

Why don't Russians answer my questions?

Finnish students' problems in producing Russian interrogative intonation

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ABSTRACT

High rising melodic pattern is an essential feature of yes/no-questions and elliptic questions in Russian, because it distinguishes between the declarative and interrogative sentence. According to our experience of teaching Russian to Finnish university students, the learning of this melodic pattern is difficult for Finns. This paper reports the results of two experiments on ten Finnish university students producing Russian yes/no-questions. In a production experiment students acted roles in a simple dialogue including five different questions without question words. The melodic patterns of students' outputs were acoustically analysed and compared with patterns produced by native speakers. In addition, a perception experiment was carried out with native speakers of Russian who were asked to evaluate, whether the outputs of the Finnish students sounded to them as declaratives or interrogatives.

1. INTRODUCTION

In the past few years the interest in teaching of pronunciation has been renewing. It has been acknowledged that phonetics is not only a minor and less important part of language skills, but an essential part of oral communication [1]. In SL/FL teaching of Russian, one cannot deny the importance of teaching of melodic patterns, as they are used to make syntactic distinction between declarative and interrogative sentences.

The methodological basis of teaching melodic patterns of Russian has been laid by E. A. Bryzgunova [2] as early as 1972 in her work "Zvuki i intonacija russkoj rechi". Bryzgunova describes Russian intonation in terms of seven melodic patterns, from IK-1 to IK-7 (IK = intonacionnaja konstrukcija). In SL/FL learning the first four IKs are considered most useful for students, as they concern declarative sentences and three different types of interrogative sentences [3:24].

The melodic pattern we are discussing in this paper, IK-3 according to Bryzgunova's classification, is in de Silva & Mäkilä's textbook for Finnish students [3] described as having normal (or medium) pitch in prenuclear part, high rise on the nucleus and steep fall on postnuclear syllables.

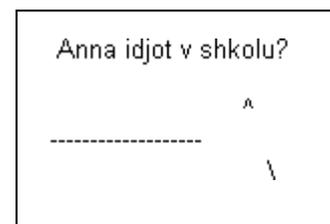


Figure 1. *Anna idjot v shkolu?* (*Anna is-going to school?*) Illustration of IK-3 according to de Silva and Mäkilä [2:24].

What kind of interrogative melodic patterns have Finnish students learnt to produce in their mother tongue? As a matter of fact, this is quite a difficult question to answer, since detailed description of Finnish interrogative intonation has yet to be made [4:137]. Actually, even the existence of rising intonation in Finnish has been a matter of dispute in Finnish linguistics [5:239]. However, rising F_0 -patterns of initial question words in Finnish have been observed by Hirvonen [6] and Iivonen [4]. In addition, according to A. Iivonen's observations [4:151], final rises may occur in questions (especially echo-questions and question-tags) in Finnish. For yes/no-questions rising intonation is not obligatory, because ending *-ko/-kö* functions as a question marker in this type of interrogative sentences in Finnish.

J. Toivanen [7:293] has in his research on Finnish students learning prosodic patterns of English stated that Finnish students produced high rising patterns of English statement-questions (such as *Agree? OK?*) surprisingly well, although such patterns do not have phonological relevance in Finnish.

2. EXPERIMENTS

2.1. Production Experiment

Eight female and two male senior students (studied Russian at university at least for 2 years) were chosen randomly. Eight of them had already completed their obligatory language practice in Russia. All of them are mother-tongue Finnish speakers (one bilingual in Swedish), from 21-38 of age.

The students were given a short dialogue-text before the experiment. They were asked to make sure they understand the communicative situation and were allowed to practice reading it. Students had not heard the mother-tongue speakers' model of the dialogue [8]. The purpose of the experiment was not revealed to the informants. Before the recording the students were given a questionnaire, in which they gave information about their linguistic background, studies of Russian and language skills in general.

The experiment was performed in a little studio at Tampere University. The students were asked not to think about the recording as an exam and not to worry too much about possible mistakes. The students were allowed to practice the dialogue in the studio as long as they wished. They were also given an opportunity to repeat the experiment, in case they felt like something went wrong. However, none of the students wished to repeat the dialogue.

The dialogue text was chosen from a series of Russian dialogues on phone [8]. It is a discussion between a travel agency worker and a customer who wants to order train tickets. This text was chosen, because it included several cases of rising pitch patterns, it was short and simple enough, and the speech situation in it was a natural and understandable one.

