

The 32nd North American Conference on Chinese Linguistics (NACCL-32)



The University of Connecticut, Storrs (online)

September 18-20, 2020

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CONFERENCE PROGRAM

Friday, September 18th, 2020

Zoom Webinar 1:

Link: <https://us02web.zoom.us/j/88634692859?pwd=Ukx1T0tkRm5JZGZsWVpNMXFKVkpXQT09>

Webinar ID: 886 3469 2859, Passcode: naccl32

| | |
|--------------|--|
| 9:00 – 9:05 | Welcome remarks NACCL-32 Program Chair, Professor Chunsheng Yang Dr. Juli Wade, Dean of College of Liberal Arts and Sciences, UConn |
| 9:05 – 10:05 | Keynote 1 – Professor James Huang, Harvard University (Zoom Webinar 1) Chair: Professor Zeljko Boskovic Title: More on Locality, Focus and Covert Movement |
| 10:15-11:15 | Keynote 2 – Professor Yi Xu, University College London (Zoom Webinar 1) Chair: Professor Jisheng Zhang Title: Toward modeling-based linguistic research |
| 11:20-12:20 | Keynote 3 – Professor Nan Jiang, University of Maryland (Zoom Webinar 1) Chair: Professor Chunsheng Yang Title: The stroke number effect in visual word recognition among CSL learners |

Zoom Webinar 2:

Link: <https://us02web.zoom.us/j/84623738028?pwd=L0RlOHRHVzAyOEExKRzFRYTFeUMydz09>

Webinar ID: 846 2373 8028, Passcode: naccl32

Zoom Webinar 3:

Link: <https://us02web.zoom.us/j/87105063568?pwd=S3hUWWV6cUVnY0lIdjd0Ry9ETHRPdz09>

Webinar ID: 871 0506 3568 Passcode: naccl32

Zoom Webinar 4:

Link: <https://us02web.zoom.us/j/84094031571?pwd=NDh2NTI4TUo1UUUjT2V5U2dFcUUXQT09>

Webinar ID: 840 9403 1571, Passcode: naccl32

Zoom Webinar 5:

Link: <https://us02web.zoom.us/j/88395730781?pwd=T0gyVm0vcEFNSDdPdVFwRUdqRm9Ndz09>

Webinar ID: 883 9573 0781 Passcode: naccl32

Zoom Webinar 6:

Link: <https://us02web.zoom.us/j/88291168973?pwd=NINPMHlElcxeG4rU3FmZC9UeWRLUT09>

Webinar ID: 882 9116 8973 Passcode: naccl32

| | Session 1-A (Zoom Webinar 2) Syntax & semantics | Session 1-B (Zoom Webinar 3) Phonetics & phonology | Session 1-C (Zoom Webinar 4) Syntax & semantics | Session 1-D (Zoom Webinar 5) Pragmatics | Session 1-E (Zoom Webinar 6) Syntax |
|-------------|---|--|---|---|---|
| 18:00-18:30 | Tommy Tsz-Ming Lee (University of Southern California) Strength in deontic modals as acceptability and optimality | Ok Joo Lee (Seoul National University) Tonal Inventory and Segmental Complexity in Chinese | Hongchen Wu (Stony Brook University) Quantifier scope in Mandarinthetic sentences | Kerry Sluchinski (University of Alberta) Genderless Ta and Personal-Narratives: The Pragmatics of <i>ta</i> in Chinese Social Media | Ping Rao (Zhejiang Sci-Tech University) The Discourse Feature of Aspectual Reference in the Narrative Mode of Mandarin Chinese |
| 18:30-19:00 | Pengfei Li (Wake Forest University) Focus But Not Focus Movement: the Syntax of the Mandarin <i>lian...dou</i> Construction | Chenchen Xu (Michigan State University) Masked phonological contrast maintained in phonetics – vowel feature remnant in Rugao contracted syllables | Junghwan Maeng (University of Illinois at Urbana Champaign) L1 and L2 Processing of Chinese VO Compounds with Dual Identities | Yunting Gu (MSU) Mandarin Self-referential Expressions: A Sociolinguistic Study | Huang, Nick (National University of Singapore/UConn), Annemarie van Dooren (University of Maryland) & Gesool Mendes (University of Maryland) Wanting the future: the case of desire and future <i>yao</i> |
| 19:00-19:30 | So Young Lee, Lei Liu & Hongchen Wu (Stony Brook University) Factive island is not an island in Mandarin | Wenting Xian & Bei Yang (Sun Yat-sen University) 广西土白话送气分调的声学分析与感知研究 | Kevin Kwong (Cornell University) Prepositions and the illusion of double object constructions in Cantonese | Chaoyi Chen (Rutgers University) Two Effects of the Utterance-final Particle <i>hao-bu-hao</i> in Mandarin Chinese | Boya Huang (Macau University of Science and Technology) “這麼一V”與“這麼V來”篇章表現差異及成因分析 |
| 19:30-19:45 | Virtual coffee break | | | | |
| | Session 2-A (Zoom Webinar 2) Syntax & semantics | Session 2-B (Zoom Webinar 3) L2 lexical/syntactic acquisition | Session 2-C (Zoom Webinar 4) Phonetics & phonology | Session 2-D (Zoom Webinar 5) Syntax & semantics | Session 2-E (Zoom Webinar 6) Phonetics & phonology |
| 19:45-20:15 | Ka Fai Yip & Tommy Tsz-Ming Lee (Yale University & University of Southern California) | Jie Liu & Mingzhe Zheng (College of the Holy Cross & UC Berkeley) | Jing Yang & Bei Yang (Sun Yat-Sen University) | Shengyun Gu (University of Connecticut) | Qiuwu Ma (Fudan University) What can be learned from the acquisition of English intonation by Chinese students? |

