

**ACQUISITION  
OF MORPHOLOGICAL  
CATEGORIES  
AND VOCABULARY  
IN EARLY  
ONTOGENESIS  
OF A CZECH CHILD**

**PAVLA CHEJNOVÁ**

**KAROLINUM**

# **Acquisition of Morphological Categories and Vocabulary in Early Ontogenesis of a Czech Child**

Politeness in Czech Academic Culture

**Pavla Chejnová**

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**1.**  
**INTRODUCTION**

This monograph introduces the process of vocabulary and grammar (primarily morphology) acquisition in one Czech child over a long time span. The research is based solely on the analysis of authentic material and covers the period from the onset of speech till three and half years of age in the target child's development. The longitudinal study is oriented toward the acquisition of lexicon and acquisition of grammatical categories of inflectional parts of speech, namely nouns, adjectives, pronouns and verbs. The analysis is mostly quantitative, largely building on concepts of pre-morphology, protomorphology and modularised morphology / morphology proper (Dressler, W. U. (ed.), 1997; Voeikova, M. D., Dressler, W. U. (eds.), 2002; Bittner, D., Dressler, W. U., Kilani-Schoch, M. (eds.), 2003; Stephany, U., Voeikova, M. D., (eds.), 2009).

The approach is constructivist, presupposing active mental processing of language input by a child. This approach assumes that in the first period of development the child uses mostly rote-learned forms without fully understanding their grammatical meanings. Therefore, in the pre-morphological stage, the child uses most lexemes only in one grammatical form. These lexemes could be referred to as base forms that do not yet express any grammatical categories. In the next, protomorphological stage, first contrasts of grammatical categories start to appear; for example, in nouns, the contrast between the nominative singular expressing the agent and the accusative singular expressing the patient / affected entity usually appears among the first contrastive forms. In verbs, contrast between infinitives, present tense forms and past participles can be observed. In the protomorphological stage, the number of contrastive forms increases and the first miniparadigms start to appear, i.e. one lemma is used at least in three different forms in one month of recording. In the last stage, modularised morphology, the grammar of the child becomes similar to the grammar of adult native speakers, and the child is able to use most of the categories of the mother tongue appropriately.

The presented study briefly addresses the pre-morphological stage, but the main focus is on the protomorphological stage, describing the first contrasts and miniparadigms in the target child's oral production between 2.8–3.6 years of age<sup>1</sup>; this span of

1 Age is usually presented in the format year, month, day, e.g. 2.8.1 means that the child is two years, eight months and one day old.

eleven months is analysed quantitatively. The study is based on an analysis of authentic material: a corpus of transcriptions of audio recordings of one Czech monolingual boy in verbal interactions with adults. As supportive material, diary records are used to illustrate the development of morphology. Furthermore, for the analysis of the lexicon, diary records serve as the primary source.

Chapter 2 introduces the results of previous studies on Czech language acquisition and the theoretical background of the research. Chapter 3 provides a detailed description of the methodology and data. The analysis of the first 1000 lexemes in the target child's lexicon is addressed in chapter 4. As the primary source of material analysed in chapter 4, diary recordings are used as the child was not very talkative after onset of speech and also because his utterances were unintelligible, thus making it impossible to use recordings. The list of the first 1000 lexemes in the child's active vocabulary is presented in chronological order in appendix A, including pronunciation, development of forms and English translation. An analysis of parts of speech in the first lexicon and the rate of acquisition is provided in this chapter as well.

Chapter 5 briefly describes the basics of Czech nominal and verbal morphology for those who are not native speakers. Chapter 6 addresses the pre-morphological stage, briefly describing the first syntactic and morphological phenomena occurring in the first two or more word combinations in the child's oral production. Chapter 7 briefly addresses syntactic development.

Chapters 8, 9, 10 and 11 are dedicated to discussing the acquisition of morphological categories of inflecting parts of speech – nouns, adjectives, pronouns and verbs. A detailed quantitative analysis of authentic materials is presented, covering the acquisition of particular grammatical categories. With respect to nouns, adjectives and pronouns, the sequence of acquisition of number (singular and plural), grammatical gender and all seven cases in relation to their syntactic and pragmatic function is presented; with respect to verbs, the acquisition of person, number, mood, tense, aspect, voice and their interrelation in syntactic and pragmatic functioning is addressed. In chapter 12, the results discussed in individual chapters are finally summarized and commented on. The description of the sequence of grammatical categories acquisition helps us answer the question concerning what factors have the strongest influence on development. The results support the assertion that both grammatical and pragmatic competences are interrelated and that one limits the other. During the period of development when the child operates with only a limited number of grammatical and lexical means, he acquires primarily those means that he needs to fulfil his communicative goals. Therefore, pragmatics influence the acquisition of grammar. On the other hand, limited grammatical competence restricts the possibilities of how to operate with language, of how to choose one's most efficient communicative strategies. Later, during the period of development when the child has already acquired a plethora of communicative means, including most of the morphological categories that a given language expresses, pragmatics also play a crucial role, as the child is able to choose a communicative strategy according to contextual factors; thus, pragmatic and grammatical competences cannot be separated during any period of development.

