

On the Early Development of Aspect in Greek and Russian Child Language, a Comparative Analysis¹

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Abstract

The category of aspect is grammaticized in both Greek and Russian opposing perfective and imperfective verb forms in all inflectional categories except the nonpast ('present'). Despite these similarities there are important differences in the way the aspectual systems function in the two languages. While in Greek nearly all verbs oppose a perfective to a given imperfective grammatical form, Russian aspect is more strongly lexicalized with pairs of imperfective and perfective lexemes not only differing aspectually, but also as far as their lexical meanings are concerned. This is especially true of perfective verbs formed by prefixes as compared to their imperfective bases. Thus, in pairs of prefixed and unprefixed dynamic verbs, the derived prefixed (perfective) member has a telic meaning while its unprefixed (imperfective) counterpart is atelic (e.g. *sjest'* (PFV) 'to eat up' vs. *jest'* (IPF) 'to eat'). Such derived perfective verbs may in turn be "secondarily" imperfectivized by suffixation furnishing the only "true" perfective/imperfective pairs of verbs (e.g. *sjest'* (PFV) 'to eat up' vs. *sjedat'* (IPF) 'to eat up' (iterative)). "Secondary" imperfectives do not occur in our child data.

In this pilot study, we will analyze the tense-aspect-mood forms of the 20 most frequent verbs with equivalent meanings occurring in the longitudinal audiotaped data of a Greek and a Russian boy between 2;1 and 2;3 (their entire lexical inventories comprise approx. 100 verbs each).

We adopt a constructivist perspective on the development of aspect in Greek and Russian child language and will show that in spite of a broad inventory of imperfective and perfective verb forms to be found in the speech of both children aspect has not yet developed into a generalized grammatical category, but is strongly dependent on *aktionsart* (stative/dynamic, telic/atelic) in both languages. While this results in a strong preference for perfective verb forms of telic verbs and of imperfective forms of atelic ones in the speech of the Greek boy, the Russian child tends to use the unmarked members

1 Introduction

An important question arising from the detailed study of different child languages is if early child language follows universal principles of development or if children are sensitive to differences in the various languages they are acquiring.² When the first author began to study the development of the grammatical categories of the Greek verb a quarter of a century ago she found that not only inflectional development in such a typical Indo-European language with a

¹ We would like to thank Anastasia Christofidou, Greek Academy of Sciences, Athens, for offering us her Greek data and helping with its analysis.

² See the controversy between Slobin (1985) and Bowerman (1985).

rich inflectional system is precocious as compared to languages of a more isolating type like English, but also that the tense-aspect-mood categories of the verb as well as person and number are all formally distinguished in the speech of children in the last fourth of their second year, the point in time when data collection started. Greek children enter the inflectional stage very early. Thus, the boy Christos already uses two different verb form categories carrying clear morphological markers by 1;8 and three different verb form categories at 1;9. Most importantly, these are used in a largely functionally adequate way as far as the categories of tense, aspect, and mood are concerned (Christofidou and Stephany 2003). However, neither the full set of verbal forms is acquired at this stage nor do the functions of forms used by the child equal those of standard Greek in every respect (Stephany 1985).³

Perfective and imperfective aspect was found to be marked in 90% of verb form tokens on average already by 1;9 with this percentage rising to 98% by the age of 2;10 (Stephany 1985:82). The prototypical combinations of aspect, tense, and *aktionsart* predominate in Greek child-directed speech and are the first ones to develop in child Greek (Stephany 1985, 1997). “While tense depends on aspect in child Greek, aspect is in turn dependent on lexical *aktionsart*” (Stephany 1997:327). At least up to 2;6, the dependence of aspect on *aktionsart* is much stronger in early child Greek than in the standard language (Stephany 1997:327). It is only when the category of aspect shifts from a more concrete category accompanying *aktionsart* to a more abstract grammatical category to be used with one and the same lexeme in both of its possibilities (perfective/imperfective) in a given tense or mood and when the category of tense is explicitly expressed that the category of aspect specializes (Stephany 1992:298-299, 295; 1997:328). A similar process of specialization of a grammatical category in Greek language acquisition may be observed in the subjunctive. Due to its fundamental role in expressing deontic meanings in everyday interaction, the subjunctive mood is more frequently attested at 1;10 than either the indicative or the imperative. The global category of the early subjunctive mood is gradually differentiated into the more specialized categories of subjunctive mood and future tense (Stephany 1992:297; 1997:203, 328).

As far as Russian child language is concerned, the development of aspect was first studied by Gvozdev (1949), who noticed that children use aspectual forms correctly from the very early stages on, quite in contrast to adult learners of Russian. These findings agree with those of Ceytlin (1989) in whose data aspectual errors are very rare, quite in contrast to the numerous morphophonemic mistakes concerning stem choice in finite verb forms. More recent work on the acquisition of Russian aspect by Poupynine (1998) shows that “errorless” occurrence of aspectual forms at the very beginning is due to a lack of contexts in which concurrent forms may be used. Stoll (2001) finds that even at the age of six children do not yet use Russian aspect in an adult-like way.

