

Abstract

This thesis aims to contribute to the basic acoustic description of Czech diphthongs [ou̯, au̯, eu̯]. The diphthong is a unit characterized by the change of quality within its duration, thus dividing it into two parts. The analysis of this change and the phonologic interpretation of these two-part segments in the system of a given language is however difficult. This is why the description of diphthongs was frequently neglected. At the present time, the need for investigating such units is increasing – neurophonetic and psychological research on the one hand and speech technology on the other are more and more interested in examining speech segments with short temporal changes. To obtain a detailed acoustic description of diphthongs is a topical problem of current language description.

In this thesis we studied the aspects of duration, spectrum and intensity changes at the local level and compared them with results acquired for simple vowels. In the temporal domain we observed the duration values divided by the initial, transient and final part of the diphthongs on the basis of auditory perception and also their total duration. The material used was partly taken from the database of the Institute of Phonetics, Faculty of Arts, Charles University in Prague, partly from specifically created texts. The recordings consist of read and semi-spontaneous utterances.

The results suggest that the longest part of the Czech diphthong is the final part and the shortest the transient part which takes 20 % of the total duration in case of all Czech diphthongs. The comparison with the simple vowels indicates that the Czech diphthongs fall into the category of long vowels. In the spectral domain we specified the first and second formant values in all three parts of the diphthong and compared them with simple vowels. The traditional characteristic of Czech diphthongs was confirmed: The individual parts correspond to the respective simple vocalic segments. The comparison of local intensity changes did not demonstrate any significant tendencies which would differentiate the diphthongs from the rest of the Czech vocalic inventory.

Keywords: diphthongs, acoustic properties, vowels, glides