To analyse relevant phenomena in child language acquisition, several quantitative indicators were used, e.g. number of contrastive forms actively used, number of mini-paradigms, number of base forms, mean length of utterance in words, and type-token ratio (see chapter 3 for methodology and procedures). The obtained results were compared with previous research on the Czech language and other typologically similar (highly inflectional) languages. The findings show that the development of the target child follows the same stages as those described in previous studies on Slavic and Baltic languages. Thus, the results support the claim that all children go through the same stages of development (Piaget, Inhelder, 1969), although the age at which children enter particular stages can differ over several months. As our child was a late talker, the present study also challenges the normative approach to language acquisition in children, which determines exact ages when a child should reach a certain level of language competence. Our child was one whose language development would be described by laypersons as follows: *He did not talk at all for a long time, and then he started to talk in whole sentences immediately*. However, detailed quantitative analysis shows the opposite – the development was not unusual, the child went through all stages of development; language acquisition was in fact gradual and regular. Hopefully, this study will also help anxious mothers worry less about their child’s language development if it starts a bit later than in other children.

**2.**  
**THEORETICAL**  
**BACKGROUND**

## 2.1 PREVIOUS RESEARCH

Current research approaches in the area of developmental psycholinguistics differ in their major orientation, whether they follow the nativist conception of Noam Chomsky (rationalistic approach, oriented toward problems of innate language abilities, Chomsky, 1965, 1988, Lust, 2006, Pinker, 1994, Sternberg, 1996); or are empiristic approaches that stress the role of learning, context, child directed speech and pragmatic function of language. Tomasello (2005) proposes a social-pragmatic approach to language acquisition in which children learn linguistic structures through intention reading and pattern finding in their discourse interactions with others. Finally, the interactionist approach to language acquisition considers the importance of both cognitive development and social environment (Clark, 2003).

More detailed theoretical explanations of different approaches and their development throughout the history of developmental psycholinguistics are presented, e.g. by Nebeská (1992), Průcha (2011), Slančová (ed.) (2008), Smolík (2007), and Šebesta (2005). Both crucial aspects, nativist and empiristic, were present in the pioneering works of language acquisition: The works of Piaget (e.g. Piaget; Inhelder, 1969), which are constructivist, held that the development of language is a result of the cognitive development of humans, but interactions with environment are also necessary; Vygotskij (1986) stressed the role of cultural and historical context, where the most important factor that influences cognition is language, and also emphasised the role of learning. Lev Vygotskij, Alexander Romanovich Luria and Alexei Nikolaevich Leont'ev presented a new approach that fused cultural, historical and instrumental psychology, an approach referred to as cultural-historical psychology. The approach emphasised the mediatory role of culture, particularly language, in the development of higher mental functions in ontogeny and phylogeny.

In the field of developmental psycholinguistics, intensive scientific research has been conducted abroad, but no linguistic research centre in the Czech Republic has addressed first language acquisition in a systematic way. Foreign scientific studies on the topic are available to Czech researchers (mostly in English<sup>2</sup>), and several excellent

<sup>2</sup> For example, E. Clark's monograph *First Language Acquisition* (2003) presents findings of many studies carried abroad; basic findings in developmental psycholinguistics are presented in D. Crystal's *Listen to Your Child* (1986),