In the last ten years, the development of Russian verb morphology and the acquisition of aspect in particular has been the object of a number of studies, among which those by Poupynine (1996, 1998), Gagarina (2000a, 2000b, in press), and Stoll (1998, 2001).⁴ Poupynine (1996, 1998) found that in the beginning of verbal development, there is an opposition between the imperative and the infinitive, with the infinitive being a kind of unmarked all-purpose or “mediator” form. When finite verb forms develop, the infinitive is restricted to modal functions and the perfective past and future are opposed to the imperfective present. Both the perfective past and the perfective future are closely related to utterance time (Poupynine 1998). According to Gagarina (2003), the first aspectual distinctions may already be detected in children’s use of reduplicated onomatopoetic forms expressing repeated actions. In the

³ See also Stephany (1981, 1997) and Christofidou and Stephany (2003).

⁴ See also Kiebzak-Mandera (1999), Kiebzak-Mandera, Smoczynska, and Protassova (1997).

early stage of the development of perfective and imperfective aspectual forms, these are not used symmetrically: while perfectives occur in the past, imperfectives are used in the present (Gagarina 2000a). In her detailed investigation of the acquisition of Russian aspect based on longitudinal as well as experimental data from children aged from 2 to 6, Stoll (2001) distinguishes three stages: (1) Item-based learning, (2) context-based learning, and (3) context-independent proficiency. What is most relevant for our own results is Stoll's finding that while verbs of other *aktionsart* than the telic one "are predetermined for aspect and no choice is available", there is "a negative correlation of use of the perfective aspect within the telic Aktionsart and age" in a complex narrative production task. "Still the perfective aspect is very much prominent for the 5- and 6-year-olds as well [as the 3- and 4-year-olds] tested."

Since both Greek and Russian possess the grammatical category of aspect and oppose the perfective to the imperfective in their synthetic verb forms, we found it tempting to study the early development of this important verbal category in a Greek and a Russian child in order to find out in how far the development of aspect follows general lines of development or is influenced by differences in the two languages.

As opposed to the Cognition Hypothesis of the Piagetian tradition and followed for example in Slobin's famous paper published in 1973, the Language Specificity Hypothesis first supported by comparative work of Bowerman and Choi's⁵ "emphasizes the child's productive analysis of the form-function patterns of the target language" (Behrens 2001:458). Slobin (2001:412) stresses that "crosslinguistic diversity in patterns of grammaticization points to adult communicative practices as the most plausible source of form-function mappings in human languages, rather than prototypical events in infant cognition." In a generative theoretical framework, Hyams (2002:226) points out that "even in the domain of inflectional morphology, where language particular variation is the richest, children acquire the specifics of the target language at a strikingly early age." This is what is called "Early Morphosyntactic Convergence."⁶

These considerations lead to the role of input frequency in language acquisition. One of the tenets of Bybee's (1991:89) model of the acquisition of inflectional morphology is that "the most often repeated experiences (in production and perception) have the strongest [mental] representation." In a recent number of *Studies in Second Language Acquisition* entirely devoted to the role of frequency in language processing and language development, Ellis (2002a:145; 2002b:298) discusses the relative roles of input frequency and of "noticing" in language acquisition as well as the importance of saliency and semantic load of grammatical phenomena (2002b:307). In view of recent research in the neuroscience of "noticing" and of implicit vs. explicit learning it seems inappropriate to dismiss the role of input frequency by arguing that it does not play an exclusive role in language acquisition (see Ellis 2002a; 2002b).⁷

We agree with the basic tenet of usage-based models of language acquisition, that young children use language to communicate and that they "begin by imitatively learning specific pieces of language in order to express their communicative intentions" trying to use language the way they have heard it used by mature speakers in their environment (Tomasello 2000:70-71). A comparison between child speech and child-directed speech will therefore be included in this comparative study of the early development of aspect in Greek and Russian. Jakobson's (1977:8) ideas on the role of input and his characterization of early language development in

⁵ See Bowerman (1985), Choi and Bowerman (1991), Gopnik and Choi (1995).

⁶ See also Hoekstra & Hyams (1998).

⁷ Thus, Hyams (2002:249, fn.21) criticizes input-based statistical models of language acquisition because "the child so often ignores robust properties of the adult input."

children as "creative imitation" regain importance in the framework of contemporary theories of language acquisition:

Was hier stattfindet, ist weder eine mechanische Übernahme noch eine wunderbare Schöpfung aus dem Nichts. Das Nachahmen öffnet den schöpferischen Kräften des Anfängers weite Möglichkeiten. Das vorhandene Muster gestattet eine Auslese der vollbrachten Entlehnungen und deren gesetzmäßige Reihenfolge, der zudem das Kind anfangs das eine und dann erst das nächste sich anzueignen weiß.

2 A note on the grammatical structure of the Greek and Russian aspectual systems

As mentioned above, the category of aspect is grammaticized in both Greek and Russian opposing perfective and imperfective verb forms in all inflectional categories expressed by synthetic verb forms except the nonpast ('present').

