ADULT L2 ACQUISITION OF REFLEXIVE VERBS IN RUSSIAN AND POLISH

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Abstract

From previous research, perceptual saliency and morphophonological and morphosyntactic regularity significantly contribute to a successful acquisition of morphemes (Goldschneider & DeKeyser 2001). This pilot study investigates if and to what extent these features are predictors in the acquisition of reflexive verbs in adult L2 Polish and Russian. Despite these languages being closely related, their reflexive verbs differ dramatically. Polish uses a particle *się* that has a high sonority value and can be freely placed in a sentence. Russian uses a reflexive affix which is placed directly after the finite verb ending and has two phonetically reduced variants *-sja* and *-s'* that depend on the phonological context.

In this pilot study, we hypothesized that i) perceptual saliency (understood as higher sonority and a prominent position in a sentence) facilitated perception and sentence repetition; ii) morphosyntactic regularity and predictability positively affected written production. Two groups of Dutch first-year students learning Russian and Polish respectively as L2 at the University of Amsterdam were recruited. Russian and Polish native speakers served as controls. In order to test perception/comprehension and (re)production of reflexive verbs in L2, a sentence repetition task (SRT) was used. The task consisted of 15 target sentences and 10 distractors for each language (syllable length: 17–22), and was administered in e-prime. The sentence position of the target structure and semantic categories of reflexive verbs were controlled. In order to test written production, a sentence translation task (STT) was developed that contained 15 Dutch items. For the controls, accuracy in both tasks was at ceiling. The Dutch-L2 groups performed significantly worse. The accuracy scores on target structures in SRT were better in Polish (61% vs. 40%). In the STT, the Russian L2 students outperformed the Polish L2 participants (84% vs. 58%). The results of this study support the idea that perceptual saliency and morphophonological uniformity affect perception and

(re)production, while morphosyntactic regularity and predictability (boundness) is relevant for written production.

1. Introduction

L2 acquisition of reflexive verbs in the Slavic languages is a challenging issue, given the fact that there is much more variation in form and meaning as compared to languages, such as English, German, or French. From teaching experience we know that acquisition of reflexive verbs is problematic in bilingual children as well as in adult foreign language learners. However, it is not yet clear which properties slow down or even impede a successful learning process. It takes sometimes years before the most basic reflexive verbs are acquired, and even highly proficient Slavic L2 learners still have difficulty with automatized production of target verbs: reflexive markers are frequently omitted when needed, or added to verbs when dispensable and redundant.

2. Reflexivity in Slavic languages

According to the most recent classification of reflexive verbs (Knjazev 2007: 260), the Slavic languages are dealing with two types of reflexivity: *heavy reflexivity* expressed by means of reflexive personal pronouns (*sebja* or *siebie* 'oneself'); and *light reflexivity* coded by reflexive particles and affixes. Reflexive affixes which are placed directly after a finite verb ending (bound morphemes) are characteristic for the East-Slavic languages, whereas reflexive clitic particles (free morphemes) occur in other Slavic languages. Moreover, all reflexive verbs can be divided into two major groups of *Subject reflexives* and *Object reflexives* (Knjazev 2007: 265). Subject reflexives are connected to the notion of agentivity which always involves causation and volition. Object reflexives lack the idea of a willing causer with his energy, control and intentions, and are hence related to inanimate objects, processes etc. Within these two groups Knjazev (2007: 268-297) distinguishes ten semantic categories which are not necessarily present in all Slavic languages. The Subject reflexive verbs contain proper reflexives (co-referential), reciprocal, possessive, causative, absolutive and autocausative reflexives, whereas the Object reflexive verbs include decausative, conversive, modal quasi-passive and passive reflexives. Next to it, there are different impersonal reflexive constructions which remain beyond the scope of this paper.

As concerns the relationship between reflexive verbs and verbs they are originally derived from, two groups can be distinguished: reflexiva tantum (such as *bojat'sja* 'to be scared' or *skitat'sja* 'to wander' in Russian), and motivated reflexive verbs that are formed on

the basis of transitive counterparts by adhering a reflexive marker (sometimes together with a prefix) that creates a new meaning, which can be either transparent (consider *vstrečat'* 'to meet' and *vstrečat'sja* 'to meet each other', or *myt'* 'to wash' and *myt'sja* 'to wash oneself' in Russian), or idiomatic (e.g. *naxodit'* 'to find' and *naxodit'sja* 'to be situated', or *torgovat'* 'to deal/trade in' and *torogovat'sja* 'to bargain' in Russian). A combination of grammatically marked reflexivity and new semantics causes difficulty in learning process.

