CHAPTER 2

METHODS. DATA COLLECTION

2.1. Subjects

Nasim and Nabil are sister and brother born in Canada in a family where the mother is Persian and the father is Canadian English. The mother is bilingual, she left Iran about 20 years ago, and till 1994 she lived in English speaking countries. Since the father's Persian is very weak at the production level, the language of the family is English. The children (Nasim, a girl, born in Canada, on September 22, 1991; and Nabil, a boy, born in Canada, on October 4, 1992) were raised since birth bilingually. The parents did not follow the one parent – one language principle and spoke only in English to the children. However, the mother taught them Persian, and, obviously, there were moments when she used Persian with her children for different reasons. The exposure to Persian was regular, however, the amount of input in English to a much extent overwhelmed that of Persian. In this respect, we can speak about something similar to Bilingual First Language Acquisition (De Houwer 1995) in terms of English and Persian.

The family arrived in Hungary in August 1994, when Nasim was 2;11, and Nabil 1;10. Very soon after their arrival the children started attending Hungarian monolingual nursery schools. The acquisition of Hungarian became vital and inevitable for them. At the time of their arrival the children were normally developed bilingual children, their language competence in English was equal to that of English monolingual children. Their Persian was, however, far behind their Persian monolingual peers, as they had little exposure. Since, as far as I know, there is no literature available on Persian child language, I cannot compare their language use with native Persian children's, and it is only the mother who tells me something about the children's command of Persian.

As far as Hungarian is concerned, it is an early second language acquisition process (or Bilingual Second Language Acquisition as De Houwer would call it) which started when the girl (Nasim) was 2;11 and the boy (Nabil) 1;10 years of age.

At the beginning of the investigation the family used English at home, so the dominant language for the children was English. However, as it was mentioned above, the mother felt responsible for teaching her first language to the children. When the children were alone with their mother, they learnt Persian. This usage was, though, very restricted, according to the

mother. The acquisition of Persian is still proceeding through instruction, nevertheless, the children seem to be very successful: they are able to answer most of their mother's questions in Persian, they can retell stories, recite poems and say prayers in Persian.

The following table describes an acquisition and communication web in terms of the fashion the children acquire their three languages and the communicators' language use. In this respect, English is acquired in a natural fashion as well as Hungarian. The acquisition of Persian is going on in an instructed way. English is used in child to child communication, i.e. when the children speak between themselves, and also in adult to child communication, i.e. when they speak with their parents or, very rarely, with some relatives or English speaking friends of the family. Hungarian is used when they talk to each other, when they play and also in the kindergarten with Hungarian monolingual children. It is also used with the kindergarten teachers, with Hungarian adult friends of the family and with the interlocutors during the observation period. However, Persian is not used between themselves so there is no child to child communication in terms of Persian. They use it only with their mother. The input is so infrequent as compared with the other two languages that the line of the Persian language in the table is displayed in a different mode.

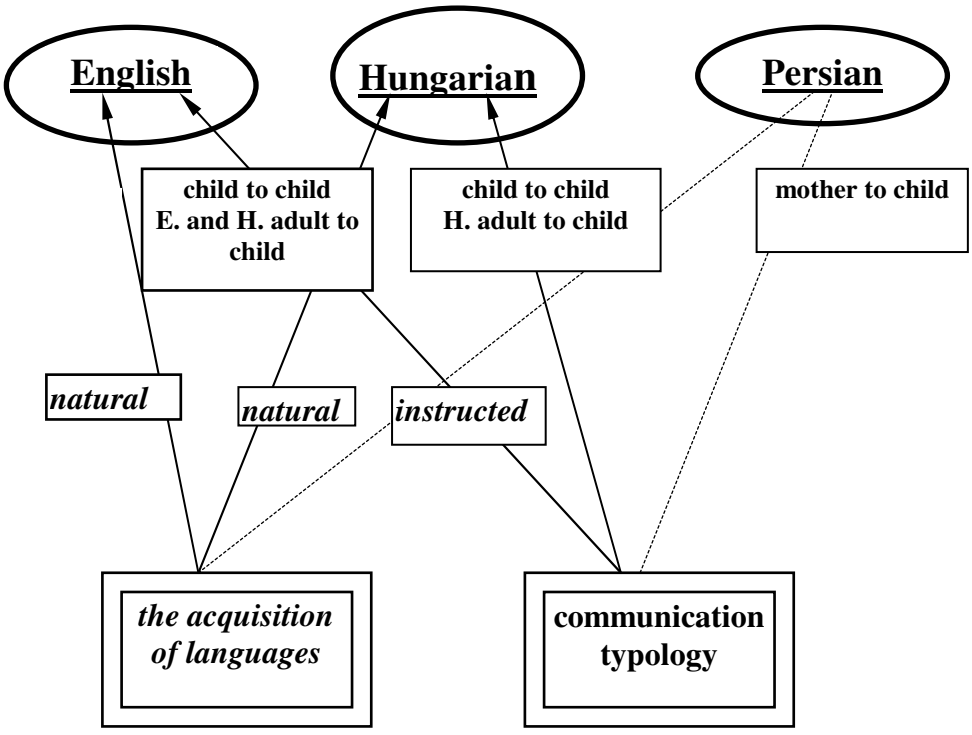

Table 5. The ways of acquisition and the types of communication of the children

In the first year of the observation (1994) the children attended a Hungarian nursery school three times a week. Every Monday, Wednesday and Friday from 9 a.m. to 4 p.m. they were among Hungarian monolingual children. There were two nursery school teachers, both were monolingual Hungarians. This way the children were biologically and psychologically highly motivated to acquire Hungarian as quickly as possible, and so they became very good subjects for an investigation of the language development of trilingual children, with respect to Hungarian.

In the second and third year they went to a kindergarten three times a week, their peers were also Hungarian monolinguals.

September 1997 was the first time – in the fourth year in Hungary – that they had been separated. The girl (Nasim) goes to primary school and the boy (Nabil) is still in kindergarten. It is very essential to know that the children were always together in the same group in the nursery and in the kindergarten as well.

2.2. Data collection

I have been observing the children since October 1994. Audio and video data have been collected regularly, in the first year of their stay with two-week frequency on the Hungarian language development of the children. After one year I have continued to have access to the children at two or three month intervals. In this way I have 22 hours of audio and 8 hours of video recordings.

The recordings are transcribed orthographically, using the letters of the Hungarian alphabet, with the exception of utterances which are phonetically weird or unintelligible. These utterances are transcribed with the symbols of the International Phonetic Alphabet. The strange productions on the phonetic level vanish from the children's speech. However, the fossilized articulation of certain sounds are reminded of in round brackets after the text itself. Protocols of the recordings are available in the separate appendix to the thesis.

Grosjean claims that bilinguals, depending on the situation and the person's language command who they are with, move on a certain continuum whose one end is the monolingual and the other end is the bilingual speech mode (Grosjean, 1995). The bilingual freely moves from one end of this continuum to the other. If the bilingual speaks with a monolingual, the

bilingual is at the monolingual end of the continuum, which means he/she tries to deactivate his/her second language as much as possible, and tries to get stuck to the language the monolingual speaks. On the contrary, if the bilingual speaks with another bilingual with whom he/she shares the two languages, he/she will not make attempts to get stuck to just one language, and, being at the bilingual end of the continuum, he/she freely switches codes whenever he/she feels like.

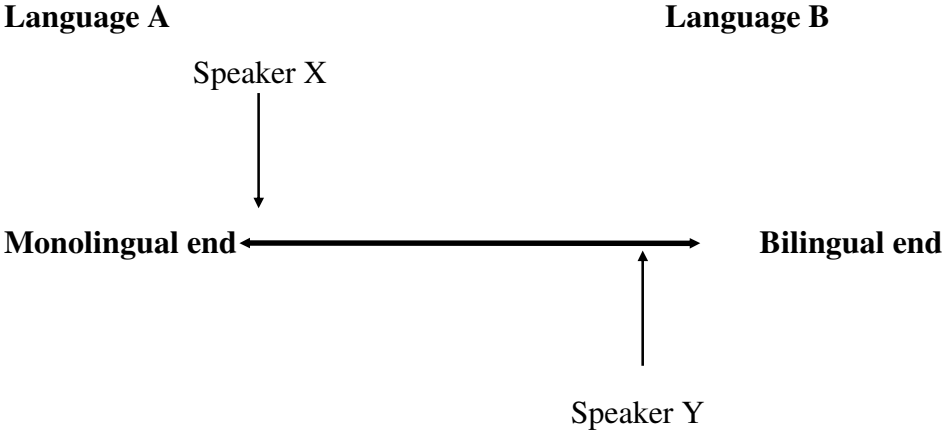

Table 6. Grosjean's continuum

In a bilingual context the partners agree on a language which is to be counted as the Matrix or Base Language (Jake and Myers-Scotton 1997). The choice of the Matrix Language (ML) is largely based on sociolinguistic and psycholinguistic considerations. ML selection means that one language is more activated.

It is interesting to note that in conversations when ML was Hungarian, these children stayed at the monolingual end of the continuum even if they knew that the interlocutors spoke English too. There is just a small number of code-switches in the conversations with their mother too, and Persian is used only when it is elicited. What is most interesting is that in recordings 24 and 26, where there is no interlocutor present at all, that is the children are playing together and there is no third person, they use only Hungarian except for a very few code-switches occurring to English and it only happens when either of the parents enter the room. More details about code-switching and language dominance will be discussed in Chapter 8.

The reason why I included the ML (Matrix Language) in the chart is to show in which matrix language the conversations occurred. As it is obvious, when the children talk to their

mother, they use English as a language of communication. No Persian is initiated by the children. When, on the other hand, the interlocutor is Hungarian, they try to stick to Hungarian. What is most interesting is that even after they realize that the Hungarian interlocutor, whom they thought to be Hungarian monolingual, can speak English, the children do not try to use English in the communications with her. They got used to speaking in Hungarian with her, the person-bound language use works.

As can be seen from the chart below, the children were constantly in bilingual language mode. However, there are huge differences in their being in bilingual language modes depending on the situations. Their both being bilinguals does not allow for a monolingual context in any situations as long as the children are together. Since they both share English and Persian, besides Hungarian, no matter that the interlocutor is trying to create a monolingual context, which the children more or less accept, still there is a chance for the children to use another language in case of misunderstanding.

The following is the list of recordings:

No.	Date	Duration	Nasim	Nabil	Interlocutor	L.mode	M L.
1.	7/10/1994	13 min.	3; 0, 5	2; 0, 3	mother	biling.	Eng.
2.	14/10/1994	10 min.	3; 0, 22	2; 0, 10	mother	biling.	Eng.
3.	21/10/1994	25 min.	3; 0, 29	2; 0, 17	Zsuzsi	biling.	Hung.
4.	28/10/1994	50 min.	3; 1, 6	2; 0, 24	Zsuzsi	biling.	Hung.
5.	5/11/1994	25 min.	3; 1, 14	2; 1, 1	Zsuzsi	biling.	Hung.
6.	10/11/1994	40 min.	3; 1, 19	2; 1, 6	Ildikó	biling.	Hung.
7.	23/2/1995	60 min.	3; 5, 1	2; 4, 19	Judit, Zsolt	biling.	Hung.
8.	9/3/1995	30 min.	3; 5, 14	2; 5, 5	Judit	biling.	Hung.
9.	16/3/1995	60 min.	3; 5, 21	2; 5, 12	Judit	biling.	Hung.
10.	30/3/1995	45 min.	3; 6, 8	2; 5, 26	Judit	biling.	Hung.
11.	6/4/1995	30 min.	3; 6, 15	2; 6, 2	Judit, Robi	biling.	Hung.
12.	11/4/1995	20 min.	3; 6, 20	2; 6, 7	mother	biling.	Eng.
13.	13/4/1995	50 min.	3; 6, 22	2; 6, 9	Judit	biling.	Hung.
14.	16/4/1995	55 min.	3; 6, 25	2; 6, 12	Judit, sons	biling.	Hung.
15.	26/4/1995	10 min.	3; 7, 4	2; 6, 22	Zsolt	biling.	Hung.
16.	3/5/1995	60 min.	3; 7, 11	2; 6, 29	Judit	biling.	Hung.
17.	31/5/1995	30 min.	3; 8, 9	2; 7, 25	Judit	biling.	Hung.
18.	25/6/1995	40 min.	3; 9, 3	2; 8, 21	Judit	biling.	Hung.
19.	27/6/1995	25 min.	3; 9, 5	2; 8, 23	Judit	biling.	Hung.
20.	15/7/1995	20 min.	3; 9, 23	2; 9, 11	Judit	biling.	Hung.
21.	26/7/1995	45 min.	3; 10, 4	2; 9, 22	Judit	biling.	Hung.
22.	15/12/1995	45 min.	4; 2, 23	3; 2, 21	Borika, Bori	biling.	Hung.
23.	25/12/1995	15 min.	4; 3, 3	3; 2, 21	mother	biling.	Eng.
24.	25/12/1995	30 min.	4; 3, 3	3; 2, 21		biling.	Hung.
25.	10/6/1996	10 min.	4; 8, 19	3; 8, 6	Judit	biling.	Hung.
26.	20/6/1996	50 min.	4; 8, 29	3; 8, 16		biling.	Hung.
27.	20/9/1996	120 min.	4;11, 29	3;11, 16	Hajni, Anna	biling.	Hung.
28.	1/12/1996	120 min.	5; 2, 9	4; 1, 27	Hajni, Anna	biling.	Hung.
29.	20/4/1997	120 min.	5; 6, 29	4; 6, 16	Hajni, Anna	biling.	Hung.
30.	20/4/1997	30 min.	5; 6, 29	4; 6, 16	Hajni, Anna	biling.	Hung.

Table 7. List of the recordings and their methodological details

The following tables show the dates and the duration of time of the recordings. October 7, 1994 was the very start of the recordings, when the videocamera was present and I recorded how the children communicate with their mother. In the beginning they were very

shy but later from the third recordings on they seemed to have forgotten about the camera. October 21 was the first date when a Hungarian interlocutor spoke and played with the children. She used a lot of English to make the children speak at all but Hungarian was also present in the recordings.

The 'minutes per recordings' means the whole recording time, i.e. includes the pauses, cries, laughters and silent games of the children.

1994

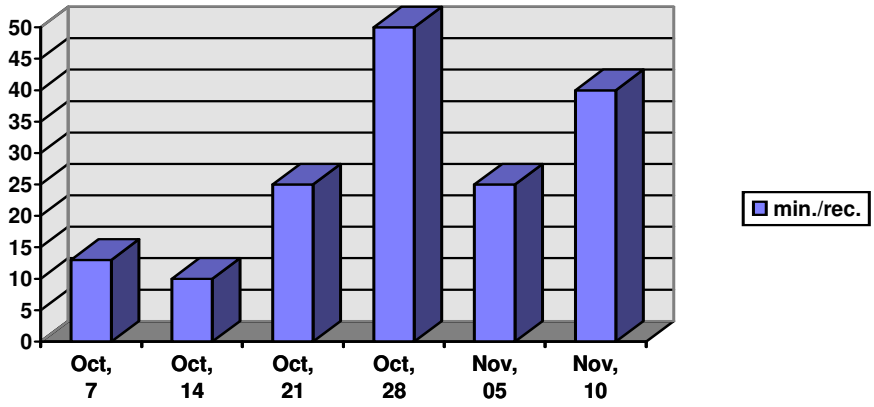

Table 8. Minutes per recordings in 1994

Throughout 1995 was the most intense period of data collection. I tried to record them every second week. Alternations could be due to illnesses or travels. In the majority of cases I went to the children's home, where either the mother or the father was at home together with the children but they did not actively participate in the conversations unless either of the children went up to him or her to ask something.

1995

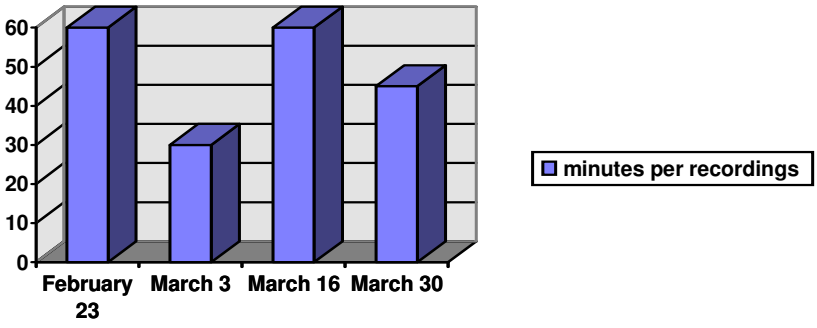

Table 9. Minutes per recordings in February-March 1995

1995

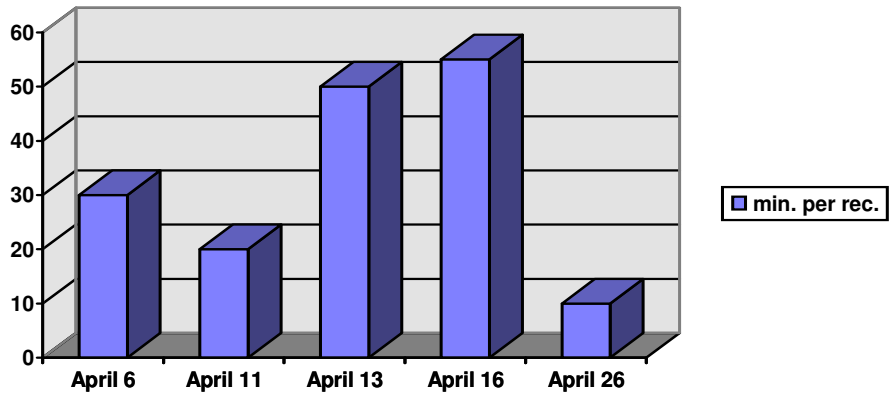

Table 10. Minutes per recordings in April 1995

April 11 was the first time that the mother recorded a conversation with the children at home. April 16 was Easter Monday and the whole family came to visit us in my home. April 26 is a very short recording done at my workplace where the children just stopped by with their mother to see their father.

1995

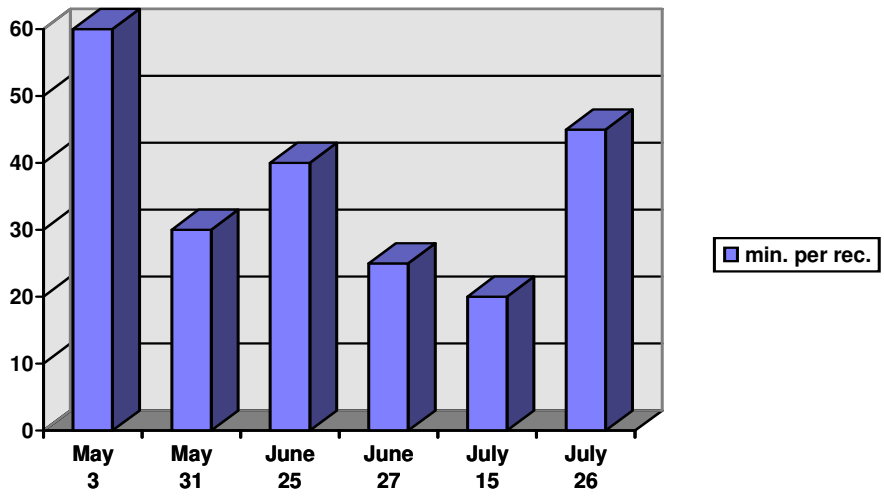

Table 11. Minutes per recordings in May-June-July 1995

In August 1995, the family moved to another town and the data collection could not occur as frequently as before. Tapings were done at three month intervals. However, the family was ready to make recordings when the children were playing alone in their room or with a Hungarian monolingual elderly woman who lived next door.

1995

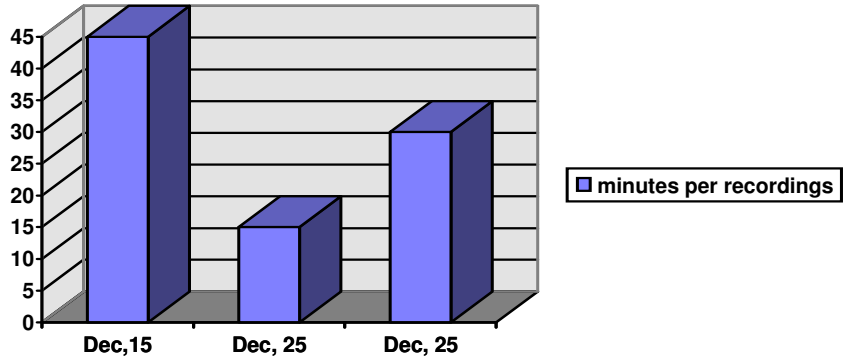

Table 12. Minutes per recordings in December 1995

On the first recording on December 25 the ML was English since the family was having breakfast while they were recording their conversations.

The first recording in 1996 took place on June 6, when the family came back to town for a short visit. They came to see me, too, but the children were so shy after almost a year of missing each other that they did not really want to talk. The time was too short for them to warm up.

1996

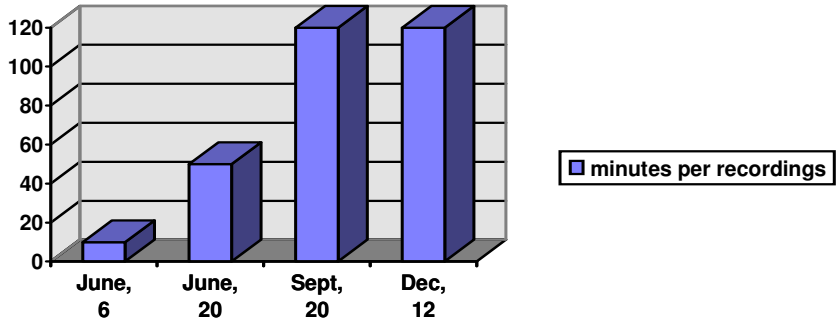

Table 13. Minutes per recordings in 1996

In 1997 two university students did the recordings with the children in the children's home. When they arrived they always spoke with the parents for a while in English, who were asking them about acquaintances, friends etc. However obvious it was for the children that these students speak English and Hungarian, too, they did not use any English with them only when it was elicited.

1997

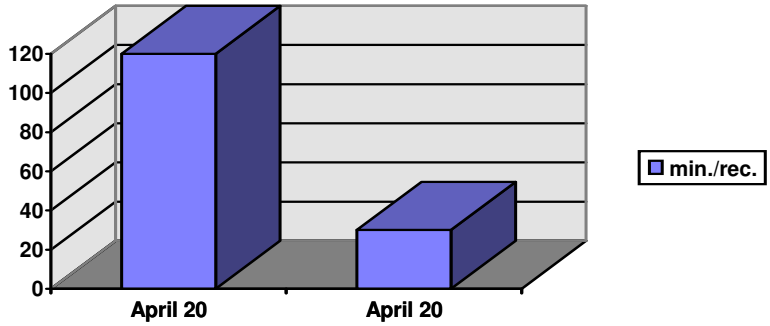

Table 14. Minutes per recordings in 1997

During the recordings Hungarian monolingual speakers of different ages and sexes and with different social backgrounds talk and play with the children besides the parents. The age range is from 5 year olds to 60 year olds:

- mother: English-Persian bilingual, MA in sociology
- Zsuzsi: a Hungarian 18-year-old monolingual female, who speaks some English
- Ildikó: a Hungarian 22-year-old student of English
- Judit: a Hungarian 34-year-old teacher of English
- Zsolt: a Hungarian 50-year-old linguist, who speaks some English
- Robi: a Hungarian 9-year-old monolingual boy
- Borika: a Hungarian monolingual elderly woman
- Bori: a Hungarian monolingual young woman, who speaks some English
- Hajni: a Hungarian 22-year-old student of English
- Anna: a Hungarian 22-year-old student of English.

In addition to the interlocutors, there are some other people participating in the recordings, e.g.:

- Adél: a Hungarian 5-year-old monolingual girl
- Attila: a Hungarian 12-year-old monolingual boy
- Dani: a Hungarian 12-year-old monolingual boy
- Kata: a Hungarian 21-year-old student of college

- father: English monolingual, MA in psychology.

The majority of recordings took place in the children's home except for the following ones:

23/2/1995	in Judit's office at the university
16/4/1995	in Judit's home
26/4/1995	at the university
3/5/1995	at the university
31/5/1995	at the university
27/6/1995	at the playground
15/7/1995	at the playground
26/7/1995	on the lakeside
15/12/1995	in Borika néni's home

In all the settings the children were in a bi- or even trilingual language context. First, because they are together all the time, secondly, because most of the interlocutors did speak English. It was only Adél, Attila, Dani, Robi, Borika néni who did not speak English at all and with whom the children were left to their own devices in terms of language use. Those were the recordings when they were forced to be at the monolingual end of the Grosjean's continuum.

2.3. Languages

One of the goals of this thesis is to see how the languages being acquired by children are in contact with one another. First some words in a nutshell are going to be presented about the typology of the languages.

English is an Indo-European language. It has been characterized as SVO. English has lost case-markings, as a result, it has a poor morphology. It has free word stress.

Hungarian, being a member of the Finno-Ugric language group, differs greatly from the Indo-European languages. It has been characterized as SOV, but with freedom permitted for pragmatic reasons. It has a rich morphology. Hungarian exhibits agglutination, a complex system of postpositions resulting in a large number of cases. There are no genders. It shows vowel harmony and verb-object agreement (MacWhinney 1976).

Persian is a member of the Iranian group of the Indo-European language family. It has been characterized as SOV. There is no definite or indefinite article in Persian. Persian has no inflections. There is no gender. If the grammatical subject of a sentence is a personal pronoun, this is implicit in the verb and is not usually expressed separately unless it is desired to lay special emphasis on the pronoun (Lambton 1967).

	English	**Persian**	**Hungarian**
Word Order	SVO	SOV	SOV
Word Stress	free	bound	bound
Case-markings	–	+	+
Prepositions	+	+	–
Postpositions	–	–	+
Gender	+	–	–
Vowel harmony	–	–	+
Verb-object agr.	–	–	+
Definite Articles	+	–	+
Indefinite Articles	+	–	+
Use of Personal Pronoun	+	– unless special emphasis	– unless special emphasis

Table 15. A comparative study of the three languages

CHAPTER 3

THE ACQUISITION OF HUNGARIAN PHONOLOGY

1. Introduction

The present chapter will attempt to describe the acquisition of Hungarian phonology by the two trilingual children. The question is whether the phonological development of bi-or trilingual children is occurring in a common place, whether they share one common phonemic set which is later separated according to languages or the phonemic systems are separated from the very first moment of acquisition.

Proponents of the Unitary System Hypothesis (Vihman 1982, Volterra and Taeschner 1978, etc) in child language literature claim that there is one commonly shared language centre and the languages of the bi-or multilingual child are not distinguished, not differentiated. First, they share the languages at the lexical, syntactic levels.

Presumably, at the phonetic/phonological level, there is one common unit for all the phonemes acquired by the child, and this one unit serves all the different languages spoken by the person. Vogel (1975) supports this hypothesis in his study on a Romanian-English two-year old child's phonological development.

Supporters of the Separated Systems Hypothesis (Lanza 1997, De Houwer 1990, Meisel 1989, etc), on the contrary, claim that lexical, grammatical units of each language are separated from each other from the very first start; consequently, we may assume that there are strictly separated phonemic centres for each language spoken by the child.

In this chapter, I will try to find evidence for either the unitary or the separated phonemic systems in the spontaneous speech of the two trilingual siblings.

Besides the above mentioned concern I am most interested in the following questions which have arisen in the course of this study:

(i) how do these two children acquire Hungarian phonology, and what is the order of the acquisition of phonemes,

(ii) the nature of interference (unidirectional or bidirectional).

Watson believes (Watson 1991) that bilinguals, like monolinguals, simplify their phonological processes, but do so cross-linguistically in each language separately.

"Any attempt to define patterns or rules in what they do is inevitably hampered by the problem of dominance – the condition of the child being more capable in one language than in the other." (Watson 1991:34)

According to Fantini (Fantini 1985), the developing bilingual has to learn processing skills which are unnecessary for the monolingual. Bilinguals have to recognize that a sound system is entirely arbitrary, in that it is possible to use more than one to communicate. They must therefore learn to assign similar physical events to different systems of oppositions according to the linguistic context. However, each phonological system is not necessarily acquired in a way analogous to monolingual acquisition. Fantini also finds that one system will dominate the other, so that the child fails to make some oppositions in one language, or at least produces some sounds in a foreign way, due to interference.

> It would be quite possible, despite differences in the acquisition process, for a perfectly balanced bilingual to have two completely independent phonological and phonetic systems, each identical in all ways to those of monolinguals. On the other hand, there could be a degree of integration between the two systems. Or, as a third possibility, the bilingual may have two systems, but which differ in some way from those of monolinguals... There is undoubtedly an early stage when the two systems are mixed, but this is due to the undifferentiated state of the two languages as a whole. After differentiation, the children described in literature

> clearly develop two sound systems, but there is variation in the correspondence of these systems to those of monolinguals, especially in their phonetic detail. At the phonemic level, even children who are dominant in one language seem to achieve a near-perfect match with monolinguals in both languages. In their productions they may, however, retain noticeable traces of interference in the realizations of particular phonemes, that is at the phonetic level. (Fantini, 1985:37)

The sound realization of phonemes making up the English, Persian, and Hungarian phonological systems are mostly present in the children's speech; when they speak English they use the English sounds, when they speak Hungarian, the Hungarian sounds and when Persian – the Persian sounds are used by them. Phoneme mixing and changes will be analysed later. The phonetic level of their speech is in accordance with the average level of children of their age. I have compared their speech with Hungarian monolingual children of their age. The ontogeny of the Hungarian language and Hungarian child language is thoroughly analysed by Lengyel (1981) and Gósy (1984). Referring just to two languages spoken by the children from this point on, namely to Hungarian and English, we can state that the children's speech is understandable, no radical deterring is observed comparing them to native speakers in respect of both perception and production. There are a lot of elements of Hungarian child language in their speech.

2. Data analysis. Results

At first, the main concern of the investigation was the extent to which their speech is understandable for native speakers.

I have asked native speakers of Hungarian to judge whether the children's speech sounds Hungarian or, whether they can feel some foreign accent in the children's Hungarian speech. The native speaker judges were

Hungarian children of 10-12 years of ages, university students and middle-aged adults, mostly university professors.

Since the opinions were all the same, namely that they basically articulate the sounds well, although in the pronunciations of certain sounds (especially those of stops) the native speakers could hear some deviances, I have decided to measure the physical characteristics of their sounds in a phonetic laboratory.

In this way, I have measured the VOTs of the stops uttered by the children in spontaneous speech at the Phonetic Laboratory of the Institute for Linguistics at the Hungarian Academy of Sciences. I have used oscilloscopes and spectograms to define the Voice Onset Time characteristics of my subjects.