Table 1. The main inflectional categories of the Greek verb in the active voice (from Christofidou & Stephany 2003:93)

Mood	Tense	Aspect	
		Imperfective	Perfective
Indicative	Non-past	líno ¹	-
	Past	élina	élisha
	Future	tha líno	tha líso
Subjunctive		na líno	na líso
Imperative		líne	líse

¹ 'to solve, untie'

In Greek, nearly all verbs formally distinguish between imperfective and perfective forms. These occur in the simple past, the future, the subjunctive, and the imperative. The other grammatical categories expressed inflectionally by the Greek verb are mood, tense, and voice, as well as person and number. Modern Greek has no infinitive. Aspect is marked on the stem, while mood and tense are expressed by the verb ending, together with person and number. Active and medio-passive voice are marked on the verb ending as well as the stem.⁸ The main temporal opposition is past/non-past. Table (1) exemplifies the principal tense-aspect-mood categories of the Greek verb.

In Russian, the two aspects are contrasted not only in finite verb forms (except the present tense) but also in the infinitive and the participles (table 2). Since participles are very rare in child speech as well as in child-directed speech we will not consider them here.⁹

Despite the similarities mentioned above, there are important differences in the way the aspectual systems function in the two languages. While in Greek nearly all verbs oppose a perfective to a given imperfective grammatical form, Russian aspect is more strongly lexicalized with pairs of imperfective and perfective lexemes not only differing aspectually, but also as far as their lexical meanings are concerned.

⁸ Since the medio-passive is irrelevant for early verb development it will not be considered here.

⁹ For a full representation of the Russian system see Gagarina (2003).

Table 2. The main inflectional categories of the Russian verb in the active voice

		Aspect	
		Imperfective	Perfective
Infinitive		reshat' ¹	reshit'
Mood	Tense		
Indicative	Present	reshaet	-
	Past	reshal	reshil
	Future	budet reshat'	reshit
Subjunctive		reshal by	reshil by
Imperative		reshaj	reshi

¹ *reshat'* and *reshit'* both mean 'to solve'.

This is especially true of perfective verbs formed by prefixes as compared to their imperfective bases. Thus, in pairs of prefixed and unprefixed dynamic verbs, the derived prefixed perfective member has a telic meaning while its unprefixed imperfective counterpart is atelic (examples 1). Such derived perfective verbs may in turn be “secondarily” imperfectivized by suffixation furnishing the only “true” perfective/imperfective pairs of verbs (examples 2). However, such “secondary” imperfectives do not occur in our child data.

- (1) RUSSIAN (a) *sjest'* (PFV) 'to eat up'
 (b) *jest'* (IPF) 'to eat'
- (2) RUSSIAN (a) *sjest'* (PFV) 'to eat up'
 (b) *sjedat'* (IPF) 'to eat up' (iterative)

The semantic and syntactic functions of the aspectual systems of Greek and Russian are highly complex. We will here limit ourselves to the description and comparison of the semantic functions of aspectual verb forms in early Greek and Russian child language.

3 The data

In this pilot study, the tense-aspect-mood forms of the 20 most frequent verbs with equivalent meanings occurring in the longitudinal audiotaped data of a Greek and a Russian boy between the ages of 2;1 and 2;3 will be analyzed. The lexical inventories of the two children comprise approximately 100 verbs each. The entire audiotaped data covering this period consists of 2.052 utterances for the Greek boy and 1.923 utterances for the Russian boy.

4 Form and function of aspectual verb forms in early Greek and Russian child language

4.1 The early development of verb forms in Greek and Russian

The types and tokens of verb forms occurring in different tense-aspect-mood categories in the speech of both boys from the beginning of data collection through the age of 2;3 are summarized in tables (3) and (4). By the age of 2;1, the Greek as well as the Russian boy seem to make a spurt in the development of verbal morphology: They use a considerably

larger number of different tense-aspect-mood forms both type- and tokenwise than before this age. Although the development of verbal inflection began much earlier, it has reached an impressive diversity at the beginning of the third year in the two languages. The numbers of verb form tokens occurring in the age range between 2;1 and 2;3 are 769 for the Greek boy Christos and 523 for the Russian boy Filipp.

Table 3. Greek: Types/Tokens of Christos' Verb Form Categories from 1;7 to 2;3

AGE	PRES	PAST		FUT		IMP		SUBJ	
	IPF	PFV	IPF	PFV	PFV	IPF	IPF	PFV	IPF
1;7	7/8	-	-	-	-	-	-	2/3	-
1;8	4/5	2/4	-	-	-	-	-	-	1/5
1;9	14/27	6/15	1/1	-	-	-	-	1/1	1/1
1;10	16/77	6/10	-	-	-	-	-	-	-
1;11	24/77	8/14	-	-	5/9	-	-	3/3	-
2;0	24/82	10/19	2/2	4/6	10/12	-	-	3/6	-
2;1	38/144	25/78	1/1	19/27	36/49	-	-	10/24	-
2;2	24/53	16/55	1/3	18/21	26/45	2/4	2/2	2/3	1/1
2;3	25/66	53/118	2/11	16/18	13/22	2/4	1/1	6/13	4/6

