

## HQSYN16 - Task #3720

Task # 3669 (New): RA1a - Analysis and cataloguing of artifacts

Task # 3688 (Closed): Separation of some phonemes into distinct phones

### Analyze unexpected results of listening test on voiced/unvoiced "ř"

27.01.2016 12:25 - Matoušek Jindřich

<b>Status:</b>	Closed	<b>Start date:</b>	27.01.2016
<b>Priority:</b>	Normal	<b>Due date:</b>	14.02.2016
<b>Assignee:</b>	Skarnitzl Radek	<b>% Done:</b>	100%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	RA1: Analysis of artifacts in synthetic speech		

#### Description

Results of so-far conducted listening tests show some inconsistencies in what was expected versus what the listeners judged - see [#3713-2](#). The sentence IDs correspond to the IDs in the [listening test](#), so you can listen to the sentences there.

The used phonetic alphabet is [here](#).

Please try to analyze these unexpected results given the information provided in [#3713-2](#). You may find some context to be inappropriate, or some other mismatches, ...

#### History

##### #1 - 02.02.2016 17:14 - Skarnitzl Radek

- Status changed from New to Assigned

- % Done changed from 0 to 40

##### #2 - 08.02.2016 10:41 - Skarnitzl Radek

- Status changed from Assigned to Resolved

In general, it is important to realize that the voicing in /ř/ is the least stable of all phonologically voiced obstruents (Skarnitzl, 2011, p. 215). It tends to get lost even between vowels (words like *pořád*) and between voiced sounds (*v řadě, bříza, pařba*). It is quite likely, therefore, that phonetic voicing may have been absent in contexts marked as voiced. Insertion of such a (partially) devoiced /ř/ into a voiceless context thus would not be disturbing.

Specific notes to the individual realizations:

**sentence #3** - ..., ohnivzdorné bundy a pep\*ř\*ové kanony.

- total score: - 0.14

- [ř] score: - 0.43

- baseline is voiceless, neither Ř has a disturbing effect

- there is no obvious reason for such a bias in the evaluation

**sentence #11** - Vep\*ř\*ové je téměř\*ř\* tabu.

- total score: - 0.29

- [ř] score: - 0.14

- the first baseline Ř is clearly from a voiced context, the second is practically voiceless

- the timing is off in both the baseline and noSubsts versions, but baseline sounds worse, there is no obvious explanation for the bias

**sentence #12** - a aby nast\*ř\*ádal na sibi\*ř\*ský výlet, ...

- total score: - 1.0

- [ř] score: - 0.43

- the first baseline Ř is voiced towards the end, the second is voiceless

- there is a huge quality change in the [a:] in nastř+á+dal which may have caused the biased evaluation\_

**sentence #16** - zdravotnické pot\*ř\*ěby a léka\*ř\*ské služby.

- total score: - 0.43

- [ř] score: - 0.14

- both baseline Ř sounds are voiceless and not disturbing

- the bias may be due to timing which is off in noSubsts, especially in potřeby

**sentence #22** - A mod\*ř\* nehybně odplová tak jako řeka, ...

- total score: - 0.71

- [ř] score: - 0.29

- baseline is fully voiced, which corresponds to Moravian assimilation (voicing before sonorants), noSubsts is voiceless and correct

- since this is quite a rare word, the spelling and expectation of [d] may have prevailed, but this is just speculation

**sentence #25** - Věříte mi, ...

- total score: - 0.29

- [ř] score: 0.29 was evaluated as better in noSubsts, problem may be somewhere else

- the voiced context of the baseline Ř is audible on closer analysis, but it is phonetically voiceless

**sentence #27** - , podivil se signatáři Martin Mejstřík.

- total score: - 0.57

- [ř] score: 0.43 was evaluated as significantly better in noSubsts, problem may be somewhere else

- both baseline Ř sounds are voiceless and not disturbing

**sentence #29** - Množme se a spořme.

- total score: - 1.0

- [ř] score: - 0.14

- In this item, the voicing is reversed! The noSubsts version is fully voiced, i.e. with Moravian assimilation, the baseline is voiceless = correct, and the score is thus logical.

**sentence #30** - Hrát proti mladší soupeřce, ...

- total score: - 1.0

- [ř] score: - 0.57

- the baseline Ř is voiceless, the timing is very much off in the [e] before Ř in the noSubsts version; in other words, both Ř sounds are ok, the biased evaluation is probably due to the context

**sentence #35** - ..., uřknutí a podobně

- total score: - 0.43

- [ř] score: 0.29 was evaluated as better in noSubsts, problem may be somewhere else

- both Ř sounds are voiceless and although the voiced context in baseline is audible upon closer analysis, it is not disturbing

**sentence #40** - ..., vysvětlil jeho ošetřující lékař Ilja Kotík.

- total score: - 0.14

- [ř] score: - 0.14

- all Ř sounds are voiceless and not disturbing

**sentence #41** - Hovoříte o třech týdnech.

- total score: - 0.57

- [ř] score: 0.29 was evaluated as better in noSubsts, problem may be somewhere else

- all Ř sounds are voiceless and not disturbing

**sentence #42** - Pracovali téměř výhradně u pošty

- total score: - 0.29

- [ř] score: - 0.14

- both Ř sounds are voiceless and not disturbing

**#3 - 08.02.2016 10:41 - Skarnitzl Radek**

- % Done changed from 40 to 100

**#4 - 08.02.2016 10:53 - Matoušek Jindřich**

- Status changed from Resolved to Closed

**#5 - 08.02.2016 10:59 - Matoušek Jindřich**

- Precedes Task #3734: Evaluate analysis of unexpected results of listening test on voiced/unvoiced "ř" added

**#6 - 19.02.2016 12:38 - Matoušek Jindřich**

- Parent task changed from #3669 to #3688

**#7 - 06.05.2016 13:30 - Matoušek Jindřich**

- Precedes deleted (Task #3734: Evaluate analysis of unexpected results of listening test on voiced/unvoiced "ř")