2.1. Consonants

The table below shows the consonants of the Hungarian language classified according to the place and manner of articulation and also to voice:

Place of articulation	**Manner of articulation**						
	plosives		**fricatives**		**affricates**		**other**
	+ voice	**– voice**	**+ voice**	**– voice**	**+ voice**	**– voice**	**+ voice**
bilabial	***b***	***p***					
labiodental			***v***	***f***			***m***
dental	***d***	***t***	***z***	***s***		***ts***	***n,l,r***
alveolar					***dz***	***tt***	
palatal	***dy***	***ty***	**f**	**t**	***df***		
velar	***g***	***k***	***j***				***nj***
glottal				***h***			

Table 16. Consonant chart of the Hungarian language

This is the English consonant chart according to the place and manner of articulation:

Place of articulation	**Manner of articulation**						
	plosives		**fricatives**		**affricates**		**other**
	+ voice	**– voice**	**+ voice**	**– voice**	**+ voice**	**– voice**	**+ voice**
bilabial	*b*	*p*					
labiodental			*v*	*f*			*m, w*
dental	*d*	*t*	*q, z*	*p,s*		*ts*	*n,l,r*
alveolar					*dz*	*t*	
palatal	*dj*	*tj*	f	t	*df*	*tt*	*j*
velar	*g*	*k*					n
glottal				*h*			

Table 17. Consonant chart of the English language

Persian consonants classified the same way as seen above:

Place of articulation	**Manner of articulation**						
	plosives		**fricatives**		**affricates**		**other**
	+ voice	**– voice**	**+ voice**	**– voice**	**+ voice**	**– voice**	**+ voice**
bilabial	*b*	*p*					*m*
labiodental			*v*	*f*			
dental	*d*	*t*	*z*			*ts*	
alveolar	*df*		f	*s, tt,*	*dz*	*tt*	*n,l,r*
				s			
palatal	*g*	*tj, k*		*t*	*df*		
velar	*g*	*k*	*j*				*nj*

glottal	***t***			***h***			

Table 18. Consonant chart of the Persian language

This is the chart of consonants used by the children in their speech (English, Hungarian, Persian together):

Place of articulation	**Manner of articulation**						
	plosives		**fricatives**		**affricates**		**other**
	+ voice	**– voice**	**+ voice**	**– voice**	**+ voice**	**– voice**	**+ voice**
bilabial							
labiodental	***b***	***p***	***v***	***f***			***m, w***
dental	***d***	***t***	***q, z***	***p, s***		***ts***	***n,l,r***
alveolar			***f***	***tt, s***	***dz***	***tt***	
palatal	***dy***	***ty***	**f**	***t***	***df***		***j***
velar	***g***	***k***	***j***				***nj, n***
glottal	**t**			***h***			

Table 19. Consonant chart of all the languages spoken by the children

When they speak English they use the English sounds, when they speak Hungarian, the Hungarian sounds are used. The same is related to Persian. As the Hungarian native speaker judges also found, the phonetic level of their Hungarian speech is understandable and in accordance with the average level of the Hungarian children of their age.

In *Table 19.* the phonemes possessed by the children are given. Since the two most often used languages are English and Hungarian, I will refer to Persian just occassionally in the discussion.

The recordings have shown undoubtedly that the children possess a certain set of phonemes, which sometimes makes it easier to acquire a new language and at other times, the lack of certain phonemes in the mother tongue, impedes development because the child generalizes or makes similar utterances to those of the first language.

The following is the list of sounds in lexical items that cause no problem for the children (for the non-Hungarian reader I must tell that in the vast majority of cases there is a one to one sound-letter correspondence in Hungarian. However, there are some cases, too, when one sound is represented by two letters, like e.g. [s] is represented by *sz*.):

/b/ ebíd, Nabil, bíka, böcsödíbe, bana, ban, bonat

/p/ kumpi

/v/ hovan, van, vájá, vijág

/f/ físzű, físű, elefant, fekete

/m/ nem, tudom, míg, enyím

/d/ ebíd, de, tudod

/z/ ződ, az, ez

/sz/ szíp, Nasim, aszik, kisz, kész

/c/ maci, biciklit, cicának

/n/ nem, Trabant, pillangó, nincs

/l/ világ, magál, hol, szeletem

/r/ szeretem, Robi, elrepült, gyorsan

/zs/ zsupsz

/s/ sájga, is, gyorsan

/cs/ kicsi, csip- csip csóka,csiga-biga, nincs csimmá

/gy/ gyere,mindjá, nagy, nagyooot

/ty/ betyár, látjuk, kutya

/g/ sájga, világ, pillangó

/k/ kicsi, kakaó, kezét

/j/ jó, Judité, vájá

/ny/ menjünk, enyém, anyu

/h/ hallod, hovan, harom

Contrary to Fantini's findings (Fantini 1985) these children can pronounce all the sounds characteristic of Hungarian, but which do not exist in English (i.e. the sounds /dy/, /ö/, /ü/), correctly, without any accent. What causes the problem is sounds existing in both languages (i.e. /p/, /t/, /k/). This is when a kind of a foreign accent can be felt in their Hungarian speech.

2.1.1. Consonant sounds identical with Hungarian monolingual children's child language consonant sounds

(i) In the process of phonological acquisition Hungarian children (Lengyel 1981, Gósy 1984) often change the voiced bilabial plosive /b/ for the voiceless bilabial plosive /p/, as did my subjects in the very beginning (basa – *pata).*

(ii) The bilabial plosive /b/ and the labio-dental fricative /v/ are often confused by Hungarian children, and Nabil's speech also contained this phonetic feature. This change always goes from the direction of /v/ to /b/ and never the reverse way: *bonat* – vonat, *ban* – van.

1. **Nabil***: Nem tudod hol ban* (correct: van) *a bonat* (correct: vonat)*?*
   Judit*: Nem tudom, hol van a vonat.*
   Nabil*: Nem látjuk*?
   Judit*: Nem látjuk.*
   Nabil*: Ement a bonat* (correct: vonat)*?*
   Judit*: Elment a vonat, igen.*

2. **Nabil***: Mindjá jön a bonat* (correct: vonat).

Judit*: Nem jön mindjárt, nem. Most sokáig nem jön, nem kell félni.*

Nabil*: Mindjá jöbök* (correct: jövök) *a bonat* (correct: vonat).

Judit*: Mindjárt jön a vonat? Majd később.*

3. **Nabil***: Hol ban* (correct: van) *a bonat* (correct: vonat)*?*

Judit*: Ott a vár tetején.*

Nabil*: Itt? Ez a bonat* (correct: vonat)*?*

Judit*: Az ott, amit az Atti épített.*

Nabil*: Ajjaj, az a bonat* (correct: vonat)*! Az a bonat* (correct: vonat)*?*

(iii) One of the commonest peculiarities made by Hungarian children is the omission of /l/ preceding a consonant. This phenomenon occurs independently of the position or the quality of the consonant coming after the sound /l/. This was also found to occur in my subjects' speech (*etünt* – eltünt, *aszik* – alszik, etc).

4. **Nasim**: *Aszik.* (correct: alszik)
5. **Nasim**: *Evitte Nabil.* (correct: elvitte)
6. **Nasim**: *Hovan?* (correct: hol van)
7. **Nasim**: *Ho?* (correct: hol)
8. **Nasim***: Egy, kettő, három, négy, öt, hat, ződ* (correct: zöld)
9. **Nasim***: Narancs kisz még. No, kész még narancs. Kész még ama* (correct: alma)*. Finom. Finom.*
10. **Nasim***: Hóvan* (correct: hol van) *az ajutó?*

(iv) The Hungarian /r/ is a post-alveolar trill, which is a big trouble-maker in the acquisitional process. There are different stages in the ontogenesis of oral language when Hungarian children either simply ignore this sound, or substitute it for other sounds. Very few children are able to

utter it correctly before the age of 5. The majority of tongue-twisters in Hungarian are based on the pronunciation of this trill. The subjects of this study sometimes omitted it (*bana* – barna), other times pronounced /j/ or /l/ instead (*sájga* – sárga, *vijág, világ* – virág), in the manner of Hungarian children, and occassionally substituted it for the English /r/.

11. **Nabil***: Bana.* (correct: barna)
12. **Nasim***: Magá.* (correct: madár)

    Judit*: Madár? Birdie?*
13. **Nasim***: Kitá.* (correct: gitár)
14. **Nasim***: Gyere, menjünk, futás! Futás!!! Mindjá* (correct: mindjárt) *jön, mindjá jön!!!*
15. **Nasim***: Vájá, vájá, vájá, vájá!* (correct: várjál)
16. **Nasim***: It has hús, and kumpi. What's kumpi?* (correct: krumpli)

    Furugh*: What's that?*

    Nasim*: Kumpi means*

We can see examples of overextension of the English post-alveolar approximant /r/, which can be due to the influence of other – adult – English people's Hungarian speech. (The parents sometimes try to talk to the children in Hungarian at home, their accent is – obviously – very strong.)

We have several occasions recorded when the trill is changed for the palatal approximant /j/: *vijág* – virág.

17. **Judit**: *Az meg ott piros, bizony.*

    Nasim: *Nem! Sájga* (correct: sárga)
18. **Judit***: Az is? Piros autó?*

    Nasim*: Sajga* (correct: sárga)**.**
19. **Nasim***: Magáj* (correct: madár).

    Judit*: Madár, bizony. Milyen madár?*
20. **Furugh***: What's flowers in magyarul?*

Nasim*: Vi̲já̲g* (correct: virág).

Judit*: És ez?*

Nasim*: Vi̲já̲g* (virág).

Judit*: Ez virág? Ez egy nagy ...*

Nasim*: Vi̲já̲g* (correct: virág).

21. **Judit***: És az milyen színű?*

Nasim*: Sá̲já̲* (sárga).

Judit*: Van abban sárga is.*

Nasim*: Sá̲já̲* (sárga).

22. **Judit***: Nem tudom, hogy hol van. Nézz oda, az mi?*

Nasim*: Magá̲j̲* (madár).

Judit*: Madár, bizony. Milyen madár?*

Post-alveolar approximant /r/ is close to palatal approximant /j/ and is probably the first step in finding the right place of articulation for the children when they hear that the sound they pronounce is not the same as they hear it. The second step then should be the substitution of the trill by the alveolar approximant /l/ : *világ* – virág.

23. **Nasim***: Magá̲l̲. Kis magá̲l̲* (correct: madár).

24. **Judit***: Nézd itt a kisfiú.*

Nasim*: Vi̲l̲á̲g* (correct: virág).

Judit*: A virágot locsolja, igaz?*

25. **Judit***: Ez mi?*

Nasim*: Vi̲l̲á̲g* (correct: virág).

26. **Judit***: Nasim, kérni kell! Na, itt a ...*

Nasim*: Magá̲l̲. Kis magá̲l̲* (correct: madár).

27. **Nasim***: Hol? Azt nem szel̲etem* (correct: szeretem). *Ez is nem.*

28. **Nasim***: Nem szel̲et* (correct: szeret). *Az nem szel̲et* (correct: szeret). *Ez szel̲etsz* (correct: szeretsz).

29. **Nasim***: Ez nem szelet* (correct: szeret) *csiga. Ez fa.*

30. **Nasim***: Nem szeletsz* (correct: szeretsz). *Ezt szeletsz* (correct: szeretsz).

The children can adapt themselves and their articulatory basis very quickly and easily to that of the Hungarian one, thanks to this, they have acquired very quickly the right pronunciation of the trill.

31. **Nasim***: Ez is nem szeretem.*

32. **Nasim***: Az nem szeret.*

33. **Judit***: Azt szereted?*

Nasim*: Igen. Meg ezt nem szeret.*

(v) Changes of /l/ for /j/ is a typical phenomenon of the boy's speech. He sometimes confuses these two sounds: *jija* – lila, *hajacska* – halacska.

34. **Nabil***: Jija* (correct: lila).

Judit*: Lila, így van.*

Nabil*: Lila.*

In the above example he can correct himself when repeating what the interlocutor is saying, however it is not always successful, like in the following case:

35. **Judit***: Nem tudod? Ez csillag?*

Nabil*: Csijag* (correct: csillag).

Judit*: Csillag?*

Nabil*: Csijag* (correct: csillag).

Judit*: Csillag. És ez itt?*

Nabil*: Hol?*

Judit*: Ez itt.*

Nabil*: Hajacska.* (correct: halacska)

2.1.2. Consonant sounds in the children's speech which are strange to the Hungarian ear

(i) Aspiration

Hungarian and English consonants differ from each other greatly in respect of Voice Onset Time. VOT is defined as the timing between the onset of phonation and the release of the primary occlusion of the vocal tract. Phonation of stops in initial position can start coincident with the release of the stop, after the release of the stop or before the release of the stop. According to Lisker and Abramson (1964) the exact time intervals vary from language to language. They present their findings for the initial stops of isolated words and sentences in eleven languages studied (Hungarian and English among them). The following table shows Lisker and Abramson's findings concerning English and Hungarian stop consonants' VOT in isolated words. Since the data related to Hungarian is a bit out of date, I also enclose the latest findings concerning the Hungarian stop consonants' VOTs measured by Mária Gósy (1997) (the range is given here).

	Lisker and Abramson (1964)		**Gósy (1997)**
	English	Hungarian	Hungarian
bilabial /p/	20 – 120	0 – 10	13 – 34
dental /t/	30 – 105	10 – 25	15 – 37
velar /k/	50 – 135	20 – 35	32 – 65

Table 20. VOTs in ms in isolated words

The following is the same measured in spontaneous speech, in word-initial positions (the average is given here):

	Lisker and	**Abramson (1964)**	**Gósy (1997)**
	English	Hungarian	Hungarian
bilabial /p/	28	0	18.51
dental /t/	39	20	26.59
velar /k/	43	28	35.31

Table 21. VOTs in ms in spontaneous speech

I have measured the plosive sounds of my subjects since these were the sounds that made their speech in Hungarian a bit strange, unusual. The following chart presents my results compared with those of Gósy's which she got when testing Hungarian children's plosives:

	Gósy (1997)	**Navracsics (1997)**	
	Hungarian	**Nasim**	**Nabil**
bilabial /p/	13 – 34	109	
dental /t/	15 – 37	35	38 – 166
velar /k/	32 – 65	42 – 131	47

Table 22. VOTs in ms in the children's spontaneous Hungarian speech

As it is clear from the above chart, Nasim uses the aspirated bilabial and velar voiceless plosives. Nabil uses only the dental voiceless plosive aspirated.

In Hungarian there is no significant aspiration. In Persian, all voiceless consonants are aspirated in different positions. English uses aspiration word initially in voiceless bilabial plosive /p/, voiceless dental /t/ and voiceless velar /k/.

In my data there are examples of all aspirated plosives irrespective of their positions:

(i) word-initial (the data in round brackets are the average milliseconds of Hungarian speakers's VOTs in spontaneous speech):

	Nabil:			**Nasim:**
/t/	*te*ja	38 ms	(**26.59**)*te*ja	35 ms
	*tú*l	73 ms	(**26.59**)	
	*tu*dom	92 ms	(**26.59**)	
/k/	*ki*csi	47 ms	(**35.31**)*ke*ll	42 ms
			(**35.31**)*ké*rsz	60 ms
			(**35.31**)*ka*csa	68 ms
			(**35.31**)*ki*csi	58 ms
/p/			(**18.51**)*pe*rsze	109 ms

Table 23. VOTs in word-initial position

(ii) invocalic:

	Nabil:			**Nasim:**
/k/	ak*ko*r	42 ms	(**35.31**)ak*ko*r	131 ms
/t/	raj*ta*	166 ms	(**26.59**)	

Table 24. VOTs in mid-position

(iii) word-ending positions.

In these examples all plosives are strongly aspirated whether or not they are in word-initial or in invocalic position. It is crucial to underline, moreover, that the [k^{h}itt^{h}i] example provides the clearest evidence that the aspiration does not concern merely the plosive consonants, it also occurs in the case of the affricate [tt]. It is most probably due to the aspirated plosive which is overextended to the affricate, too.

(ii) Opposition according to voice

The opposition of voiced and voiceless sounds is exhibited to a lesser degree in English than in Hungarian. English [g] (17/-45 ms) is closer to English [k] (43 ms) than to the Hungarian [g] (-61 ms). This may be the reason why voiced and voiceless consonants were sometimes confused by the children in their Hungarian speech.

36. **Nasim***: Kitar.* (k^{h}itar) (correct: gitár)
Judit*: Gitár.*

However, the data contains a number of examples where /g/ preserves its voiced quality and is pronounced correctly.

A rather unusual change /g/-/k/ according to voice can be observed in the following example where neither of the solutions is correct, since they are both to stand for the sound /dy/, which is a voiced alveolar plosive, and, is, by the way, one of the most difficult sounds for English learners of Hungarian. On numerous occasions the children utter this sound correctly, without any accent or strangeness in their articulation. (e.g. *gyerünk, gyorsan, így*). However, in the following example Nasim has some problems with it:

37. **Nasim**: *Itt? Mondd, hogy* ***gere*** [gere] (correct: gyere). (Say gere.)
Judit*:* *Bemegyünk?* (Are we going in?)
Nasim: *Nem. Mondd,* ***gele*** [gele]. *Mondd* ***gele*** [gele]*, mondd* ***kele*** (k^{h}ele]. (No. Say gele.)
Judit*: Mi az a kele* [kele]*?* (What's kele?)
Nasim: ***kele*** [k^{h}ele] *i**de** mondd.* (Kele here, say.)
Judit*: Mondjam neki, hogy* ***gyere*** [dyere] ***ide****?* (Shall I tell him to come here?)
Nasim: *Igen. Jó?* (Yes. O.K.?)

Here, for a different reason she replaces it with /g/ and/or /k/. The strange pronunciation even disturbs the conversation, which breaks down due to the unintelligible sounds, since the interlocutor herself does not understand what Nasim is trying to say, it is only the situation that allows for the interlocutor to make out what the intention of the utterance is. It is also noticable that, when the girl wants to emphasize the element which was not understood by the interlocutor, that is when she starts replacing sounds differing from each other just in one phonetic feature, namely the presence or lack of voice in articulation. Here the place of articulation is eliminated, the hierarchy of articulation stages are represented. Primary and secondary processes play a role in the articulation of the sound. In this way, the opposition according to voice seems to work in a way that the more stressed elements first become voiceless and then – aspirated. In this relation it is useful to reconsider the status of aspiration concerning the languages in question. Again, we may rightly think that aspiration is not the result of the interference of a language, but it may be a way of correctly expressing emphasis, emotion.

3. Some vowel changes

3.1. The vowel systems of the three languages

This is the chart of the Hungarian vowel sounds:

Front, rounded	unrounded	rounded	unrounded	Back	
ü,ű	i,í	u,ú			High
ö, ő	é	o, ó			Middle
	e	a	á		Low

Table 25. The chart of the Hungarian vowel system

The Hungarian language has 14 vowel sounds as opposed to English which has 11 monophtongs and several diphthongs depending on the variant of English.

The following chart presents the English vowels:

Front			Back	
i:		u:		High
i		u		
e	e		j:	Middle
ae	a	ɨ		Low
			a:	

Table 26. The chart of the English vowel system

The Persian vowel system is described in the following chart.

Table 27. The chart of the Persian vowel system

Sounds /k/ and /a/ and /u/ are longer than /e/, /ae/ and /o/. Besides the 6 monophthongs, there are 4 diphthongs in Persian. They are as follows: /ei/, /ai/, /ui/, /ou/.

3.2. The problem of /e/ and /e:/ sounds

From among the vowel sounds the most critical for the children in this study proved to be the sound /e:/ which is very close to the English and Persian diphthong /ei/. The tendency in colloquial Persian, namely that vowel /e/ tends to be pronounced as /i/ (Jeremiás, 1986), seems to impact the boy's pronunciation in the English words, too. Data taken from the mother's collections justify the child's pronunciation of *teddy bear* as [ti:di ber], *get up* as [git sp]. I found a large number of examples where the children used /i:/ instead of /e:/ in the Hungarian corpus too.

I have measured the formants of the /e:/ sound of the girl and compared the results with those of Hungarian adults' /e:/ and /í/ sounds' formant sructures. Here are the results:

F1 473 (data taken from Hungarians: 560-740)

F2 3865 (data taken from Hungarians: 2000-2500)

Native Hungarian adults' /i/ sound's formant structure is the following:

F1 450-540

F2 3700-4300.

Nasim's /e:/ sounds completely fit into the latter category, so no wonder that /i:/ can be heard in her speech instead of /e:/.

The majority of examples show that the articulation of these vowel sounds are still under development; the children do not feel the difference between the two vowels. In the beginning they never corrected themselves; no matter how many times the interlocutor tried to correct their pronunciation and repeated the words, the children would stick to their own way of pronouncing these sounds. However, as time has passed, they have acquired this sound correctly. Consequently, phonemic discrimination is not a question of experience but rather a question of exposure.

38. **Nasim:** *Kík* (correct: kék).

    Zsuzsa: *Igen, kék.*

39. **Zsuzsa**: *És az ott a ruháján milyen színű?*

    Nasim: *Kík* (correct: kék)

40. **Zsuzsa***: Milyen?*

    Nasim: *Kík* (correct: kék)

41. **Nasim:** *Kík* (correct: kék)

    Zsuzsa: *És milyen a te cipőd?*

    Nasim: *Pios. Az pios* (correct: piros)

    Zsuzsa: *Igen*

    Nasim: *Az kík* (correct: kék)

42. **Zsuzsa**: *Az micsoda?*

    Nasim: *Kík. Az kík.* (correct: kék)

Zsuzsa: *Ez nem kék, ez fekete.*

Nasim: *Kík* (correct: kék).

Zsuzsa: *Nem kék.*

Nasim: *De kík* (correct: kék)**..**

43. **Furugh**: *What is this?* (points at her dress)

    Nasim: *Kík* (correct: kék) (points at the pattern)

44. **Nabil**: (takes out a blue car) *Kík* (correct: kék).

45. **Nasim***: Egy, kettő, három, négy, öt, hat, ződ, kík* (correct: kék), *sarga, lila, sarga, nem, nem, nem, narancs, kík* (correct: kék).

46. **Nabil***: Az míg a kík míg* (correct: kék még).

47. **Nabil***: Nízz* (correct: nézz) *ide!*

48. **Judit**: *Jaj, de ügyes! Béka! Béka ugrik!*

    Nasim: *Nem, ez a gyuci* (incorrect pronunciation)

    Judit: *Tessék? Juci?*

    Nasim: *Nem a bíka* (correct: béka)*, nyuszi*!

49. **Judit**: *Úgy ugrik a béka!*

    Nasim: *Itt a bíka* (correct: béka)*! Ez a bíka* (correct: béka)*! Igy!*

50. **Nasim***: Kettő, három bíka* (correct: béka).

51. **Nasim***: Bíka! Bíkahal!* (correct: békahal)

    Judit*: Na, hol?*

    Nasim*: Ott! Bíkahal!* (correct: békahal)

52. **Judit***: Papucs? Kinek a papucsa?*

    Nasim*: Enyím* (correct: enyém).

53. **Judit***: Ez itt az én ágyam.*

    Nasim*: Nem. Enyím.* (correct: enyém)

    Judit*: Én alszom, jó?*

    Nasim*: Nem.*

Judit*: De én alszom. Énekeljél nekem, mert én alszom. O.K.? Na, szia, jó éjszakát.*

Nasim*: Nem. Nem. Enyím.* (correct: enyém)

54. **Nasim***: Csinádis el, jó? Enyím* (correct: enyém) (takes the gun out of Dani's hand) *most te, jó?*
55. **Nasim***: Kész az ebíd. Nabil, főztem a ebíd* (correct: ebéd).

    Judit*: Főztél ebédet?*

    Nasim*: Igen. Most itt a ebíd* (correct: ebéd).
56. **Nasim***: Fehír* (correct: fehér).

    Judit*: Fehér autó?*

    Nasim*: Igen.* (Takes out a picture book. points at a picture)

    Judit*: Az nagy. És milyen színű?*

    Nasim*: Fehír* (correct: fehér).
57. **Judit***: Ott a Dávid? Szerinted hol a Dávid?*

    Nasim*: Hol?*

    Judit*: Hol? Otthon?*

    Nasim*: Böcsödíbe* (correct: bölcsődében).
58. **Nasim***: Ez is szíp* (correct: szép).

    Judit*: Ez nem szép, ez csúnya. Én ezt nem szeretem.*

    Nasim*: Ez is nem.*

    Judit*: Ez is csúnya.*

    Nasim*: Meg ez is szíp* (correct: szép).
59. **Judit***: Kisfiú? Hű, itt vannak ám csúnya madarak. Ez csúnya vagy szép?*

    Nasim*: Szíp* (szép).
60. **Nasim***: In the nursery, er, kumplilevis, kumpiebíd* (correct: krumpliebéd).

3.3. Quantitative differences. The problem of /o/ and /a/

The following example may be the result of interference due to similar sounding. The word *chocolate* is well-known to the children from the English language. This is probably the reason why they use the same vowel in the Hungarian word as they use in English: *csaki* [ʧjki] – csoki [ʧoki].

However, in the boy's speech we may discover a great amount of underextension mixing the two vowel sounds /o/ and /a/.

61. **Nabil***: Pijas* (correct: piros).

62. **Nabil***: vanat* (correct: vonat)

3.4. Vowel phoneme discrimination test

In order to find out what the situation really is with the above analysed sounds, why are they so problematic for the children, I have decided to set up a phoneme discrimination test. Pairs of words differring only in one vowel sound which is usually in a midword position were gathered and the children were asked either to repeat them or to tell whether they heard the same words or different ones. There were word pairs whose meanings were supposedly known for the children:

fel – fél, rak – rák

However, sometimes the children were given words which had no meanings at all but could have been possible Hungarian words owing to their phonotactics.

beb – béb,

In these sittings the children were separated from each other. They were in separated rooms with one of the interlocutors.

3.4.1. Perception and production of qualitative differences concerning vowel sounds

First the discrimination of the sounds /e/ and /e:/ were tested. We wondered whether they heard the difference between these sounds and also if they could tell us the differences in meanings. The following are the excerpts from the protocols of the recordings made on December 1, 1996 (the children's ages are 5;2,9 and 4;1,28) (The English translation is given in capital letters.)

fel (UP) **– fél** (BE AFRAID, HALF)

Nabil (4;1,28)**:**

(63) **I1:** Mit jelent az, hogy **fél**?
WHAT DOES **FÉL** MEAN?

Nabil: Fel? (the pronunciation of the vowel is incorrect)

I1: Igen.
YES.

Nabil: Én elfelejtettem azt. Nem tudom azt.
I HAVE FORGOTTEN IT. I DON'T KNOW IT.

I1: És azt hogy **fel**?
AND WHAT IS **FEL**?

Nabil: Fel? (pause)

I1: Az a fel. Fel. (she shows the direction) Nem le, hanem fel.
NOT DOWN, UP.

Nabil: (interrupts) Magyarul?
IN HUNGARIAN?

I1: Ühm.

Nabil: *Uph*.

I1: Hm? Ez nem magyarul van, hanem angolul. És mi az a **fél**?

THIS IS NOT HUNGARIAN, THIS IS ENGLISH. AND WHAT IS **FÉL**?

Nabil: **Fél?** (the pronunciation of the vowel is correct, he thinks for a short time:) *Half.*

Nasim (5;2,9)**:**

(64) **I2:** Mondok két szót egymás után, és mondd meg ugyanazt jelentik-e vagy mást. **Fel** meg **fél**

I'M GOING TO SAY TWO WORDS. TELL ME WHETHER THEY HAVE THE SAME MEANING OR THEY MEAN DIFFERENT THINGS. **FEL** AND **FÉL**.

Nasim: Más.

DIFFERENT.

I2: Mást jelentenek?

ARE THEY DIFFERENT?

Nasim: Mhm. (nods)

I2: Mit jelent a **fel**?

WHAT DOES **FEL** MEAN?

Nasim: fent.

UP.

I2: És a fél? Mit jelent az, ha valaki fél?

AND WHAT IS **FÉL**? WHAT DOES IT MEAN WHEN SOMEBODY IS **FÉL**?

Nasim: ijedni

BE SCARED.

The girl can distinguish between the vowels in question and knows the meanings of the words. However, we are uncertain about the boy. The first imitation was not very successful when he was supposed to pronounce the sound /e/. However, the second vowel i.e. /e:/'s pronunciation is correct in the word **fél**. He knows the meaning of both words.

The following is the distinction of /a/ and /á/:

rak (PUT) – **rák** (CANCER, LOBSTER, SHRIMPS)

Nabil:

(65) **I1:** És mi az, hogy **rák**?

AND WHAT IS **RÁK**?

Nabil: Rá?

I1: **Rák. Rák**.

Nabil: *Chewing*.

I1: Nem **rág**. **Rák**.

NOT **RÁG** (chewing). **Rák**.

Nabil: (he says it louder) *Chewing*!

I1: Az **rág**. De mi az a **rák**?

THAT IS CHEWING. WHAT IS **RÁK**?

Nabil: *Chewing!*

I1: És mi az, hogy **rak**?

AND WHAT IS **RAK**?

Nabil: **Rak? Ráák**.

I1: Mi az?

Nabil: **Rák**?

I1: Mutasd nekem. Mi az, hogy **rak**?

SHOW ME WHAT IS **RAK**.

Nabil: (unclear)

I1: Angolul sem?

NEITHER IN ENGLISH?

Nabil: Angolul se.

NEITHER IN ENGLISH.

I1: Rakd ide a kezed! (she puts Nabil's hand into her hand) Na, ez a **rak**. (she picks up a car) Ide rakom a dudút. Most meg ide rakom a dudút.

PUT YOUR HAND HERE. WELL, THIS IS **RAK**. I'LL PUT THIS CAR HERE. AND NOW I'LL PUT THIS CAR HERE.

Nasim:

(66) **I2:** És a **rak** meg a **rák**? Ugyanaz?

ARE THEY THE SAME?

Nasim: Mm (shakes her head)

I2: Hát a **rak**, az mit jelent?

AND WHAT DOES **RAK** MEAN?

Nasim: Kavics.

PEBBLES.

I2: **Rak**?

Nasim: Mi az? **Rag**?

I2: **Rak**. Hát én kérdezem. Nem tudom, mi az, hogy **rak**. Te tudod? **Rak**.

I DON'T KNOW WHAT **RAK** IS. DO YOU?

Nasim: Öö.. nem tudom.

I DON'T KNOW.

I2: És a **rák**, az micsoda?

AND WHAT IS **RÁK**?

Nasim: **Rág**?

I2: **Rák. Rák**.

Nasim: Ezt se tudom. Aki **rág**, aki **rág** valamit.

I DON'T KNOW IT, EITHER.

SOMEBODY WHO CHEWS THAT CHEWS SOMETHING.

I2: Akkor hogy hívják azt az állatot, amelyiknek ollója van? Tudod, és így hátrafelé megy a vízben. A tengerben van.

WHAT DO YOU CALL THE ANIMAL WHO HAS SCISSORS? AND GOES BACKWARDS IN THE SEA.

Nasim: Hal?

FISH?

I2: Hát nem hal.

NO, NOT FISH.

Nasim: Krokodil?

I2: Nem,

Nasim: Delfin?

Nasim: Kacsa?

DUCK?

I2: Kacsa? A rákot nem ismered?