Table 4. Russian: Types/Tokens of Filipp's Verb Form Categories from 1;4 to 2;3

AGE	PRES	PAST		FUT		IMP		INF	
	IPF	PFV	IPF	PFV	IPF	PFV	IPF	PFV	IPF
1;4	-	-	-	-	-	3/5	1/1	1/14	-
1;5	-	1/1	-	-	-	1/4	2/2	1/82	-
1;6	-	2/2	-	1/1	-	4/9	-	1/60	1/1
1;7	1/1	1/3	-	1/1	-	-	1/1	1/47	-
1;8	11/22	2/2	-	3/5	-	4/7	6/6	1/56	7/15
1;9	28/43	10/11	5/5	2/2	-	6/22	4/5	7/21	12/17
1;10	12/17	4/5	4/4	1/1	-	5/7	-	2/2	3/3
1;11	12/19	13/14	1/3	5/9	-	5/11	4/7	6/9	3/3
2;0	18/26	11/16	15/18	6/10	-	5/12	7/9	2/3	5/10
2;1	46/81	32/46	14/24	9/20	½	8/15	4/4	3/6	10/12
2;2	22/33	29/39	7/9	16/23	2/3	8/14	8/11	5/9	10/16
2;3	36/59	14/15	8/19	13/15	1/1	4/12	8/10	2/2	8/15

It is important to point out that in Greek and Russian finite verb forms do not only express the category of aspect but also mood and tense. Thus, contrasting use of such forms not only concerns aspect but also the latter two categories.¹⁰ As shown in tables (3) and (4), in both Greek and Russian a shift in aspect is usually accompanied by a shift in tense or mood.

¹⁰ In this paper, we will not be concerned with the categories of person, number, and gender.

Changes of aspect within one and the same tense or mood are very rare. This is true for the two children's speech as well as the child-directed speech of their mothers (see tables 7 and 8 below).

Let us next consider the use of the aspectual forms occurring in the two children's speech in more detail and compare the child data to what is found in child-directed speech.

4.2 Use of perfective and imperfective verb forms with stative, telic, and atelic verbs in child Greek and child Russian as compared to child-directed speech

In spite of the fact that most Greek verbs distinguish imperfective and perfective forms, these forms are not evenly distributed in speech. Besides the interaction of aspectual verb forms with the categories of tense and mood, there is a strong interaction with the inherent aspectual character of verbs, their *aktionsart*. As shown by Stephany (1985), this holds true for colloquial Greek, but is especially prominent in both Greek child language and child-directed speech, where a more or less strong dependence between the two aspects and stative vs. dynamic verbs is found on the one hand and telic vs. atelic verbs on the other. The distribution of the aspectual forms of 21 of Christos' verbs belonging to the classes of stative, telic, and atelic verbs, respectively, is summarized in table (5).

Table 5. Greek: Usage of the perfective and imperfective aspect with 21 stative, telic, and atelic verbs in Christos' speech from 2;1 to 2;3 (lemmas/tokens)

Aktions-art	PRES	PAST		SUBJ/FUT		IMPERATIVE	
	IPF	PFV	IPF	PFV	IPF	PFV	IPF
Stative (3 lem.)	3/36	-	-	-	-	-	-
Telic (10 lem.)	3/58	6/103	-	10/66	3/5	2/24	-
Atelic (8 lem.)	5/83	2/5	1/1	5/88	2/8	2/5	-

While stative verbs are exclusively used in the present tense and thus with the imperfective aspect, Christos shows a strong tendency to use telic verbs both in the perfective past and the perfective subjunctive or future. Altogether, perfective verb forms amount to more than 75% of tokens with telic verbs, while atelic verbs occupy a more moderate position as far as the distribution of the two aspectual categories is concerned: about 50% of atelic verb form tokens are imperfective and the other 50% perfective.

In Russian, the situation is different: Stative and atelic verbs typically have no true perfective correspondence since with these verbs a change of aspect causes a simultaneous change of *aktionsart*. Thus, *exat'* – 'to go by vehicle' is imperfective and atelic, whereas its perfective counterparts are all telic (examples 3).

- (3) RUSSIAN (a) *exat'* – 'to go by vehicle' – IPF, atelic
 (b) *poexat'* – 'to start going by vehicle' – PFV, telic
 (c) *uexat'* – 'to leave by vehicle' – PFV, telic
 (d) *priexat'* – 'to arrive by vehicle' – PFV, telic

Given this situation, both perfective and imperfective forms only occur with telic verbs in standard Russian and children thus have no opportunity to hear any perfective forms of atelic

verbs. They accordingly use both stative and atelic verbs exclusively in the imperfective aspect (table 6). With telic verbs, there is an even stronger preference for the perfective aspect than in Greek, with 90.8 % of all telic verb tokens being perfective. Thus, the use of aspect with stative verbs in Greek exactly corresponds with Russian, while telic and atelic verbs behave differently in the two languages. The reason seems to be that the more strongly aspect is lexicalized the more it depends on *aktionsart*.