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|-------------|--|--|---|---|---|
| | Generalized Scope Economy | Are “pants” clothes or long objects: Exploring the L2 acquisition of Chinese classifiers | Durational of disyllabic words produced by Russian learners of Chinese | Agreement verbs with weak hand classifier in Shanghai Sign Language | |
| 20:15-20:45 | Xuetong Yuan & Hiroaki Saito (University of Connecticut & Mie University) On matrix shuo in Mandarin | Xiao Luo (University of Cincinnati) Theme choices in CSL writing and cross-linguistic effects: A corpus-based study | Bihua Chen (Indiana University) The Fate of Round Vowels in Cantonese Varieties of the Pearl River Delta —with a Focus on the Doumen Dialect | Jiahui Huang (University of Washington) Finiteness as anchoring: Evidence from Cantonese | Yung-hsiang Shawn Chang (National Taipei University of Technology) An acoustic and articulatory investigation of [ou] in Taiwan Mandarin vs. Beijing Mandarin |
| 20:45-21:15 | Zhuo Chen (University of California at Los Angeles) An A-bar movement analysis of Mandarin ‘even’-focus constructions | Sachiko Shimoji, Yu Kang, & Ren Ying (Kobe City University of Foreign Studies, KWANSEI GAKUIN University, Kobe City University of Foreign Studies) Transitivity and Morphological Voice in Japanese and Chinese From the Perspective of Cognitive 'Viewpoints' | Lu Lu (Wake Forest University) Revisit the tone-melody matchings in Chinese singings: A meta-analysis of Shanghai opera and Mandarin pop songs | Tsai-Heng Yang (Harvard University) On Domains of Nominalization in Mandarin Chinese | Rob Squizzero (University of Washington) Attitudes toward L2 Mandarin Speakers of Chinese and non-Chinese Ethnicity |
| 21:15-21:45 | Chit-Yu LAM (The Open University of Hong Kong) Verbal definiteness and presupposition effects in Gaozhou Cantonese standard negation | | Jing Ji (CUNY Stony Brook) Formation of Reduplicative Polysyllabic Onomatopoeia in Mandarin | Catherine Arnett & Eva Wittenberg (UC San Diego) Conceptual effects of Verbal Reduplication in Mandarin Chinese | |

Saturday, September 19th, 2020

Zoom Webinar 1:

Link: <https://us02web.zoom.us/j/88634692859?pwd=Ukx1T0tkRm5JZGZsWVpNMXFKVkpXQT09>

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Link: <https://us02web.zoom.us/j/87105063568?pwd=S3hUWWV6cUVnY0lldjd0Ry9ETHRPdz09>

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Zoom Webinar 6:

Link: <https://us02web.zoom.us/j/88291168973?pwd=NINPMHlElcxeG4rU3FmZC9UeWRLUT09>

Webinar ID: 882 9116 8973 Passcode: naccl32

| | Session 3-A (Zoom Webinar 2) Historical linguistics | Session 3-B (Zoom Webinar 3) Syntax & semantics | Session 3-C (Zoom Webinar 4) Sociolinguistics | Session 3-D (Zoom Webinar 5) Morphology | Session 3-E (Zoom Webinar 6) Phonetics & phonology |
|-------------|---|--|--|---|--|
| 8:00 – 8:30 | Futeng Luo (Singapore University of Social Sciences) “昆蜚蜚”字组声母演变寻踪 | Quansheng Xia (Nankai University) 语境条件下，语素层面的名动分离现象研究 | Wenxi Li (Peking University) 东乡语-汉语双语者的语言迁移研究 | Wanling Guo (Guangdong University of Foreign Studies) The Ideal Foreign-oriented Definition Model of Words with Chinese-characteristics Senses | 时秀娟 (Tianjin Normal University) 普通话通音声母n-m、r-l的感知实验 |
| 8:30 – 9:00 | Andrew Allard (George Washington University) A historical-linguistic analysis of the origins of Sino-Khmer numerals | Xia Wang & Li Tang (Hong Kong Polytechnic University) Processing phonetic radicals of Chinese characters in a sentence: Data from Mandarin native speakers | Eva Daussà & Yeshan Qian (University of Groningen, The Netherlands, University of Utah) Language Transmission among Multilingual Chinese Immigrant Families in Northern Netherlands | Yung-Yung Chang, Alex Cherici, & Nozomi Tanaka (Indianan University) Estimating cue strengths in L1 Chinese input and output: A Competition Model approach to corpus data | Ping Cui & Yunjia Wang (Peking University) 抚顺话声调的协同发音与连读变调 |
| 9:00 – 9:30 | 曹亚北 (北京大学) 试论汉语话题结构与回指的互动演变 | Taijing Xiao (National Tsing Hua University) On the Mandarin Distributive Marker gezi | Shuying Ye (National Tsinghua University) 从程度副词到模态副词——以温州方言后置成分“险”为例 | Khai-in Lim (University of Hawaii) An Ergative Marker Revisited in Tangut | 谭丽亚 & 陈海宏 (西南林业大学) 泰国留学生汉语双元音uo、ua习得的偏误分析及教学对策 |
| 9:30-10:00 | Ming Huang (Sorbonne Université (France)) | | Daxingwang Peng (INALCO-CRLAO) | | Dongmei Rao & Jason Shaw (Xihua University, Yale University) |

