

Mental Lexicon Structure in L1 and L2 Acquisition:

Russian Evidence

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Current views on mental lexicon organization are shaped predominantly by research on English regular and irregular past-tense inflection, which has been conducted within two competing approaches – dual-system, according to which regular and irregular verbs are processed by two distinct mechanisms or modules - computed in a rule-processing system or processed in associative memory. (Marcus et al. 1992, 1995, Pinker 1991, Pinker and Prince 1988, 1994, Prasada and Pinker 1993); and single-system approach in its two variations, the connectionist (MacWhinney and Leinbach 1991, Plunkett and Marchman 1991, 1993, Rumelhart and McClelland 1986) and the network (Bybee 1985, 1995, Langacker 1987, 1988) by which both regular and irregular verbs are processed by one single mechanism in associative memory. Russian is a language with numerous verb classes, which vary in size, and numerous conjugational patterns. Therefore, since Russian verb classes differ ‘gradually’ in ‘regularity’ and size, a sharp division into regular and irregular processing could hardly be expected.

Our project focuses on the role of morphological cues and explores the hypothesis that the complexity of paradigm plays a role in language acquisition. The complexity of paradigm is understood as the number and type of rules shaping the conjugational pattern of individual verb classes. We studied three groups of subjects: Russian native speaking adults and children aged 4-6 and adult American learners of Russian. The study addressed the following questions: What is the default pattern for Russian? Which conjugational patterns are more likely to be generalized to other verb classes? Are generalizations influenced by type frequencies of the verbal classes involved and/or by the complexity of paradigm factor? What is the role of morphological cues in verbal processing? Are the rules shaping the conjugational pattern for a particular verb class applied in a set, or they may be disassociated in verbal processing? Does explicit instruction on verb conjugation facilitate the development of native-like verbal processing strategies in L2 learners? What is the role of input frequencies in L2 processing of complex verbal morphology?

The results compared to our previous research (Chernigovskaya and Gor 2000, Gor and Chernigovskaya 2002) show that child L1 and adult L2 processing had several features in common:

Both children and L2 learners generalized the default -aj- pattern to the non-default irregular -a- class.

Both used the morphological cues and identified the -i- and -ova- stems.

Both made errors in conjugation type and consonant mutations.

There is a developmental tendency in child L1 processing of verbal morphology and morphological processing in beginning adult L2 learners does not match the processing in any of the child age groups. Child L1 verbal processing depends more on associative patterning, while adult L2 processing depends more on the application of discrete rules.