2.1 Reflexivity in Polish and Russian

Although the semantic range of reflexive categories in Russian and Polish show considerable overlap, they are not identical. Moreover, morphological coding of reflexivity in both languages is completely different. First of all, there is no passive reflexivity in Polish. Therefore, Russian sentences as exemplified in (1) have no Polish equivalents:

1) Dom   stroitsja   izvestnym   arxitektorom.
   house   build-PRS-3SG-REFL   famous-INSTR architect-INSTR
   'This house is being built by a well-known architect.'

Secondly, reciprocity is insufficiently distinctive in Polish. For example, verbs, such as *bawić się* 'to amuse oneself/each other' or *wynagrodzić się* 'to award oneself/each other', can be interpreted either as possessive reflexive or as reciprocal. Thirdly, the Polish particle *się* is a free morpheme and can relatively freely move in the sentence. In contrast, the Russian affix *-sja* is a bound morpheme, and its position in the sentence is fixed which makes it syntactically more predictable. Finally, the Polish reflexive particle consists of one syllable with a nasal vowel that has a high sonority value (see Goldschneider & DeKeyser 2001: 22), while the Russian affix is always unstressed and has a smaller phonetic substance by virtue of the post-tonic vowel reduction of /ja/ to a schwa or even to a zero phoneme in certain finite forms.[1] Thus, the Russian reflexive affix has two phonetically weak allomorphs (*-sja* [s'ə] occurring after consonants, and *-s'* [s'] after vowels),[2] whereas the Polish *się* is morphophonologically regular and salient.

3. The current study
3.1 Research goals and predictions
Previous research has shown that perceptual saliency, morphophonological regularity, morphosyntactic predictability, semantic complexity, and frequency significantly contribute

to a successful acquisition of morphemes (Goldschneider & DeKeyser 2001). Although Polish and Russian are quite similar with respect to semantic categories and functions of reflexive verbs, they differ dramatically regarding perceptual saliency and morphosyntactic regularity and predictability of their reflexive markers. This study aims at determining whether or not the abovementioned features affect L2 acquisition of reflexive verbs, and if so, which linguistic tasks this concerns.

In the study, we predicted that (i) perception and sentence repetition would be favored by higher sonority and morphophonological uniformity of the reflexive marker and by a prominent position of a reflexive verb in the sentence; (ii) morphosyntactic predictability of the reflexive marker would positively affect written production.

3.2 Method

Subjects

For this study, two groups of Dutch first-year students learning Russian (n=10) and Polish (n=6) respectively as L2 at the University of Amsterdam were recruited. Both groups were at the end of their first year (an intermediate level), had no previous knowledge of Russian or Polish, received the same amount of input and worked with comparable language courses. Russian (n=5) and Polish (n=5) native speakers were used as controls.

Experimental tasks

Two tasks were developed to test perception/comprehension and (re)production of reflexive verbs in L2. A sentence repetition task (SRT) was used to test perception and oral (re)production of reflexive verbs. In a paper-and-pencil translation task (STT) written production of reflexive verbs was tested.

The choice of the SRT was determined by its high reliability as an indicator of overall language proficiency (see references in Marinis & Armon-Lotem 2015). If sentences are long enough to disallow 'parroting', participants must rely on their knowledge of lexicon and grammatical system to be able to repeat the sentences verbatim. Therefore, structures which are not fully acquired will not be reproduced. In our study, if the participants would have some trouble with perception and processing of verbal semantics, and the basic grammar was not automatized yet, it would be measurable in their responses. Because we needed to control for target structures, other types of tasks were not appropriate. In retelling, for instance, the students would be free to choose any structures they wanted and might make use of an avoidance strategy.

Stimuli

The items were selected from the study books used in the language courses, and controlled for semantics of the reflexive verbs: they must be frequent and belong to one of the following five semantic categories: proper reflexive, possessive, autocausative, decausative, and reciprocal.

The SRT consisted of a set of 15 target sentences and 10 distractors for each language, and was administered in e-prime. All items were well-known and slightly adjusted with respect to syntactic complexity and sentence length varying between 17 and 22 syllables. The target structure was in the beginning, in the middle, or in the end of the sentence (as exemplified in 2-7). The Polish *się* was used in a pre-verbal (as in 5) and post-verbal position (as in 6-7), and with distant placement with respect to the main verb (as exemplified in 8).

