

1. What do we want to do?

The goal of the project is investigating how changes in speaking rate influence the realisation of phonemic contrasts in a native and nonnative language. We will analyse the production of selected phonemic contrasts in Polish, English, and Japanese as a native language (L1) in different speaking rates ranging from slow to very fast speech. Polish, English, and Japanese exhibit interesting typological cross-linguistic differences in the implementation of phonemic contrasts in terms of both durational and spectral parameters that may require different adjustment strategies with increasing or decreasing speaking rate. Next, we will investigate the production of English as a second language (L2) by native speakers of Polish and Japanese. These production data coupled with perception data from native speakers of English will allow us to determine how differences in speaking rate affect the realisation of phonemic contrasts in L2 and to what extent it differs from what we observe in L1. Finally, we will test Polish learners of Japanese as a third language (L3) to see how different rates of speaking influence contrast realisation in a consecutive foreign language and how it relates to contrast realisation in L2.

2. How do we want to do it?

In our project, we will use the methodology in which will determine the slowest and fastest speaking rate that will be acceptable in the three languages (separate ranges for L2 and L3, because proficiency sets the limit on maximum speaking rates) and create speaking rate categories in equal logarithmic steps (approximately 7-8), expressed as syllable/mora per second. These steps will be subsequently recalculated to beats per minute (BPM) on a digital metronome. The participants will see video images of metronome cycles and will be required to fit the test phrases and sentences into each cycle.

3. Why do we want to do it?

We want to contribute to the current phonetic studies by addressing the following issues:

1. How different steps of speaking rate influence phonemic contrast realisation in a native language by comparing three typologically different languages such as Polish, English, and Japanese. In other words, how native speakers of these languages adjust durational phonetic parameters with decreasing or increasing speed of speaking and what strategies they use to preserve phonemic contrasts.
2. How different steps of speaking rate influence contrast realisation in L2, how effective learners are at sustaining these contrasts compared to native speakers, and how it affects their intelligibility (perceptual identification by native speakers).
3. How different steps of speaking rate influence contrast realisation in L3, how it is mediated by language-specific phonetics of L1 and L2, and how successful learners are in L3 compared to L2.