Table 6. Russian: Usage of finite aspectual forms from 35 stative, telic, and atelic verbs in Filipp's speech from 2;1 to 2;3 (lemmas/tokens)

Aktionsart	PRES	PAST		FUT		INF		IMPERATIVE	
		PFV	IPF	PFV	IPF	PFV	IPF	PFV	IPF
Stative (3 lemmas)	13	-	-	-	-	-	1	-	-
Telic (24 lemmas)	1/5	14/38	-	11/33	-	5/16	1/1	5/22	4/5
Atelic (8 lemmas)	7/45	-	4/8	-	1/1	-	4/16	-	-

Comparing the children's language to child-directed speech it is found that the distribution of aspectual forms in the Greek boy's speech corresponds quite closely with his mother's usage in her child-directed speech between 2;1 and 2;3 (table 7). She uses stative verbs exclusively in the present imperfective. With telic verbs, perfective verb forms amount to 73.5% and thus by far outnumber imperfective ones. As is the case in her son's speech, imperfective and perfective verb forms are more evenly distributed with atelic verbs, where imperfective forms amount to 57.3% of tokens.

Table 7. Perfective and imperfective verb form tokens (%) in Greek child speech and child-directed speech (CDS)

	Aktions-art	PRES	PAST		SUBJ/FUT		IMPERATIVE	
		IPF	PFV	IPF	PFV	IPF	PFV	IPF
Child 2;1-2;3 (21 lem.)	Stative	100%	-	-	-	-	-	-
	Telic	22.7%	40.2%	-	25.8%	1.9%	9.4%	-
	Atelic	43.7%	2.6%	0.05%	46.3%	4.2%	2.6%	-
CDS 2;1-2;3 (37 lem.)	Stative	100%	-	-	-	-	-	-
	Telic	24.7%	30.7%	-	28.3%	2.2%	14.5%	0.6%
	Atelic	44.1%	4.4%	0.4%	38.2%	4.0%	4.0%	4.8%

The Russian child's exclusive use of stative and atelic verbs in the imperfective aspect exactly corresponds to that of his mother (table 8). With telic verbs, the perfective aspect is also preferred by the mother, in whose child-directed speech it amounts to 68.7% of tokens. The mother, however, uses the imperfective present and the imperfective imperative of telic verbs much more often than her son.

Table 8. Perfective and imperfective verb form tokens (%) in Russian child speech and child-directed speech (CDS)

	Aktions-art	PRES	PAST		FUT		INF		IMP	
		IPF	PFV	IPF	PFV	IPF	PFV	IPF	PFV	IPF
Child 2;1 – 2;3 (35 lem.)	Stative (3 lem.)	92.9%	-	-	-	-	-	7.1%	-	-
	Telic (24 lem.)	4.2%	32%	-	27.5%	-	13.3%	0.8%	18.1%	4.1%
	Atelic (8 lem.)	64.4%	-	11.4%	-	1.4%	-	22.8%	-	-
CDS 2;1-2;3 (35 lem.)	Stative (3 lem.)	97.1%	-	2.9%	-	-	-	-	-	-
	Telic (24 lem.)	18.8%	40.6%	-	9.8%	-	6.4%	3.5%	11.9%	9.0%
	Atelic (8 lem.)	72.6%	-	16.1%	-	0.8%	-	9.7%	-	0.8%

4.3 The functions of aspectual forms in early Greek and Russian child language

As mentioned above, in both Greek and Russian finite verb forms, aspect cooccurs with mood or tense. Depending on these latter categories as well as on the *aktionsart* of verbs, there are certain preferred combinations of aspect, tense, and mood used with certain functions in the two standard languages, in child-directed speech, and in child language. Typical examples from Greek and Russian child language are given in examples (4) to (6).

(4) GREEK

(a) Christos 2;1.9 PRES:IPF, atelic *odhigo* ‘to drive’

FAT: tu baba to kikinito@b [: aftokinito] echi timoni.

of.the daddy the car has steering.wheel

‘Daddy’s car has a steering wheel.’

CHR: otiji [: odhiji] (o) PikioC@c [: Christos] (to) kinimo [: aftokinito]

drive:IPF:NONPAST:3S (the) Christos (the) car

timoni (to) kikineto [: aftokinito].

steering.wheel (the) car

‘Christos drives the car steering wheel car.’

(b) Christos 2;2.18 PAST:PFV, telic *pefto* ‘to fall’

CHR: epetse [: epese]. ‘It has fallen.’

fall:PFV:PAST:3S

MOT: ti epese moro mu?

‘What has fallen (PFV:PAST) baby of.me?’

CHR: to (for)tigho Medi [: Mercedes] epetse [: epese].

the truck Mercedes fall:PFV:PAST:3S

‘The Mercedes truck has fallen.’

- (c) Christos 2;1.23 SUBJ:PFV, atelic *troo* 'to eat'
 GRM: na su katharisi i jaja ap(o) to kukutsi ke na fas?
 MDL.PTL you:GEN clean:PFV:SUBJ:3S the granny of the stone and
 MDL.PTL eat:PFV:SUBJ:2S
 'Shall Granny clean (it) for you from the stone and that you eat?'
 CHR: (tha/na) fai kilika [: elitsa].
 (FUT/MDL.PTL) eat:PFV:SUBJ:3S olive:DIM:SG
 'He will/wants to eat (an) olive.'