Russian items:

2) Ja **poproščalsja**   s   nej i   povtoril obeščanie prislat' ej   lekarstvo.
   I say.goodbye-PST-REFL with her and repeated promise   send   her medicine
   'I said goodbye to her and repeated my promise to send the medicine to her.'

3) Vozle   školy **naxoditsja**   nebol'šoj park attrakcionov.
   next.to school find-PRS-3SG-REFL small   park amusements
   'A small amusement park is (situated) next to the school.'

4) Esli ty   ne perestaneš' rugat' menja, ja **obižus'**.
   if   you not stop   scold me   I   get.offended-PRS-1SG-REFL
   'If you don't stop with scolding me, I will get offended.'

Polish items:

5) Kiedy **się   poznaliśmy**, miała długie warkocze i   różową sukienkę.
   when REFL meet-PST-1PL had long   hair braids and pink   dress
   'When we met each other she had long hair braids and a pink dress on.'

6) Zamykam oczy, kiedy już   chcę **położyć   się** spać i
   I.closed   eyes when already I.want lie.down-INF REFL sleep and
   'I close my eyes when I want to go asleep and

   przytulić się   do ciebie
   cuddle-INF REFL to you
   to cuddle with you.'

7) W tej sytuacji radzę wyjechać do domu i nie **martwić się** studiami.

   in that situation rather depart to house and not worry-INF REFL lessons

   'In this situation you should rather go home and should not worry about your study.'

8) Chciałem **się** z najładniejszą japońską konkubiną **żenić**,

   I.wanted REFL with most.beautiful Japanese concubine marry-INF

   'I wanted to marry a beautiful Japanese concubine,

   to ona nie chciała.

   but she not wanted

   but she did not want to.'

In the STT, the participants were given ten Dutch target sentences and five distractors for each language. Every sentence contained five to seven content words. By virtue of the task we could not control for the position of the verb and the reflexive particle in the sentence. In order to avoid the effect of positive language transfer no Dutch reflexive equivalents were used that could be interpreted as a cue for reflexivity in the target language.

Procedure

For the SRT, each student was tested individually. Every sentence was played twice without any interval between two trials. Then, the students had to repeat what they heard. All coding for accuracy was done automatically in e-prime. Two practice items were administered to familiarize the students with the task and the electronic equipment. Including instructions and practice items, the task took approximately 20 minutes to administer. The STT was taken in a classroom setting. Before the test started, the students were given a list with all (both reflexive and non-reflexive) verbs used in the task. They had three minutes to refresh their knowledge of the target verbs, after that the list was withdrawn, and the students started with the translation task. The task took approximately 25 minutes. Accuracy scores were used as a measure of students' ability to correctly perceive and (re)produce sentences and target structures. No reaction time was measured.

4. Results

Sentence Repetition task

For the controls, accuracy in both tasks was almost at ceiling, whereas both Dutch-L2 groups performed significantly lower. There was almost no difference observed between the two languages on full sentence repetition accuracy: 33% for Polish vs. 31% for Russian. Two

thirds of the sentences were either not completed, or contained grammatical errors, or were repeated with omissions and lexical substitutions. In Russian, only 47 out of a total of 150 items were target-like repeated. In Polish, 30 out of 90 sentences were correctly reproduced. The results on target structure accuracy in the SRT were, however, higher: with an average of 57% in Polish vs. an average of 43% in Russian.

Table 1

Position of the target structure in the sentence (SRT)

	Beginning			Middle			End		
	target verb	without reflexive	other lexemes	target verb	without reflexive	other lexemes	target verb	without reflexive	other lexemes
Russian	48%	0%	2%	49%	24%	2%	32%	4%	12%
Polish	75%	3%	3%	53%	0%	8 %	44%	17%	11%

From table 1, the Polish L2 participants were much better in reproducing the target structure than the Russian L2 students. The Russian scores on the fronted position and the position in the middle of the sentence of the target structure were almost alike. In the middle of the sentence, however, the Russian L2 students attempted to repeat the verb stem, while forgetting the reflexive affix in 24% of all items. Thus, trying to capture the meaning they failed to reproduce the correct morphological form. In Polish, a clear decline of the scores was observed, with the highest score on fronted position, and the lowest on final position. Interestingly, the Polish L2 participants repeated the verb stem without reflexive particle in the end of the sentence considerably more often than the Russian L2 students did.

As regards the position of the Polish reflexive *się*, a slight difference between the pre-verbal and post-verbal placement was observed. The distant placement caused more difficulty which led to many lexical substitutions (see table 2).