DUCK? DON'T YOU KNOW SHRIMPS?

Nasim: **Rák**?

In both examples the trouble is double. Not only do they not distinguish between /a/ and /á/ but also the problem of the opposition

according to the presence of voice or its absence comes into play (the opposition of /g/-/k/) as it was mentioned in the section on the consonant sounds (see ex. 36, p. 54.).

It is also interesting to see that the girl gets confused when she is asked about the meaning of *rak.* Her answer *kavics* makes us believe that she does not even know at first what language the word belongs to and she associates the word with the English word *rock*. This must be a kind of semantic interference since she puts the word in the right semantic field in English, that is why she says *pebble* which is also a kind of stone.

In order to avoid such methodological flaws, CVC sequences were given to the children in which the consonants are the same just the vowels are different.

bab (BEAN) **– báb** (PUPPET)

Nabil:

(67) **I1:** Nabil! Mondod utánam azt, hogy **bab** meg **báb!**
(pause) Mondjad, légy szíves!
NABIL, PLEASE, SAY **BAB** AND **BÁB.**

Nabil: Bab.

I1: És a másik?
AND THE OTHER ONE?

Nabil: Báb.

Nasim:

(68) **I2:** **Bab-báb.** Ugyanaz a két szó, hogy bab meg báb?
ARE THEY THE SAME?

Nasim: Nem.

beb – béb

Nabil:

(69) **I1:** Most utánam azt, hogy **beb-béb!**
AND NOW REPEAT **BEB-BÉB.**

Nabil: Beb - béb.

Nasim:

(69) **I2:** És az, hogy **beb** meg **béb**? Ugyanazt mondtam?
DID I SAY THE SAME?

Nasim: Mit?
WHAT?

I2: **beb-béb**. Ugyanúgy mondtam?
DID I SAY THE SAME WAY?

Nasim: nem.
NO.

I2: Hát? Utánam tudod mondani? **Beb** meg **béb**.
CAN YOU REPEAT? **BEB** MEG **BÉB.**

Nasim: **beb** meg **béb**

This task was easier for them and without any troubles they could perceive and produce the difference between the pairs of words.

3.4.2. The distinction of long and short vowels

As it was shown in Table 25 (p.56), in the Hungarian language concerning the vowel sounds there are quantitative differences. These differences make changes in the meanings of words. Quite a few vowel sounds have a short and a long variant. This phenomenon is not present in

either English or Persian. The ability of children to make distinction between the short and the long vowels is shown in the following examples.

/ő/ őrült (MAD) **– /ö/ örült** (WAS HAPPY)

Nabil:

(70) **I1:** És mi az, hogy **őrült**? Hú, de őrült ez az ember.
AND WHAT IS **ŐRÜLT**? HOW MAD THIS PERSON IS!

Nabil: *Happy.*

I1: És akkor mi az, hogy **örül**?
AND THEN WHAT IS **ÖRÜL**?

Nabil: (repeats) **Örül**? *Happy.*

I1: És az, hogy **őrült**?
AND **ŐRÜLT**?

Nabil: *Happy?*

I1: Hát, igen. És mi az, hogy *mad*? *I am mad*. Mit jelent?
WELL, YES, AND WHAT IS *MAD? I AM MAD*? WHAT DOES IT MEAN?

Nabil: (uncertain) Magyarul mondjam?
SHALL I SAY IT IN HUNGARIAN?

I1: Igen. Mi az, hogy *I am mad*?
YES. WHAT IS *I AM MAD?*

Nabil: *I'm mad*. Azt nem tudom. Elfelejtethem. Anya nem mondta azth.
I AM MAD. I DON'T KNOW THAT. MUMMY DID NOT TELL ME.

Nasim:

(71) **I2:** És az a kettő ugyanaz-e, ha azt mondom, hogy **őrült** meg **örült**?

IS IT THE SAME IF I SAY **ŐRÜLT** AND **ÖRÜLT**?

Nasim: Az.

YES.

I2: Ugyanaz?

IS IT THE SAME?

Nasim: Mhm (nods)

I2: És az mit jelent?

AND WHAT DOES IT MEAN?

Nasim: **Örölt**?

I2: **őrült.**

Nasim: Boldog lett.

HE BECAME HAPPY.

I2: És az **örült**?

AND **ÖRÜLT**?

Nasim: Boldog lett.

HE BECAME HAPPY.

Both children think that the long /ő/ and the short /ö/ sounds are the same. They cannot feel the difference and they do not even think that the difference in the sounds can result in a totally different meaning. The same can be said about the sounds /o/-/ó/, /ü/-/ű/, /u/-/ú/ and /i/-/í/ (see examples below):

kór (ILLNESS) – **kor** (AGE)

Nabil:

(72) **I1:** És mi az, hogy **kór**?
AND WHAT IS **KÓR**?

Nabil: Korrr?

I1: Kór.

Nabil: Kórrr?

I1: Tudod mi az a betegség, Nabil?
DO YOU KNOW WHAT IS DISEASE, NABIL?

Nabil: Igen.
YES.

I1: Mi az? (expects a Hungarian explanation)
WHAT'S THAT?

Nabil: *Sick.*

I1: És mi az a **kor**?
AND WHAT IS **KOR**?

Nabil: **Kór**?

I1: Nem **kór**, mert az a betegség, hanem **kor**.
NOT **KÓR** BECAUSE THAT IS A DISEASE, **KOR.**

Nabil: (mumbles something)

I1: Nem.
NO.

Nabil: *Sick.*

I1: Az a **kór**. De rövid ó-val: **kor**. (pause) Milyen kor?
Közép**kor**.

THAT'S **KÓR.** BUT WITH A SHORT O:

KOR. WHAT AGE? MIDDLE AGE.

Nabil: Közép**kór**? (uncertain, he apparently doesn't know the word)

Nasim:

(73) **I2:** **Kór** és **kor.** Ugyanaz?

ARE THEY THE SAME?

Nasim: Igen.

YES.

tűzet (GETS SOMETHING PUT OUT) – **tüzet** (FIRE + Acc.)

(74) **I2:** **Tüzet** és **tűzet**

Nasim: Igen.

I2: Ugyanazt mondtam?

DID I SAY THE SAME THINGS?

Nasim: Igen.

I2: És az mit jelent?

AND WHAT DOES IT MEAN?

Nasim: Azt, hogy tüzet raktak ott, hogy tudjanak főzni.

THAT THEY MADE FIRE TO BE ABLE TO COOK.

kint (OUTSIDE) – **kínt** (PAIN + Acc.)

Nabil:

(75) **I1:** És mi az a **kint**?

AND WHAT IS **KINT**?

Nabil: Kinth.

OUT.

I1: Most hol vagyunk? Kint?

WHERE ARE WE NOW? OUT?

Nabil: Most bent.

WE ARE IN.

I1: És mi az a **kínt**?

AND WHAT IS **KÍNT**?

Nabil: **Kint**?

I1: **Kínt? Kín**.

Nabil: **Kint**.

I1: Nem **kint. Kínt**.

Nabil: **Kint**.

I1: Kínt.

Nabil: **Kínt.**

Nasim:

(76) **I2:** És azt hogy **kint** meg **kínt**?

AND WHAT IS **KINT** AND **KÍNT**?

Nasim: Igen.

YES.

I2: Ez is ugyanaz?

ARE THEY THE SAME?

Nasim: Igen.

YES.

I2: És ez mit jelent?

AND WHAT DOES IT MEAN?

Nasim: Azt, hogy aki ki akar menni, az kimegy.
IT MEANS THAT IF SOMEBODY
WANTS TO GO OUT, HE WILL GO OUT.

húzat (GETS SOMETHING PULLED) – **huzat** (DRAUGHT)

Nabil:

(77) **I1:** Tudod, hogy mi az a **huzat**?
DO YOU KNOW WHAT IS **HUZAT**?

Nabil: Huzat? *Pull. Pulling*.

I1: És mi az a **húzat**?
AND WHAT IS **HÚZAT**?

Nabil: *Pulling.* (louder)

I1: És mi az a **huzat**? Mondjad csak utánam: **huzat**.
AND WHAT IS **HUZAT**? REPEAT IT,
PLEASE.

Nabil: *Pull. Pulling*.

I1: És magyarul?
AND IN HUNGARIAN?

Nabil: Magyarul? (he is furious) Hát ez a magyarul!
THIS IS IN HUNGARIAN!

I1: De én nem hallom mit mondasz!
BUT I COULDN'T HEAR WHAT YOU
WERE SAYING.

Nabil: *Pull.*

I1: Ez az angol. Magyarul mond!
THIS IS ENGLISH. SAY IT IN
HUNGARIAN.

Nabil: Ez angol?

IS THIS ENGLISH?

I1: A *pull out* magyarul hogy van? (pause) **Huzat** vagy **húzat**?

WHAT IS PULL OUT IN HUNGARIAN?

IS IT **HUZAT** OR **HÚZAT**?

Nabil: **Húzat** vagy **húzat**? (he pronounces long vowels in both words)

The following examples show the ability of the children to make distinction between short and long vowels. The words do not denote anything, they are just CVC sequences.

bőb – böb

Nabil:

(78) **I1:** **Bőb - böb.**

Nabil: Böb....

I1: Másik? Még egyszer: Bőb - böb.

Nabil: Bőb - böbh.

bíb – bib

Nabil:

(79) **I1:** **Bíb - bib.**

Nabil: Bíb - bíb. (both vowels are long)

Nasim:

(80) **I2:** És a **bíb** meg a **bib***?* Ugyanúgy hallod őket?

DO YOU HEAR THE SAME?

Nasim: Igen.

YES.

I2: Akkor mondd te is utánam!

THEN REPEAT THEM, PLEASE.

Nasim: Mit mondtál?

WHAT DID YOU SAY?

I2: **bíb** és **bib**.

Nasim: bib és bib (both vowels are short)

bób – bob

Nasim:

(81) **I2:** Most **bób** és **bob**.

NOW BÓB AND BOB.

Nasim: **bob** és **bob** (both vowels are short)

bub – búb

Nabil:

(82) **I1:** **bub - búb.**

Nabil: Bu - búh.

bűb – büb

(83) **I1:** **Bűb.**

Nabil: Bűb.

I1: **Büb.**

Nabil: Büb.

In the majority of cases even this task proved to be too difficult for the children. They cannot hear the quantitative differences, consequently they cannot even produce them. Hungarian monolingual children develop the ability of discrimination of long and short vowel sounds a little earlier but experts dealing with speech impairement claim that at ages 3-6 it is often the semantics and context that help them figure out which meaning of these word pairs are to be used.

4. Conclusions

1. From among the allophones of the phonemes /p/, /t/, /k/ it is the aspirated allophones which are the most frequently occurring variants in the children's speech. It is the more strongly marked allophone and it plays an emphasized role.

2. There is an obvious underextension in the case of allophones since there is no conscious discrimination in the usage of the allophones. The children seemed not to pay attention to whether aspiration happens according to any rules related to any particular language. Aspiration, therefore, must have a cross-linguistic character, and is not limited to the language in which it is appropriate but is also extended to another language or languages.

3. There is an obvious overgeneralization, too, regarding the position of the aspiration. In the Hungarian phonological system there are no examples of any aspirations except in emotional, emphatic expressions. Aspiration at the end of the word is not acceptable. However, we found several examples where these children transferred aspiration into the syllable-closing position.

4. Since some features are partly identical with the ones made by Hungarian monolinguals, we can assume that the order of acquisition of features coincides with that of the Hungarian children. Concerning the other types of pecularities, namely aspiration: it is an unusual phenomenon in Hungarian, and apart from emotionally overburdened situations there is no aspiration at all. However, even having spent more than four years in Hungary now, the children still aspirate their voiceless plosives giving thus a special accent to their Hungarian speech. There should be some psychological reasons behind this phenomenon; maybe this is the way they want to show their peers that they are different. In sum, we can state that the feature acquisition of these children follow the pattern: aspiration, voicing

and the quantitative differences. Metric phonetics is opposed to segmental phonetics. Here the depth of feature specification is important.

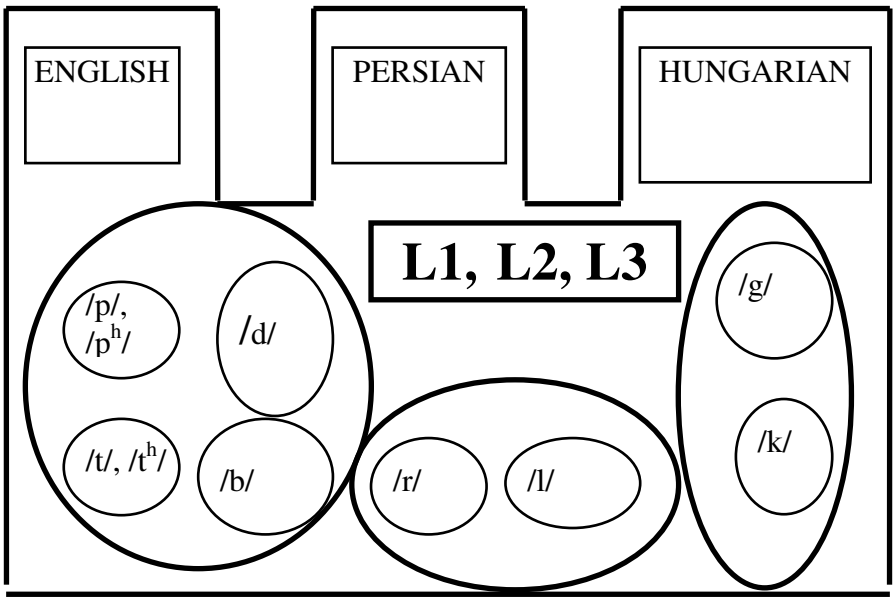

Table 28. The distribution of consonant sounds of trilingual children

5. Concerning the vowel sounds we can say the following:

(i) there is an interference of English due to the stress and rhythm differences in the two languages, namely English and Hungarian. English has a big influence upon Hungarian.

(ii) Phoneme discrimination causes some problems due to different reasons. First of all, it is probably due to the Persian influence that they tend to pronounce the sound /e:/ as /i:/. Secondly, as our sound discrimination test has shown they cannot hear the differences in respect of the quantitative features of the Hungarian sounds. This phenomenon is entirely new for them since it does not exist in their other two languages.

6. Based on all the pecularities of the children's speech discussed thus far, we propose the following: there is a very loose set of phonemes, shared by all the languages spoken by the child, from which the more

strongly marked allophone is retrieved irrespective of the actual language for which it is intended. Minimal pairs of phonemes are groupped together, and also all the allophones of the phonemes are represented. There are elements at the phoneme level and there are also elements at the level of the minimal pairs. With language development the phonemes get separated according to the actual language in use.

The analysis at the phonetic level tends to support the standpoint that there is one common centre for all the phonemes which is built up according to the characteristic features of the phonemes. The ones being close to each other are tightly linked irrespective of the language in which the phoneme actually exists.

CHAPTER 4

MORHOPHONOLOGICAL DEVELOPMENT

In this chapter I will discuss the two trilingual children's phonetic peculiarities in their Hungarian speech in the light of the development of their morphophonological system. One of the biggest typological differences between Hungarian and English is that at the level of morphology. As a result, morphophonology is exhibited to a greater degree in Hungarian than in English. In English it is mostly exhibited by irregular forms of Past Tense such as *go – *go + ed – went.* In Hungarian it plays a greater role since, owing to the agglutinative character of Hungarian, phonetic changes which may not happen within the lexical morpheme might occur at the border of the root morpheme and the grammatical morpheme. The main concern is to show evidence of how linguistic awareness is represented in the children's speech, how they realize the morphophonological questions at the morphophonetic level.

When proceeding from the base form to the derivated form of a word, some transformational rules must be taken into consideration. If they are neglected, the phonology of the word will be reflected at the phonetic level. This, at the same time, tells a lot about the linguistic competence of the language user. When connecting the morphemes within a lexeme, two principles may come into play: either the phonetic or the phonological one. In the examples given in this chapter the dominance of the phonological principle over the phonetic one will be demonstrated.

This is not an unusual phenomenon in Hungarian child language to use the phonological forms (the base forms) instead of the derivated ones. However, this occurs in the case of Hungarian monolingual children at age

three. Our subjects are surrounded by Hungarian children of four and five when the base forms start appearing in their speech. There is no similar input since everyone in their environment has already passed this period.

In this chapter I will demonstrate how these children function like little linguists at a certain age. At the beginning of their Hungarian language development they used grammatically correct utterances. However, after spending one year and three months in Hungary, when their biological age was 4;2,23 and 3;2,21 they started using the language with the conscience of native speakers. The examples analysed in this chapter are taken from Protocols No. 22 (see Appendix pp. 116-124); No. 24 (pp. 130-132); No. 26 (pp 133-140). The recordings took place on December 15, 1995; December 25, 1995; and June 20, 1996.

Hungarian children of their age, and also their peers at the kindergarten, have already gone through this period of language development, so they could not have imitated the forms analysed below. None of their peers, nor their teachers at the nursery used similar language forms. Nasim's and Nabil's Hungarian language development follows the same way as that of the Hungarian monolingual children. They repeat the developmental characteristic features of three and four year olds among four and five year old Hungarian monolingual children. However, this period lasts for a very short time and there is no evidence of the recurrence of these features later. They are unique, and are hardly ever repeated. It will be also shown that in spite of the interferences and the languages' influences on each other, the language development of their Hungarian corresponds with that of Hungarian monolingual children. At the same time, examples will be shown to prove that Nasim and Nabil treat the language in a slightly different way since they extend these phenomena to features which are not concerned at all in the case of Hungarian monolingual children. Their analysis is deeper and more thorough than that of Hungarian monolingual children.

A part of the examples taken from our data presented here corresponds with, another part of them differs from how Hungarian monolingual children use the language. The following 7 classes of morphophonological peculiarities can be distinguished:

1. The lack of assimilation

Two grammatically correct morphemes – the lexical morpheme and the grammatical morpheme – are put together but the expected phonetic changes are ignored at the borders of the morphemes.

e.g. *olyan* + *val* (correct: olyannal)
such with

84. **Nabil:** Nem olyanval szoktam aludni.

Here, the assimilation is missing. The child, who has already acquired the rule that the Hungarian suffix of Instrumental Case is the allomorphs *-val, -vel*, analyses the phonemes predicted, neglects the rule of assimilation, according to which the initial phoneme of the suffix should assimilate with the final phoneme of the root. The child follows the phonological principle and uses the sound realization of the original phoneme.

2. Vowel harmony

Two correct morphemes – the lexical morpheme and the grammatical morpheme – are put together, the phonetic changes are ignored at the borders of the morphemes, plus there is no vowel harmony.

Vowel harmony is something typical of the Hungarian language. This means that the vowel sound of the root morpheme determines the vowel sound of the suffix. If the root morpheme contains front vowels, the

suffix will contain a front vowel, too. However, if the root morpheme contains back vowels, the suffix will contain a back vowel sound. Mixed vowel roots take back vowel suffixes.

e.g. *ilyet* + *val* (correct: ilyennel),
such with

85. **Nabil:** Én, én mindig ilyetval szoktam aludni. Tudod?
Nasim: Tudom.

In this example, it should be admitted that the two morphemes are correct only from a sociolinguistic point of view. The formal language use requires the word *ilyent* ('such' + Accusative marker). The word *ilyet* is the colloquial use of the same word. This example is very similar to the example mentioned in **1.**. However, here, in addition, the vowel harmony is incorrect.

There has not been any findings so far in normally developing Hungarian monolingual children's speech when they would have broken the rule of vowel harmony. Due to the front vowels of the root morpheme, a suffix with a front vowel could have been expected. This rule is underextended, and so, a suffix with a back vowel is applied. This means vowel harmony, which is exhibited in Hungarian unlike in English, is something new that the children have to learn as a rule.

3. Low vowel lengthening

e.g. *párna* + *d* (correct: párnád), *róka* + *t* (correct: rókát)
cushion your, fox Accus.

86. **Nabil:** Itt van a pár .... , pár... , Nasim, itt van a párnad

87. **Bori:** Erre pedig rajzolunk. Mit rajzoljunk?

Nabil: Egy rókat.

Bori: Rókát? Az nagyon nehéz. Nabil megpróbál egy rókát rajzolni?

Nasim: Én is rókát

The low vowels /e/ and /a/ are short in word-final position, but long if they are followed by a grammatical morpheme. The above two examples *párnad* and *rókat* are also due to the insufficient representation of the knowledge of morphophonological changes going on at the borders of the morphemes at the morphophonetic level. The altering of the root-ending vowel sound /a/ to /á/ before a suffix of Possessive or Accusative is not natural in these children's speech, unlike in Hungarian child language.

The word-ending /a/ and /e/ are always short vowels if the noun is in the Nominative Case. In other Cases, when a grammatical morpheme is added, they become long. Still, Nabil uses the short vowel in other grammatical cases, which gives evidence that it does not depend on the frequency which vowel sound is used by him. This raises the question whether the behaviourist view is true or not. In Nabil's case probably the answer is negative. Hungarian children acquire this rule at a very early age of language processing, among the very first rules.

4. The lack of liason

In the following cases the liason is omitted, which is common in Hungarian monolingual children's language development, too.

e.g. *gombóc* + *t* (correct: gombócot), *három* + *t* (correct: hármat)

noodle Accus. three Accus.

88. **Bori:** Mit fõz?

Nasim: Gombóct.

89. **Nasim:** Most háromt adok. Inkább az úgy lenne, hogy ezt is csak kettõt kérjél, jóvan? Az jó lenne, hogyha csak kettõt vinnél, jóvan?

MacWhinney (1976) claims that in cases like this the allomorph *-t* would be the common denominator, however, there are five allomorphs of the Accusative: *-ot, -öt, -et, -at* and *-t.* It might very well occur that these trilingual children learnt these forms from their peers this way (Lengyel 1981).

5. The lack of liason in past tense verbs

e.g. *eles* + *t* (correct: elesett)

fall Past Tense

90. **Nasim:** Jó. Hagyjál békén. Te mondjad.

Nabil: Nem. a bácsi nem .... õ csak elest.

Nasim: Elesett.

Nabil: Csak elest. Hogy?

This example is very similar to the above mentioned ones, almost identical with example (88) and (89) in **4.** The only difference is that in this case it is a verb in the past tense, where the liason is omitted. This strengthens the viewpoint that certain phenomena are not characteristic of just one part of speech. They can be extended to different parts of speech, like in this case to the past tense of a verb.

6. Metric phonetics

In metric phonetics the root morpheme rules the other (grammatical or unstressed) morphemes. Here, the wrong choice from among the allomorphs *-ot, -öt, -et, -at* and *-t* of the Accusative causes the problem.

e.g. *öt* + *-et* (correct: ötöt)
five Accus.

91. **Nasim:** Hozok neked, jóvan? És felnõttnek is hozzak?
Nabil: Aha.
Nasim: Jóvan. És hányat?
Nabil: *Erm,* ötet.

92. **Nabil:** Csak mondom ötet kérek. Ötet kérek.

Here the Accusative case marker is present, however, it is incorrect. One should really feel the language in order to be able to decide when to use *-ö-* and when to use *-e-* in suffixes or as liasons with words containing the vowel sound *-ö-* in their roots (Papp 1997).

7. Simultaneous phonetic and phonological analysis

In the following examples incorrect root-ending consonant, grammatically correct suffix are presented and the assimilation is ignored.

e.g. *hallgas* *j* *atok meg* (correct: hallgassatok meg),
listen Imp. 2nd Pers. Plural
megmutas *j* *am* (correct: megmutassam)
show Imp. 1st Pers. Sing.

93. **Nasim:** Hallgasjatok meg bennünket, és édesebb énekünk és, ha dalunk tetszik,
Nabil, Nasim: mi szívesen énekelünk virradattól estig.

94. **Nabil:** Nekem hosszú van
Nasim: Neked hosszú?
Nabil: Megmutasjam?
Nasim: Nem, nem kell megmutatni. Majd ín teszem bele, jóvan?

If we start analysing these two examples, the following will be clear: from a phonological point of view they are perfect. The roots are modified according to the morphophonological rules i.e. in *hallgat* 'listen' and *mutat* 'show' the final *-t* is replaced correctly by a *-s* before a suffix of the Imperative *-j*. This, most probably, comes from the more frequently heard Second Person Singular Imperative *hallgass, mutass*. It also means that the most frequently heard form is treated by the child as the base form. The initial phoneme of the suffix should also assimilate with the root-ending *-s*, however, this rule is not employed by the children. Since due to the agglutination, there are more suffixes coming up, the phonological changes should concern them, too. This is what the children ignore, and no matter how perfect from the morpheme isolation point of view whatever they said, it sounds strange. They try to make the lexeme transparent from the point of view of the morpheme structure. We must admit, at the same time, that Hungarian children go through the same stages but not to the same extent. They do not analyse their language so thoroughly and omit this transformational rule.

Most of these phenomena are present in Hungarian monolingual children's speech development, though at a younger age, at about the age of three.

As it was mentioned before, these children are acquiring Hungarian from their peers and from their teachers at the kindergarten. It is hard to believe that they have heard any of these forms. It is more probable that they are going on the same route in the ontogenesis of language as their Hungarian monolingual peers, just a little later in time. (The twin-phenomenon is worth mentioning here, since they – just like twins – support each other in developing language items.) This hypothesis seems to support the universal features of language acquisition, and also what Lengyel (1981) and Gósy (1984) related to the Hungarian language claiming that children after the imitation period start to analyse their language, discover the rules spontaneously, and try to use them overextendedly without restrictions. This is why Hungarian children say *majomt* (correct: majmot)*, lót* (correct: lovat)*,* and our subjects *háromt* (correct: hármat)*,* and Hungarian children say *buszval* (correct: busszal) and our subjects *megmutasjam* (correct: megmutassam).

It should be mentioned, however, that the girl was 3;5,22 when the mother started to complain about her English usage. She told me that before Nasim had not had any problems with the irregular forms of the words. Now she started using *falled* instead of *fell, catched* instead of *caught.* We also have an example in our data for the latter one: *I was catched!*

All this implies that both multilingual and monolingual children acquire their languages consciously, i.e. there are a lot of learning elements in the acquisitional processes. They discover certain regularities in their languages, build hypotheses, and try to check them, i.e. apply the acquired rules in different contexts. The advantage of multilingual children in this respect is in the duration of time, since the more languages they acquire the

better skills they develop in drawing inferences about the languages themselves. Hungarian monolingual children face this phenomenon at age around three, the trilingual children in the study struggle with it in terms of English at age 4;6 and 3;6, and in terms of Hungarian having spent about two years in Hungary. The whole process is accelerated by the fact that they have already had some experience in this respect in their first language. With this experience they prove that they have a certain kind of metalinguistic awareness.

CHAPTER 5

LEXICAL DEVELOPMENT

This chapter will describe in details how the children developed their Hungarian vocabulary. The way from one-word utterances to multi-word sentences, the vocabulary growth will be shown. I will also highlight the order of the acquisition of lexical morphemes. The second part is a sentence length analysis.

1. Statistics of words uttered in each recording

The following charts (Tables 29-34) show the children's Hungarian language development from the lexical point of view. The columns display the number of words (tokens) uttered by the children during the recordings. The utterances measured by the number of tokens give evidence of how the children were motivated in verbal communication. All the recordings are described here, not only the recordings with Hungarian as the matrix language but also the ones with English as the ML.

Tokens are all the words uttered during a session without taking into consideration whether they are used just once or several times. In this way a general picture of the children's attitude to verbal communication can be traced. There are recordings when they talk a lot and also some when they are shy, reserved, not very talkative. The reasons for their different attitude towards verbal communication were different. If they liked the toys I gave them, they were more motivated to communicate with me. If they were ill or tired, or sometimes moody, they would not talk as much as I wanted them to. These emotions could not have been controlled, and, as a result, there are 90 minute recordings as well as 15 minute ones.

I will present 6 tables below.

(i) The first table (Table 29) shows the number of tokens of the recordings from October 7 to November 10, 1994. They are the children's conversations with the mother and also with a Hungarian interlocutor who used English and Hungarian mixed with the children.

(ii) The second table (Table 30) shows the number of tokens in February and March, 1995. These recordings are all in Hungarian, with Hungarian as the matrix language.

(iii) The third table (Table 31) shows the number of tokens in April where the matrix language is again Hungarian except for the taping recorded on April 11, 1995. Then the mother recorded their conversation at home and the matrix language is English.

(iv) The fourth table (Table 32) contains the recordings done in May and June 1995 with Hungarian as the matrix language exclusively.

(v) The fifth table (Table 33) shows the last two recordings in the first year of their stay in Hungary. Since the family moved to another town in August 1995, most of the coming up tapings were recorded either with just the presence of the parents or the kindergarten teacher or the children alone. Sometimes Hungarian students of English visited them and made recordings. In the recordings with their parents present the matrix language is English, with the kindergarten teacher – Hungarian, when they are alone – Hungarian and when the students are there – Hungarian.

(vi) The sixth table (Table 34) presents the tokens uttered by the children in the four tapings recorded in 1996. All the recordings' matrix language was Hungarian in spite of the fact that the interlocutors first had conversations with the parents in English. The children did not interfere in their talks but when the interlocutors started talking to the children in Hungarian, they used only Hungarian to which the children also responded in Hungarian.

The figures vertically shown are the number of tokens, and dates on the horizontal line are the time of the tapings. From left to right the first columns are Nabil's, the middle ones are Nasim's and the third ones are the interlocutor's tokens.

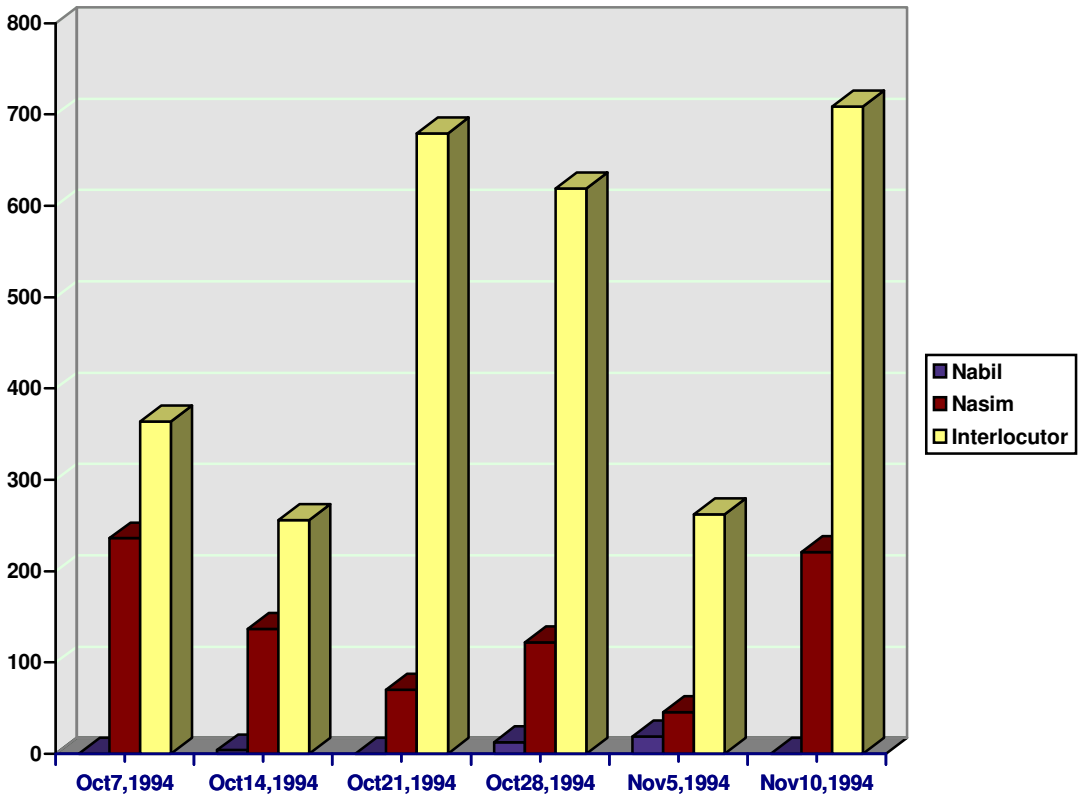

Table 29. Number of tokens used in the first month of recording

In the first two recordings the interlocutor was the mother, the language mode was bilingual and the matrix language was English. They had conversation about the family, their home and the daily routines at the nursery. It was only from the third recording that the interlocutor was Hungarian. From that point the language mode was trilingual with Hungarian being the matrix language. The interlocutor quite frequently used

English and so did the children in order to keep the conversation flowing. They were mainly looking at picture books or playing.

