DIPPING TONES IN MULTI-REGISTER AND FOUR-LEVEL MODEL

Xiaonong Zhu
Jinan University, Guangzhou

Li Yi
China Agriculture University, Beijing

Ting Zhang
Nanjing Normal University, Nanjing

Đình Hiền Nguyễn
University of Languages and International Studies, Vietnamese National University, Hanoi

ABSTRACT
This paper classifies dipping tones in the framework of the Multi-Register and Four-Level Model, using new, firsthand acoustic data. Seven dipping types are identified. Four of them are produced in normal clear voice and affiliated with the Modal Register: (1) Central Dipping, typologically transcribed as /323/, (2) Back Dipping /523/, (3) Front Dipping /324/, and (4) Double Circumflex /4343/. The remaining three are produced with non-clear voice qualities: (5) Breathy Dipping /213/ and (6) Creaky Dipping /202/ in the Lower Register, and (7) Discontinuous Fortis Dipping /405/ in the Upper Register. Each of the seven dipping tones contrasts with one or another with four distinctive features [± RgM, ±RgL, ±H front , ±H back].

KEYWORDS
Tone Typology Tonotype Dipping Double Circumflex

Acknowledgments
An earlier version of this paper was presented at The 3rd International Symposium on Tonal Aspects of Languages, 27-29 May 2012, Nanjing. We were grateful for the comments from the audience. Thanks also go to Dan Yuan and Jill Elliott for their assistance during the preparation of this paper and the support from “The General project of National Social Science Fund (17BYY074).”

There is no conflict of interest to publish this paper in Journal of Chinese Linguistics.

Li Yi (衣莉; author for correspondence) [daisyyili120@cau.edu.cn]; NO.17, China Agriculture University, Tsinghua East road, Beijing; https://orcid.org/0000-0003-1906-3653
裂声作为低调特征：河北省方言的声调考察 (Creaky voice as a feature of [+low]: A tone survey of Hebei dialects). *Yuyan yanjiu jikan* 语言研究集刊 7: 134–147.


### 分域四度制中的凹调类型

<table>
<thead>
<tr>
<th>朱晓农</th>
<th>衣莉</th>
<th>章婷</th>
<th>阮廷贤</th>
</tr>
</thead>
<tbody>
<tr>
<td>暨南大学，广州</td>
<td>中国农业大学，北京</td>
<td>南京师范大学，南京</td>
<td>越南河内国家大学下属外国语大学</td>
</tr>
</tbody>
</table>

摘要

本文采用一手材料在分域四度框架中对凹调进行类型学分类，一共辨识出七种凹调。其中四种为常域清声凹调：(1) 央凹型，代码为 /323/，(2) 后凹型 /523/，(3) 前凹型 /324/，(4) 两折型/4343/。另外三种凹调属于非清声声调：(5) 下域的气声凹型/213/，(6) 下域的嘎声凹型 /202/，(7) 上域的张裂声凹型 /405/。本文使用四对区别特征 [±RgM, ±RgL, ±Hfront, ±Hback] 来刻画这七种凹调。

关键词

声调
类型学
调类
凹调
两折调