

LFG Contributions In SLA Research: The Development Of Case In Russian L2

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This paper aims to show how LFG can be helpful in formulating developmental hypotheses in Second Language Acquisition (SLA), with specific attention to Russian case. An example of LFG application to SLA can be found in Processability Theory (PT, Pienemann 1998, Pienemann et al. 2005), a cognitively founded, formal and explicit theory of grammatical development. PT owes a great deal to LFG. First, LFG's formalism is adopted in Levelt's Model (1989) for speech production, which constitutes the main psycholinguistic basis of PT. Secondly, it provides PT with a lexicalist framework, which corroborates PT's general assumption that the learners' development of grammatical skills is lexically-driven (Pienemann 1998). Thirdly, PT assumes the concept of feature unification (Bresnan 2001) as the underlying criterion upon which universal stages of grammatical development are built.

Learning the grammar of a second language is a gradual path involving a stepwise acquisition of skills. The advantage of PT is that it deals systematically with this path in online oral production by hypothesizing a series of implicational stages. This means that, in order to reach a higher stage, learners must acquire the processing resources of the previous stage. With regard to morphological development, the crucial intuition of PT is that such stages are defined by the sequence of Levelt's Model processing stages during language production. PT derives the following implicational stages from Kempen and Hoencamp's Incremental Procedural Grammar (1987): (I) Lemma access, when learners produce either single words without formal variation or formulas; (II) Category procedure stage, which entails lexical form variation; (III) Phrasal procedure stage, when feature unification occurs within a phrase; (IV) Sentence procedure stage, when feature unification occurs across phrases. With regard to syntactic development, the way learners progress is determined by their gradual ability to move away from the rigidity of canonical word order towards the full flexibility of choices in the word order allowed by their L2. Thus, LFG's notion of mapping between c- and f-structure is very important for PT to describe the different alignments of canonical and non-canonical word ordering.

Case is particularly interesting: in most descriptive grammars, it is defined as formal marking of syntactic relations (Otoguro 2006), and this suggests that it must be investigated at the interface between morphology and syntax. This is possible within the framework of PT, which offers a transitional paradigm of grammatical development from a twofold perspective: syntactically motivated morphology and pragmatically motivated syntax.

In a language such as Russian, case is the crucial resource for the interpretation of (1a) and (1b), respectively exhibiting canonical and non-canonical word order constructions.

- (1) a. *Marija ljubit Olega*
 *Marija*_{NOM/SUBJ} loves *Oleg*_{ACC/OBJ}
- b. *Olega ljubit Marija*
 *Oleg*_{ACC/OBJ} loves *Marija*_{NOM/SUBJ}

Our work will attempt to integrate PT developmental hypotheses with the LFG analysis of case in Russian proposed by King (1995). Although her analysis involves only syntactically motivated morphology, we will show how King's proposal can be helpful for PT to work out a consistent interface between morphological and syntactic development. King's essential intuition consists in the identification of four types of case assignment in Russian:

(a) Semantic case assignment, when a specific case is associated with a particular semantic meaning, e.g. Instrumental case for <instrument>, as in (2);

- (2) *Ja napisala pis'mo karandašom*
 I_{NOM} wrote_F letter_{ACC} pencil_{INST}

(b) Configurational case assignment, when assigned in a specific c-structure position within a phrase, as shown in (3), where Genitive case is assigned to NP daughter of NP → N (NP);

- (3) *Otvet učenika*
 Answer_{NOM} pupil_{GEN}

(c) Lexical case assignment, when lexically required by a verb within VP, as shown in (4a), or a preposition within PP, as in (4b). In (4a) the OBJ of the verb *ždat'* (wait) has to be in Genitive case; similarly, the OBJ of the preposition *u* (at-near) has to be case marked by Genitive.

- (4) a. *ždat'* 'wait' V <SUBJ, OBJ>
 (↑OBJ CASE) = GEN
- b. *u* 'at-near' PREP <OBJ>
 (↑OBJ CASE) = GEN

(d) Grammatical Functions (GFs) assignment, when assigned in direct association with GFs regardless of word order. The sentence in (5) shows the three cases associated to their respective GFs, as required by the f-structure rules in (6).

- (5) *Mal'čik* *dal* *Inne* *knigu*
 Boy_{NOM} gave Inna_{DAT} book_{ACC}
- (6) a. (↑SUBJ CASE) = NOM
 b. (↑OBJ CASE) = ACC
 c. (↑OBL_{GOAL} CASE) = DAT

With regard to (6c), unlike King, we claim that Dative case is not associated to OBL_{GOAL} via GFs assignment, but it is an instance of Semantic case assignment, in so far as it is directly associated to the <goal> role. The other OBLθs are associated with different PPs and constitute instances of Lexical Case assignment.

We propose the following implicational sequence using King's classification and PT developmental stages, to be read from bottom to top.

PROCEDURE	Stage 1	Stage 2	Stage 3	Stage 4
SENTENCE	-	-	-	GF assignment in non-canonical position
				Lexical case assignment by Verb in non-canonical position
PHRASAL	-	-	GFs assignment in canonical position	+
			Lexical case assignment by Verb	
			Lexical case assignment by Prep	
			Configurational case assignment within NP	
CATEGORY	-	Semantic case assignment	+	+
LEMMA ACCESS	Single words and formulas	+	+	+

We assume that Semantic case assignment will occur at the Category procedure stage. Then Lexical case assignment and Configurational case assignment require an operative Phrasal procedure, i.e. feature unification within the phrase. Then again, because evidence for full functional assignment becomes clear when GFs are correctly case marked in non-canonical position, the morphological resources of the Sentence procedure must be available to interface with syntax.

Our hypothesis is supported by a cross-sectional data set collected among 10 learners of Russian L2 from a variety of L1 backgrounds, which will provide evidence of the implicational development of case in online oral production. Data analysis shows that learners first produce random case variation. Then they introduce case in phrasal contexts, e.g., in PP where case is lexically assigned by the preposition, and start marking GFs by case only in canonical positions. Finally, they are also able to mark GFs by case morphology in non-canonical position.

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