Both children participated in all tapings, however, Nabil, especially in the very beginning, mainly used just means of non-verbal communication.

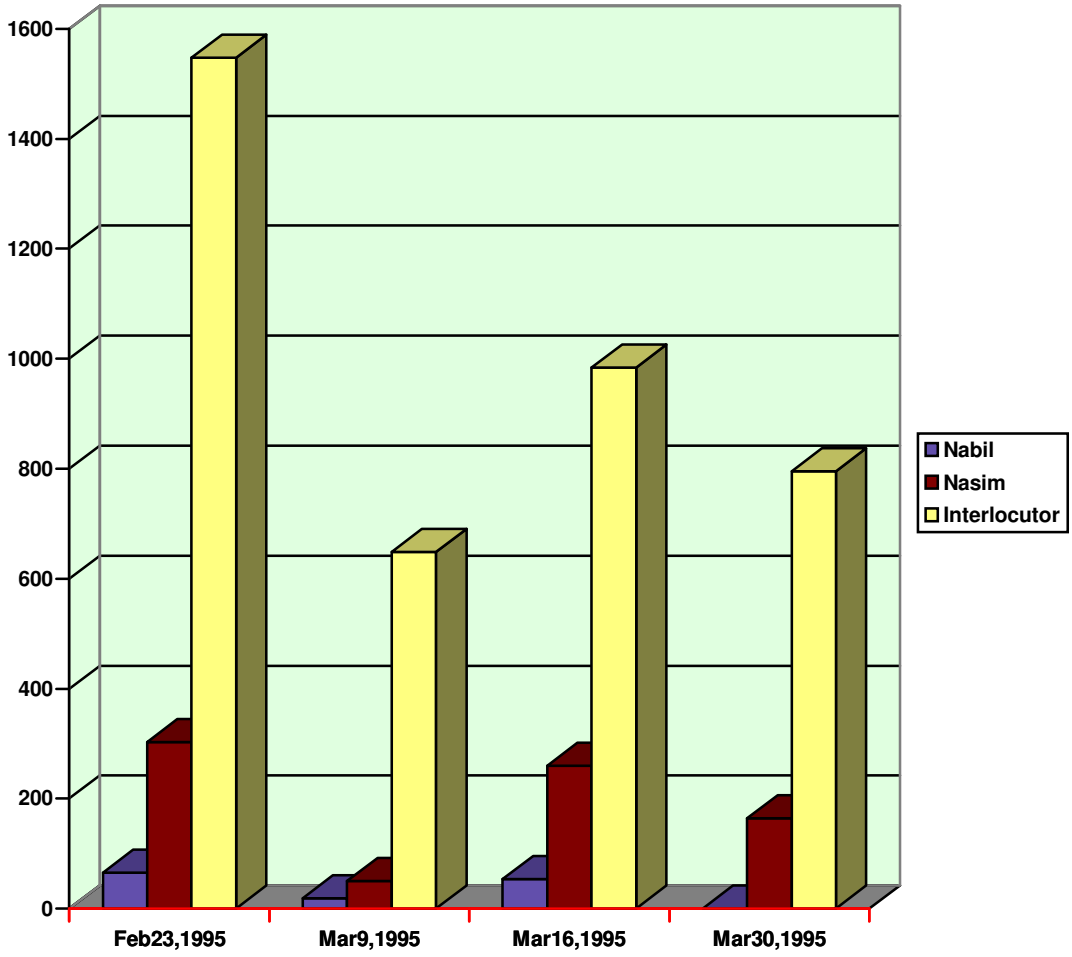

Table 30. Number of tokens in February-March 1995

As it is seen in the chart, Nabil starts verbal communication although he stays behind his sister in all recordings. His non-verbal behaviour also expresses his reservedness. However, it must be admitted that he always

took an active part in the tapings, he always was there and expressed that he wanted to belong to the small group. These tapings were all proceeded by a Hungarian interlocutor who pretended that she did not speak English at all. The children spoke in Hungarian, but since the mother was also present, there were moments when they felt more comfortable with the mother and rushed up to her for a couple of words.

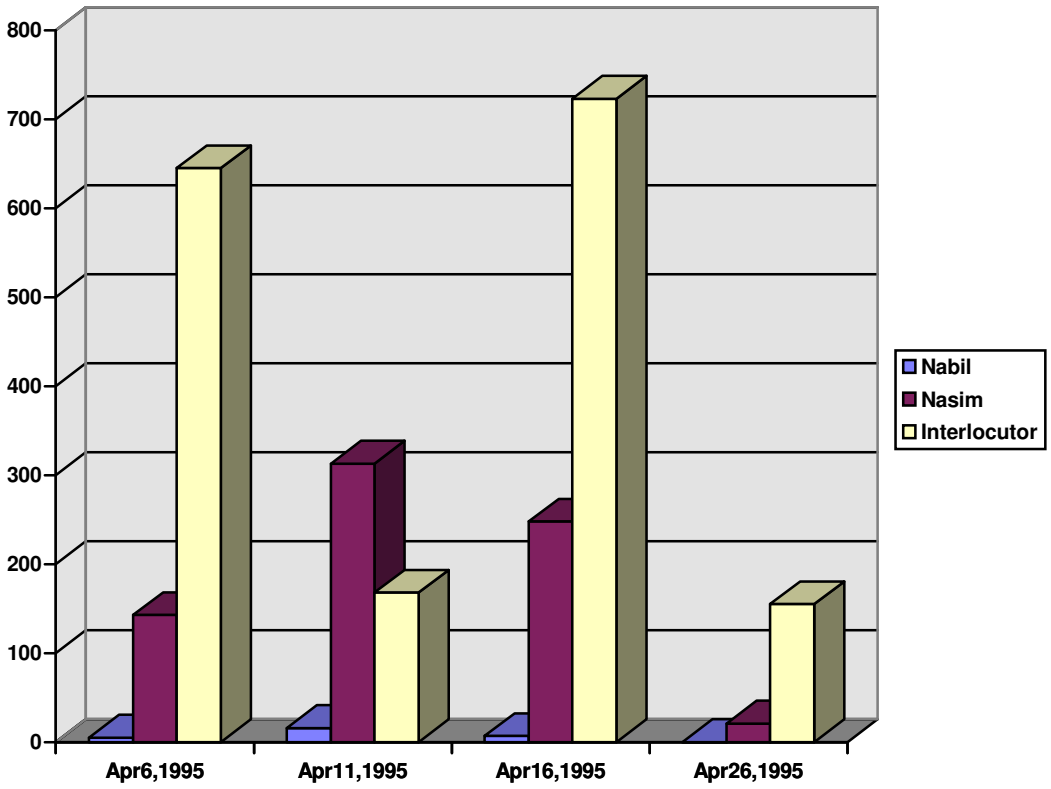

Table 31. Number of tokens in April 1995

This is again a period when Nabil is very passive during the recordings. This is partly because he was ill, and partly because he preferred playing with the toys the interlocutor showed the children. April 11th is a recording made by the mother; the ML is English and still the boy speaks very little as compared with the girl, which gives evidence of the fact that it

is not the language barrier that makes the child so shy, this is his general language behaviour irrespective of the language in use.

If we compare the two children's vocabulary growth in the first half a year, it is obvious that Nabil was slower at acquiring new words and his transition into syntactic combinations was less clear and not marked by a rapid increase in new vocabulary items.

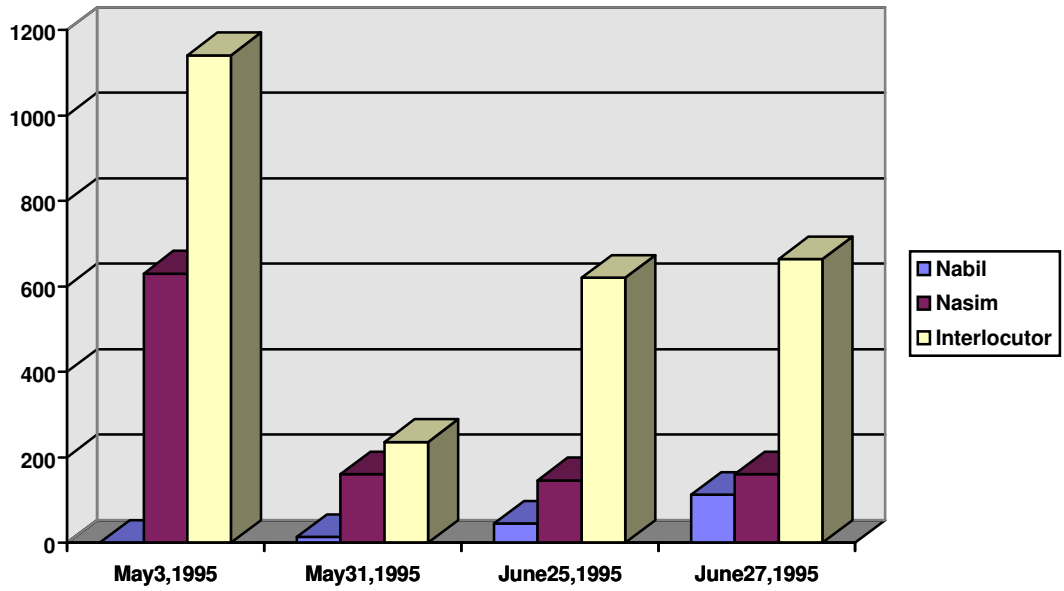

Table 32. Number of tokens in May and June 1995

Here we can see a rapid development in Nabil's linguistic verbal behaviour, he starts taking an active part in conversations. The number of tokens starts to increase, and the amount of his vocabulary gets similar to that of his sister.

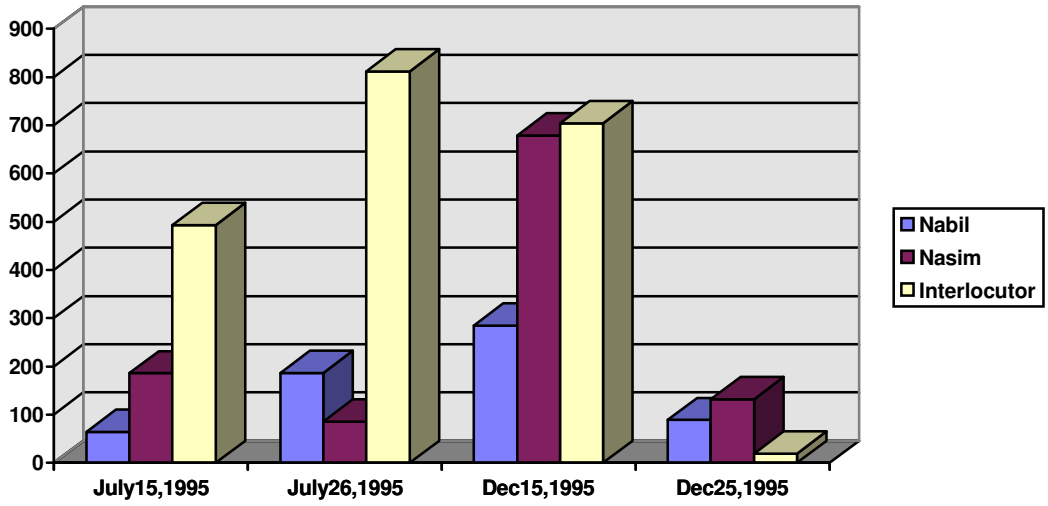

Table 33. Number of tokens in the second half of 1995 (July-December)

July 26 is the first time that Nabil overcomes Nasim in terms of the number of tokens. If we take a closer look at the children's token rates, we can see that they are getting closer and closer to each other. This is partly because the boy is getting braver and starts enjoying verbal communication.

The period between July 26 and December 15 is the first turning point in the children's speech development. Up to this point we could see a gradual but slow development, especially in the boy's case, but from this point there is a boom in his vocabulary. Nabil's tokens are 295 and Nasim's are 702 as compared with the data of the preceding recording where Nabil's tokens are 65 and Nasim's are 86. It must not be forgotten, however, that in Nasim's data there are tapings with a lot more tokens, among them 625 on May 3rd.

As it is obvious from the above mentioned, to speak in Hungarian is not a problem for the children. It was observed in earlier cases that they used Hungarian between themselves, and the mother also reported that when they were at home and played together, they always spoke in Hungarian to each other. The first taping where the children are alone, just between themselves

is on December 25, 1995, when they are recorded while playing in their room. The matrix language is Hungarian. The 19 words uttered by the 'interlocutor' are either their mother's or their father's words. They entered the room and asked something in English. The children answered in English, however, after the parents' leaving the room, the children switched back to Hungarian and went on talking and playing in Hungarian, again.

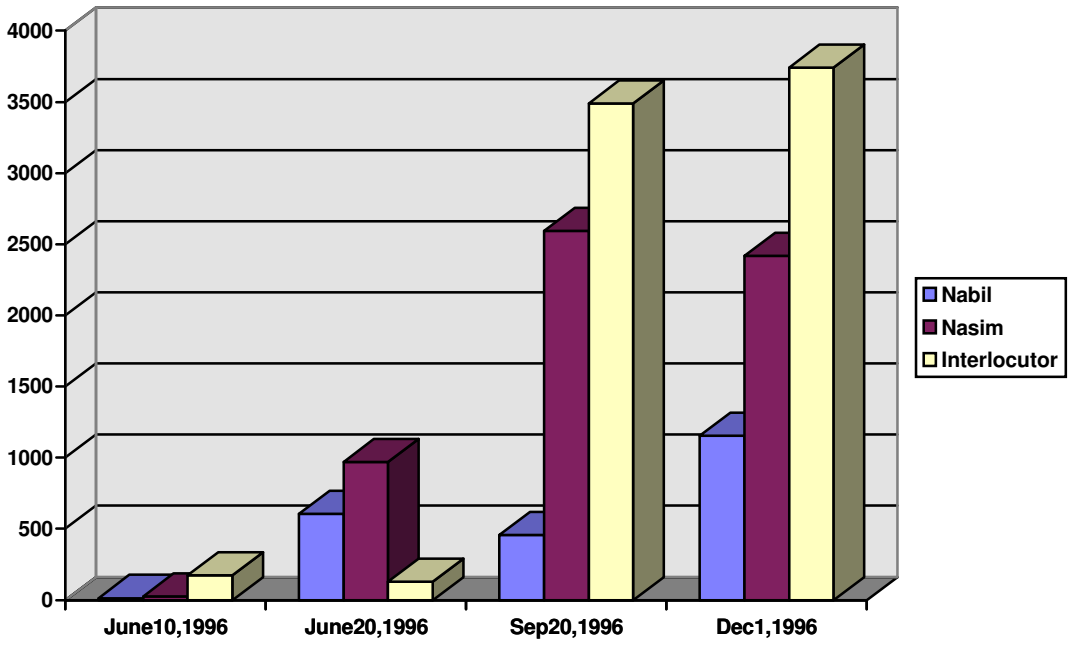

Table 34. Number of tokens in the recordings in 1996

On June 10, 1996 the family visited friends in a different town whom they had not seen for a long time. The matrix language was intended to be Hungarian but the children were too shy in the new situation. This must have been the reason why the children are so reserved and do not want to talk. On the contrary, on June 20, at home between themselves they again speak only in Hungarian. The interlocutor is again either of the parents. Since the first turning point another year passed by, and the children's

vocabulary increased to 597 (i.e. doubled) in Nabil's case and to 980 in Nasim's case.

The last two recordings show that within half a year (i.e. by December 1996), having spent two years and three months in Hungary, another significant growth occurred in both children's case with tokens over 1000 in Nabil's case and over 2500 in Nasim's case, which corresponds more or less with the vocabulary size of Hungarian children of the same age.

2. Type-token ratio

I have carried out a quantitative analysis of the data with the help of Litstats and Microconcord programmes.

I have counted all the tokens and types in both children's speeches. The tokens – as it was shown above – give a picture of the children's verbal behaviour. It cannot give a realistic evidence of the vocabulary. In order to find out the vocabulary size the word types are to be analysed. Since there were periods when their development was not so spectacular, I have chosen the most typical protocols (in Nabil's case it is eight, and in Nasim's case it is twelve tapings) for the analysis. For the analyses of the lexical items the data have been separated. First I will analyse Nabil's data and then Nasim's. The recordings that coincide in time in both analyses are made on the same date, the same occasion and written in the same protocol. If e.g. there are data from the 6th month of their stay in Hungary, they are taken as samples from the same recording in both children's cases (although there may have been other recordings, too, in the 6th month which are not analysed).

Corpus which is the basis of word frequency can well be characterized by the type-token ratio which expresses the relationships of all the types and all the tokens uttered in a recording. The tables below (Table 36 and Table 38) show the exact numbers of types and tokens and their ratio in both children's data individually. The difference between types and tokens

emerges from the frequency so I have gathered the most frequent words. It can also emerge from the different grammatical forms of one and the same word, i.e. types.

2.1. Nabil's data

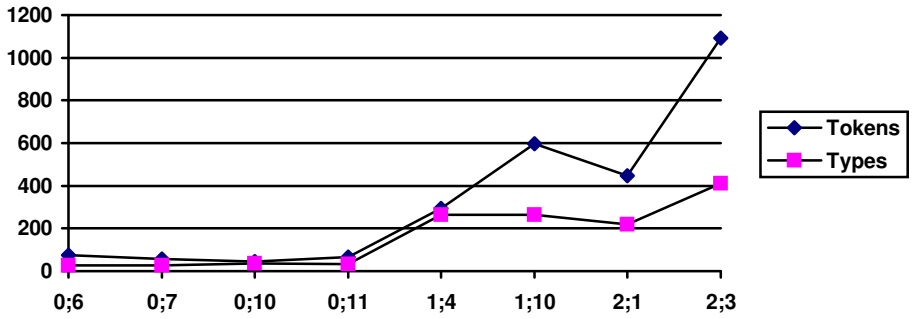

Table 35. Nabil's vocabulary development

0;1-0;6 was basically the silent period for Nabil when he hardly ever uttered a word during a recording. He rather had a passive vocabulary. He participated in all activities and with his non-verbal behaviour he justified that he could understand what was going on around him, and reacted in this way or the other.

At 0;6 he started uttering individual words/utterances, his one- and then two-word stage started.

In Nabil's speech the second turning point from the point of view of lexical development is between the ages 0;11 and 1;4 spent in Hungary. His linguistic behaviour changed and as it can be seen in Table 35 both his tokens and types doubled from recording to recording, i.e. within a couple of months. He also started using full sentences of different types. This development is detailed in Table 36.

	age	linguistic age	tokens	types	type-token ratio	most frequent word
1.	2;4,19	0;6	75	28	0.3733	ez (12) 'this'
2.	2;5,12	0;7	56	27	0.4821	ott (6) 'there'
3.	2;8,21	0;10	46	36	0.7826	a (3) 'the'
4.	2;9,11	0;11	65	32	0.4923	nem (8) 'no'
5.	3;2,11	1;4	295	142	0.4814	a (19) 'the'
6.	3;8,16	1;10	597	265	0.4439	a (34) 'the'
7.	3;11,14	2;1	447	218	0.4877	nem (33) 'no'
8.	4;1,27	2;3	1092	412	0.3773	nem (64) 'no'

Table 36. Word frequency examination of Nabil's speech

The type-token ratio shows that in the beginning Nabil did not use words frequently. He was just naming objects; his lexicon was dominated by words for objects, especially his

- toys: *guriga* 'roll', *toll* 'pen', *labda* 'ball'
- animals: *maci* 'bear', *cica* 'kitty', *kutya* 'dog', *csiga-biga* 'snail', *elefánt* 'elephant',
- vehicles: *busz* 'bus', *autó* 'car', *kukásautó* 'dust-cart', *repülő* 'plane', *bicikli* 'bicycle',

However, the most frequent words belong to the pivot class of vocabulary (e.g. *ez* 'this', *itt* 'here', *ott* 'there', *a* 'the', *nem* 'no').

The two-word stage lasted until he lived in Hungary for 0;11. It is very artificial to separate the one-word and the two-word stages from each other in Nabil's speech. There are very few examples e.g. *Nasim Trabant* which give evidence of the presence of the two-word stage. He quite rapidly goes from the one-word stage over to whole simple sentences. From the next

recording, i.e. from 1;4, we have data of full simple and complex sentences in Nabil's speech.

2.2. Nasim's data

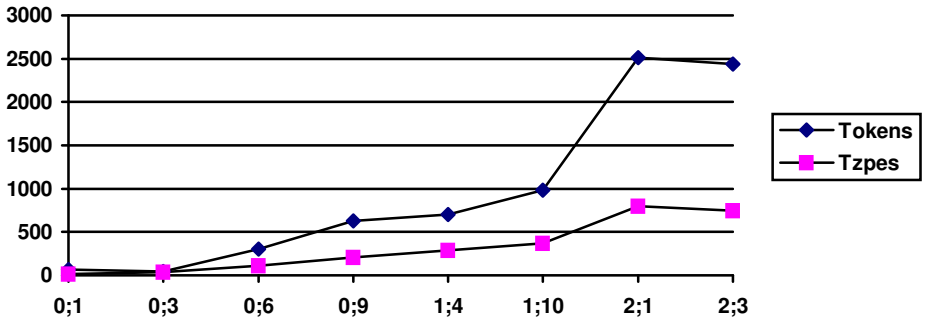

Table 37. Nasim's vocabulary development

Unlike in Nabil's case, it is worth examining Nasim's Hungarian vocabulary from the very beginning. In the first recording, i.e. in the first month of her stay in Hungary, she uttered 65 tokens and 17 types. The difference between the number of tokens and the number of types was definitely owing to the frequent use of one and the same lexeme. Words like *pios, kék, ződ, sájga, fehír* occurred many times.

Within half a year she enlarged her vocabulary at least 5 times, which led to 306 tokens and 110 types. Most of the words used by Nasim belong to the open class of vocabulary. However, she has mostly one-word utterances such as words denoting:

- objects: *busz* 'bus', *baba* 'doll', *autó* 'car', *kesztyű* 'gloves',
- colours: *sájga* 'yellow', *barna* 'brown', *kék* 'blue', *fekete* 'black',
- sizes: *kicsit* 'small', *nagy* 'big'
- actions: *aszik* 'sleeps', *eetünt* 'allgone', *csüccs* 'sit', *evitte* 'took away', *menjünk* 'let's go'

Another three months passed and she doubled her vocabulary. From here the enrichment of her vocabulary is not so significant, however, after two years she uttered 2513 tokens and almost 800 types. Nasim's development in this respect is detailed in Table 38.

	age	**linguistic age**	**tokens**	**types**	**type-token ratio**	**Most frequent word**
1.	3;0,29	0;1	65	17	0.2615	kék (14) 'blue'
2.	3;1,14	0;3	46	34	0.7391	kék (4) 'blue'
3.	3;5,1	0;6	306	110	0.3595	nem (50) 'no'
4.	3;5,21	0;7	258	100	0.3876	nem (27) 'no'
5.	3;6,15	0;8	144	84	0.5833	nem (12) 'no'
6.	3;7,11	0;9	625	210	0.3360	nem (51) 'no'
7.	3;9,3	0;10	141	72	0.5106	el (5) 'away'
8.	3;10,4	0;11	86	51	0.5930	az (6) 'the'
9.	4;2,23	1;4	702	291	0.4145	a (39) 'the'
10.	4;8,29	1;10	980	372	0.3796	a (43) 'the'
11.	4;11,29	2;1	2513	797	0.3172	nem (134) 'no'
12.	5;2,9	2;3	2440	743	0.3045	a (111) 'the'

Table 38. Word frequency examination of Nasim's speech

Nasim in the very first recording with Hungarian being the ML has one- or two-word utterances. The most frequent words in her speech are those naming colours. *Kék* 'blue' occurs 14 times out of the total 65 and there is *piros* 'red', too, four times. Colours were very important for her in the first three months of her stay in Hungary. However, names of animals also appear as well as adjectives of size *kicsi* 'small', *nagy* 'big'. Unlike in Nabil's case, here what we can see is not the words of the pivot grammar but the words of the open class. In the seventh month she still used one- or two-

word utterances and her vocabulary was enlarged by demonstratives and the expressions of negation. In the eighth month names of animals appeared.

From the ninth month she used full sentences and different sentence types.

3. Sentence length examination

I have made the sentence length statistics for both children, too. I have examined the lexical components of the sentences, their morphological components and the types of sentences.

As it is pointed out in the investigations of Gósy (1984), Lengyel (1981) and S. Kádár (1986) the child starting from the utterance of the first words keeps enriching his or her knowledge about the world which surrounds him or her. Nouns are the first to appear, then the verbs expressing an activity. Later appear adjectives, numbers, adverbs and other parts of speech. For a normally developing Hungarian monolingual child it means the following:

the vocabulary	at the age of three is about	500-1000,
	at the age of four is about	1000-1500,
	at the age of five is about	1500-2000,
	at the age of six is about	2-3000, i.e. the child

enriches his/her vocabulary with 500 words/year.

3.1. Nabil's corpus

I have selected the corpus from Nabil between the ages of 2;4,19 – 4;1,27, i.e. a time period a little more than one year and nine months. As for the development of his vocabulary, there was a boom in his third year: he developed from 75 tokens to 295, in the fourth year from 295 to 597, and at the beginning of the fifth year his data contained 1092 tokens and 412 types.

His shortcomings were made up for by the age of four and five. Within a year and nine months he almost completely made up for the lost. We also must take into consideration that he is a boy, he is shy and that he prefers doing things to talking about them! Besides, he is more object oriented than person oriented.

	age	**linguistic age**	**No. of sentences**	**longest sentence**	**statements**	**exclamations**	**questions**
1.	2;4,19	0;6	38	4 (5x)	28	6	4
2.	2;5,12	0;7	32	4 (2x)	16	13	3
3.	2;8,21	0;10	31	4 (1x)	26	1	4
4.	2;9,11	0;11	32	5 (3x)	29	1	2
5.	3;2,11	1;4	52	27 (1x)	39	4	9
6.	3;8,16	1;10	141	14 (1x)	87	20	34
7.	3;11,14	2;1	152	12 (1x)	122	11	19
8.	4;1,27	2;3	421	14 (1x)	310	17	94

Table 39. Sentence length examination of Nabil's speech

Some additional data to the above table (in the coming up analysis I will indicate with an asterix, but not correct or explain, the wrong language use. The analysis of the utterances form a morphosyntactic point of view see in Chapter 6. The sentences in capital letters are the meaning of the utterances in English):

3.1.1.

- The mean sentence length is 1.9737, i.e. on average about two words per sentence.
- The length of the longest sentence is four words, which occurred five times:

95. *Ez* *nem* *jó* *oda.*
This no good there.
THIS IS NOT GOOD THERE.

96. *Ez* *a* *Laci* *bácsi!*
This the Laci (male Christian name) uncle!
THIS IS UNCLE LACI!

- From the point of view of the adult language, the following parts of speech can be traced:
  nouns: *autó* 'car'*, busz* 'bus'*, repülő* 'plane'*, Laci, bácsi* 'uncle',
  adjectives: *jó* 'good'*, kík* 'blue'*, pijos* 'red'*,*
  demonstratives: *itt* 'here'*, ott* 'there'*, ez* 'this'*,*
  verbs: *megy* 'goes'*, elmentünk* 'we are gone'
- There are no incorrect utterances from a morphological or syntactic point of view, which proves that Nabil is still mostly imitating and echoing the utterances.

3.1.2.

- The mean sentence length is 1.7500, basically the same as it was a month before.
- The length of the longest utterance is four words, which occurred twice. However, the first cannot be considered a sentence. It is just a game with words. The second is a sentence but just with three words. The word *csigabiga* is sometimes written with hyphen, other times as one word since *-biga* is a bound morpheme. Here, the hyphenated form made the program count it as two words.

97. *Ide, oda, ide, oda.*
Here, there, here, there.

98. *Nasimé* *a* *csiga-biga.*
Nasim's (possessive) the *csiga-biga* (a toy).

- The distribution of vocabulary according to parts of speech (in some cases the nouns and adjectives are used with case markers as it will be indicated in the examples):

  nouns: *kutya* 'dog', *csiga-biga* 'snail', *Péter, Nasim* + *é*
  'Nasim's' (Possessive marker)
  adjectives: *nagy* 'big' + *ot* (Accusative)
  verbs: *lees* + *ett (Past Tense, 3rd Person Singular)* 'it fell',
  megy + *ünk (Present 1st person Plural)* 'we are going'

- Incorrect correspondence: **Én* *megy* + *ünk.*
  I go + Present 1st Person Plural

Similarly to Hungarian monolingual children, the first case markers to appear in Nabil's speech are those of the Accusative and Possessive Cases.

The use of the different case markers and verb conjugation does not make a problem for the child as long as he imitates the people around him. But as soon as he starts using the language creatively, in his own way, some grammatical peculiarities can be observed in his speech.

3.1.3.

- The mean sentence length is 1.4839
- The length of the longest sentence is four words, which occurred once.
- The distribution of vocabulary according to parts of speech:

  noun: *narancs* 'orange', *sapka* 'cap', *halakka* 'fish', *vízbe* 'into water' (Locative marker), *autóban* 'in the car' (Locative marker), *elefánt* 'elephant', *bíka* 'frog'
  adjective: names of colours: *bana* 'brown', *ződ* 'green', *sajga* 'yellow', *kík* 'blue', *fehíj* 'white',

kicsit 'small' (Accusative marker)

verb: *van* 'is'

Here, again the order of morpheme acquisition can be followed, which is identical with that of the Hungarian monolingual children. After the Accusative and the Possessive case markers it is the case marker of Locative that comes third. There is a difference in Hungarian between the expression of 'where' i.e. the expression of place and 'where to' i.e. the expression of direction. The case marker of the former is *-ba/-be*, and that of the latter is *-ban/-ben*. There is no distinction between the two neither in Nabil's speech nor in Hungarian monolingual children's speech.

