

Casual Speech Phonology and Perception of Further Languages: The case of Latvian

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ABSTRACT

Common sense tells us that we use what we (unconsciously) know about our first language to process further languages. The contribution of casual speech phonology has not been examined from this point of view. This paper looks at shared phonological processes of this type as possible aids to perception of L2 English. We proposed that complex syllable structure promotes casual speech reduction, as it leads to long consonant clusters, especially across word boundaries. English and Polish share this complexity, and L1 Polish speakers are good at perceiving casually-spoken English. However, while Latvian has a potential for complex syllables, it is not often realised, and as a result, English-type reductions are not evinced. We suggest that because Latvian does not share many casual speech processes with English, perception of English casual speech may be problematic. This is borne out by test results.

Keywords: Latvian, casual speech, second language, phonetics, phonology

1. INTRODUCTION

This is one of a series of experiments to investigate the relationship between a) skill in interpreting English casual speech reductions in connected speech and b) the presence of similar but not necessarily identical casual speech shortcuts in the native language of the perceiver. Our current hypothesis is that the greater the match between languages, the more transparent the further language will be. We suggest that the match can be specified in terms of reductions as well as syllable and morpheme structure which licence reductions.

It may seem obvious that listeners use their L1 perceptual procedures in the perception of other languages. Work has been done on shared phonology from the production angle (cf [1] p.531), but perception studies have focused largely on segments, syllables, and prosody rather than on casual speech processes.

2. BACKGROUND

In previous work ([2]), we have found that native speakers of Greek (graduate students in linguistics at Reading University) were surprisingly poor at unravelling English casual speech reductions presented in gated form (25% correct), while native speakers of Polish (with a similar age and education profile) were very good (51% correct), close to native speakers (67%).

Examining Polish conversational speech showed that reductions were not infrequent and were not dissimilar to those occurring in English. Examples are shown in Figure 1.

3. CONDITIONING BY PHONOTAXIS?

We hypothesised further that one conditioning factor for reduction is syllable structure. Both English and Polish are characterised by strong syllable-initial and –final consonant clusters, while Greek (while having some rather unusual initial clusters) shows simpler phonotaxis in general. Shared reductions as well as complex syllable structure may have provided Polish listeners with perceptual strategies or processes which they could apply while listening to English.

With this in mind, we decided to examine perception of the same casual sentence by speakers of Latvian, which also allows for complex syllable structures (especially in final position). Latvian syllable onsets can consist of up to three consonants while it is possible to find five consonants closing syllables if inflections are included ([3],128).

auksts	cold
valks	humid
kalns	hill, mountain
pirksts	finger

4. METHOD

4.1. Materials.

We used the same gated sentence as in earlier studies: “So it was quite good fun, actually, on the wedding, though”:

sə^wɪ^swɪ^{wl}kwai^ʔgʊfʌnætʃuɪŋŋ:ə^lwɛdɪŋ.ɔ̥ə^ʔ
 /səʊ it wɒzækʃʊəli.....ðəʊ/

There was no [t] in ‘it’; the [w] in ‘was’ was represented by rounding in the first syllable; the [t] in ‘quite’ was a glottal stop; there was no [d] in ‘good’; ‘actually’ was significantly reduced; there was no separate dental fricative in ‘the’; the fricative at the beginning of ‘though’ was pronounced as a dental stop.

The utterance was presented in a gated fashion (20 gates of 30 msec, with three seconds between each stimulus), and subjects were asked to write what they heard in English spelling after each stimulus. Two test stimuli were presented before the writing began to accustom subjects to the input. The answer sheet resembled the following:

Test 1 _____
 Test 2 _____

Now please write what you hear. Don’t forget to use a new line each time. Do not change any of your earlier answers if you change your mind.

1. _____
2. _____

A version of the instructions in Latvian was included. If a stimulus was perceived as identical to the previous one, they were allowed to use ‘ditto’ marks.

4.2. Listeners.

The sentence was presented to 32 undergraduate students of languages and business. They had an average age of 21 and were predominantly L1 speakers of Latvian, though three were native speakers of Russian. They had begun their study of English at an average age of 8 but used Latvian the majority of the time (68%). The remainder of the time (29%) was largely spent speaking English.