In the Greek example (4a), in which the atelic verb *odhigho* 'to drive' is used in the present tense while the child and his father are playing with a toy car simultaneously referring to cars in the real world. The function of the present imperfective is descriptive and the situation is unbounded. In example (4b), the perfective past used with the telic verb *pefto* 'to fall' is also descriptive but has a resultative meaning. The function of the perfective past is therefore aspectual rather than temporal with the topic time being the present rather than the past. The perfective subjunctive of the atelic verb *troo* 'to eat' in example (4c) has a more future-like or more subjunctive-like modal interpretation depending on the particle used. In Christos' speech, it expresses a wish or an intention and has a strong deontic modal character. All of Christos' imperative forms occurring in the data studied are perfective and there is thus not yet any aspectual distinction within this mood. Besides, all early Greek verb forms are finite.

(5) RUSSIAN

- (a) Filipp 2;2 PRES:IPF, atelic *exat'* 'to go by vehicle'
 *FIL: Netu gruzha.
 %eng: no load:GEN:SG
 *MOT: Nu potom najdem.
 %eng: later on we find:FUT:PFV
 *FIL: Nasha mashina bez gruzha edet.
 %eng: Our car without load go:PRES:IPF
- (b) Filipp 2;1 PAST:PFV, telic *upast'* 'to fall down'
 *MOT: a chto obezjanka sdelala?
 %eng: and what monkey do:PFV:PAST
 *FIL: upala.
 %eng: fall_down:PFV:PAST
- (c) Filipp 2;3 FUT:PFV, telic *ubrat'* 'to tidy up', *lech'* 'to lie down'
 *MAM: Tebja zovut Filipp, a ee kak zovut ?
 %eng: your name is Filipp and what is her name?
 *FIL: Zhakonja.
 %eng: Zhakonja.
 *FIL: Baba uberet i ljazhesh' spat' .
 %eng: Granny tidy_up:FUT:PFV and you go:FUT:PFV to bed
 %com: addressing the monkey

The examples of imperfective present and perfective past form usage of the Russian child given in (5a) and (5b) are quite typical and immediately compare to examples (4a) and (4b) of the Greek boy. Both utterances are descriptive and refer to the here-and-now of the situation. In example (5a), Filipp speaks about an unbounded action. While the process itself lies in the immediate past in example (5b), the state resulting from the monkey's falling exists at the time of the utterance. The perfective future is clearly used with a temporal function in the first predication of example (5c), whereas the second predication may also be interpreted modally.

(6) RUSSIAN

- (a) Filipp 2;2 INF:IPF, atelic *kushat'* 'to eat', stative *ljubit'* 'to love'
 *FIL: nado kushat', nado babu ljubit'.
 %eng: need to eat:IPF:INF need to love:IPF:INF granny
 %com: addressing the toy cat
- (b) Filipp 2;2 INF:PFV, telic *sjest'* 'to eat up'
 *MOT: kogo xochet sjest'?'
 %eng: whom:ACC want (the fox) to eat_up:INF:PFV
 *FIL: zajchika sjest' .
 %eng: hare eat_up:PFV:INF.
- (c) Filipp 2;2 IMP:PFV, telic *pochinit'* 'to repair'
 *FIL: na pochini sobaku.
 %eng: there repair:PFV:IMP dog:ACC
 *MOT: ne budu ja, ty lomaesh' ee, ne budu chinit' .
 %eng: I shall not, you break it, I shall not repair:FUT:IMP
- (d) Filipp 2;2 IMP:IPF, telic *sadit'sja* 'to sit down'
 *FIL: sadis, otkrytku dam
 %eng: sit_down:IPF:IMP, postcard give:FUT:PFV
 'Sit down I will give you a postcard.'

In example (6a), a stative and an atelic verb are used in the imperfective infinitive while in example (6b), a telic verb occurs in the perfective infinitive. In both examples, the infinitive carries a modal meaning. In examples (6c) and (6d), telic verbs are used with the perfective as well as the imperfective imperative. As far as the perfective imperative form used by the child in example (6c) is concerned, there is a small difference in meaning between this perfective form and a possible imperfective one: Use of the perfective form implies that the child's directive is not yet known to his mother and comes to her as new information. The imperfective imperative would be used if the directive was already known to the hearer. It is also natural in a situation such as the one in example (6d). It is questionable though whether the child already understands these subtle differences in meaning.

(7) GREEK

- (a) Christos 2;2.4 SUBJ:IPF, atelic *troo* 'to eat'
 na t(r)oi mam.
 MOD:PTL eat:SUBJ:IPF:3S food
 'He shall eat food.'