3.1.4.

- The mean sentence length is 2.0313.
- The length of the longest sentence is five words, which occurred three times:

99.	*Ott*	*van*	*a*	*Nasim*	**Trabanta.*
	There	is	the	Nasim's	Trabant.
					THERE IS NASIM'S TRABANT
100.	*Papa*		*nem*	**vezet* *a*	**Trabant.*
	Daddy		no	drives the	Trabant.
					DADDY DOESN'T DRIVE TRABANT
101.	*Itt*	*a*	*én*	*is*	**bicikli.*
	Here	the	my	too	bicycle.
					HERE IS MY BIKE, TOO.

- The distribution of vocabulary according to parts of speech:

  noun: *vijág* 'flower', *szék* 'chair', *motor* 'motor', *Trabant,* *házába* 'into his house' (Locative marker), *homok* 'sand', *bicikli* 'bicycle'

  adjective: *lila* 'purple', *rossz* 'bad',

verb: *vezet* 'drives', *nincs* 'isn't'

3.1.5.

- The mean sentence length is 5.4615 which is, on the one hand, due to the previously mentioned fact that after the silent period and then the period of one- or two word utterances the child started to use full sentences and there is a boom in his language development. On the other hand, it is also due to the large number of children's rhymes that he has learnt and is proud to recite or sing.
- The length of the longest sentence is twenty-seven words, which occurred once when reciting two children's rhymes.

3.1.6.

- The mean sentence length is 4.2340, which supports that the previous data were not random, this is a constant and consistent language development.
- The length of the longest sentence is fourteen words, which occurred once:

  102. *Most a baba pici, ilyen beteg, ha, most vigyem a doktorhoz, jó, mer sír.*

  NOW THE BABY IS SMALL, SO ILL, IF, NOW I'LL TAKE HER TO THE DOCTOR, GOOD, BECAUSE SHE IS CRYING.

3.1.7.

- The mean sentence length is 2.9408.
- The length of the longest sentence is twelve words, which occurred once:

103. *Azért, mert hallott egy hangot és azt hitte, hogy az egy *oroszlány.*
BECAUSE HE HEARD A NOISE AND HE THOUGHT IT WAS A LION.

The word *oroszlány* might have been taken over by him from his Hungarian peers at the nursery school. The Hungarian equivalent of 'lion' is *oroszlán*. However, it is a typical mistake of Hungarian monolingual children to utter this word the way Nabil uttered it. It resembles *lány* (girl) which is a well-known and more frequently used word. Nabil makes the same mistake as his age group peers.

3.1.8.

- The mean sentence length is 2.5938.
- The length of the longest sentence is fourteen words, which occurred once:

104. *És most is még-még-még egyszer lett piros meg dobtak még egyszer szemetet.*
AND NOW, TOO, ONCE-ONCE-ONCE MORE IT BECAME RED AND THEY THREW LITTER ONCE MORE.

3.2. Nasim's corpus

	age	linguistic age	no. of sentences	longest sentence	statement	exclamation	question
1.	3;0,29	0;1	42	8 words	31	8	3
2.	3;1,14	0;3	39	4 words	38	0	1
3.	3;5,1	0;6	205	14 (1x)	114	70	21
4.	3;5,21	0;7	110	17 (1x)	29	69	12
5.	3;6,15	0;8	91	16 (1x)	59	24	8
6.	3;7,11	0;9	256	8 (2x)	128	55	73
7.	3;9,3	0;10	85	5 (3x)	75	2	8
8.	3;10,4	0;11	45	9 (1x)	27	3	15
9.	4;2,23	1;4	170	29 (1x)	111	13	46
10.	4;8,29	1;10	244	26 (1x)	130	47	67
11.	4;11,29	2;1	574	29 (1x)	434	42	98
12.	5;2,9	2;3	585	42 (1x)	517	10	58

Table 40. Sentence length examination of Nasim's speech

Some additional data to the above table (in the coming up analysis I will indicate with an asterix, but not correct or explain, the wrong language use. The analysis of the utterances form a morphosyntactic point of view see in Chapter 6. The sentences in capital letters are the meaning of the utterances in English):

3.2.1.

- The mean sentence length is 1.5476
- The length of the longest sentence is four words, which occurred once:

105. *Az* *ott* *az* *guriga.*
That there that roll.
THAT'S THE ROLL OVER THERE.

- The distribution of vocabulary according to parts of speech:

  noun: *autó* 'car', *guriga* 'roll', *csóka* 'bird'

  adjective: *kík* 'blue', *piros* 'red', *sarga* 'yellow',

  verb: *látom* (Present, 1st Person Singular) 'I see'

  adverb: *ez* 'this', *az* 'that', *ott* 'there'

- There are no incorrect utterances from a morphological or syntactic points of view, which proves that Nasim is still mostly imitating and echoing the utterances.

3.2.2.

- The mean sentence length is 1.1795
- The length of the longest sentence is four words, which occurred once when reciting a children rhyme:

  Csip, csip, csóka, vavajúcska.

- The distribution of vocabulary according to parts of speech:

  noun: *labba* (labda) 'ball', *busz* 'bus', *anyu* 'mummy', *nuci* (nyuszi) 'bunny', *cica* 'kitty', *ló* 'horse', *maci* 'bear', *kutya* 'dog', *papucs* 'slippers', *teja* 'tea', *ama* (alma) 'apple'

  adjective: *fehír* 'white', *finom* 'tasty',

3.3.3.

- The mean sentence length is 1.4927.
- The length of the longest sentence is fourteen words, which occurred once, again, when reciting a rhyme:

  Csiga-biga gyere ki, ég a házad ideki, kapsz tejet, vajat, honapra is marad!.

- The distribution of vocabulary according to parts of speech:

  Nouns with case markers:

  1. Accusative: *kicsit* 'small',

2. Possessive: *Nasimé* 'Nasim's', *Nabilé* 'Nabil's', *Magdié* 'Magdi's', *Juditét* 'Judit's'
3. Locative: *böcsibe* 'to the nursery'

Conjugated verbs: *megyünk* 'we go', *menjünk* 'let's go', *menni* 'to go', *evitte* 'he took it', *aszik* 'sleeps', *tudod* 'you know', *etűnt* 'allgone'.

Adjectives: colour names, + *kicsi* 'small', *nagy* 'big', *csúnya* 'ugly', *jó* 'good', *rövid* 'short',

The order of grammatical morpheme acquisition can clearly be seen in the above examples. Identically with Nabil's and Hungarian monolingual children's order of morpheme acquisition, Nasim also uses first the Accusative case marker, then the Possessive and finally the Locative ones. However, she has a wider range of verbal suffixes. We can see examples of

(i) Indicative Mood: in Present and Past Tenses as well as different Persons like e.g. Present 1st Person Plural (*megyünk*), Present 2nd Person Singular (*tudod*), Present and Past 3rd Person Singular (*aszik, evitte*),

(ii) Imperative Mood: 1st Person Plural (*menjünk*)

(iii) Infinitive (*menni*).

3.2.4.

- The mean sentence length is 2.3455.

The length of the longest sentence is seventeen words, which occurred once, when singing the song: *Pál, Kata, Péter, jó reggelt.*

- Incorrect sentences:

106. **Megy a hó.*
Goes the snow.
IT IS SNOWING.

107. **Te is nem megy.*
You too no go.
YOU DON'T GO EITHER.

108. **Te nem de.*
You no yes.
YOU DON'T, EITHER.

109. **Te igen nem megy.*
You yes no go.
YOU DO NOT GO.

Next to the numerous correct sentences (e.g. *Nem adom oda.* 'I won't give it to you.' or *Itt a rózsaszín.* 'Here is the pink.') the last three sentences were utterred by the girl while trying to persuave the interlocutor not to leave. She does not know the correct ways of argumentation and she is desperately seeking for the appropriate forms.

3.2.5.

- The mean sentence length is 1.5824
- The length of the longest utterance is sixteen words, which occurred once. However, it is just an enumeration of numbers and colours, so it cannot be taken as a sentence.

  110. *Egy, kettő, három, négy, öt, hat, ződ, kík, sarga, lila, sarga, nem, nem, nem, narancs, kík.*
  ONE, TWO, THREE, FOUR, FIVE, SIX, GREEN, BLUE, YELLOW, PURPLE, YELLOW, NO, NO, NO, ORANGE, BLUE.

- The distribution of vocabulary according to parts of speech:

There are mainly nouns (*lepke* 'butterfly', *róka* 'fox', *cica* 'kitty', *tojás* 'egg', etc.), but there are some adjectives (e.g. *sárga* 'yellow', *csimmás* 'with boots on', *nagy* 'big', etc.), numbers and one verb (*tudom* 'I know').

3.2.6.

- The mean sentence length is 2.4414
- The length of the longest sentence is eight words, which occurred twice:

  111. *Ott van a *Mummyhoz itt csak nem ott.*
  There is the Mummy + to here just no there.
  IT'S HERE AT MUMMY, HERE AND NOT THERE.

- Plenty of correct sentences, out of which four are incorrect:

  112. **Ementjük a Nabilt?*
  Save + 1st Person Plural the Nabil?
  SHALL WE SAVE NABIL?

  113. *Nabil, főztem a *ebíd.*
  Nabil, cook + 1st Pers. Sing., Past T. the lunch.
  NABIL, I HAVE COOKED LUNCH.

  114. **Te nem beteg vagy.*
  You no ill are.
  YOU ARE NOT ILL.

  115. *Te nem *tudom.*
  You no know + 1st Person Singular
  YOU DON'T KNOW.

3.2.7.

- The mean sentence length is 1.6588.

- The length of the longest sentence is five words, which occurred three times:

116. *Na,* *most* *te* *engedd el!*
Now, now you let it go.

117. *Most* *te* *engedd el,* *jó?*
Now you let it go OK?

118. *Most* *te* *engedd el* *most*
Now you let it go now*!*

3.2.8.

- The mean sentence length is 1.9111.
- The length of the longest utterance is six words, which occurred once and also is just enumeration of numbers:
Egy, kettő, három, négy, öt, hat.
ONE, TWO, THREE, FOUR, FIVE, SIX.
- Incorrect Hungarian:

119. *Micsinász* **azt?*
What are you doing that?
WHAT ARE YOU DOING WITH THAT?

120. *Most* *Nabil* **megcsinál* ** autó.*
Now Nabil repairs car.
NOW NABIL IS REPAIRING THE CAR.

121. *Itt* *van* *a* **másikat.*
Here is the other + Accus.
HERE IS THE OTHER.

3.2.9.

- The mean sentence length is 4.1294.

The length of the longest sentence is twenty-nine words, which occurred once when singing the song *Megy a vonat, megy a vonat Kanizsára.*

However, as it was seen in Nabil's case, Nasim's corpus also provides full sentences, which clearly shows that the two-word stage is over. Here are a couple of examples:

122. *Mondjuk, hogy a Nabil lesz a vezető, és én alszok, és csukom le a szememet, így, jó?*

LET'S PRETEND THAT NABIL IS THE DRIVER, AND I'M SLEEPING, AND I'M CLOSING MY EYES LIKE THIS, OK?

123. *Ez nem, nem ilyen színűre akarok, én ződre akarok, jó?*

THIS NO, I DON'T WANT THIS COLOUR, I WANT GREEN, OK?

124. *Én gyógyszert szoktam enni, amikor megyek aludni*.

I USUALLY TAKE SOME MEDICINE WHEN I GO TO BED.

3.2.10.

- The mean sentence length is 4.0164.

Number of sentences with 1-5 words: 192 (78%)

Number of sentences with 6-10 words: 43 (18%)

Incorrect Hungarian sentences:

125. *A* *képek* **vannak* *szépek*
The pictures are nice.
THE PICTURES ARE NICE.

The sentence is a mirror translation of the English structure.

126. **Ez* *kellenek,* *ez* *biztos* *kellenek.*
This needed this surely needed.
THESE ARE NEEDED, THESE ARE SURELY NEEDED.
There is no subject-predicate agreement.

127. **Még* *hozom* *inkább* *valakit* *el.*
Plus bring + 1st Pers. Sing. rather somebody away.
I RATHER BRING SOMEBODY ELSE.

128. **Menjél* *ki* *is* *már!*
Go + 2nd Person Imperative out too already.
YOU TOO GO OUT NOW.

129. *Kérek* *szépen* **giliszta!*
Ask + 1st Person, Singular nicely worm – Accus.
PLEASE, GIVE ME A WORM.

3.2.11.

- The mean sentence length is 4.3781.
- The length of the longest sentence is twenty-nine words, which occurred once:

130. *Csak, csak mi nem tudtuk, csak mi nem tudtuk, hogy ezzel lehet aludni, mert valamikor anya azt mondta, mert van oda leesett, mert aludtunk olyan kicsikkel és oda leesett.*
JUST WE DIDN'T KNOW, JUST WE DIDN'T KNOW THAT WE CAN SLEEP WITH IT BECAUSE WHEN MOTHER TOLD US BECAUSE IT WAS FALLEN THERE BECAUSE WE SLEPT WITH SUCH LITTLE ONES AND IT FELL THERE.

3.2.12.

- The mean sentence length is 4.1709.
- The length of the longest sentence is fourty-two words, which occurred once:

131. *És ott vót, vót egy, egy ilyen kicsi hajó és arra Tomand és Jerry és az a lány ott al- alszatak és jött egy ilyen nagy hajó és kiromlott és a Jerry ebben meg a Tomand is meg az a lány is.*

AND THERE WAS THIS THIS SMALL BOAT AND TOMAND AND JERRY AND THAT GIRL WERE SLEEPING THERE AND A BIG BOAT CAME AND IT BROKE OUT AND JERRY IN THIS AND TOMAND, TOO, AND THAT GIRL, TOO.

4. Conclusions

Both children's lexical development has been described in this chapter. It has been proved that the growth of their vocabulary is going the same way as it is the case with the Hungarian monolingual children. Like in the ontogeny of language of monolingual children, here the following has been observed:

(i) There is a silent period when perception is developing, i.e. the child just listens to his or her environment and develops his or her passive vocabulary. However, there is a sex related difference between the two children, since the boy's period of silence is a lot longer than the girl's. His development of speech production starts later than the girl's, as he starts actively using what he knows just after 6 months staying in Hungary whereas the girl starts from the first recording, i.e. after a month.

(ii) If we consider their first lexical items from the adult language point of view, they are nominals which are followed by adjectives and verbs. The period of naming objects lasts for about 5-6 months as a main characteristic feature of their verbal activity. From among the adjectives it is the names of colours which especially intrigue the girl's attention. She is very good at naming different sorts of colours, however, the boy is just restricted to some basic colours like red, blue, yellow and white. The boy at first mainly uses words of pivot grammar, however, the girl utters more and more words belonging to the open class. Her language is more developed from the very beginning, which is probably due to her age.

(iii) The two-word stage lasts in both children's case until July 1995, i.e. for about a year stay in Hungary. From December 1995 we have evidence from both of them that they use the language just like their Hungarian peers. Their vocabularies start improving spectacularly, they are doubled in each recording, i.e. every three months.

(iv) From December 1995 their dialogues are worth examining since this is the time that they constantly use Hungarian between themselves, and the corpus provides spontaneous dialogues of the children and not only elicited by the interlocutor dialogues.

(v) The table below (Table 41) presents the differences in sentence length of the children at the same ages of language development. Here, we can see again that a very important turning point in their development is the end of the first year. After spending more than one year in Hungary, their sentence length is doubled and it is clearly seen that the two-word stage is over.

In the third year Nabil's sentences got shorter a little bit, and Nasim's sentences stay at an average of 4.2 words. Perhaps, the difference in sex is reflected at an early age as that if we take into account the well-known stereotype that girls are more talkative, their sentences are longer, more emotional, as opposed to boys' short and referential sentences.

Linguistic age	**NABIL (boy)**	**NASIM (girl)**
0;6	1.9737	2.3455
0;10	1.4839	1.6588
1;4	5.4615	4.1294
1;10	4.2340	4.0164
2;1	2.9408	4.3781
2;3	2.5938	4.1709

Table 41. Mean sentence length in the mirror of age and sex

CHAPTER 6

THE DEVELOPMENT OF GRAMMAR

In this chapter the development of grammar is treated in the narrow sense, i.e. the development of morphology and syntax will be presented. Morphology is linked with phonology and syntax. The phonetic changes at the morphophonological level, i.e. at the border of the lexical and the grammatical morphemes, were discussed in Chapter 4. In this chapter, after a brief general outline of the Hungarian morphology, examples taken from the data will be analysed at the morphological and the syntactic level. However, there will be more emphasis on the morphological part since Hungarian is a highly morphological language as opposed to English which has rather poor morphology. In the syntax part I will concentrate on the structures used by the children in search for the evidence of the Separated System Hypothesis.

At the same time, I will highlight on the order of acquisition of grammatical morphemes. First the Accusative case of nouns will be examined, then the expression of Possession, followed by the use of the Locative case marker and finally the verb conjugation will be analysed.

1. The morphology of the Hungarian language

Hungarian is an agglutinative language which means the syntactic structure is ensured by suffixes glued to the root morphemes. The grammatical morphemes are bound morphemes coming after the root in a certain order. This order cannot be changed. In this way, a one-to-one correspondence is supposed to be between morphs and morphemes. However, it is not always the case. There are some exceptions when e.g. the

Person and the Number are expressed within one morph in the conjugations of verbs (Kiefer et al. 1998). It cannot be claimed that Hungarian is a perfect agglutinative language, however, agglutination is one of its main characteristic feature.

Nasim and Nabil were faced with grammatical categories of noun declination, verb conjugation, within this the distinction of definite and indefinite verb conjugation.

2. The order of morpheme acquisition

Lengyel (1981) describes the order of morpheme acquisition of Hungarian monolingual children. He claims that the first grammatical morpheme to appear in the children's speech production is the Accusative *-t*, the second is the Possessive *-é*, followed by the Locative *-ba/-ban* and its allomorph *-be/-ben*.

2.1. The Accusative case marker

In Hungarian monolingual children's speech the Accusative *-t* may be present or may be absent but the word order confirms that the child means to use the Accusative form of the noun. Accusative in Hungarian can be elicited by a Definite or Indefinite Verb, a Definite, Indefinite or Zero Article, e.g.:

H: Apa a könyvet olvassa.

E: Daddy the (Def. Art.) book (+ Acc.) reads (def. verb conj. Present, 3rd Pers. Sing.)

H: Apa egy könyvet olvas.

E: Daddy a (Indef. Art.) book (+ Acc.) reads (indef. verb conj. Present, 3rd Pers. Sing.)

H: Apa könyvet olvas.

E: Daddy (zero art.) book reads (indef. verb conj. Present, 3rd Pers. Sing.)

In the examples below the use of the Accusative case marker and not the Accusative structure is presented. In Nabil's and Nasim's speech the usage of *-t* as the suffix of Accusative is the following:

Correct	**Time spent in Hungary**	**Incorrect**
	10 months	nem vezet a *Trabant–
	11 months	*kicsit
	11 months	*másikat autó
kocsit vezet	**1;10**	***** másik– is hozom
tenni a lábat	**1;10**	
vegyél cukrot	**1;10**	
fagyit eszünk	**1;10**	
felébreszted a babákat	**1;10**	
hozom egy képet	**1;10**	
hányat kérsz	**1;10**	
csokit?	**2;1**	
tojást fest	**2;1**	
nem láttam Kanadát	**2;1**	
beletesszük a hajót	**2;4**	
ezt én rajzoltam	**2;4**	
lehet tenni egyiket	**2;4**	
láttam egy rigót a tévébe	**2;4**	
elviszi a hajót	**2;4**	

Table 42. Correct and incorrect use of the Accusative case marker

The table above demonstrates that there are much more frequent cases of the correct use of the Accusative case marker than of the incorrect one. Before June 25 the children used mostly the Nominative case overextendedly just like Hungarian children do. This is the unmarked use of the Accusative when only the word order shows which is the subject and which is the object. There were some occasions observed when they used the Accusative instead of the Nominative, like in the example in Table 42: *kicsit* instead of *kicsi, másikat* instead of *másik*. In the examples *nem vezet a Trabant* (correct: nem vezeti a Trabantot) and *másik is hozom* (correct: másikat is hozom), on the contrary, the Nominative is used instead of the Accusative; this is a more frequent type of language use in the case of Hungarian monolingual children, whereas the first type of mixing is very rare if it exists at all.

There are two examples of hypercorrect language use due to overextension: *pénzet* and *eztet*. In the case of *pénzet* the children give evidence of their phonological awareness. They have already recognized that Hungarian avoids consonant clusters. In case of the word *pénz* (money) ending in two consonants this recognition makes them insert a liason between the two root-ending consonants and the suffix *-t*. However, the correct solution would have been *pénzt*. In the case of *eztet* the child doubles the suffix *-t* and inserts a liason between the two suffixes of the Accusative case. It must be admitted though that this is a common use of this word in colloquial Hungarian mostly among undereducated people.

It is obvious from the above examples that in the beginning the children cannot make a distinction in forms between the Nominative and the Accusative cases, which is due to the fact that there is no such distinction in English. However, from a semantic point of view they can and indicate it by

the word order. After a year spent in Hungary they can differentiate between the two cases and later no incorrect use of the Accusative case marker *-t* was observed.

2.2. The expression of possession

In the Hungarian monolingual language acquisition there are four phases of the entire acquisition of the expression of possession (Lengyel 1981):

(i) the use of personal pronoun (in the majority of cases it is the first person *én* 'I') instead of the possessive pronoun;

(ii) the use of the possessive suffix *-é* put after the noun, like e.g. *Nasimé, Nabilé*;

(iii) the use of possessive pronouns *enyém* (my), *tied* (your);

(iv) the use of Possessive case markers glued to the nouns. There are different endings for each person and number, which makes this language phenomenon most complex and difficult.

The following is the example of the first two phases in my subjects' speech from a taping in February 1995, i.e. in the sixth month of their stay in Hungary.

132. **Zsolt**: Na, nézzétek már, mit találtam! Ez a Judit cipõje!
(He is holding Nasim's shoe in his hand.)
LOOK, WHAT I'VE FOUND! THIS IS JUDIT'S SHOE! (He is deliberately misleading her)

Nasim: Nem, én.
NO, I.

Zsolt: Én?

I?

Nasim: Én.

I.

Zsolt: Én cipõm?

MY SHOE?

Nasim: Nem!

NO!

Zsolt: Várjál, felveszem, ez az én cipõm!

WAIT, I'LL PUT IT ON. THIS IS MY SHOE.

Nasim: Nem! Én!

NO! I!

Zsolt: Aha! Ez a te cipõd, értem. Én meg azt hittem, hogy a Judité. És ez kié? (He asks about the turtle.) Apáé biztos.

SO, IT'S YOUR SHOE, I SEE. I THOUGHT IT WAS JUDIT'S. AND WHOSE IS THIS? PROBABLY FATHER'S.

Nasim: Nem.

NO.

Zsolt: Nem, hát kié?

NO? WHOSE THEN?

Nasim: (She looks at Judit, smiles.)

Judit: És az a baba, tudod, hogy kié?

AND DO YOU KNOW WHOSE IS THE DOLL?

Nasim: Én.

I.

Judit: Ki az az én?

WHO IS THAT I?

Nasim: Nasimé. NASIM'S.

The third phase first appeared on March 30 1995, i.e. one and a half months later:

133. **Judit**: Papucs? Kinek a papucsa?
SLIPPERS? WHOSE SLIPPERS ARE THESE?
Nasim: Enyím.
MINE.

At the end of May she knew the 2nd Person Possessive pronoun, too, besides the 1st Person:

134. **Nasim**: Ez a enyím, ez a tied.
THIS IS MINE, THIS IS YOURS.
Judit: Na, hol a tied?
WHERE IS YOURS?
Nasim: Enyím?
MINE?

On June 27 and July 15 1995, i.e. 10 and 11 months after being in Hungary they still had problems with these kinds of expression of possession and still did not acquire all the possible forms.

135.	Itt	a	Nabil	autó.	
	Here	the	Nabil	car.	
					HERE IS NABIL'S CAR.
136.	Itt	a	én	is	bicikli.
	Here	the	I	too	bicycle.

HERE IS MY BICYCLE, TOO.

The Possessive case markers did not appear in their speech before December 15, i.e. the second turning point in their speech development. The only exception is the use of some Possessive cases in the 3rd Person when speaking about the parts of the body: e.g. *keze* (his/her hand), *lába* (his/her leg), *füle* (his/her ear). They were able to express possession in this sense as early as February 1995. This is the one-word period, and it is suspected that they do not even know the Nominative case of these words. At that time they were just imitating their surroundings' language use. Parts of the body are mentioned in the Possessive much more often than in the Nominative in Hungarian.

The following table is a summary of Possessive case markers and the examples taken form the children's data in all persons and numbers (the examples are taken from Protocols 24-30):

	Singular	**Plural**
1st Person	–m *kabát-o-m, kocsi-m*	–nk *fej-ü-nk, gyerek-ü-nk*
2nd Person	–d *sál-a-d, ágy-a-d*	–tok *vers-e-tek*
3rd Person	–ja *hátul-ja, ajta-ja*	–juk *oroszlán-juk*

Table 43. The case markers of Possessive in Hungarian

Once the children became mature enough to acquire the most complex form of the expression of possession, they do it very rapidly. In the above mentioned protocols examples of words supplied with the Possessive case marker and also some additional syntactically needed suffixes can also be found. Having acquired the Possessive case markers they can almost

perfectly use them in correct syntactic structures (the examples are from September 20, 1996, i.e. after two years spent in Hungary):

137. de most a mi óvodánk**ba** van
BUT IT IS IN OUR KINDERGARTEN NOW

In this example the child correctly puts the Locative case marker after the Possessive case marker. Similarly she correctly uses the case marker of time in the following example:

138. Ezt kaptam a születésnapom**ra**. (she shows a pullover)
I GOT THIS FOR MY BIRTHDAY

However, Nabil makes a mistake ignoring the case marker of time when trying to express a similar grammatical function:

139. Nasim születésnapja krémes volt.
Nasim birthday+Poss. cake was.
ON NASIM'S BIRTHDAY WE HAD A CAKE.

The Instrumental case is expressed in the following examples:

140. **Hajni:** Mit csinált Nasim?
WHAT DID NASIM DO?
Nabil: Megnyalth engem.
SHE LICKED ME.
Hajni: Igen?
REALLY?
Nasim: A nyelvé**vel**. (They start running again.)
WITH HER TONGUE.

141. Mutassak valamit a szám**mal**? (she imitates a fish)
SHALL I SHOW YOU SOMETHING WITH MY MOUTH?

The Accusative case marker in the majority of cases does not present a problem for them:

142. Mit húztad a... Mit húztad a hajama**t**?
WHAT DID YOU ... WHAT DID YOU PULL MY HAIR?

However, as it is seen below, there are some cases occasionally when they cannot use the Possessive and the Accusative together correctly. In example (143) the Accusative case marker is correctly used but the Possessive case marker is missing. It could have been possible to leave the Accusative case marker but the Possessive one is compulsory. It could be a possible correct Hungarian sentence: 'Csak mi nem tudjuk a te versed.', where the Accusative is left out. But here, she omits the Possessive case marker, which may be due to the avoidance of the redundancy that is expressed by the Hungarian language when not only the pronoun expresses possession but also the Possessive case marker and they come into play together.

143.	Csak	mi	nem	tudjuk	a	te	verse**t**.
	Just	we	no	know	the	you	poem + Accus.

BUT WE DON'T KNOW YOUR POEM.

In the following the Possessive case marker is present and the Accusative is missing:

144. **Anna:** mit nem tudtok?

WHAT DON'T YOU KNOW?

Nasim:	A	ti	versetek.
	The	you	poem + Possessive, – Accusative
	YOUR POEM.		

In example (145) the first Possessive is used incorrectly instead of the Nominative case, however, the second Possessive is correct:

145.	õneki	botja	kell,	mer	fáj	a	lába.
	she	stick+ Poss.	needs	because	aches	the	leg+Poss.

2.3. The use of the Locative case marker

The third grammatical morpheme to appear in Hungarian child language is claimed to be that of the Locative marker *-ba/-be* denoting direction 'into', which often substitutes for the other Locative marker *-ban/-ben*, which denotes the place where the action takes place: 'in', 'inside'.

Nasim and Nabil, similarly to Hungarian monolingual children, use very often the suffix *-ba/-be* instead of *-ban/-ben*. They never do it in a reverse way, just like their Hungarian peers.

The following table presents how they express location in their speech (the examples are taken from protocols 22 to 30, i.e. at ages 4;2,23/3;2,11 – 5;6,29/4;6,16 having spent 1;4 in Hungary and on):

Instead of -ban/-ben	**Correct -ba/-be**	**Correct -ban/-ben**
Ezt Nabil rajzolta óvodába	mennek boltba	Hol laktok? Kanadában?
ott szokott lakni a fába	megy iskolába	melyik kezemben van a kocsi?
biciklizni a parkolóba	iskolába mész	van ebben még valami
Hol laktok? Angliába?	konyhába megyek	autóban van
boltba van	mentünk óvodába	csak Kanadában is
aki lent van ebbe a házba	elment iskolába	
óvodába nem eszünk uzsonnát	odamentem a konyhába	
Hol? A vízbe?	bemegy a tûzbe	
nem vagyok csendbe	beletetted ebbe	
láttam egy rigót a tévébe	teszem a ölembe	
ebbe nem csúnya		

Table 44. The use of the Locative case marker

There are two crucial consequences worth emphasizing after studying the table.

(i) Nasim and Nabil treat the expression of location the same way as their Hungarian peers do. The use of *-ban/-ben* is very infrequent as compared with the use of *-ba/-be*. The reason for it is to be sought in the language environment of the children. As it was mentioned above, not only

in child language but also in Hungarian colloquial adult speech the two suffixes are used mostly for the benefit of the *-ba/-be* form.

(ii) The correct use of *-ba/-be* almost always collocates with the verb *megy* (go). A wide range of forms of Present and Past Tense conjugation is presented in the appropriate column.

3. The acquisition of verb conjugation

Unlike in English, verb conjugation in Hungarian is present in all Times, Persons, Numbers and Moods. All these grammatical functions are expressed by different verb ending suffixes stuck to the root morpheme. Besides, there are two types of verb conjugation: a definite and an indefinite one depending on whether in the verbal phrase there is a definite object or an indefinite one.

The following table is a summary of the Indefinite and the Definite conjugations in the Present and the Past, respectively:

	Present				**Past**			
	Singular		**Plural**		**Singular**		**Plural**	
	Indef.	**Def.**	**Indef.**	**Def.**	**Indef.**	**Def.**	**Indef.**	**Def.**
1st Person	-k,	-m	-nk,	-juk	-m,	-m	-nk,	-k
2nd Person	-sz, -l,	-d	-tok,	-játok	-l,	-d	-atok,	-átok
3rd Person	–	-ja, -i	-nak,	-ják,	–	-a	-ak,	-ák

Table 45. The chart of Indefinite and Definite verb conjugation

The Past Tense forms are always preceded by the *-t* suffix appearing after the root morpheme, which indicates the past time.