The recording was arranged in the following way: Two informants were sitting in a little studio room next to each other, by a small table. One microphone was placed in front of them so that the distance between both speakers and the microphone was approximately the same (about 0,3 m). The researcher was in another room, and could see the speakers through a window.

2.2. Perception experiment

In the first part of the experiment, six native Russian speakers (two males and four females from 20 to 28 years of age) who are living in Finland were chosen for the perception test. In this part of the experiment the informants were listening to the outputs of four Finnish students (numbered 1-4). In the second part of the perception experiment six native Russian subjects (one male and five females from 22 to 36 years of the age) participated in the test. These informants listened to the outputs of six Finnish

students (numbered 5-10). All of the native speaker informants were born in Russia and lived there till 25 years of age in average and still use Russian in every day conversations. Two subjects have Finnish spouses but they use Russian at home.

In the perception experiment were used the recordings made in the production experiment. Eight phrases with possible rising intonation were chosen from the dialogue-text produced by the Finnish students. Five of them were meant to be questions without question-word, so called intonation questions. Three other phrases, non-final phrases inside declarative sentences, were chosen as well, as they could have been pronounced with a similar rising intonation pattern as the questions. By using a cassette recorder Salora SP 705, the chosen phrases pronounced by each subject were separated from the dialogues and taped on separate cassette. These signals were separated by pauses and a sound of a bell indicated the start of the next signal. The same phrase was taped eight times: in the first part of the experiment (with four different outputs) the phrase was produced twice by four Finnish students in a random order, and in the second part of the experiment (with six different outputs) the phrase was once read by four Finnish subjects and twice by two in a random order. The native Russian subjects listened to the tape in a separated quiet room without earphones (one or two persons at the same time) and marked between brackets a question mark (?), if they understood the phrase as a question, or a full stop (.), if they did not hear a question.

3. RESULTS

3.1. Production experiment

The outputs of one native speaker and 10 students were acoustically analysed with Praat-programme and the following features of F_0 -contours (autocorrelation method) were measured: F_0 -slope between minimum and maximum values in the nuclear syllable, mean absolute F_0 -slope, F_0 -change between the final value of the nuclear syllable and the final value of the following postnuclear syllable, F_0 -slope and range of the nuclear vowel and standard deviation of the F_0 -values in the nuclear vowel. The F_0 -curves were always checked both by overlaying them on narrow-band spectrogrammes and auditorily.

In Figures 2-5 are presented the F_0 -patterns of the question *Vzroslyh? (Adults?)* by one native speaker and three students. As can be seen in Figure 2, the question *Vzroslyh?* consists of a nuclear syllable *vzros-* with a high rising F_0 and a postnuclear syllable *-lyh* that has a falling F_0 . Student 3 (Figure 3) produces something quite different: a slightly falling F_0 in the nuclear syllable and practically level low F_0 in the postnuclear syllable. Student 5 (Figure 4) starts by producing a promisingly rising F_0 but then continues the rising pattern in the postnuclear syllable.

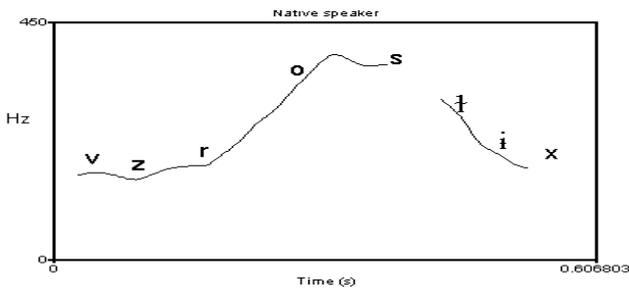


Figure 2: *Vzroslyh?* Female native speaker.

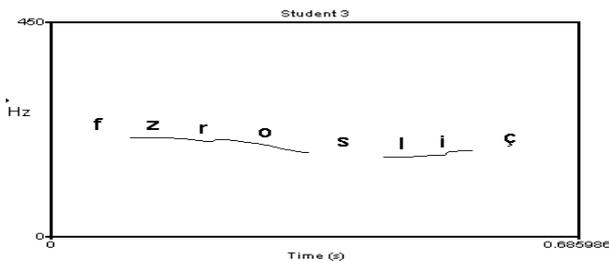


Figure 3: *Vzroslyh?* Female Finnish Student 3.