- (b) Christos 2;1.27 SUBJ:IPF, atelic *troo* ‘to eat’
 (tha) majetsi [: majirepsi] i jaja to [: na] poi [: troi] fatses [: fakjes].
 (FUT.PTL) cook:SUBJ:PFV:3S the granny MOD.PTL eat:SUBJ:IPF:3S lenses
 ‘Granny will cook lenses for him to eat.’
- (c) Christos 2;1.27 SUBJ:IPF, atelic *pino* ‘to drink’
 (th)eli na pini ne(r)o (o) Pitsio.
 wants MOD.PTL drink:SUBJ:IPF:3S water (the) Christos
 ne(r)o (th)eli na pji (o) Pitsios.
 water wants MOD.PTL drink:SUBJ:PFV:3S water (the) Christos
 ‘Christos wants to drink water.’

In the speech of the Greek boy, there are only a few examples in which he uses an atelic verb in the imperfective subjunctive. If a mature speaker used such a form one would have to interpret it as having a marked meaning, for example an iterative one. With Christos, however, there is only one example of the verb *troo* ‘to eat’ where the imperfective subjunctive has such a meaning and is colloquially correct (example 7a). In the other four tokens of this verb form, he seems to be using a memorized form without sufficient knowledge of the relation between the aspectual forms of the superordinate and the subordinate verb (example 7b). In standard Greek, the subordinate verb would be in the perfective subjunctive form *fai* ‘eat:SUBJ:PFV:3S’. The only other atelic verb occurring in the imperfective subjunctive is *pino* ‘to drink’ (1 token). Here, Christos immediately corrects the inadequately used imperfective form to a perfective one in the next utterance (example 7c). As far as the imperfective past is concerned, there is only one token of the atelic verb *troo* ‘to eat’. However, it seems to have been wrongly used instead of a present or subjunctive form.¹¹ These few examples seem to demonstrate that Christos has not yet achieved the mapping between form and meaning of such marked aspectual forms of the language he is acquiring. In the light of such findings, Hyams’ claim that “there is a strict mapping between form and meaning” in children’s early inflections (2002:236-237) and that “children do not typically assign wrong aspectual or modal meanings to inflectional forms” (2002:244-245) seems too categorical.

5 Universal and particular in the acquisition of Greek and Russian aspect

The main findings of this pilot study comparing the development of the category of aspect in early Greek and Russian child language may be summarized as follows:

In both languages, the early use of aspect strongly depends on *aktionsart*. While stative verbs exclusively occur in the imperfective aspect, the perfective aspect is strongly preferred with telic verbs in Greek as well as Russian. This agrees with what Stoll (2001) found, especially for her younger subjects. There is a difference between the two languages as far as atelic verbs are concerned. While these are more or less evenly used with both aspects in Greek, they exclusively occur in the imperfective aspect in Russian. As mentioned above (section 4.2), the reason is that the perfective aspect would automatically change these verbs into telic ones. Still, it can be maintained that in neither child language has the category of aspect as yet

¹¹ At 2;2.14, Christos still uses the form *etroje* ‘he ate:IPF:PAST:3S’ inappropriately.

developed into a generalized grammatical category and demonstrates more local, low-scope systematicity instead.

In Greek as well as Russian, there is a strong correlation between aspectual use in the children's and their mothers' speech. Thus, early child Greek shows typical characteristics of aspectual use of Greek while early child Russian shows typical characteristics of Russian. Such language-specific features of aspectual use are even stronger in child language than in child-directed speech.

The correlation between the children's and their mothers' speech also concerns the types of verb form categories used in each language: While in Greek the subjunctive is a very important verbal category in everyday interaction expressing deontic modal meanings, the infinitive and the future are used in comparable functions in Russian.

To conclude, our study seems to support the hypothesis that from very early on children are sensitive to the specific characteristics of the language they are acquiring.

