

# **A Phonetic Study on Implosives in China**

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## **Abstract**

Implosives are sounds made with ingressive glottalic air-stream. This thesis studies the phonetic characteristics of implosives in Chinese dialects, focusing on how they arise and develop. This study adopts an experimental phonology approach. We believe that many phonology patterns originate in phonetics, and many sound changes arise from the phonetic variations that are determined by the physical, physiological and psychological factors.

It is uncovered that one of the sources of implosives is the forced voiceless stops. The sound change is motivated by the aerodynamic need to initiate vocal folds vibration. Implosives are observed as the phonetic variation of the voiceless stops in Chaozhou, a Min dialect of Chinese.

This research is one of a few pioneering studies using such instrumental methodology to investigate the phonetic characteristics of the implosives in the Chinese dialects, and provides invaluable aerodynamic and acoustic data. This research will contribute to the general knowledge of phonetics, especially in providing a better understanding of the distinction between the implosive and the voiced stop, and the physiological reason for pitch perturbation at vowel onset that follows implosives.

It is also trying to establish a phonetic typology of implosives which is not only applicable to the classification of the phonetic variations in Chinese dialects, but also the other variations found in the world's languages. This phonetic typology of implosives reveals the distinctions and connections of these phonetic variations, and indicates possible evolutionary traces of how implosives arise, and what they may change into when they disappear from the language.