studies have also been published by Czech authors, but most of these are older. Ohnesorg's works focused on the phonetic development of his two children (1948, 1959) and language development in general (1948). Pačesová's work addressed the development of articulation and vocabulary (1968) and grammatical categories acquisition (1979). Příhoda's *Ontogeneze lidské psychiky I / Ontogenesis of Human Psyche* included a brief section on language acquisition (1963). Čáda's works also presented findings reported by foreign researchers (1906, 1908). Moreover, Jakobson was interested in child language (Jakobson, 1941). The work of Saicová Římalová (2013) focuses on verbal and non-verbal expressive means at the one-word stage and in early development; this work is based on the longitudinal observation of one child in a dialogue with adults and is essentially the only recent longitudinal study on Czech language acquisition. Work by the same author (2012) focuses primarily on intertextuality. Smolík (2002) addresses verb morphology acquisition in two Czech girls. Smolík and Seidlová Málková (2014) address the acquisition of grammatical, lexical and phonological categories in pre-school children from a psychological and psychodiagnostic point of view; the authors also mention the lack of empirical studies on authentic materials regarding Czech language acquisition. Smolík also presents an experimental methodology in psycholinguistics (Smolík, 2006, 2009). In addition to linguistic and psychological studies, logopaedic and diagnostic studies have been conducted (Kutálková, 2002, 2005, Lechta, 2011, Sovák, 1978). Findings in the fields of developmental psychology (Langmeier; Krejčířová, 2006, Vágnerová, 2000, Šulová, 2004) and neurolinguistics (Koukolík 2006, 2008) are also available. However, language development is only briefly outlined in general; grammatical development lies beyond the scope of most studies. The most important findings reported in the above mentioned studies will be further commented on in chapter 12.

Most foreign research addresses the acquisition of English, which differs significantly from Czech in terms of typological features (analytic language), but several works on languages typologically similar to Czech have also been reported. Gvozděv (1949, 1961) described the acquisition of grammatical categories of Russian by his son. Zarębina (1965) recorded several aspects of acquisition of Polish in several children. Quality research in the field of developmental psycholinguistics has been conducted in Slovakia, centred at the University of Prešov (<http://laboratorium.detskarec.sk>). Slančová (ed.) (2008) presented several studies focusing on the early acquisition of Slovak, including semantic and pragmatic aspects of child language. Kapalková et al. (2010) presented findings obtained from large studies based on questionnaires completed by parents (TEKOS), which focused not only on passive and active knowledge of lexemes but also on morphological and syntactic development. The findings help to suggest norms in development according to the percentage of children who had reached that level at a certain age. Kesselová (2014) carried out a study on early development of conjunctions, relatives, correlatives and particles with conjunctive func-

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and J. Stilwell Peccei's *Child Language* (1999) introduces the topic and also lists further readings. Grammatical morphemes acquisition in English is described by Brown (1973).

tions, relative adjectives and grammatical category of case, i.e. how children during early childhood acquire linguistic means to express relations between words and their expressive contexts. Slovak studies are particularly relevant as they describe a Slavic inflecting language that has many features in common with Czech. Thus, the findings will be referred to in this study when appropriate.

## **2.2 CROSS-LANGUAGE RESEARCH OF LANGUAGE ACQUISITION**

As researchers began to realize the importance of analysing acquisition of inflectional and agglutinative languages, several studies on various aspects of the acquisition of different languages were published, e.g. Slobin (ed.) (1985a, 1985b, 1992, 1997), Bowerman (1973), and Bowerman, Brown (eds.) (2008). The results suggest that it is not possible to generalise the results obtained for analytical languages with fixed word order such as English. Children acquiring inflecting and agglutinative languages focus more on morphological factors, which play a crucial role in their respective languages for expressing relations between sentence elements.

Research on the acquisition of verbal and nominal morphological categories in typologically different languages was carried out in the international Crosslinguistic Project on Pre- and Protomorphology in Language Acquisition. The project started in 1993 under the coordination of Wolfgang U. Dressler (Österreichische Akademie der Wissenschaften). Researchers from several countries published studies on the acquisition of morphological categories in nouns and verbs. Each study typically included longitudinal recordings of one or two children (only few studies included data obtained for more children) during their early stages of development (the age usually did not extend beyond four years of age, but the studies did extend beyond the one-word stage). The analysed languages included agglutinative, inflectional and isolating languages. The languages could be assigned to a gradual continuum between two ideal language types in terms of verb morphology (Bittner, Dressler, Kilani-Schoch, 2003: xv):

- 1) inflecting-fusional type < --- > isolating type: Lithuanian - Greek - Russian - Croatian - Italian - Spanish - Yucateco Maya - German - Dutch - French - English
- 2) agglutinative type < --- > inflecting-fusional type: Turkish - Finnish - Yucateco Maya - the other languages

With respect to noun morphology, the languages in the analysed sample may be assigned to a continuum of ideal language types ranging from agglutinative to isolating ones, with inflecting-fusional languages occupying an intermediate position (Stephany, Voeikova, 2009: 3):