I have chosen the three most frequently used by the children verbs (*lát* 'see', *szeret* 'love', *csinál* 'do') to illustrate to what extent they know the verb conjugation systems.

	Singular		**Plural**	
	Indefinite	**Definite**	**Indefinite**	**Definite**
1st Person	–	látom	–	látjuk
2nd Person	látsz	látod	–	–
3rd Person	lát	–	látnak	–

Table 46. The conjugation of the verb 'lát' in the Present Tense

	Singular		**Plural**	
	Indefinite	**Definite**	**Indefinite**	**Definite**
1st Person	láttam	láttam	láttunk	láttuk
2nd Person	–	láttad	láttatok	láttátok
3rd Person	látott	látta	láttak	látták

Table 47. The conjugation of the verb 'lát' in the Past Tense

	Singular		**Plural**	
	Indefinite	**Definite**	**Indefinite**	**Definite**
1st Person	csinálok	csinálom	csinálunk	–
2nd Person	csinálsz	–	–	–
3rd Person	csinál	csinálja	csinálnak	csinálják

Table 48. The conjugation of the verb 'csinál' in the Present Tense

	Singular		Plural	
	Indefinite	**Definite**	**Indefinite**	**Definite**
1st Person	csináltam	csináltam	csinálunk	csináltuk
2nd Person	csináltál	–	–	–
3rd Person	csinált	csinálta	–	

Table 49. The conjugation of the verb 'csinál' in the Past Tense

	Singular		Plural	
	Indefinite	**Definite**	**Indefinite**	**Definite**
1st Person	szeretek	szeretem	szeretünk	szeretjük
2nd Person	szeretsz	szereted	–	–
3rd Person	szeret	szereti	szeretnek	–

Table 50. The conjugation of the verb 'szeret' in the Present Tense

From the above tables it is apparent that by far not all the verb forms are represented in the tapings. However, it is interesting to see that the 1st Persons are the most extendedly represented forms with 85%, the least represented forms are those of the 2nd Person (45%) and the 3rd Person is between the two (75%).

There is no table for the presentation of the conjugation of the verb 'szeret' in the Past Tense because there has been found no evidence in all the corpus of the use of this verb in the Past Tense.

Here is a chart of correct Definite and Indefinite verb conjugations taken from the children's data:

Indefinite conjugation	**Definite conjugation**
amit nem szeretünk	azt beletesszük
mennek boltba	ezt nem ma csináltuk
nem mentünk óvodába	láttam õket
óvodából hozunk uzsonnát	nem tudom ezt a mesét
együtt rajzolnak	csináltam ezt
csinálnak egy hajót	ezt csinálja
tojást fest	amikor ezeket kaptuk
hallott egy hang	felébreszted a babákat
nem találtál kulcsot	ezt is elfelejtettem
hányat kérsz?	eztet odaadom
takarítok	Annamarit nagyon szereti Charmel
fagyit veszünk	

Table 51. Correct use of Indefinite and Definite verb conjugations

The incorrect use by the children is very rare. Here are some examples:

146. *megbántott Szandit* (correct: megbántotta Szandit)
147. *ezt is nem láttak* (correct: ezt sem látták)
148. *hozom egy képet* (correct: hozok egy képet)
149. *ezt nem szeretsz?* (correct: ezt nem szereted?)
150. *Tudom írni.* (Tudok írni.)

151. *Én megkóstol<u>ok</u>.* (Megkóstolom.)

4. Syntactic structures

In this part of the chapter some differences between the two syntactic systems, i.e. Hungarian and English will be brought into focus. The one- and two-word stages were analysed in Chapter 5 mainly according to the data obtained in the first year of the children's stay in Hungary. Now the second half of the corpus, when the children use full sentences, simple and complex ones, will be subject to analysis. Examples will be taken from protocols No. 22-30.

4.1. The use of personal pronouns

Pronominal expression of the subject is very rare in Hungarian and restricted only to situations when a special emphasis is given to the agent of the action. Otherwise the subject is expressed by the verbal suffix as it was shown in the morphological part. The children kept this rule.

152. *Tudod, hogy írni?* (Do you know how to write?)
153. *Rajzolok egy naposka* (I'm drawing a sun.)
154. *Nézz oda, csinátam ilyen gombócot!* (Look! I've made a ball like this!)

However, there are some cases when they cannot judge whether the emphasis should be put on the subject or not. A certain interference of English may be observed in the following sentences, which is mainly restricted to the use of 1st Person:

155. *<u>Én</u> lerajzolom vele* (I'll draw with it.)
156. *<u>Én</u> csináltam más gombóc.* (I've made another ball.)
157. *<u>Én</u> megkóstolok.* (I'll taste it.)

158. *Én gyógyszert szoktam enni, amikor megyek aludni*. (I usually take some medicine when I go to bed.)

159. *Én takarítok, mert valaki jön*. (I'm tidying up because somebody is coming.)

4.2. Word Order

Word order plays different roles in the two languages, i.e. in English and Hungarian. In English it has a grammatical function, in Hungarian a pragmatic one. English is an SVO language whereas Hungarian is an SOV. Still, Hungarian has relatively free word order between major constituents. However, there are strict rules within the constituents which are to be obeyed.

The following is a list of sentences taken from the children's data. In the first place the sentences from the data are given. The age of the child is given in the first round brackets, the correct Hungarian sentences are in the square brackets, and the second round brackets contain the time spent in Hungary at the time of the uttered sentence. An asterix can be found before the sentence which is unacceptable either in the Hungarian adult, or the Hungarian child language.

In order to see the problem in sentences 160-161 the use of prefixes in Hungarian verbs needs some explanation. The normal order in the Indicative and Conditional Moods is first the prefix followed by the verb. However, if the Imperative is used, or if negation or a question with a question word is expressed, the prefix gets separated from the verb, and follows it.

Violation of this rule is bound to age among Hungarian monolingual children, since it occurs at the earliest phases of language processing.

Consequently, the peculiarities shown in examples 160-161, could have been made by Hungarian monolinguals, too.

160.	*Ezt*	*odategye.* (3;6,22)	[Ezt tedd oda!] (0;6)
	This	there put + 3rd Person Sing.	
			PUT IT THERE.

161.	*Mit*	*ideteszed?* (4;3,3)	[Mit teszel ide?] (1;4)
	What	here put + 2nd Person Sing.?	
			WHAT ARE YOU PUTTING HERE?

The correct word order can also be shown by an example:

162. *Na, most te engedd el!* (3;9,3) (0;10)

NOW YOU LET IT GO!

The following sentences (163-166) are incorrect either from the aspect of adult or child language. The word of negation fails to precede the word it negates. This kind of an error cannot be found in the child language of Hungarians. However, it is observable in the Hungarian child language how a word's antonymous meaning emerges. It happens in the following order (Lengyel 1981): first the word, i.e. *beteg* 'ill', then the word preceded by the word *nem* 'no', i.e. *nem beteg* 'not ill', and finally the antonym of the original word, i.e. *egészséges* 'healthy'.

163.*	*Te*	*nem*	*beteg*	*vagy.* (3;7,11)	[Te nem vagy beteg.] (0;9)
	You	not	ill	are.	
					YOU ARE NOT ILL.

164. **Most nem beteg vagy?* (4;3,0) [Most nem vagy beteg?] (1;7)
Now not ill are 2nd Pers. Sing.?
AREN'T YOU ILL NOW?

Most probably the problem is with the development of the antonymous meaning, this is the reason why these sentences are strange.

The following two sentences make us feel that a slight English interference is appearing in the utterances:

165. **Volt nem jó.* (3;9,5) [Nem volt jó.] (0;10)
Was not good.
IT WAS NOT GOOD.

166. **Nem bolt ez volt.* (4;3,0) [Ez nem bolt volt.] (1;7)
Not shop this was.
IT WASN'T A SHOP.

In sentences 167-168 the child corrects herself after the incorrect sentence (167) 'We cannot go' (again an interference) a correct Hungarian sentence is uttered in (168) – the same semantics with a different structure, which may be due to a conscious control over the syntactic structures.

167. **Tudunk nem menni.* (3;9,5) [Nem mehetünk.] (0;10)
Cannot+1st Pers. Plu. no to go
WE CANNOT GO.

168. *Nem lehet menni.* (3;9,5) (0;10)
WE CANNOT GO.

The following (169-172) is some examples of the children using SVO structure instead of SOV. The Accusative case marker is missing in these sentences. However, according to the English word order it is expressed in all the Hungarian sentences that the noun following the verb is the object. In these cases irreversibility also comes into play. The subject and the object cannot be changed. The object cannot replace the object and vice versa.

169. *Nabil, fõztem a ebíd.* (3;7,11) [Nabil, ebédet fõztem.] (0;9)
S V O

170. *Papa nem vezet a Trabant.* (2;9,11) [Papa nem a Trabantot vezeti.] (0;11)
S V O

171. *Most Nabil megcsinál autó.* (3;9,22) [Most Nabil az autót megcsinálja.] (0;11)
S V O

172. *A maci keresett csillag.* (4;2,22) [A maci a csillagot megkereste.] (1;4)
S V O

4.3. Mirror translations from English into Hungarian:

The following structures give evidence of the two separated language systems in terms of syntax. The sentences have English structures filled with Hungarian lexical items. Once the child uses a structure in a different language, it supports the ability of the conscious distinction between the two language structures. In (173-174) the 3rd Person copula is used, which is unacceptable in Hungarian:

173. *A* *képek* *vannak* *szépek.* (4;8,29)
THE PICTURES ARE NICE.
(correct: A képek szépek.)

174. *Ez* *van* *mi* *autónk.*
THIS IS OUR CAR.
(correct: Ez a mi autónk.)

The Hungarian conjunction *ha* has two equivalents in English: 'if' and 'when'. 'If' is used in conditional sentences, 'when' in time adverbial subordinate clauses. The Hungarian relative pronoun *amikor* 'when' is used only in time relations, i.e. in the concrete meaning. However, the English 'when' can be translated into Hungarian as *ha* if it introduces a future action denoting something abstract. In the following example *ha* should have been used instead of *amikor*:

175. *De nem tudom mesélni,* *amikor semmi nincs rajta.*
But I cannot tell anything when nothing is there.
(correct: De nem tudom mesélni, ha semmi nincs rajta.)

In the following example it is the verb of perception that causes the trouble. The rule to be applied in English (a bare Infinitive) is transferred to Hungarian instead of using the conjunction *hogy* 'that'.

176. *Hogyha hallod, valaki jön, akkor feljövünk és fent maradunk.*
If you hear somebody come, then we'll come up and stay here.
(correct: Hogyha hallod, hogy valaki jön, akkor feljövünk és fent maradunk.)

In example (177) the word *ilyen* is substituted by the English structure 'like this':

177. *És* *õk* *csinának* *egy* *hajót,* *mint ez.*
And they make a ship like this.
(correct: És õk csinálnak egy ilyen hajót.)

After the English 'until' there is no negation used. The Hungarian equivalent of 'until' is *amíg nem* (in colloquial Hungarian *míg nem*), which denotes that the coming up phrase should be used in the negative. Nasim ignores this rule and follows the English rule:

178. *Addig nem gyógyul meg,* *míg a tél jön.*
She won't get well until the winter comes.
(correct: Addig nem gyógyul meg, amíg a tél nem jön.)

In English a countable noun cannot stand in the singular without an indefinite or a definite article. In Hungarian it is allowed to use countable nouns with zero article:

179. *Egy* *lány* *egy* *lánnyal* *van.*
A girl a girl + Instr. is.
(correct: Lány lánnyal van.)

We have evidence of a Hungarian structure transferred to English, where she does not use any articles before a countable noun in the Singular:

180. *The* *lion* *was* *girl.*
Az oroszlán volt lány.

To sum the questions of word order up, three kinds of sentences relating to word order can be detected:

- The children use acceptable Hungarian sentences.
- There are sentences which are unusual with respect to Hungarian adult language, but correct with respect to Hungarian child language (i.e. peculiarities the same as Hungarian children make are represented)
- There are sentences which are in support of the view that English interferes in the correct acquisition of Hungarian.

The syntactic analysis does not show evidence in support of the one-system hypothesis. What is incorrect in Hungarian in the children's speech, is due to interference. In addition, there are some sentences which are mirror translations of the English structures, which makes it obvious that the child uses the grammatical patterns consciously, and by accident he/she uses it in the inappropriate language.

CHAPTER 7

THE DISCOURSE LEVEL

Telling narratives is a most complex speech function. We have seen that after the one- and two-word stages the children are able to produce simple and complex sentences. They are able to talk in three languages, they can converse fluently, they use perfect dialogue chains. However, when they are left to their own devices to tell a story, they are behind their ages in any of the languages spoken by them.

1. A story made up by the child

I have recordings of the children trying to tell narratives in one language. Neither in Hungarian, nor in English were these story-tellings successful. The first is an example of how Nasim (4;8,29) is telling Nabil a story in Hungarian (which was probably invented by herself).

181. **Nasim:** Most a mókusról fogok én mesélni. A mókus.
Nabil: Inkább menjünk venni fagyit, OK?
Nasim: A mókusmedve az állatkertbe ... szeret... sok van állat ... Mókus és elment és zongorázott. Megkapta a kismókust, utána a egér futott, a róka meg az egeret és látta, hogy jött a
Nabil: Takarítok. Én takarítok, mert valaki jön.

The following is the translation:

Nasim: Now I'll tell you a story about the squirrel. The Squirrel.
Nabil: I'd rather go and buy some ice-cream, OK?

Nasim: The squirrel bear to the Zoo to love many animals are.... Squirrel and gone and played the piano. He caught the little squirrel ...the fox was running and the mouse and saw that there came the

Nabil: I'm cleaning up, I'm cleaning up because somebody is coming.

Although there are a lot of places where the recording is unintelligible, the intelligible parts do not make too much sense, either, which means the child can communicate in dialogues almost perfectly, but she is not able to tell a whole narrative without interruption.

A couple of weeks later the children were asked to tell us the story about the squirrel but they said they did not know any tales like that:

182. **Interlocutor:** Nabil, te tudsz egy rövid mesét?

DO YOU KNOW A SHORT TALE?

Nabil: (shakes his head)

Interlocutor: Nem?

NO?

Nabil: Nem tudok.

I DON'T KNOW.

Interlocutor: Mókusról sem?

NOT EVEN ABOUT A SQUIRREL?

Nabil: Mit?

WHAT?

Interlocutor: Mókusról sem?

NOT EVEN ABOUT A SQUIRREL?

Nasim: Nem tudunk olyan mesét.

WE DON'T KNOW A TALE LIKE THAT.

The problem of telling a narrative is not language specific. Once she (4;3,3) was telling her mother in English what she dreamt about:

183. **Nasim:** I dreamed about Rosemary. And was playing with me.
Mother: What did you dream about?
Nasim: About Rosemary.
Mother: Was it nice?
Nasim: The house?
Mother: Yes.
Nasim: Yes, and Rosemary got me a kitty because that what my kitty. Look here.
Mother: What did you say, Nabil?
Nabil: The kitty wasn't Figaro. Got the name Thodor. That was his name. And I have a dog.
Mother: Do you? Where is it?
Nabil: He's farther, he's in Canada.
Nasim: He wanted to stay here by herself.
Mother: Really?
Nabil: Ma, It was no funny. The kitty was ... to his mom, the mom didn't see the kitty.
Nasim: And I'm not finish it. I take the kitty for my mom. And my dog lives in Canada. You know? And but but after that he he he was a little bit sad because because he saw a scary scary owl. He said that he heard that he is going to be the the monster. The but the kitty was seeing a a a lion so he went to his mom. The lion was girl. Scary, and and and so the kitty went to his mom.
Nabil: And, Nasim, did you, did the mom, did the mom wasn't there when he went home?
Nasim: Yeah, he went home.

Nabil: OK.

Nasim: We want what the kitty the kitty knows how to run. And my dog knows how to run. And my dog saw a lion, too. And I know that that was the Zoo, he came from the Zoo, he saw. And you know how? I saw how. He has a door and he come out and he open another door, and he come out and he open another door and he come out and he come out and he open another door and he come out.

Not too much can be traced from the framework of the story. We just know about the heroes (Rosemary, the kitty, the dog, the owl and the lion), the place (Canada, Zoo) but the action is not clear: we do not know whether it is the dog who knows how to run or the kitty.

2. Elicited story telling

2.1. Recalling an event

We wanted to test how they can recall their own experiences, i.e. they were asked to tell us an event in which they participated. This task was a lot easier for them as it can be seen from example (184):

184. **Nasim:** Tudod, amikor, amikor a Szandi thesója megbántott Szandit, és bement a konyhába, és, és én láttam ott. Akkor volt, amikhor én Szandinál voltham. És én láttam őket, odamentem a konyhába, tesója úgy nézett (she shows how her brother looked), és rá-rá-rá-ment az asztalla, és ott shétált és Szandi, Szandi így csinálta: "hí", és megmondta anyának.

Interlocutor: Igen? És mit mondott meg még anyának?

Nasim: De Szandi is ezt csinált, úgy. (she sticks her tongue out)

Interlocutor: Kinyújtották a nyelvüket egymásra?

Nasim: Igen.

The following is the English translation:

> **Nasim:** You know, when when Szandi's brother hurt Szandi and went into the kitchen, and, and I saw there. It was when I was at Szandi's place. And I saw them and I went into the kitchen her brother looked at me like this (she shows how her brother looked at her) and climbed up the table and walked there and Szandi did like this:"hi" and told the mother.
>
> **Interlocutor:** Really? And what else did she tell her mother?
>
> **Nasim:** But Szandi did like this (she sticks her tongue out)
>
> **Interlocutor:** Did they put out their tongues to each other?
>
> **Nasim:** Yes.

Although it is not easy to understand this story, either, here, the framework is more precise. We know the place (Szandi's home), the time (when she was at their place), the participants (Szandi and her brother) and the plot (Szandi's brother walked on the table, they stuck their tongues out at each other and Szandi told her mother about it).

2.2. Telling a dream

Nasim was asked to tell us a dream in Hungarian. The narrative was interrupted by a small accident when the glass was pushed over but with the help of the interlocutor she could get back to the dream:

> 185. **Interlocutor:** Meséld el. Nasim! Nasim! Gyere Nabil, hallgassuk meg, mit álmodott Nasim! Jó? El akarja mesélni. Elmeséled?
>
> **Nasim:** El ám!
>
> **Interlocutor:** Akkor mondd! Nabil, gyere hallgassuk!

Nasim: *Azt á-ámodtam, hogy, hogy...az óvónéni és és ott látott meg engem,* hű, jaj, jaj, gyorsan, jaj... (the night glass is pushed over)

Interlocutor: Kifolyt?

Nasim: Majnem, majnem kifolyt.

Interlocutor: Hű, de ügyes vagy, nem folyt ki. Na, igen, jött az óvónéni (she wants her to continue the story)

Nasim: *és gyerekeke és úgy aludtunk. De Nabilt is megnézték*,

Interlocutor: Igen?

Nasim: *Nabil má ott alszott ... Nabil ágya*.

The translation (only what is typed in italics is what concerns the dream, so I'll give the translation only of those sentences):

Nasim: I dreamt that the kindergarten teacher and and there she saw me..... and children and we were sleeping like that. But she also looked at Nabil .... Nabil was there sleeping ... Nabil bed.

In this case it is a bit difficult to follow the dream but it can be guessed that the plot is the kindergarten teacher's checking the children whether they are asleep or not.

2.3. Narratives based on a story from a book or comics

The following is a narrative of a story from comics which Nasim knows well enough. Although she knows the story in the original, i.e. in a dialogue form, she is required to retell the story in Indirect Speech. Considering her age (5;2,9) she was very successful in fulfilling this task:

186. **Nasim:** Virsli és ez nemcsak virsli, hanem olyan virsli, hogy erre vigyázni kell. Ez úgy, azt mondta Rosie, hogy 'Hogy működik?'. És azt mondta a fa, hogy, mon -mondani kell, hogy nőjjetek fel és

akkor felnő. És Jim meg azt mondta, hogy, hogy mostmár na...., jó nagy megenni. És akkor megete s me-, azt mondta fa, hogy kérsz még. S azt mondták, igen. És azt mondta Rosie, hogy vigyázz. És nagy lett és, és akkor ilyen nagy lett. És akkor meg odament a kacsához és a khacsa azt mondta legyél kicsi. És kicsi lett a virsli. Most má mindenki boldog.

The following is the English translation:

Nasim: Sausage and this is not just a sausage but such a sausage that it should be taken care of. Rosie said that How it works and the tree said that it should be told that grow up and then it grows up. And Jim said that now it is big enough to be eaten. And then he ate it and said that do you want more. And they said yes. And then Rosie said take care. And it became big and then big like this. And then it went up to the duck and the duck said be small. And the sausage became small. And now everybody is happy.

The predicate of the main clauses is always the word 'said', maybe due to the fact that she does not know any synonyms. It can also occur that she simply uses the most elementary way of making a text coherent. However, it is hard to ignore the idea that it also may be the influence of English where in dialogues the most frequently used predicate is the verb 'said'. Perhaps this prevents the child from searching in her memory for other words denoting the same thing.

Intonation may help but also may disturb in speech comprehension. The intonation of the sentence *the tree said how it works* is falling, which makes us think that she meant the tree explained it how it worked. In fact, the following sentence makes it clear that it was a question. At the same time, the phrase *the tree said that do you want more* has a rising intonation,

which makes the listener feel undoubtedly that it was a question and the word choice was incorrect again: instead of 'said' she should have used the verb 'asked'.

3. References in children's narratives

Before going into more details concerning the children's narratives and analysing them in the mirror of references, here are some theoretical issues concerning research into the development of the ability of telling narratives. As far as I know, there is no description of children's narratives in terms of the Hungarian child language, nor is there an elaborated method to analyse them. This is why I will be analysing the texts according to the ways given in the English literature, although I know that from the differences in the two languages' typology some questions may be raised.

Telling a story means the production of a cohesive narrative, therefore, the possession of a wide range of linguistic skills is required. The prominence of these referential linguistic devices is inevitable as it helps the speaker to organize his narrative and the listener to understand it. Regarding the participants in a narrative, references to them are either maintained or changed with the application of pronouns or zero anaphors. It means that the participant is named in its first appearance but only referred to later with the help of a pronoun. However, the knowledge of the syntactic, semantic, functional and pragmatic rules of these linguistic devices is necessary.

Wigglesworth (1997) refers to Hickmann's statement (1995) that the function of pronouns and zero anaphors may be different in discourse and young children have control over anaphoric relations at the sentential level, whereas that of the discourse level cannot be maintained at a young age. This is due to the multifunctional feature of anaphors in discourse.

Wiggelsworth also quotes Karmiloff-Smith (1985) who claims that concerning linguistic devices children cannot organize their discourse until

they are 10-12 years old. She worked out a three stage developmental model:

> In the model, the first procedural stage is manifest linguistically with the case of a rich lexicon, deictic use of pronouns and with correct syntax, but a lack of overall narrative organization. In the second, metaprocedural stage, the development of a thematic subject was characteristic, but the lexicon was more impoverished although there was a recognizable overall organization. The third stage exhibited overall organization, a richer lexicon and more detailed narratives.
>
> (Wiggelsworth 1997:280)

She argues that these stages reflect the child's cognitive development and do not depend on their age.

3.1. Types of references

Longman Dictionary of Applied Linguistics (1992) defines reference as '(in semantics) the relationship between words and the things, actions, events, and qualities they stand for' (1992:310). Children's ability of referential expressions is well-known, however, research examining this aptitude result in different ways. Some studies reveal a developmental change between the age of four and five, whereas other essays show major changes after six years of age. Children's ability of referential expressions is claimed to be a complex pragmatic skill. However, it is also a cognitive ability which enables them to realize whether the listener can predict and approach the referents or not.

Linguistic forms, such as stressed demonstrative pronouns and full nominal expressions signify the introduction of referents. These forms usually refer to a new entity and, therefore, help both the speaker and the listener realize it.

Reference maintenances, such as personal pronouns, draw the speaker's and the listener's attention to the old entity. They generally just indicate a change in the features of the discourse but not a new focus.

However, it is not the case in Hungarian, where the agent of the action is often expressed by the verb ending suffix instead of the personal pronoun.

Re-introducing referents is a mixture of both the introduction of referents and reference maintenance. On the one hand, reintroduced entities are already known focuses, therefore, they do not need to be expressed with linguistic forms. On the other hand, linguistic forms may be required to be used to an extent since previously not so dominant characters may become focussed in the current one. The use of a re-introduction referent emphasizes the importance of an essence.

Bamberg (1987) observed how children manipulate with references, how they switch or maintain references when telling a story from a picture book. It turned out that adults' narratives are different from children narratives in terms of referential functions. When adults' aim was to switch reference they applied nominals while for maintaining reference they preferred pronominals. Older children's reference application was akin to that of adults'. However, younger children adopted pronominals for the purpose of both maintaining and switching references.

3.2. References in stories told by the children

Here I will analyse the same story about the sausage (see example 186, p. 151) from the point of view of references used by the child.

The analysis is based on Wigglesworth's study and akin to his research: it investigates how children handle different referential complexities in narrative.

3.2.1. Material 1

Date of the recording: December 1, 1996.

At the time of the recording Nasim (5;2,9) was in Hungary for two years. She was asked to tell a story based on one of her books taken from the shelf at random. She had high familiarity with the book which was in

Hungarian and which she and Nabil had already shared with each other in Hungarian. She told the story with the help of pictures without hearing the tale from the interlocutor right before the recording.

1. Virsli
2. és ez nem csak virsli,
3. hanem olyan virsli,
4. hogy erre vigyázni kell.
5. Ez úgy, azt mondta Rosie,
6. hogy, hogy mûködik.
7. És azt mondta a fa,
8. hogy mon-, mondani kell,
9. hogy nõjjetek fel
10. és akkor felnõ.
11. És Jim meg azt mondta,
12. hogy, hogy most már na-, jó nagy megenni.
13. És akkor megete és me-,
14. azt mondta fa,
15. hogy kérsz még.
16. S azt mondták, igen.
17. És azt mondta Rosie,
18. hogy vigyázz
19. És úgy lett
20. és akkor ilyen nagy lett.
21. És akkor meg odament a kacsához
22. és a kacsa azt mondta,
23. legyél kicsi.
24. És kicsi lett virsli.
25. Mostmár mindenki boldog.

The following is the English translation divided into clauses:

1.Sausage
2. and this is not just a sausage
3. but such a sausage that
4. it should be taken care of.
5. Rosie said that
6. How it works
7. and the tree said
8. that it should be told
9. that grow up
10. and then it grows up.
11. And then Jim said
12. that now it is big enough to be eaten.
13. And then he ate it
14. and said the tree
15. that do you want more.
16. And they said yes.
17. And then Rosie said
18. take care.
19. And it became
20. and then became big like this.
21. And then it went up to the duck
22. and the duck said
23. be small.
24. And the sausage became small.
25. And now everybody is happy.

The first clause starts with the re-introduction of the referent since *virsli* (sausage) has already been introduced in an earlier clause which is not quoted here. This re-introduction is marked by a full noun whose syntactic

function is a subject. In clause 4 it appears in an adverbial position expressed with a pronoun in the same clause. Then reference to *virsli* (sausage) is interrupted and in clause 5 a new nominal referent is introduced whose function is again a subject. In clause 6 Nasim does not enable the listener to grasp the message concerning who the subject is. She applies a null form reference which is a characteristic feature of the language. It means that using the verbal suffix the subject can be dropped since the endings let the listener identify the subject without ambiguity. Yet, here it is not obvious what is *mûködik* (works). The lack of information is due to the fact that the picture cannot be glanced at and the semantic content does not help, either.

In clause 7 a new referent is introduced with a full noun in a subject position. In clauses 8-10 it is ambiguous who the null forms refer to and only clause 24 clears it up. Thus, reference to *virsli* (sausage) is re-introduced in clause 9 and maintained to clause 10. The syntactic role of the three null references is a subject. However, there is no consistency in her inflecting the verb since in clause 9 it is in plural, whereas in clause 10 singular is used. From the content the concord of the subjects of the two consecutive clauses is indisputable. In clause 11 Nasim nominally introduces a new referent in a subject position but a subordinating clause prevents the maintenance of the referent. However, in clauses 12 and 13 reference to *virsli* (sausage) is re-introduced with null-forms, which are in an object position. Although there is no frequent repetition of the item *virsli* (sausage) in her discourse, its syntactic role as an object in these two clauses is predictable and exclusive. Besides the object position of *virsli* (sausage), in clause 13, re-introduction of reference to Jim occurs with a null-form in a subject role. In the next clause the subject position is occupied by the *fa* (tree), which is re-introduced with a full noun. The subjects of clauses 15 and 16 are expressed with null forms, which must refer to Jim who had

already eaten some. However, similarly to clauses 9 and 10, between clauses 15 and 16 there is a shift from singular to plural in the inflection of the verb. In clause 17 Rosie in subject position is re-introduced with a nominal. Nevertheless the subject of the following clause is obscure. In clause 20 reference to *virsli* (sausage) is re-introduced with a null-form in subject position and maintained to it in clause 21. In clause 21 a new referent is introduced by using a full noun, which is in adverbial position. In clause 22 reference to *kacsa* (duck) is maintained and again marked nominally. However, here the referent is in a subject role. In clause 23 re-introduction of reference to *virsli* (sausage) occurs with the help of a null form, which is then maintained in the next clause but by using a full noun. The last clause introduces a new referent which is a pronoun in a subject position.

In summary, re-introduction of reference was more frequent than either introduction or maintenance of that. Nasim used full nouns and null forms as linguistic forms but no pronoun forms to express the referential function in her narrative, which is absolutely correct in Hungarian since the personal pronouns are used just in emphasized situations. Full nouns were either proper names or common nouns preceded by the definite article. In case of null forms the person and number inflection on the verb signified the omitted subject. Yet there were inconsistent shifts from singular to plural reference in the inflections of some of the verbs. This phenomenon can result in either the restriction or widening of re-introduced references. In clauses 9 and 10 a change from plural to singular takes place, thus marking restriction of referents. However, in clauses 15 and 16 the situation is the opposite: the scope of the referents widens by shifting the inflection on the verb from singular to plural.

Suffixes on the verb can also serve maintenance of references in the subject role even when the subject is dropped. It means that if the subjects of the consecutive clauses are the same, the suffixes alone ensure the referent

maintenance without the subject marked. In this way, null forms can also express functions of references and Nasim has a higher proportion of null forms over nouns. However, personal pronouns, which are not used by Nasim, are usually applied in Hungarian when emphasized.

3.2.2. Material 2

Date of the recording: April 20, 1997.

Nabil (4;6,16) was in Hungary for three years at the time of the recording. He was asked to tell a tale first in English then in Hungarian based on a Hungarian book of his chosen from the shelf at random. He was already familiar with the story as his parents had told it to him in English several times, whereas he discussed the story with Nasim in Hungarian. However, it was not reviewed before Nabil told the tale. He was concentrating on the pictures while formulating the story.