References

- Behrens, H. (2001): Cognitive-conceptual development and the acquisition of grammatical morphemes: The development of time concepts and verb tense. In Melissa Bowerman and Stephen C. Levinson (eds.): *Language acquisition and conceptual development*, 450-474. Cambridge: Cambridge University Press.
- Bowerman, M. (1985): What shapes children's grammars? In Dan I. Slobin (ed.): *The Crosslinguistic Study of Language Acquisition*. Vol. 2, 1257-1319. Hillsdale, NJ/London: Lawrence Erlbaum Ass.
- Bybee, J. L. (1991): Natural morphology: The organization of paradigms in language acquisition. In Thom Huebner and Charles A. Ferguson (eds.): *Crosscurrents in second language and linguistic theories*, 67-91. Amsterdam/Philadelphia: John Benjamins.
- Ceytlin, S. N. (1989): Child language: form and word-building innovations. Unpublished PhD Dissertation, Leningrad (in Russian).
- Choi, S. & M. Bowerman (1991): Learning to express motion events in English and Korean: The influence of language-specific lexicalization patterns. *Cognition* 41, 83-121.
- Christofidou, A. & U. Stephany (2003): Early Phases in the Development of Greek Verb Inflection. In Dagmar Bittner, Wolfgang U. Dressler & Marianne Kilani-Schoch (eds.): *Development of Verb Inflection in First Language Acquisition. A Cross-Linguistic Perspective*, 89-129. Berlin: Walter de Gruyter.
- Ellis, N. C. (2002a): Frequency Effects in Language Processing. A Review with Implications for Theories of Implicit and Explicit Language Acquisition. *Studies in Second Language Acquisition* 24, 143-188.
- Ellis, N. C. (2002b): Reflections on Frequency Effects in Language Processing. *Studies in Second Language Acquisition* 24, 297-339.
- Gagarina, N. (2000a): The acquisition of aspectuality by Russian children: the early stages. *ZAS Papers in Linguistics, 2000*. Vol. 15. Berlin.
- Gagarina, N. (2000b): Early verb development in one Russian-speaking child. *ZAS Papers in Linguistics, 2000*. Vol. 18. Berlin.
- Gagarina, N. (2003): The early verb development and demarcation of stages in three Russian-speaking children. In Dagmar Bittner, Wolfgang U. Dressler & Marianne Kilani-Schoch (eds.): *Development of Verb Inflection in First Language Acquisition. A Cross-linguistic Perspective*, 131-169. Berlin: Walter de Gruyter.
- Gopnik, A. & S. Choi (1995): Names, relational words, and cognitive development in English and Korean speakers: Nouns are not always learned before verbs. In Michael Tomasello & William E. Merriman (eds.): *Beyond names for things: Young children's acquisition of verbs*, 63-80. Hillsdale, NJ: Lawrence Erlbaum Ass.
- Gvozdev, A. N. (1949): Formirovanie u rebjonka grammaticheskogo stroja russkogo jazyka. Moscow: Akademija pedagogicheskix nauk RSFSR.

- Hoekstra, T. & N. Hyams (1998): Agreement and finiteness of V2: Evidence from child language. In Annabel Greenhill, Mary Hughes, Heather Littlefield, and Hugh Walsh (eds.): *Proceedings of the 22nd Annual Boston University Conference on Language Development*. Vol. 22/1, 360-373. Somerville, Mass.: Cascadia Press.
- Hyams, N. (2002): Clausal Structure in Child Greek: A reply to Varlokosta, Vainikka and Rohrbacher and a reanalysis. *The Linguistic Review* 19, 225-269.
- Jakobson, R. (1977): *Der grammatische Aufbau der Kindersprache*. Rheinisch-Westfälische Akademie der Wissenschaften. Vorträge, G 218. Opladen: Westdeutscher Verlag.
- Kiebzak-Mandera, D. (1999): Kształtowanie się systemu werbalnego u dzieci rosyjskojęzycznych. Unpublished PhD Dissertation. Jagellonian University, Krakow.
- Kiebzak-Mandera, D., Smoczynska, M., and E. Protassova (1997): Acquisition of Russian verb morphology: the early stages. In Wolfgang U. Dressler (ed.): *Studies in Pre- and Protomorphology*, 101-114. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- Poupynine, I. A. (1996): Usvoenie sistemy russkix glagol'nyx form rebenkom *Voprosy jazykoznanija*, 3.
- Poupynine, I. A. (1998): Elementy vido-vremennoj sistemy v detskoj rechi. *Voprosy jazykoznanija*, 2.
- Slobin, D. I. (1973): Cognitive prerequisites for the development of grammar. In Charles A. Ferguson & Dan I. Slobin (eds.): *Studies of child language development*, 175-208. New York: Holt, Rinehart & Winston.
- Slobin, D. I. (1985): Crosslinguistic evidence for the language-making capacity. In Dan I. Slobin (ed.): *The Crosslinguistic Study of Language Acquisition*. Vol. 2, 1157-1256. Hillsdale, NJ/London: Lawrence Erlbaum Ass.
- Slobin, D. I. (2001): Form-function relations: How do children find out what they are? In Melissa Bowerman and Stephen C. Levinson (eds.): *Language acquisition and conceptual development*, 406-449. Cambridge: Cambridge University Press.
- Stephany, U. (1981): Verbal Grammar in Early Modern Greek Child Language. In Philip S. Dale and David Ingram (eds.): *Child Language: An International Perspective*, 45-57. Baltimore: University Park Press.
- Stephany, U. (1985): *Aspekt, Tempus und Modalität: Zur Entwicklung der Verbalgrammatik in der neugriechischen Kindersprache* (Language Universals Series, 4). Tübingen: Gunter Narr Verlag.
- Stephany, U. (1992): Grammaticalization in first language acquisition. *Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforschung* 45, 289-303.
- Stephany, U. (1997): The Acquisition of Greek. In Dan I. Slobin (ed.), *The Crosslinguistic Study of Language Acquisition*. Vol. 4, 183-333. Mahwah, NJ/London: Lawrence Erlbaum Ass.
- Stoll, S. (1998): The Role of Aktionsart in the Acquisition of Russian Aspect. *First Language* 18, 351-378.
- Stoll, S. (2001): The Acquisition of Russian Aspect. Unpublished PhD Dissertation. University of California, Berkeley.
- Tomasello, M. (2000): First steps toward a usage-based theory of language acquisition. *Cognitive Linguistics* 11, 61-82.