The sentence was also presented to seven MA students of English philology. They had an average age of 25 and, again, three were Russian natives, so the results are mixed. They used Latvian on average 49% of the time and English 31%, with other languages such as German, French, and Russian comprising the rest. The test was administered with

the kind help of Vita Kalnberzina of the University of Latvia

5. RESULTS

Results are calculated in terms of number of correct words scored. In general, only “it” and “quite” were identified during the time course of the utterance. Other words were identified after presentation of the entire sentence, most prominently “wedding” and “though”. Overall correct recognition was 14%. The late recognition suggests a holistic technique in which an overall profile is processed rather than individual syllables or words (this further explored in [4]).

Results for the more advanced group show a larger degree of recognition of words during the utterance itself, but some late recognition as well. Overall the recognition accuracy was around 23%.

5.1 For Latvian, Phonotaxis NO, Usage YES

We analysed Latvian relaxed speech from radio interviews to see to what extent the languages share reductions. Latvian shared some similarities with English and Polish in that it has reduction in consonant clusters:

pasta:vet	[pasa....]
simt (p)	[sim]
pirkt (v)	[pirt]

By far the most common casual speech variants show loss of vowels, which often creates new consonant clusters. Karins [5] found that affected vowels were almost always inflectional endings and results indicated that internal phonological and prosodic factors (especially distance from main word stress) were the strongest constraints on vowel deletion, along with the speaker's educational level. For example:

Pateicis	[paterts]
Virtenes	[virtens]

However, there seem to be fewer inputs for consonant-reducing processes. In a paragraph of 106 words from a story, complex consonant sequences were rare:

In word:	N
#CC- absolute initial	2
-CC- word medial	8

-CC# word final 2
 -CCC# word final 1

Most final consonant sequences are followed by a vowel or end a sentence.

Word boundaries:

-C#C- 34
 -C#CC 2
 CC#C 4
 CC#CC 1
 CCC#C 1

Finally, in a 117-word sample from a newspaper:

#CC 11
 -CC- 27
 (many are morpheme boundaries)
 CC# 5
 -CCC- 8
 (morphemes e.g. “ne-iz-brina”)
 CCC# 2
 (Morphemes, e.g. “no-lemts”)

Although complex consonant clusters are certainly possible, sampling from texts suggest that they are unusual.

We conclude that a potential for heavy syllable structure is only part of the story. We suggest that if this potential is not utilised to a significant degree, related reductions are not triggered and are, in this

case, not a significant part of the phonological repertoire of native speakers of Latvian. If so, this points to why their results are more like the Greek students than the Polish.

6. PROJECTING AHEAD

We expect to find that speakers of other first languages show results for perception of reduced English speech on a cline determined by degree of shared reduction processes. While a significant amount of effort has been put into these pilot studies, we acknowledge that they are only a first step. An obvious obstacle to collecting information from many languages is that the work requires a fairly sophisticated knowledge of the phonology of each. It is also abundantly clear that the research must be expanded to encompass more casual speech processes. Despite these considerations, we find the results encouraging:

English Polish Greek Latvian

Complex syllable structure?

yes yes no yes

English-like casual speech processes?

yes yes no no

Understanding of English casual speech

good good poor poor

Figure 1: Polish and English Casual Speech Reductions

<u>POLISH</u>		<u>ENGLISH</u>		
<u>Vowel compression</u>				
słowa od	/swova od/	[swov od]	go away	/gəʊ ə'weɪ/ [gə'weɪ]
Polsce oni	/polstse oni/	[polstsoni]	the academy	/ðɪə'kædəmi/ [ðə'kærəmi]
<u>Approximant compression</u>				
czy już	/tʃi juʒ/	[tʃuʒ]	a red rose	/əˌrɛdˌrəʊz/ [əˌɛdˌrəʊz]
dawno ja studio../davno ja studjo/ [davnestudjo]		which was		/wɪtʃ wəz/ [wɪtʃəs]
<u>Vowel Loss</u>				
to na tym	/to na tɪm/	[tnatɪm]	thousand	/'θaʊzənd/ ['θaʊzŋ]
protsent	/prɔtsent/	[prɔtsɲt]	station	/'steɪʃən/ ['steɪʃŋ]

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