187. 1. A pig came
2. and broke everything –
3. even the paints.
4. And even the, the, the ... eating.
5. And also when they make something
6. they al-, e, also broked.

In the first clause, the pig is introduced as the subject and its function is nominal. The subject of the first clause is maintained to the next clause with a null form. However, in clauses 3 and 4, new referents are introduced in the object position, two of them with nominal forms. In clause 5, the introduction of a new referent occurs using a pronominal form. If it were a re-introduction of a referent introduced in an earlier clause, the listener would know who the personal pronoun 'they' as the subject of the clause

refers to. Furthermore, in clause 5, an indefinite pronoun occupies the object position. In the next clause reference in the subject position with the pronominal function is maintained.

The Hungarian version of the story told by Nabil:

188. 1. Azuthán jött egy malac

2. és mindent szétrombolt.

3. Az, az amith,

4. azuthán meg szétrombolta a festéket is,

5. az ennivalókat is

6. meg még amit csináltak is.

The new referent, *malac* (pig) is introduced in the first clause and then maintained to clauses 2, 3, 4 and 5. In clauses 1-5, *malac* is coded as the subject, however, in clause 1 with a nominal whereas in clauses 2 to 5 with null forms. The object of clause 2 is introduced with an indefinite pronoun while those of clause 3, 4 and 5 with full nouns. Clause 6 is a subordinating clause of clause 5. The last clause introduces a new referent in subject position with null forms.

However, similarly to the English equivalent tale, it is ambiguous who the word 'they' refer to. Therefore, the inflection of the verb only enables the listener to realize that the subject is the personal pronoun in the third person plural. Furthermore, in clause 6, the object position is occupied by the relative pronoun introduced for the first time.

Comparing the two stories told by Nabil the following conclusions can be drawn:

In neither of the tales did he use re-introduction of referents. The reason for this is the shortness of the story during which he either introduced or maintained the referents. As for the characters of the tale, in both stories

only the *pig* and the personal pronoun *they* appeared. Also, the number of functions according to both subject and object positions corresponded in both stories. However, only in the Hungarian version did he employ null forms three times. In the English equivalent he did so only once. Nominals were applied to the same extent, whereas the amount of pronominals in the Hungarian had half of that of the English version, again correctly. In Hungarian pronouns coded as subjects are not uttered. They are generally marked by null forms.

It is hard to decide whether it is a real narrative or a complex sentence but the tools used are those of sentence grammar and not discourse level.

3.2.3. Material 3

Date of the recording: April 20, 1997.

Nabil (4;6,16) was asked to tell a tale in English then in Hungarian from an English book. He took the book from his shelf. He had already had high familiarity with the story, which was told him before by his parents in English several times. However, when narrating it in Hungarian he needed the interlocutor's help, who asked leading questions when Nabil faltered. He mainly lacked the knowledge of some words in Hungarian and the reason for his stuttering was that he was used to telling that English tale only in English. When being asked to reiterate the story in Hungarian he showed uncertainty: *Az nem megy. Azt majd megpróbálom* (It won't go. I'll try it.).

This is the English story told in English by Nabil:

189. 1. Thomas has two coaches: A-, Any and Churbell.
2. And Percy came along
3. 'Hello' Percy, Thomas said.
4. And then Thomas stopped and the station.

5. Percy stopped and – down. Down.
6. Then He-, then Henry came,
7. Henry was proud of sking green, sking green co-, sh-,
8. Henry came and a tunnel.
9. and couldn't come out.
10. Then they, they a wall on.
11. Then Gordon came.
12. Came out of the tunnel
13. and helped Henry, Thom-, Tom and James red engine.
14. But the driver of it pushed the their-, their trucks backwards.
15. And Berty and Percy came to take the childrens home – back home.
16. Her heli-, helicopter over. The helicopter came at last.
17. the childrens was cold and hungry.
18. But the helicopter got a picnic basket.

In clause 1, three referents are introduced nominally as the subject of the clause. In clause 2, *Percy* is introduced coded as the nominal subject which is different from the subject of the previous clause. Reference to *Percy* is maintained to the next clause with a full noun, however, in a locative position. Also reference to Thomas with a full noun in the subject role is re-introduced in clause 3 and then maintained as a subject through to the next clause. In clause 5, *Percy* is re-introduced nominally in the subject position. The subject of clause 6 is different from that of clause 5, therefore, re-introduction of reference to *Henry* occurs, coded as the nominal subject of the clause. Reference maintenance in the subject role in clause 7 is expressed again by a full noun. However, reference with a null form would be ample since reference is predictable and unambiguous. In clause 8,

reference in the subject position is maintained by a full noun. Consequently, the subjects of clauses 6-8 are the same and are all maintained nominally. Nevertheless, in clause 9, reference to *Henry* in subject position is maintained by a null form. Clause 10 lacks the verb, but reference introduction is served by a personal pronoun which occupies the subject role. However, the listener cannot assign the reference unambiguously. In the next clause, reference to *Gordon* is introduced with a full noun and it is in the subject position. Then reference in subject role is maintained by null forms through to clauses 12-13, coded as the zero subjects of the clauses. Furthermore, in clause 13, reference to *Thomas* and *Henry* is re-introduced nominally and reference to *James* is introduced with a full noun. The three proper names occupy the possessor positions of the engines. The name of the red engine is either *Any* or *Churbell* as referred to in clause 1, thus reference to it is re-introduced. The possessors and the possession are coded as the nominal objects of the clause. In clause 14, the nominal form used to express reference could refer to either of the characters introduced in the previous clauses. He can be the driver of any engine. However, reference to *it* is re-introduced with a pronominal form and the phrase is the subject of the clause. Yet, one does not know which engine the pronoun *it* refers to. Reference to *their trucks* is again a re-introduction in the object position by both pronominal and nominal forms. Nabil uses *engine* and *truck* alternatively to express the same item. Therefore, although the actual realization of the word is a new noun in the story, the semantic content is already introduced and known. In clause 15, a new referent, *Berty*, is introduced with a full noun as one of the subjects of the clause. In the same clause reference to *Percy* and the pronoun *it* of the previous clause are not identical, thus, not maintenance but the re-introduction of reference occurs in clause 15. In the same clause, reference to *children* in the object role is introduced nominally. In clause 16, *helicopter* coded as the nominal subject

of the clause is introduced. Then in clause 17, reference to *children* in subject position is re-introduced with a full noun. In clause 18, there is a shift of reference in the subject role to *helicopter*, which is re-introduced nominally.

The following is the Hungarian version of the story told by Nabil:

> 190. 1. Am, Thomas-nak khett, khett, khetthõ va-, van. Az egyik
> 2. Churbell és, és még Any.
> 3. Azuthán meg jött egy, egy busz.
> 4. És piros volt a lámpa
> 5. és jött egy vonat.
> 6. Azuthán jött egy zöld vonat
> 7. és belement egy, egy zárba
> 8. és bezárták. Alagútba
> 9. nem thud kijönni.
> 10. Az kijött egy, egy kék vonat.
> 11. És, és sssegített a zöld vonatnak.
> 12. És jött egy piros vonat,
> 13. de nagyon nagy volt a piros vonat,
> 14. de, a, a vezetõje el akarta vinni a, a, ah, a alagúth és, és
> 15. Azuthán jött egy másik zöld, e-,
> 16. és elvitte a gyerekeket haza.
> 17. Azuthán, a, a gyerekek, ami, hideg voltak meg éhes.
> 18. De, de ah, a leve-, helicopter hozott egy, egy picnic-ot.

In clause 1, reference introduction takes place to *Thomas*, *Churbell* and *Any*, who are the nominal subjects of the clause. In the next clause, a

new referent is introduced with a full noun in the subject position. Then again reference is switched to *lámpa* which, with its nominal form, occupies the subject role. In clause 4, reference introduction to *vonat* is expressed with a nominal form and coded as the subject of the clause. Similarly to the previous clauses, in clause 5, a new subject is introduced with a full noun. So far, the subjects of the first five clauses are different. However, in clause 6, reference to *zöld vonat* in subject position is maintained with a null form and still maintained through the next clause with a null form but in the object position. Furthermore, in clause 7, reference to *zár* in locative is introduced nominally. In clause 7, reference introduction in the subject position occurs with a null form. Then with the help of the interlocutor Nabil corrects himself and says *alagútba* in clause 8 instead of *zárba* in clause 7. Thus it is rather a re-introduction of reference, however, provoked. In clause 9, reference to *zöld vonat* as the subject of the clause is re-introduced with a null form. In clause 10, *kék vonat* is first introduced in the subject position with a full noun and is maintained through to the next clause, nevertheless, with a null form. Furthermore, reference to *zöld vonat* is re-introduced nominally in dative position in clause 11. Reference introduction occurs in clause 12 coded as the nominal subject of the clause and maintained through to clause 13. In clause 14, a new referent in the subject position is introduced with a full noun and reference to the *piros vonat* is maintained in the object position with a null form. In clause 15, *másik zöld* is first introduced with a full noun as the subject of the clause and maintained through to the next clause, however, with a null form. Moreover, in clause 16, reference to *gyerekek* is introduced nominally taking up the object role and then becomes the nominal subject of the following clause by employing reference maintenance. In clause 18, both *helicopter* and *picnic* are introduced with applying a full noun, however, while the former one occupies the subject, the latter one occupies the object position.

It is also interesting that the tale is so familiar to the child that both his versions, i.e. the English and the Hungarian ones can be identically divided into 18 clauses. The Hungarian version could also be thought to be the translation of the English version.

4. Conclusion

Comparing the types of references used by Nabil and Nasim, the number of reference re-introduction in the English version is much bigger than that in the Hungarian one, which is due to the language typological differences. Whereas they employed reference introduction and maintenance to the same extent in the two tales. The reason for the bigger number of reference re-introduction in the English story may be the fewer characters appearing in it. In the Hungarian version the constant appearance of new items resulted in reference introduction.

The nouns were mainly in subject position with a few exceptions occupying the object and locative role in both languages and dative position in the Hungarian tale.

The use of nominals was far more intense in both languages collated than that of pronominals and null forms. However, Nabil applied three times as many null forms in the Hungarian story as in the English one. Consequently, reference maintenance in the English tale was served mainly with the help of nominals, whereas in the Hungarian with the help of null forms.

In sum, both Nabil and Nasim primarily employed full nouns to introduce and re-introduce reference both in English and Hungarian. However, they preferred null forms to express reference maintenance in Hungarian. As for the number of pronominals, it is not evident which language is abounded in them. In some cases it was the English version, in other cases the Hungarian tale that had a bigger number of pronominals.

CHAPTER 8

CODE-SWITCHING AND LANGUAGE CONTACT

1. Introduction

In this chapter I will present the nature of code-switching in the children's speech. I will also examine the factors promoting code-switching and try to find the answer to the question whether there is only a quantitative difference between the code-switches in childhood and adulthood or young bilinguals' code-switches are qualitatively different from those of more mature bilinguals', too. Besides, I will examine whether the frequency of code-switching is proportional with the development in language command and also with the age.

It is well-known that in the speech of bilinguals there are a lot of code-switches, which is not deliberate at all. In the majority of cases they do not even notice when they switch between the languages. Code-switching, however has its certain psychological and other (social, linguistic, etc.) kinds of prerequisites. The speech mode is decisive which the bilingual is in during a conversation. When bilinguals speak with monolinguals, they try to stay at the monolingual end of the continuum (see Chapter 2) and deliberately avoid code-switching or mixing (Grosjean 1995). On the other hand, when they talk with bilinguals, who they share the same languages with, the number of code-switches and code-mixings will definitely grow, they will be more frequent due to the loose control over the speech. However, these code-switches also have their own rules.

Code-switching has its linguistic (descriptive) and sociolinguistic aspects. From a linguistic aspect intra- and intersentential code-switching can be distinguished. However, code-switching can be situational, person-

related, topic-related; it can also depend on the context, the age and social background and the level of education of the speaker. Blom and Gumperz (1972) makes a distinction from a sociolinguistic point of view and classifies code-switching into two categories:

- situational, which is the use of languages according to function. Linguistic varieties come to symbolize the social situations, roles and statuses and their attendant rights and obligations, expectations and assumptions.
- metaphorical when the code-switching occurs due to some intention, deliberately. This is the use of a variety in an unconventional context to call into play the social meaning the variety has come to symbolise.

In adulthood the social prestige of the languages may also be presented in the choice and use of languages. The legal and social unequality of language choice may cause grave problems in ethnolinguistically minority schools (e.g. in Canada, Slovakia, Hungary, etc.), in societies where only the use of state language is allowed and there are no bilingual labels in official places.

The question emerges: Is it the languages structure that determines code-switching or are there other factors influencing it? Li Wei (1994) puts the emphasis on the complex character of code-switching and, based on his research carried out in some Chinese speech communities in North-East England, he concludes that besides linguistic factors there are emotional, social, psychological factors that come into play as far as code-switching is concerned.

In the field of infant bilingualism, researchers are divided into two groups depending on whether they believe that code-switching exists at an early age or not. Those who deny the existence of code-switching in early childhood explain the phenomenon of mixing with the simple fact that the lack of the equivalent lexical item in one vocabulary makes the child switch

to the other language. They use the words they know independently of their being aware of which language is used by them. Others claim that there is code-switching at as early an age as infancy elicited by some psychological factors and it is always related to something. However, there is some obscurity in the definition of the term code-mixing: some use it as the equivalent of code-switching, others simply call it mixing and the existence of mixing is explained by the undifferentiated language systems.

Vihman (1985) a proponent of the one-system hypothesis, claims that there is a qualitative difference between the code-switching of infant bilinguals and that of the more mature ones. As Lanza (1997a) describes it:

> she (i.e. Vihman) makes an important observation that in the speech of young bilinguals, the category of function words is the most often mixed while this category is rarely switched (as single items) by older bilinguals. More mature bilingual speakers tend to switch nouns most often as a single category. This purported qualitative difference in mixing patterns is interpreted as support for the view of the young bilingual child's lack of language differentiation or bilingual awareness.
>
> (Lanza 1997a:136)

Meisel studying German-French infant bilingualism (1994) argues for the qualitative difference, too, but he claims that the bilingual infant at first does not have access to functional categories. Code-switching, similar to that of more mature bilingual speakers will be observable only after the acquisition of grammatical constraints on code-switching, having gained grammatical skills and grammatical competence.

Lanza (1997b) claims that there is no qualitative difference between infant language mixing and adult code-switching. She argues that "the mixing of function words is not indicative of the bilingual child's lack of access to grammatical categories or a lack of a bilingual awareness, but rather can be an indicator of ... language dominance." Taking the fact that

the child's language system is under development into consideration, Lanza also argues that there is no qualitative difference between the code-switching of children and that of adults. In the former case it is a competence to be achieved, in the latter, a competence already acquired. Language context is determining in both children's and adults' code-switching.

I will not make a distinction between code-mixing and code-switching in my subjects' case since they are far beyond the age of mixing the three languages unconsciously lacking a bilingual language awareness. In all cases I will refer to code-switching (CS).

Since the distribution of content words and function words is highly language specific, it is important to separate them while examining the children's mixed utterances. However, it is a universal feature that content words are more frequently subject to switches than function words.

2. Data analysis. Results

According to speech mode the tapings can be classified into 4 phases depending on the time spent in Hungarian surroundings and the interlocutors:

1. October-November 1994 Bilingual

In the first two tapings the children talk with their mother, the matrix language is English. In the third and fourth tapings the interlocutor is a Hungarian 18-year-old female who speaks English, too. The matrix language is supposed to be Hungarian.

2. February-December 1995 Bilingual

In the tapings the interlocutor is a Hungarian female who pretends not to speak English and speaks with the children only in Hungarian.

However, after a while the children can hear her speaking with their parents in English but by that time the monolingual speech mode had been established concerning talks with her and so they do not even give it a try to use English with her. The matrix language remains Hungarian.

3. December 1995 – September 1996 Trilingual

In these tapings the children play with each other, there is no interlocutor present, and the matrix language is Hungarian.

4. September 1996 – April 1997 Bilingual

These are recordings with Hungarian university students of English who, at the beginning of the tapings, always talk with the parents in English, and after a while they turn to the children and start talking to them in Hungarian but then the matrix language is Hungarian.

These were my working hypotheses:

1. When the children talk with their mother and the matrix language is English, I expected switches to Persian. These recordings took place in the 6th and 8th week of their stay in Hungary.
2. While the children were talking to Hungarian-English bilinguals I expected frequent switches from Hungarian to English.
3. In conversations just between the children I expected frequent code-switches among the three languages.

The following is a table presenting the number of code-switches (Css) according to the recordings.

		Number of Css	
	Date of the recordings	**Nabil**	**Nasim**
1.	Oct. 1994 - Nov. 1994	1	15
2.	Febr. 1995 - Dec. 1995	8	22

3.	Dec. 1995 - Sept. 1996	2	7
4.	Sept. 1996 - Apr. 1997	5	1
Total	**30 hours**	**16**	**45**

Table 52. Number of CSs

There is a very small number of CSs as can be seen from the table. During the 30 hour corpus it happened only 61 times that the two children switched from one language to another, i.e. from Hungarian to English or Persian, from English to Hungarian or Persian, etc.

From the table below it can be seen how many times the children switched to another language when being in an English, a Hungarian context or in a Persian context. The percentage given in round brackets expresses the amount of code-switches as opposed to the total number of utterances.

	English context	**Persian context**	**Hungarian contex**
Nabil	53,5 %		46,5 %
Nasim	36 %	2 %	62 %

Table 53. The distribution of CSs according to language context

Nabil switches more frequently than Nasim in the English context, which is partly due to the fact that he speaks much less in general in any of the languages because of his age. Nasim switches more when being in the Hungarian context than in the English context or in the Persian context.

In the first group of the recordings (the children talk with their mother) the matrix language is English. There is no code-switching to Persian; both Nabil and Nasim switch to Hungarian in these recordings. My hypothesis did not work. When speaking with the Hungarian-English

bilingual, there are a relatively big number of CSs both by the interlocutor and the children. The code-switching concerns one-word utterances, which is due to the lack in the vocabulary of the children. The interlocutor was teaching the words to the children as well. It must be admitted that the biggest number of CSs are one-word utterances (26 out of the total 61).

2. 1. One-word utterances

In the following examples the language context will be typed in normal characters, the switched elements in italics and the English translation will be given with capital letters.

2.1.1. English context + Hungarian utterance

Examples (191) and (198) are all taken from mother-children communications. The mother keeps asking the children and they answer with pleasure in Hungarian to the English-Persian bilingual mother. These dialogues are highly guided, it feels like a language lesson where the knowledge of vocabulary items are being checked. The children's vocabulary is restricted to certain nouns, adjectives, especially names of colours.

In the following case the Hungarian name *Magdi* triggers the code-switching.

191. **Mother:** Nasim what did you say to *Magdi* when the soup was nice?
Nasim: *Finom*
DELICIOUS

192. **Mother:** What's this Nasim?
Nasim: *Autó*
CAR

193. **Mother:** What is this? (points at her dress)

Nasim: *Kék* (points at the drawing)

BLUE

194. **Mother:** What soup?
Nasim: *Teja.*
TEA

195. **Mother:** What's this colour, Nabil?
Nabil: *Kék.*
BLUE
Mother: And what's this?
Nabil: *Sajga*
YELLOW

In examples (196) and (197) we can find words with grammatical morphemes, however, neither of them is correct. Obviously these are the most frequent forms heard by the children.

196. **Mother:** Five doors? Nasim, what is Zoo in Hungarian?
Nasim: *Állatketbe. Állatketbe*.
TO THE ZOO. TO THE ZOO.

197. **Mother:** What is playing ball in Hungarian?
Nasim: *Labdázunk*.
WE ARE PLAYING BALL.

198. **Mother:** Nasim, what is skating in Hungarian?
Nasim: *Kórcsolyázik*
HE/SHE IS SKATING
Nabil: *Kócsolya*
SKATE
Nasim: *Kócsolyacipő*

SKATING SHOES

Nabil: *Kosolyaszipő*

SKATING SHOES

Nasim: *Korcsolyacipő*

SKATING SHOES

Mother: Now, let's see, what Nabil knows. Nabil, what is sledge in Hungarian?

Nasim: *Szánkó.*

SLEDGE

Mother: Nabil, what is swimming in Hungarian?

Nabil: *Súszni.*

Nasim: (whispers) *úszni*

TO SWIM

Nabil: *Úszni.*

TO SWIM

Mother: *Csúszni*?

TO SLIDE?

Father: That's sliding.

Nasim: *Csúszni*, flying.

Mother: What is *csúszni?*

Nasim: *Csúszni*? Flying.

2. 1.2. Hungarian context + English utterances:

The interlocutor being a Hungarian-English bilingual inspires the children to use the other language in case of some troubles in expressing themselves. They are not bound to the matrix language. They are at the bilingual end of the Grosjean's continuum and feel free to switch whenever they like.

199. **Zsuzsi**: Mit csinál itt? Mit csinál?
WHAT IS IT DOING HERE?
Nasim: *Fall.*
Zsuzsi: *Fall.* Esik. És ez mi, ami itt van a bácsin?
FALL. AND WHAT'S ON THE UNCLE'S HEAD?
Nasim: *Hat.*

Examples (200) and (201) give evidence of animals' names existing in the children's mind only in English no matter how the interlocutor tries to elicit their Hungarian names. They must consider animals' names as proper names as they are talking about animate creatures. They similarly treat the following words: 'bunny', 'snake', 'frog', 'butterfly'. This reminds us the hypothesis that the mental lexicon of a bilingual cannot be treated as a collection of lexical equivalencies concerning the two languages. They do not translate words in normal situations.

200. **Zsuzsi**: Mi ez?
WHAT IS THIS?
Nasim: *Bear.*
Zsuzsi: Magyarul mi ez? Maci?
WHAT IS IT IN HUNGARIAN?
Nasim: Maci.
BEAR.
Zsuzsi: És mi a neve?
AND WHAT IS ITS NAME?
Nasim: *Bear.*
201. **Judit**: Jaj, itt meg a malacka, ugye? Mi ez?
HERE IS LITTLE PIGLET, RIGHT? WHAT IS THIS?
Nasim: *Pig.*

Judit: *Pig?* Malacka?
PIGLET?
Nasim: Nemmm. *Pig*.
Judit: *Pig?*
Nasim: (nods)

The following is a CS motivated by the simpler lexical element in the other language. There is no lexical equivalent of the English word 'van' in Hungarian.

202. **Judit**: Ez egy ... kicsi busz. Igaz? (Nabil nods, Nasim interrupts)
THIS IS A SMALL BUS. RIGHT?
Nasim: *Van!*

203. **Judit**: Mi ez? *Mushroom*, vagy gomba?
WHAT IS THIS? *MUSHROOM* OR MUSHROOM?
Nasim: *Mushroom.*

204. **Judit**: Mit csinált a Nabil?
WHAT DID NABIL DO?
Nasim: *Exercise.*

In one-word utterances CSs can be observed in the English context when they are elicited by the mother, at the same time, in the Hungarian context there are more often CSs. This is partly due to the children's background knowledge, namely that the interlocutor speaks English, and partly because at the time of these recordings the children spent such little time in Hungary that the dominant language for them could just be English.

2.2. Multiword utterances and lexical mixings

Multiword utterances in terms of the frequency of CSs can be investigated in two groups. In the first group there are the intersentential, and in the second one the intrasentential CSs can be observed.

	intersentential CSs	**intrasentential CSs**
Nabil	**1** (20 %)	**4** (80 %)
Nasim	**13** (43 %)	**17** (57 %)

Table 54. Number and percentage of inter- and intrasentential Css

Among the intrasentential CSs lexical and grammatical CSs are observed.

	lexical CSs	**grammatical CSs**
Nabil	**3** (75 %)	**1** (25 %)
Nasim	**13** (76 %)	**4** (24 %)

Table 55. The distribution of lexical and grammatical CSs of the children

The factors promoting code-switching are as follows:

2.2.1. Code-switches triggered by a picture

In example (205) the child switches from Hungarian to English. It can be explained that when seeing a cake she remembers the birthdays celebrated in the family. Since the family uses English, it elicits the use of English even in a Hungarian context.

205. **Judit**: Ez itt micsoda? Torta?
WHAT IS THIS? A CAKE?

Nasim: *Happy birthday*!

In example (206) she switches from Hungarian to Persian – also due to the influence of a picture or maybe due to some visual association.

206. **Judit**: És ez mi?
AND WHAT IS THIS?
Nasim: Labda. *Horma! horma*!
BALL.
Mother: *Horma in Persian means dates*.

2.2.2. Elicited code-switches

In the mother-child interactions it often happens that the mother behaves like a language teacher and so she frequently asks the children for a word in the other two languages. Examples (207) and (208) serve as an illustration:

207. **Mother:** Nasim! What's *nem tudom*?
WHAT'S *I DON'T KNOW?*
Nasim: *Nem ... tudom ... tudom*
Mother: Nasim, what is *nem tudom*?
Nasim: *Nem...* I can't say
Mother: You can't say?
Nasim: *Nem tudom ... nem tudom*
Mother: Can you say it?
Nasim: I can't say
Nasim: *Nem tudom*
Mother: Yeah, Nabil is teaching you Nasim. Can you say it?
Nasim: *Nem tudom*

208. **Mother:** What is *mit kérsz*?
WHAT IS *WHAT DO YOU WANT?*
Nasim: *Mit kérsz* means I want some, I want some French fries.

In the following example (209) the children are playing together in the presence of the mother. Since the mother does not understand a Hungarian word, she asks Nasim what the word means. After giving her mother the answer, Nasim goes on playing switching back to Hungarian.

209. **Nasim:** Így, és akkor még ide. Jó? Jaj, jaj, jaj, jaj, ezek nem idevalók! Mit ideteszed? Ez idevaló!
THESE DON'T FIT HERE. WHY ARE YOU PUTTING THEM HERE? THIS FITS HERE!
Mother: *What is* való?
Nasim: *It goes in here*. Jaj, jaj, ez a jobb keze.
OH, THIS IS ITS RIGHT HAND!

In example (210) as a result of the mixing in the mother's speech the grammatical markedness is incorrectly doubled:

210. **Mother:** *What's flowers <u>in</u>* magyar<u>ul</u>?
<u>IN IN</u> HUNGARIAN
Nasim: Vijág.
FLOWERS.

Example (211) is a CS elicited by the lack of the lexical equivalent in Hungarian. The just learnt word *óriás* 'giant' for the sake of good

interpretation is applied with a Hungarian adverb quantifier 'nagyon' by Nasim:

211. **Anna:** Mi lesz most rajta?
WHAT WILL BE ON IT NOW?
Nasim: Ezt magyarul nem tudom, csak angolul.
I DON'T KNOW IT IN HUNGARIAN, JUST IN ENGLISH.
Anna: Angolul micsoda?
WHAT IS IT IN ENGLISH?
Nasim: *Giant*.
Anna: *Giant?*
Nasim: Igen.
YES.
Anna: Óriás?
GIANT?
Nasim: Nagyon óriás.
VERY GIANT.

3. Insisting on one language

In the following examples the children insist on using English:

212. **Furugh**: What's your name?
Nasim: My name is Nasim
Furugh: Good! ... *Mi a neved*?
WHAT'S YOUR NAME?
Nasim: ... My name is Nasim

213. **Judit**: Mi ez? *Mushroom*, vagy gomba?
Nasim: *Mushroom.*

4. CS as a confirmation strategy

When they want to emphasise something, it is a well-known strategy to repeat the utterance in the other language, too. This is what happens in the following examples.

4.1. English confirmation in a Hungarian context:

214. **Nabil**: Nem jó.
NOT GOOD.
Nasim: Kicsit. *Small. Small.*

In the following example (215) the children do not want the interlocutor to go and in the process of trying to persuade her not to leave they say different incorrect Hungarian phrases. Perhaps they feel themselves that their Hungarian is not correct enough and this is why they switch to English:

215. **Judit**: *OK. Kids, we are leaving now.*
Nasim: üm-üm (shakes her head)
Judit: De igen.
YES, WE ARE.
Nabil: Nem megyünk.
WE ARE NOT GOING.
Judit: De elmegyünk, ti nem mentek.
YES, WE ARE. YOU ARE NOT GOING.
Nabil: Igen, megyünk!
YES, WE ARE GOING!
Judit: Ti mentek?
ARE YOU GOING?

Nabil: Nem megyünk. Igen, megyünk.
NO. WE ARE NOT GOING. YES, WE ARE GOING.

Nasim: Te is nem megy. Te nem de. Te igen nem megy.
YOU DON'T GO, TOO. YOU NO YES.
YOU YES NOT GO.

Judit: Nekem most el kell mennem. Miklósnak is el kell menni.
I MUST GO NOW. MIKLÓS MUST GO, TOO.

Nabil: Igen, is megyünk. Én megyünk. *Go.*
YES, WE TOO GO. I GO. *GO.*

In example (216) it can be observed how the children start playing. In the beginning, English seems to be the matrix language, however, after some switches to and from Hungarian, they insist on talking in Hungarian.

216. **Nasim:** *He's mummy and daddy. Mummy, and Daddy! So, his name is, his name*: Papa. Menjél el autóhoz, menjél el,
GO TO THE CAR, GO AWAY
I have to go to the car. Én vagyok a vezető. Jaj, Nabil, segítség.
I AM THE DRIVER. OH, NABIL, HELP!
Nabil, *autch*, segítség már. Segítség, Nabil!
NABIL, PLEASE, HELP ME! HELP ME, NABIL!

4.2. Hungarian confirmation in an English context

In all the three examples (217-219) the children are talking to each other. They give the lexical equivalency in (217) of the word Zoo in Hungarian, and in (218) and (219) mirror translations of the English utterances.

217. **Nasim:** That one is *állatket*. And there is another Zoo. *Állatket*.
ZOO.

218. **Nabil**: *Look here.* Nasim, nézd meg!

219. **Nasim:** *That's your scarf.* Az a sálad.

5. Situational code-switching

In (220) the topic – Nasim was talking with her mother about her day in the nursery – determines the switch. She remembers the situation when she was sleeping and it elicits a switch to Hungarian.

220. **Nasim:** Uh ... Sleep for *tenti*. I did *tenti*. I did *tenti*

In example (221) the tea at home is not identical with the tea in the nursery, that is what she wants to emphasize by insisting on the use of the Hungarian word for tea. It is only a small remark that the Hungarian *tea* is not applied with the Accusative case marker and so it is grammatically incorrect. The object function is expressed only by the English word order.

221. **Furugh**: Did you have tea?
Nasim: No, it's *teja* not tea

Furugh: *Tea* (in Hungarian) is tea? (in English)

Nasim: No, not tea (in English) Just *teja* (in Hungarian)

Furugh: Just *teja*

Nasim: Yes ... I liked *teja*

6. Person-related code-switching

When speaking to the father Nasim uses English, when to the interlocutor, Hungarian is used by her (example 222.). In example (223), again, the switch to Hungarian was triggerred by the Hungarian name.

222. **Judit**: Nasim, mondd az apunak, hogy megyünk, jó?
NASIM, TELL YOUR DAD THAT WE ARE GOING, OK?