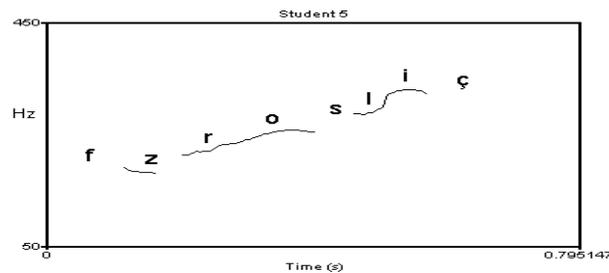


Figure 4: *Vzroslyh?* Female Finnish Student 5.

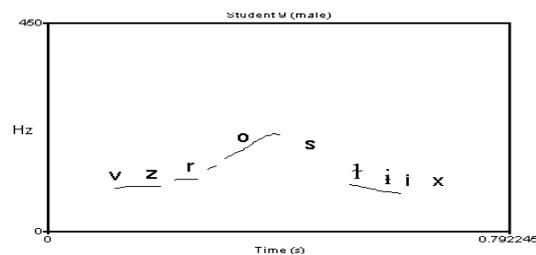


Figure 5: *Vzroslyh?* Male Finnish Student 9.

Student 9 (Figure 5) seems to succeed well: F_0 -pattern of his output resembles greatly the native speaker's F_0 (note that low F_0 -level results from the speaker's sex) and one would like to think that this student's output would do well in the following perception experiment.

The outputs of *Vzroslyh?* by the ten students were distributed according to their overall F_0 -patterns in the following way: 4 students produced rising-falling F_0 -contours (c.f. Figure 5), four students produced rising F_0 -contours (c.f. Figure 4), one student produced a falling contour and one a low level contour.

The other yes-no-question in our experiment, *Mozhno zakazat' bilety s dostavkoj na dom?* (*Can one order tickets delivered home?*) was analysed in the following way: In the first word *Mozhno* the F_0 -curve was measured as described above, but because the phrase was a long one, we also analysed the F_0 -slope between the minimum and maximum F_0 -values in the last two syllables, in spite of the fact that in Russian the interrogative intonation is supposed to be realized in this kind of case in the beginning of the phrase. The native speaker produced the initial word *Mozhno* in the same kind of rising-falling F_0 -pattern as seen in the word *Vzroslyh?* (Figure 2). This initial part of the question was produced by Finns in four different ways: 1) with a rising-falling F_0 -pattern (5 students), 2) with a rising pattern (2 students), 3) with a level F_0 -pattern (2 students) and 4) with a falling F_0 -pattern (1 student). The analysis of the two final syllables revealed that six students produced them with falling F_0 -pattern (as they were supposed to), two students produced (to our great surprise) a clearly rising tone and two students a slightly falling-rising tone.

3.2. Perception experiment

In Figure 6 is presented the average recognition rate (percentage) for all the five questions produced by Finnish students. The two yes-no-questions discussed above had a lower recognition rate than elliptic questions *Tshislo?* (*Date?*) and *Vasha familija?* (*Your surname?*), but a slightly higher rate than the alternative question *Kupirovannyj, platskartnyj?* (*With or without compartments?*). This supports our assumption that high rising pitch pattern causes difficulties to Finnish students. The students' outputs of the one-word question *Vzroslyh?* appeared to our Russian better than the productions of longer *Mozhno...?*.

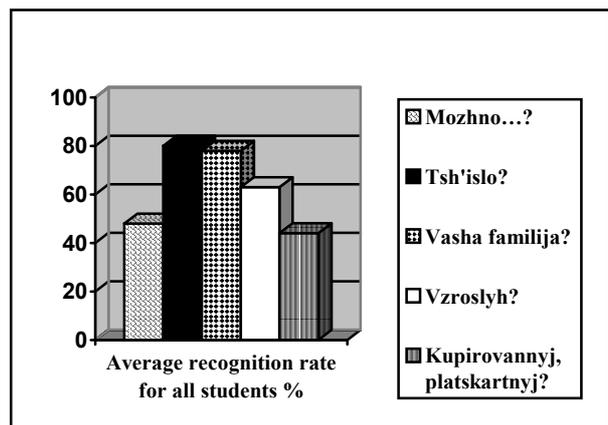


Figure 7: Average recognition rate for all students.