Table 2
Position of the Polish reflexive się (SRT)

	Target verb	Without reflexive	Other lexemes
Pre-verbal	60%	3%	7%
Postverbal	64%	6%	0%
Distant placement	54%	4%	17%

Sentence Translation task

In the STT, on the contrary, the Russian L2 students significantly outperformed the Polish L2 students on full sentence accuracy (77% vs. 15%), and scored much better on target structure accuracy (84% vs. 58%).

5. Discussion and conclusions

In this pilot study, we investigated which linguistic properties could be seen as good predictors of accurate acquisition of reflexive verbs in Russian and Polish. We also investigated for which tasks these features could be of importance. The most striking outcome of the study was a very low score on full sentence repetition accuracy in both language groups. Some plausible explanations can be found for this fact. First, it might have to do with a relatively low proficiency of the students. Although the items were extracted from the learning materials which were extensively used in the course, the cognitive load of the task was obviously too high for this proficiency level. The knowledge of grammar and semantics was proceduralized but not automatized yet which led to a poor performance. Second, the mean length of sentences possibly exceeded the memory span of most students. While a mean utterance length (MUL) for young (bilingual) children is established between 7 to 13 syllables (Marinis & Armon-Lotem 2015), the information on a MUL for adult foreign language learners is contradictory (see Munnich, Flynn & Martohardjono 1994; Bley-Vroman & Chaudron 1994). We determined a MUL on our own that seemed to be too demanding for the participants involved. Third, poor performance might have to do with a lack of training in memorizing and recalling verbal information in a foreign language. These skills were not specifically trained during the course. Fourth, the participant's own perception of the nature of the task cannot be excluded: some students tried to repeat as verbatim as possible, while other students probably tried to convey the approximate meaning only.

When comparing the accuracy scores on target structures one can see that the results were certainly dependent on the position of the target verb in the sentence: fronted position

facilitated accuracy. The students were able to recall the beginning of the sentence better than the end which is not so strange. However, this tendency was much more clear in Polish than in Russian. In Polish, the target structure in fronted position was perceived and reproduced in 75% of all responses, whereas in Russian only in 48%. Despite the lower scores on final position, the percentage of the target-like responses was still higher in Polish than in Russian, where final position in combination with reduction led to an extremely poor performance: the reflexive verb as given in (4) was reproduced only once.

The distant placement of the Polish particle with respect to the main verb also affected the scores. The target structure as given in (8) was correctly reproduced only twice. However, the phonological context also played a role, as in Russian example (2). Despite the fronted position in the sentence, and because of consonant assimilation and contraction with the preposition *s* 'with', the target verb was correctly repeated only by one student. In contrast to Russian, an adjacent position of the reflexive particle and the preposition *z* 'with' had less effect on target structure accuracy in Polish. These facts can be explained by a higher sonority value of the reflexive particle *się* that was easier perceived than the Russian reduced affix *-sja*.

Importantly, full sentence accuracy in the translation task was significantly higher in Russian than in Polish. The Russian L2 students were five times as good as their Polish L2 peers. Although the procedure was the same for both language groups, the Polish L2 students showed very poor proficiency in written skills which can partially be explained by insufficient practice. (This was also emphasized by the students themselves.) However, morpheme boundness and morphosyntactic predictability of reflexive verbs cannot be ignored. Russian verbs have to be learnt as one whole, while Polish verbs are seen as two words, whereby the grammatical marker is of less importance. Although we controlled for positive language transfer by avoiding Dutch reflexive verbs, negative language interference was observed. Posture verbs, decausative verbs, and reflexive verbs expressing emotions that correlated in Dutch to not-reflexive or ambitransitive verbs, or to a combination of a state verb with an adjective/a participle, repeatedly missed the reflexive marker in the STT.

To conclude, the results of this pilot study support the idea that perceptual saliency, understood as a combination of phonetic substance and a prominent position in the sentence, and morphophonological uniformity are relevant in acquisition of morphemes with respect to perception and repetition, while morphosyntactic regularity and predictability are influential in written production. Still, we need more statistical power to confirm our observations.

Endnotes

[1] Russian is a stress-based language which has systematic vowel reduction in unstressed syllables. This concerns the vowels /a/, /o/, and /e/. In contrast, Polish has a fixed stress pattern on the penultimate syllable and no qualitative vowel reduction.

[2] Moreover, the [s'] of *-sja* is incorporated into an affricate [c] after /t/ that is found in the palatalized infinitive suffix *-t'* (*borot'sja* 'to fight') and in the non-palatalized *-t* of the 3 singular and plural forms (*boretsja* 'he/she fights', *borjutsja* 'they fight'). This makes perception even more complex.

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