Nasim: *Daddy! Let's go!*

Father: *You want to go? Are you getting bored here? Or is it time to go? OK.*

Judit: Mit csinálunk?
WHAT ARE WE DOING?

Nasim: Megyünk.
WE ARE GOING.

223. **Mother:** Nasim, do you want to invite *Dani*? Tell him to come.

Nasim: *Gyere hozzám.*
COME TO ME.

7. Metaphorical code-switching:

In this example only at the beginning and at the end of the conversation is Hungarian used. While Nasim talks about her emotions, she uses English, perhaps because she wants to tell it to her mother. She feels, at the same time, that in a situation like this the interlocutor is almost a family member, which strengthens the right to use English. The dialogue closing *köszönöm* 'thank you' she addresses to her brother with whom the common language is Hungarian.

224.	**Judit**:	És az milyen színű, Nabil?
		AND WHAT COLOUR IS THAT, NABIL?
	Nasim:	Pios. *I like that.*
		RED.
	Furugh:	*You like that?*
	Nasim:	(nods)
	Judit:	Azt szereted a legjobban?
		DO YOU LIKE IT MOST?
	Nasim:	*And this one*. (She wants to take away the purse.)
	Furugh:	*Nasim, you can get it later.*
	Nasim:	*Now. Please, Nabil!*
	Furugh:	*Nabil, she is asking nicely. Can you give it to her now? You can have it later.*
	Nabil:	(he gives it to Nasim)
	Furugh:	*Good boy. What d' you say, Nasim?*
	Nasim:	Köszönöm.
		THANK YOU.

In examples (225) and (226) the mother's appearance in the room provokes the switching (the children – as usual – play and talk in Hungarian):

225. **Nabil:** Hol van? Elfelejtettem. Hol van? (the mother enters the room)
WHERE? I'VE FORGOTTEN. WHERE?
Mother: Hol van *what*?
WHERE
Nabil: *My slippers. Where? where?*
Nasim: *Here, under the blanket*. Bemegyek.
I'M GOING IN.

When the mother enters the room both children switch to English. However, by switching back to Hungarian they want the mother to understand that they want to go on playing. So the mother leaves the room.

226. **Nasim:** Jóvan akkor. Tedd az öledbe. (the mother comes in) *I can't reach the ...*
IT'S OK. PUT IT ON YOUR LAP.
Mother: *Say it again?*
Nasim: *I can't reach the ...*, adjál nekem, kérem
GIVE ME, PLEASE

The situation is very similar to the above mentioned one. However, as soon as the code-switch occurs the girl realizes that she wants something from her brother and not her mother and so she switches back to Hungarian, and the mother leaves the room.

8. Mixings at the grammatical level

8.1. Hungarian context + English lexical morpheme + Hungarian grammatical morpheme:

227. **Nasim**: Igen. Ott van a *mummy*hoz itt, csak nem ott.
YES. THERE IT IS TO MUMMY HERE
BUT NOT THERE.

228. **Judit:** Ement? Hova ment?
DID HE GO? WHERE DID HE GO?
Nasim: *Mummy*hoz.
TO MUMMY.

229. **Judit**: Ti nem jöttök?
AREN'T YOU COMING?
Nasim: Csak a *mummy*vel.
ONLY WITH MUMMY.

230. **Nabil:** Ühm. (goes on with the story) Azuthán jött egy másik zöld, e-, és elvitte a gyerekeket haza.
Azuthán, a, a gyerekek, am, hideg voltak meg éhes. De, de ah, a leve-helicopter hozott egy, egy *picnic*-ot. Ez volt az.
(the translation see in example 190, Chapter 7, p. 165.)

The word 'picnic' exists in Hungarian, too, however, its connotation is not identical with that of the English one and it can be highly supposed

that Nabil does not know it. Besides, the sound realization is also identical with the English pronunciation (an aspirated [p^h] and lax [k]-s).

9. Code-switching among the three languages within one discourse

In both examples the question *What is ...* makes the children tell an equivalent in whatever language they can, so these CSs cannot be taken as real code-switches.

232.	**Zsuzsi**:	És ez?
		AND THIS?
	Nasim:	*Sun.*
	Zsuzsi:	*Sun*, nap. *And this one*?
	Nabil:	Labda.
		BALL.
	Zsuzsi:	És ez micsoda ez a nagy?
		AND WHAT IS THIS BIG?
	Nasim:	(says something in Persian)
	Furugh:	*She is saying it in Persian.*
233.	**Furugh**:	Ott is van. *What's it, Nabil?*
	Nabil:	*Mohéi.* (Says something in Persian)
	Furugh:	*What's it in* magyarul?
	Nabil:	*In Persian.*
	Furugh:	*What about in* magyarul?
	Nasim:	*Washing machine.*
	Furugh:	*Washing machine in English. What's it in* magyarul?

Conclusions

1. Both children are trilingual, they are able to communicate with each other in all the three languages. However, there are some restrictions coming from the knowledge of the code. Between each other they use Hungarian much more frequently than either of the other two languages. Consequently, if there is a need to switch, they themselves initiate it.

2. They do not use Persian between themselves as a means of everyday communication. This language is the language of talks with the mother, and only with the mother. Thus code-switching to Persian is minimal and as a rule elicited, it is not initiated by the children.

3. The children speak in English with the parents. In English speech mode Nasim's CSs are 36 %, Nabil's are 53.5 %. This must be due to the age difference: Nabil talks less in English, too, than Nasim. In later recordings with the parents in English speech mode, there is hardly ever any evidence of code-switches.

4. They insist on applying the 'one person-one language' strategy since they use the appropriate language with everybody. No matter that in a later period they realize that they had been deceived and the person speaks an other language, too, they do not switch: they use the language they got used to with the particular person.

5. They got used to speaking in Hungarian to each other by being and playing in the same groups in the nursery and in the kindergarten. They do not break this rule, and the tapings where they play just between themselves, they do not switch unless either of the parents enters the room and asks something. But as soon as the parent leaves, they switch back to Hungarian.

6. It may be assumed that the dominant language of the children is Hungarian. The proportion of the lexical and grammatical code-switching in Nasim's case is 76 % lexical and 24 % grammatical; and in Nabil's case: 75 % – 25 % for the benefit of lexical code-switching. In order to determine the

dominant language grammatical code-switches are to be investigated. It is essential to which language the grammatical CS occurs. The grammatical morpheme of the non-dominant language cannot appear in the dominant language. We could see several examples of English lexemes getting Hungarian grammatical morphemes, e.g. *picnic*-ot, *mummy*-vel, *mummy*-hoz. Though they are very sporadic and the lexical items could also be argued whether they should be considered as Hungarian or English entities, the evidence that in example (216), p. 184. Nasim uses both the English form 'Daddy' and the Hungarian equivalent 'papa' makes us assume that they are familiar with the Hungarian equivalent of 'mummy', too. However, due to the small number of examples, it is hard to determine the dominant language of these children. Most probably, Nasim and Nabil, according to Grosjean's definition, are true bilinguals, which means they can use the appropriate language in the appropriate situation with the appropriate person. It is always the context that determines which is the dominant language.

7. As it was seen in the data presented and also according to the literature discussing code-switching in more mature bilinguals (Grosjean 1982), no qualitative difference seems to exist between infant and adult bilingualism. Both lexical and grammatical switches occurred in the children's speech just like in adult bilinguals' speech. As time was passing by, the small number of CSs became even smaller.

CHAPTER 9

LANGUAGE DIFFERENTIATION AND MULTILINGUAL AWARENESS

1. Introduction

There are relatively few investigations on the language awareness of children. We do not know exactly whether the knowledge about the language, the metalinguistic awareness, is a prerequisite or a consequence in language acquisition.

It has been claimed that children simultaneously acquiring two languages go through an initial stage when they are unable to differentiate between their languages. Nasim and Nabil have been exposed to English and Persian since birth, though the amount of input differs a lot. Their English development happens in the normal way but their Persian usage is restricted. The development of Hungarian started almost three and two years later, respectively, but the amount of exposure is the biggest of the three languages.

2. Preverbal period

Their language behaviour in the new (Hungarian) environment can be described in the following way. In the Hungarian speech community, in the Hungarian monolingual language mode, according to the nursery school teachers, they did not even try talking at all in the first two weeks. Not only did they not talk to their Hungarian peers or to the kindergarten teachers, but they did not even talk to each other. After a while, when they started communicating with their peers and teachers, if they did not feel secure to say something, they would not say it. No occasions were observed when

they used English or Persian in the nursery. When they wanted to say something, they used non-verbal communication. Once, as it was told by the teacher, Nasim was observing the teacher washing her hands with her rings on her fingers. Nasim wanted to tell her that her mother took off her rings when washing hands, so she decided to grab the teacher's skirt, pulled her to the basin, said one single Hungarian word *anyu* (Mummy), turned on the tap, pretended taking off her imaginary rings, washed her hands, turned off the tap, dried her hands, and finally, put on her rings again. During this activity no word of any languages was uttered by her, except for the one and well-known at that time Hungarian *anyu* (Mummy).

3. The beginning of the Hungarian speech production

Her Hungarian speech comprehension improved very rapidly. The time of the first recording done by a Hungarian interlocutor was at age 3;0,30, after spending roughly two months in Hungary. She could understand most of the interlocutor's questions and reacted by nodding or shaking her head, pointing at objects. When speaking about colours, she could tell most of the colours in Hungarian. The first mixing was observed at the same time.

234. **Interlocutor:** És ez micsoda? (points at her own nose)
AND WHAT IS THIS?
Nabil: Az *nose!* (That's a nose!)
THAT'S A *NOSE.*

235. **Interlocutor:** Mit csinál itt? Mit csinál?
WHAT IS HE DOING?
Nabil: *Fall.*

4. Language awareness in phonetics and morphophonology

When they speak in Hungarian, they follow the Hungarian phonemic rules, and pronounce each other's and their own names as the Hungarian teachers in the nursery: ['nabi:l] and ['nasi:m], although the English pronunciations are [ni'bi:l] and [ni'si:m]. As was mentioned in Chapter 3, Nasim and Nabil learnt very early how to produce sounds not existing in their first two languages, e.g. /dy/, /ö/, /ü/, etc. and they never used these sounds either in English or Persian. They were also observed by the parents to use nonsense Hungarian-like words while playing before they could talk in Hungarian. However, these words sounded Hungarian just according to the phonotactic rules of Hungarian.

5. Language awareness at the lexical and syntactic levels

Since there is a time difference between the onset of the acquisition of Hungarian, and there is a difference in the exposure concerning English and Persian, language differentiation should not be a problem for them. In fact, there is no evidence in Nasim's corpus of mixing the languages. She (3;0,15) was aware of the different languages she used with different people. Recordings taken in English monolingual language mode with her mother have shown that she could quote the Hungarian nursery teacher's words to her mother, who did not speak Hungarian. At the same time, she could give the English translation.

236. **Mother:** What did she (i.e. the Hungarian nursery school teacher) say?

Nabil: She said *tenti.*

SLEEP

Mother: *Tenti?*

Nabil: Yeah, *tenti.* Sleep

In the above example we cannot speak about code-switching or code-mixing, since the reason for the use of the two languages is obvious: she wants to quote what has been told, and also wants her mother to understand it. It is neither due to a kind of "relief strategy" (Heller 1988), nor to the insufficient knowledge of the languages. On the contrary, she can consciously use the appropriate language with the appropriate person in the appropriate situation as it was seen in Chapter 8, example (222), p. 186.

However, it is not the case with Nabil. He, at the beginning of the recordings, often mixes the languages, especially when he is asked by the mother different lexical items in different languages. At the age of 2;6,9 the following example was recorded:

237. **Mother:** What's it, Nabil?

Nabil: *Mohéi.* (in Persian)

Mother: What's it in *magyarul?*

IN HUNGARIAN

Nabil: In Persian.

Mother: And what's this?

Nabil: Birdie.

The child answers the English question of the mother in Persian and in English, though the mother wants to test his Hungarian. Consequently, the cognitive ability of making distinctions in terms of languages must be around age 3.

The following is an example of how they play with the mother when she checks their vocabulary.

238. **Mother:** What is *tshai* (Persian) in Hungarian?

Nasim: *Tea, teja*.

TEA

Mother: Good. What is *sir* (Persian)?

Nasim: *tej. tej*.

MILK

Mother: What is *sabz* (Persian)?

Nasim: *Ződ.*

GREEN

Mother: Good, Nasim, and what is it in English?

Nasim: Green.

Mother: Very good. How about *míz* (Persian)?

Nasim: *Asztal*.

TABLE

Mother: Very good. In English?

Nasim: Table.

Mother: What is *ghermez* (Persian)?

Nasim: (whispers to Nabil) Piros.

RED

Nabil: Ződ. Piros.

GREEN. RED

Mother: *Piros*. And in English?

Nabil: Red.

Nasim: I'm teaching Nabil.

Mother: Are you?

Nasim: Now, teach me all of them.

Mother: What is Nabil..... (Nabil is being asked about Persian words, but there are more incorrect answers than correct ones.)

Nasim: *Fehér.*

WHITE

Mother: And in English?

Nabil: *Fehír.*

(WHITE in Hungarian)

Mother: English!

Nabil: White. White.

Mother: Nabil, what is yellow in Hungarian?

Nabil: *Fehír.*

WHITE

Mother: Yellow.

Nabil: That's *fehír*.

WHITE

Mother: *Fehér* is white.

Nasim starts playing with languages at age 3;1,16 and enjoying that she can say things differently from her mother, she gives an English answer to the Hungarian question of her mother's.

239. **Mother:** Good! ... *Mi a neved?* (What's your name?)

Nabil: ... My name is Nasim.

The same recording gives evidence of her distinguishing Hungarian entities, and what is seen or done in Hungarian surroundings, she mentions in Hungarian. The following example is a real code-switch, triggered by the situation:

240. **Mother:** What do you eat in the nursery?

Nasim: In the nursery, er, *kumplilevis, kumpiebíd.*

POTATOE SOUP, POTATOE LUNCH

Mother: What's that?

Nasim: It has *hús,* and *kumpi.*

MEAT POTATOES

Translation at the lexical or syntax level does not cause any problems for the children. They are trained at the lexical level by their mother who often plays with them games like the one introduced in example (238). They are also very good at translating whole sentences.

6. Language awareness at the discourse level

Ages 3;5,14 and 2;5,12 is the first time that we have recordings of the mother speaking to the children in Persian. Although she herself tells us that she teaches them Persian, still there are emotionally condensed moments when she speaks to them in her mother tongue. There were cases when she did not want the children to do something, and she used Persian with them. This is what the mother says about the children's language use (Nasim 3;5,14, Nabil 2;5,5) in the 7th month of their stay in Hungary:

241. **Interlocutor:** Is Nasim perfectly able to talk in Persian?

Mother: She doesn't talk much, but she understands perfectly well.

Interlocutor: And how about Nabil?

Mother: They both. When they converse, they partly use it. They basically use English and now more or less Hungarian. They talk to each other in Hungarian a lot.

Two weeks later the mother reports that Nasim can tell what language they use:

242. **Mother**: Once I asked her: What is this thing in English? And she said what it was, then, I asked her what is this thing in Persian, and she said what it was, and, finally I asked her what is it in Hungarian, and she said after a while: *Húha!*

What is interesting about *húha* is that it is a Hungarian word for the expression of surprise, confusion, and does not have any denotative meaning. Although she does not know the given word, she knows how to express confusion in Hungarian. Her pragmatic competence is well on the way.

Since Nasim and Nabil go to the same nursery school, they play together all day long. As a consequence, they more and more often use Hungarian as the language of communication between them. We have several tapes recorded in the family's home, without anybody else being in the room where the children are playing. They constantly use Hungarian, and they only switch the languages when the mother or the father step into the room and asks them something. As soon as they have answered their questions, they go on talking in Hungarian.

The use of Persian is not very frequent, however it is not restricted only to games like in example (238), p. 196. We have already spoken about the emotional situations when the mother subconsciously uses her mother tongue with the children. As a result of this, in our data there is a scene when the children are rebuked. What happened was that Nasim took away one of the toys without asking Nabil. Nabil started crying, and demanded his toy. The mother started asking her to give the toy back to Nabil in English. No result. Then, again in English, she started telling them how to behave in a situation like this, but all these did not prove to be successful. Then, all of a sudden, I heard Persian words from the mother's mouth, and after a while Nasim said sorry, though in English (*sic!*), to her little brother, and the

problem was solved. This little scene had a psychological effect. This was evidence of the power of persuation in the mother's first language.

At the discourse level it is hard for them to translate narratives where Persian is concerned. Nasim and Nabil were telling me a Persian fairy tale. We were looking at pictures in a book on animals. When we got to the woodpecker, they did not know the word in Hungarian, but they remembered it in Persian. The word reminded them of a book in which the main character was a woodpecker, and brought me the book, and started telling the story in Persian. They were turning the pages absolutely correctly, from the end page to the beginning one, and told the story in succession: one page Nasim, one page Nabil. It was obvious that the mother had taught them the story. What is more, the mother kept praising them page after page in English, like e.g., "Very good, Nabil!", etc. And the children went on in Persian. When they finished the story in Persian, I asked Nasim to tell me in English what it was about. She could not tell, what is more, did not even give a try. She just shook her head.

Later, at age 5;6,19 and 4;6,26 we tried again to make them tell us stories in Persian. First, they were told a story in Hungarian and then they were asked to tell the same story in English.

243. **Hajni:**	El tudod mondani angolul? (short pause)
	CAN YOU TELL IT IN ENGLISH?
Nabil:	Magyarul.
	IN HUNGARIAN.
Hajni:	Csak magyarul? Angolul nem?
	ONLY IN HUNGARIAN? NOT IN ENGLISH?
Nabil:	(shakes his head)

Once Nabil volunteered to tell a story in Persian. This is what happened:

244. **Hajni:** És perzsául tudod?
AND DO YOU KNOW IT IN PERSIAN?

Nabil: Aha. (turns the pages of the Persian book)
YES.

Nabil: Ez amikor evett.
THIS IS WHEN HE WAS EATING.

Hajni: De perzsául hogy van?
BUT WHAT IS IT IN PERSIAN?

Nabil: (he starts telling the tale in Persian, there are a lot of pauses, he thinks a lot, then all of a sudden he mumbles something in Hungarian but it's unclear)

Hajni: Tessék?
PARDON?

Nabil: .... én nem thudom.
I CAN'T TELL.

The language of the tale determines the language mode for the child and he does not want or cannot tell the same story in another language.

245. **Hajni:** Tényleg? És ez hogy van angolul, Nabil?
REALLY? AND WHAT IS IT IN ENGLISH?

Nabil: Angolul?
IN ENGLISH?

Hajni: Meséld nekem tovább angolul!
GO ON WITH THE STORY IN ENGLISH.

Nabil: Ez nem angolul van!

THIS IS NOT IN ENGLISH!

Hajni: Tudom. Dehát angolul is tudod. Érted, hogy mit csinálnak, nem? (Nabil doesn't care, he goes on in Hungarian)
I KNOW. BUT YOU KNOW IT IN ENGLISH, TOO. YOU UNDERSTAND WHAT THEY ARE DOING, DON'T YOU?

Nabil: A cicus má jön ki és...
NOW THE KITTY COMES OUT AND ...

Once we managed to make Nabil tell us a story in Persian. He could and wanted to do it only with the help of his mother. The mother started and Nabil continued. The mother helped him several times, usually she started the new page and Nabil finished it. Once they stopped telling the story, the mother told Nabil in Persian to clean his lips with a tissue. Nabil answered in Persian. Though he cannot retell a whole story in Persian, in everyday communication he is more successful.

Another attempt was to ask him to tell a Persian tale in Hungarian or in English. He refused to do so.

246. **Hajni:** Ezt a perzsát - elmondod magyarul?
CAN YOU TELL THIS PERSIAN IN HUNGARIAN?

Nabil: Nem thudom magyarul.
I DON'T KNOW IT IN HUNGARIAN.

Hajni: Nem tudod magyarul?
YOU DON'T KNOW IT IN HUNGARIAN?

Nabil: Nem.
NO.

Hajni: Angolul sem?
NOT EVEN IN ENGLISH?

Nabil: Angolul se. (he doesn't care about books any more)
NOT EVEN IN ENGLISH.

This is what the children say about their command of Persian:

247. **Hajni:** És perzsául tudsz valamit mondani, Nabil?
CAN YOU SAY SOMETHING IN PERSIAN?

Nabil: Perzsául? Csak számolni.
IN PERSIAN? I CAN ONLY COUNT.

Hajni: És mit tudsz te még perzsául, Nabil?
AND WHAT ELSE DO YOU KNOW IN PERSIAN?

Nabil: Csak állatokat.
ONLY ANIMALS.

Nabil: Csak ezek tanútam meg anyától.
ONLY THESE I LEARNT FROM MOM.

Hajni: Hogy köszönünk perzsául?
HOW DO WE GREET EACH OTHER IN PERSIAN?

Nabil: Köszöntheni? (thinks hard) Anya nem mondta ezt.
GREET? MOM DIDN'T SAY THAT.

At this point Nasim joined the company. She inquired what the interlocutor and Nabil were talking about. When she was also asked to tell animals' names in Persian, this is how she reacted:

248. **Nasim:** Kutya az kutya.
DOG IS DOG.

Nabil: (to Nasim:) Pherzsául!
IN PERSIAN!

Hajni: És a macska?
AND CAT?

Nasim: A macska is macska. Most montad, hogy macska.
CAT IS CAT. YOU HAVE JUST SAID CAT!

Nabil: De pherzsául.
BUT IN PERSIAN!

Nasim: Én csak azt tudom mondani, hogy *mizu* (in Persian).
I CAN ONLY SAY *mizu.*

Hajni: Na és hogy van angolul a macska?
AND WHAT IS CAT IN ENGLISH?

Nasim: *Cat*.

In the following example the children tell us how they learn Persian:

249. **Hajni:** Beszélgetni szoktatok anyával perzsául vagy csak tanulni?
DO YOU TALK IN PERSIAN WITH YOUR MOM, OR JUST LEARN THE LANGUAGE?

Nabil: Csak anya thud pherzsául.
ONLY MOTHER SPEAKS PERSIAN.

Nasim: Anya tanít meg bennünket pherzsául.
AND MOTHER TEACHES US PERSIAN.

Hajni: De hogyan? Leültök.
BUT HOW? DO YOU SIT DOWN?

Nabil: Ő má thü - thud.
SHE KNOWS PERSIAN.

Nasim: Nem, hanem mindig, mindig, mindig úgy beszélünk, mikor reggel - meg este.
NO, WE ALWAYS SPEAK LIKE THAT WHEN MORNING AND EVENING.

With the last sentence the girl gives evidence that the mother is more and more concerned about the children's level of Persian. As they grow older, she speaks more and more to them in her first language in order for them to make up for the loss.

The last example of this thesis will talk about the attitude of the children towards the languages. Nabil was supposed to make a language choice:

250. **Hajni:** Mi lenne Nabil, ha mesélnél nekem ebből olyan nyelven, ahogyan akarsz. (we open the book)
NABIL, WHAT IF I ASK YOU TO TELL ME A STORY FROM THIS LANGUAGE IN WHATEVER LANGUAGE YOU PREFER.
Nabil: Egy bácsi, egy víz és egy kutya. Meg egy themplom.
AN UNCLE, A WATER AND A DOG. AND A CHURCH.

And he goes on telling the story in Hungarian with the help of the interlocutor.

7. Conclusions

From this chapter it is obvious that the children have undergone a very rapid development of Hungarian language processing. They speak Hungarian and they enjoy speaking in Hungarian.

As it was shown at all linguistic levels, Nasim and Nabil can separate their languages and use the appropriate sounds and lexical items in the appropriate language. In Chapter 4 evidences were shown in support of the children's language awareness in terms of morphophonology.

They can easily translate words and whole sentences if they are asked to do so. However, story telling is difficult for them in different languages, which is most probably due to their young age and the level of their cognitive development.

Apart from the difficulties observed in the beginning concerning language differentiation, they are successful in using the languages in the appropriate context.

CONCLUSIONS

In this thesis three major issues were brought into focus:

(i) How the Hungarian language is being acquired by a trilingual pair of siblings; does Nasim's language processing run parallel with that of Nabil's; does the language development run parallel in Nasim and Nabil to monolingual Hungarian children.

(ii) Do they develop one language system with respect to all linguistic levels or three separated systems.

(iii) Is it the same process if one acquires just two or more than two languages at the same time or is it different? In other words: can a sign of equality be put between the terms 'bilingualism' and 'multilingualism'? What is the opposite of monolingualism? Is it just bilingualism or bi- and multilingualism?

Investigations have been carried out at all linguistic levels: at that of phonetics/phonology, morphophonology, lexis, morphology, syntax and discourse. The development of speech functions, the children's translating abilities, their multilingual and multicultural abilities as well as their ability in language differentiation have also been examined. The following conclusions can be drawn:

1. Phonetics/Phonology

The order of acquisition of features coincides with that of Hungarian monolingual children. Some features in their phonetics are partly identical with the ones made by Hungarian monolinguals. Concerning some other types of pecularities, namely aspiration or opposition according to voice, it can be stated that some kind of an overextension of English or Persian sounds are exhibited in the children's speech, especially at the very

beginning. This makes us assume that at the very beginning the phonological systems are not totally separated. Aspiration is an overall feature. Phonemes are parts of a unit, within which some features may be extended to all the members of the unit. Aspiration seems to be the most naturalistic feature, consequently, it is a part of the universal capacity. In addition, the opposition does not concern languages but just features, allophones. One particular allophone may be preferred by the child and for a short time in the development it may be used overextendedly irrespective of the actual language in use. But for this small remark, the corpus gives evidence of the systems being separated since in the Hungarian speech the children use Hungarian sounds, in the English one, English sounds, and the same concerns Persian.

One of the arguments of the Critical Period Hypothesis is that the child is a good phonetician but a weak grammarian has not been proved. However, it should be stated that, though the children are not the best phoneticians, they are outstandingly good phonologists (see morphophonology).

2. Morphophonology

The chapter dealing with the development of morphophonology shows clear evidence of the language processing going parallel with Hungarian monolingual children. Symptoms of language awareness identical with those of Hungarian monolinguals can be traced in these trilingual children's speech. However, this awareness is deeper as it occurs earlier and the phonological phenomena are more thoroughly analysed. This awareness occurs in their English development, too, but a year earlier. The phenomenon was observed in their English speech at the normal age for English monolinguals, i.e. around three. However, the same thing happened in their Hungarian a year later when they were surrounded by children who

had already undergone this period of development. This supports the maturalistic approach to language processing as opposed to the behaviourist view.

3. Lexical development

Like in monolingual children's ontogeny of language, here the following has been observed:

(i) There was a silent period when perception was developing, i.e. the children just listened to their environment and developed their passive vocabularies. However, there was a sex related difference between the two children, since the boy's period of silence was a lot longer than the girl's. His development of speech production started later than the girl's. He started actively using what he knew just after 6 months staying in Hungary whereas the girl started from the first recording, i.e. after a month.

(ii) One-word utterances, i.e. the period of naming objects lasted for about 5-6 months as a main characteristic feature of their verbal activity. In the two-word utterances the boy at first mainly used words of pivot grammar, however, the girl uttered more and more words belonging to the open class. Her language was more developed from the very beginning, which was probably due to her age.

(iii) The two-word stage lasted in both children's case until July 1995, i.e. for about the first twelve months of their stay in Hungary. From December 1995 we have evidence from both of them that they use the language just like their Hungarian peers. Their vocabularies start increasing spectacularly, they are doubled from one recording to the next, i.e. every three months.

4. Morphology and syntax

These two linguistic levels show the most clear evidence of the separated systems. The typological differences between English and Hungarian demand a conscious language user in order to keep the systems separately, and not to mix them especially at the morphological level. We have no evidence of the use of English morphology in a Hungarian context, at the same time, some examples show that the Hungarian morphology is present sometimes in their English. This may be due to the Hungarian morphology being richer than the English one.

The syntactic analysis does not show evidence in support of the one-system hypothesis, either. English syntax, which is richer than the Hungarian is present in their Hungarian. What is incorrect in Hungarian in the children's speech is due to interference. In addition, there are some sentences which are mirror translations of the English structures, which makes it obvious that the child uses the grammatical patterns consciously, and by accident he/she uses it in the inappropriate language.

5. Code-switching

The surprisingly small number of code-switches prove that the language input and the children's language use is more or less consistent. They have got used to situation-bound, person-bound language use. Nasim and Nabil also keep in mind and respect the interlocutor's language behaviour. Even when they are just between themselves, they play in one language, i.e. Hungarian, and hardly ever switch among the three languages.

6. Major findings

Based on my findings the following can be stated:

- the acquisition of Hungarian is identical with monolingual children's acquisition; Nabil and Nasim show some differences in the acquisition of Hungarian, especially at the starting period. The differences are due to

their age and sex differences and basically communication related. Nasim being a girl and a year older than her brother is more talkative. For her verbal communication is much more important at the beginning period than for her brother. She is more motivated in the acquisition of a new language since she wants to establish new relationships, to make new friends. Nabil is more reserved, shy, and he prefers acting than speaking. As a result he hardly ever said anything in the first six months.

- they seem to develop three separate systems. However, as it turns out, the question whether the languages are stored separately or in a unitary system is too complex to answer. Based on our findings, it should be supposed that there are linguistic levels where the systems are totally separated. In the field of lexis for example they do not mix words, furthermore they can label the items which language they belong to. In the development of morphophonology, morphology and syntax examples have also illustrated that they know the proper structure and use it correctly appropriate to the language in question. However, there are also other linguistic levels (some elements of the phonetics and discourse) where the one-system seems to work. The overextended use of allophones irrespective of language, or the same strategies used for story-telling in any of their languages prove that there are common features applied in speech execution.
- besides the quantitative, there are some qualitative differences at some linguistic levels between bilingualism and multilingualism. These multilingual children are more mature in using their languages, their metalinguistic awareness is more developed, their skills are better. The reason why they realize language specific phenomena faster lies in their ability and experience of using more languages. The more languages they know, the better skills they have in language processing.

- As far as the corpus analysed in this thesis is concerned, trilinguals develop three autonomous languages which are distributed according to their functions. All three languages are subject to influence from, and influence themselves the other two languages.

This study has shown the case of trilingual acquisition (with special emphasis on the acquisition of Hungarian as the third member of the children's trilingualism) in which there are plenty of natural acquisitional elements but evidence can be found of instructed learning, too. I hope to have more and more bi- or trilingual children as subjects of case studies so that the advantages of infant bi-or trilingualism could be easily proved. Also, for Hungarian parents it should be shown that there is no need to be afraid of bringing up their children bilingually or letting them go to bilingual kindergartens where they can get familiar with other languages.

This thesis also tries to persuade the reader about the advantages of foreign language learning in early childhood. In some respect, my subjects also had some learning elements in their language acquisition, which did not do any harm to them. Having observed Nasim's and Nabil's trilingual language processing, we dare say that multilingual development has only advantages for the child. There is no need to be afraid of languages, not even in early childhood.

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