

Voice Recognition and Phonetic Speaker Identification

Abstract

The submitted thesis deals with voice recognition and forensic speaker identification as methods used for individual identification of a person. Voice recognition, enshrined in Section 104b(3) *in fine* of the Code of Criminal Procedure, is one of the special methods of evidence and, together with facial recognition, one of the two types of recognition mentioned in the legislation. Since most of the attention, both doctrinal and jurisprudential, has been focused on facial recognition, which has been significantly more frequent, there is no detailed analysis of the specifics of voice recognition. However, particularly in view of the changing nature of crime in terms of its cybernetic nature, there is an increasing number of crimes in the investigation of which voice recognition may be of fundamental and irreplaceable importance. The thesis seeks to provide not only the theoretical basis of voice recognition with an emphasis on its problematic aspects, but also to present *de lege ferenda* proposals to help better grasp and regulate this institute. Subsequently, audio-expertise is presented as a more practically represented method of voice identification of a speaker. At the same time, the thesis aims to confront the theoretical part of the work with practical knowledge gained by prosecutors, judges, experts, and other persons participating in the current practice, as well as to gain perspective by comparing it with foreign legislation and practice.

In the first part of the text, in addition to the basic characteristics of recognition and its types, the differences between voice recognition, including its history, and facial recognition are highlighted, which have significant consequences for the inappropriateness of the analogical application of the general legal regulation of recognition enshrined in Section 104b of the Code of Criminal Procedure. Subsequently, attention is focused on the individual stages of voice recognition, while emphasizing its specificities, complications and inherent limitations. Not only the legal ones, but also the limitations stemming from the psychological aspects of this act are dealt with in the following chapters.

The second part of the thesis deals with audio-expertise as a more frequent method of speaker identification, its history, methods of its performance, parameters of human voice examination, possibilities of its use, as well as evidence obtained through it. Consequently, an analysis of current practice is provided, not only in relation to audio-expertise, but also to voice recognition, so that the conclusions of the theoretical part are illustrated and supported by statistical data.

In the conclusion, as well as within the individual chapters, the author resorts to searching for solutions to some controversial or problematic aspects within the limits of the current legislation, at other times presenting *de lege ferenda* considerations concerning both the practical and theoretical levels.

Key words:

Voice Recognition – Speaker Identification – Audio-expertise