The influence of the mother tongue on the perception of constructed fantasy languages

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Whether a language sounds pleasant or not has been investigated in several studies [see e.g. 1] and seems to depend on diverse factors such as the knowledge of the language and phonological characteristics. In the current study we minimize the factor familiarity by testing stimuli from 14 different constructed languages, mainly from popular Fantasy and Science Fiction culture. Previous research showed that the intended impressions of conlangs are, at least partly, evoked by the sound structure and not only by the appearance of the speakers, their disposition or special sound effects [2]. Most conlangs are tailored towards a Western audience. Therefore we test the universality of their phonological design features by an online rating experiment with speakers of three unrelated and typologically distinct languages German, Mandarin Chinese and Japanese.

The aims of this study are to test whether listeners with different L1 languages rate fictional languages differently on various scales and whether these ratings depend on different phonological features for participants with different L1. We investigate four groups of features: sonority related features, such as the sonority index [3]. More sonorous languages have been rated as more pleasant [1]. The second feature group is based on the syllable structure. Here we assume a positive relationship with the percentage of open syllables and a negative one with the onset complexity, which might be stronger for Mandarin and Japanese listeners. The third group is related to sound symbolism. Sounds produced in the back of the mouth are supposed to be less pleasant [4, 5]. The last group is 'otherness' based on the percentage of unfamiliar allophones per L1 language.

Two speakers (m/f) recorded two sentences in each of the following languages: Adûnaic, Atlantean, Dothraki, Fjerdan, Horn, Kesh, Khuzdul, Klingon, Na'vi, Orkish, Quenya, Sindarin, Vulcan, and ʕUiʕuid. These stimuli were recorded in a neutral voice and presented in an online rating experiment using an interactive web browser, the Percy platform [6]. Listeners were asked to rate each stimulus on three 7-point Likert scales: good—evil, pleasant—unpleasant, peaceful—aggressive. Afterwards the listeners identified whether they recognised any of the languages. 184 participants (85 German, 63 Mandarin, 36 Japanese) completed the experiment. The ratings for the three scales were averaged.

The rating results are presented in the figure below and show clear differences for the L1 of the participants. The Elvish languages Quenya and Sindarin are rated most positively by German and Japanese L1 speakers. However, Chinese L1 speakers rated Kesh most positively, and Orkish second. Klingon, on the other hand, was rated most negatively, independent of the L1. The correlations between the ratings and the phonological characteristics of the stimuli are presented in the table below. As can be seen the average sonority and related measures do not contribute strongly to the ratings for Mandarin Chinese compared to German and Japanese. Complex onsets and back articulations have a negative effect for all three languages. The results on non-familiar sounds in each language are rather puzzling. In summary, the results tend to suggest that it is easier to construct a language that sounds universally unpleasant than a pleasing one. Experiments with participants from other language families such as Slavic and Romance are needed to confirm this first impression.

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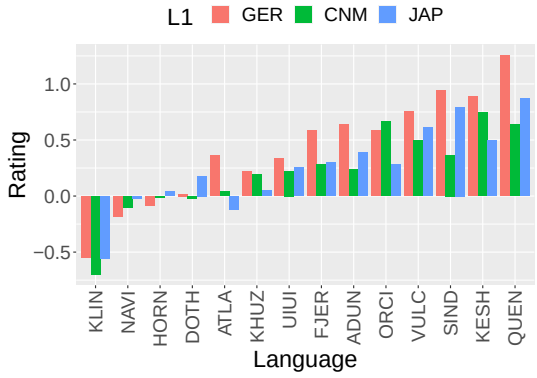

	German	Mandarin	Japanese
SonorityIndex	0.33*	0.18	0.35**
SonorityIndexCons	0.21	-0.01	0.22
PctVowels	0.53***	0.42**	0.42**
PctObstruents	-0.57***	-0.34*	-0.51***
PctObstruentsOfCons	-0.45***	-0.20	-0.44***
PctOpenSyllables	0.17	0.24	0.04
PctOpenNasalSyllables	0.47***	0.46***	0.27*
PctComplexOnsets	-0.43**	-0.39**	-0.47***
PctBackVowOfVow	-0.02	0.04	-0.02
PctGutturalVelar	-0.58***	-0.29*	-0.48***
PctNonEnglish	-0.49***	-0.41**	-0.30*
PctNonGerman	-0.65***	-0.61***	-0.55***
PctNonMandarin	-0.46***	-0.44***	-0.46***
PctNonJapanese	-0.42**	-0.36**	-0.34*

Results from ratings (left) and correlations between ratings and phonological characteristics (right)

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