In Figure 7 can be seen the results of the perception experiment for the question *Vzroslyh?* The numbers refer to students (1-10). In this case the outputs of the students could be classified into three groupings: 1) over 80 % recognized (6 students), 2) 50 % recognized (1 student) and 3) under 10 % recognized.

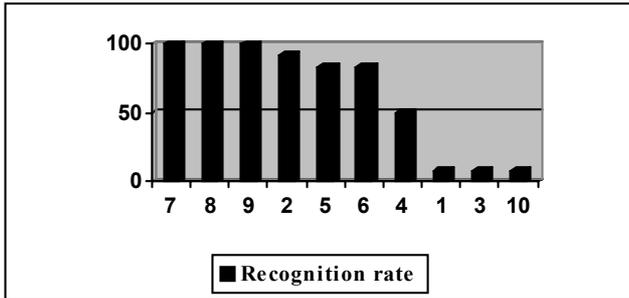


Figure 7: *Vzroslyh?* Recognition rates for all the students.

As was predicted above in 3.1., Student 9's output with a rising-falling pattern was successful: it gained a 100 % recognition. Surprisingly enough, Student 5 who produced the question "in a wrong way", i.e. with a rising pitch without a fall in the postnuclear syllable succeeded well, too, and gained an 80 % recognition! The poorly recognized outputs were, quite expectedly, those that were produced with falling or low level pitch.

For the question *Mozhno...?* the analysis of the results of the perception experiment were somewhat puzzling: the differences in F_0 of the initial word did not give a sufficient explanation for the different recognition rates. After thorough analysis of the postnuclear and final parts it became clear that the students that produced the question with a final rise, had even better results than those students that produced beautiful rising-falling patterns in the nuclear part. Thus, it seems that some students were able to "fool" the native speakers of Russian with the final rising tone!



Figure 8. F_0 -pattern of the question *Missä sää oot käyny kouluja?* in the Finnish spontaneous data.

Figure 8 gives us a possible explanation why students seemed to be eager to produce final rising pitch patterns, though that was not supposed to be even part of their mother tongue competence. The example is taken from the Finnish spontaneous speech data collected in INTAS-project 00-915. There a young female Finn asks her friend: *Missä sää oot käyny kouluja?* (*Where did you go to school?*) In this case the speaker clearly uses a high rising pitch pattern in the final part of the question. We made several observations of final rising pitch in Finnish spontaneous speech material. So, it seems that final rising pitch patterns are not as strange to Finns as has been thought...

4. CONCLUSIONS

The results of the two experiments reported in this paper support our initial assumption about Finnish students having problems with interrogative intonation in Russian. The overall recognition rate for all types of questions was only 63 %. Acoustic analysis of the interrogative sentences produced by the students revealed that the differences in recognition rates between students could not be explained by merely concentrating on the nuclear part of the question. Thus, the analysis of interrogative intonation must not be limited in nuclear syllables, as has been done in earlier textbooks of Russian phonetics. Observations on Finnish spontaneous speech data revealed that final rising pitch patterns are used in Finnish. This feature requires thorough analysis in our future work on Finnish intonation.

REFERENCES

- [1] M. González-Bueno, "Pronunciation component in SL/FL Education Programs: Training Teachers to teach Pronunciation," in *Applied Language Learning*, Vol.12, pp. 133-146, 2001.
- [2] E. A. Bryzgunova, *Zvuki i intonacija russkoj rechi*, Moskva, 1972.
- [3] V. de Silva and K. Mäkilä, *Venäjän ääntämisopas: Venäjää aikuisille*, Finn Lectura, Vaasa, 1996.
- [4] A. Iivonen, "Intonation of Finnish questions," in *Nordic Prosody: Proceedings of the VIIIth Conference*, W. A. van Dommelen and T. Fretheim (eds.), Lang, 2000.
- [5] P. Hirvonen, *Finnish and English Communicative Intonation*, Publication of the Department of Phonetics 8, University of Turku, 1970.
- [6] A. Iivonen et al., *Puheen intonaatio*, Gaudeamus, Helsinki, 1987.
- [7] J. Toivanen, *Perspectives on Intonation: English, Finnish and English spoken by Finns*. Forum Linguisticum, Band 37, Lang, 2001.
- [8] K.A. Shilova and E. E. Usmanova, *100 dialogov po telefonu*, "Russkij jazyk", Moskva, 1990.

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