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|-------------|---|---|---|---|--|
| | Diachronic study of the concessive mechanism in Chinese | | From the third person pronoun to the particle: 他 lǎ33 in the Cenchuan dialect (Sinitic) | | Milliseconds and years: two times scales in bidirectional sound change within the non-coronal fricatives of Southwest Mandarin |
| 10:00-10:15 | Virtual coffee break | | | | |
| 10:15-11:15 | <p align="center">Keynote – Professor Marjorie K.M. Chan (Zoom Webinar 1) Chair: Professor Bei Yang Title: Dialect-Writing, Transcribing, and Other Forms of Translanguaging: Literacy in the Modern Era</p> | | | | |
| 11:20-12:20 | <p align="center">Keynote – Professor Ming Xiang, University of Chicago (Zoom Webinar 1) Chair: Professor Chien-Jer Charles Lin Title: Parsing and interpretation: a case study of Mandarin wh-in-situ construction</p> | | | | |
| | Session 4-A (Zoom Webinar 2) Syntax & semantics | Session 4-B (Zoom Webinar 3) Historical linguistics | Session 4-C (Zoom Webinar 4) Second/dialectal language speech learning | Session 4-D (Zoom Webinar 5) Syntax & semantics | Session 4-E (Zoom Webinar 6) L2 morphology & syntax |
| 18:00-18:30 | Hai Hu & Chien-Jer Charles Lin (Indiana University Bloomington) A Corpus Investigation of the Features of Translated Chinese | Kening Li (University of Michigan) 论汉语书面语文白混杂的风格对汉语“词”的定义的挑战 | Yadong Xu & Kevin Russell (University of Manitoba) What if what you think is the opposite of what I say? Online processing of two tonal systems: Evidence from Lanzhou-Beijing bidialectal speakers | Dongdong Chen (Seton Hall University) Towards a Classifier Parameter | Jili Sun (Northwestern University) Reflection of time conception through the acquisition of Chinese aspectual particle "LE" by French Learners |
| 18:30-19:00 | Feier Gao, Siqi Lyu & Chien-Jer Charles Lin (Indiana University Bloomington) Processing Mandarin Tone 3 Sandhi at the Morphosyntactic Interface | Tian Li (Universität Konstanz) Why er is not the ancestral form of ne | Yuhong Zhu (The Ohio State University) Quantity-sensitive Foot Formation in Suzhou: Evidence from Light-initial Tone Sandhi | Yunchuan Chen (Duke University) An experimental investigation of the reconstruction effects of the head quantifier phrase in Chinese relative clauses | Yilan Liu (University of Arizona) A Corpus-Based Study of L2 Learners' Production of Chinese High-Frequency Verbs |
| 19:00-19:30 | Xu Bian (Seattle Pacific University) 汉语个体量词认知功能的研究 | Yiyang Guo (Peking University) | Rongru Chen & Min Liu (Jinan University) Production of Mandarin Rhotic Onset [ɹ] by | Pei-Jung Kuo (National Chiayi University) The Peripheral Applicative gei in Mandarin Chinese | Naiyan Du (Michigan State University) Rethinking the Sentence-Final Particle (SFP) system in |

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|-------------|---|---|--|--|--------------------------------|
| | | The mechanism of lexicalization in hen-shi (很是) | Indonesian Learners of Mandarin | | Mandarin: The Status of Le (了) |
| 19:30-20:00 | Riich Yoshimura (Kyushu University) A Syntactic Analysis of Chinese Adverbial Clauses Bearing Topichood | | Xinchun Wang (CSU Fresno) The Acquisition of Mandarin Consonants by English Learners: Perception and Production Mismatches | | |

Sunday, September 20th, 2020

Zoom Webinar 2:

Link: <https://us02web.zoom.us/j/84623738028?pwd=L0RIOHRHVzAyOEExKRzFRYTFpeUMydz09>

Webinar ID: 846 2373 8028, Passcode: naccl32

Zoom Webinar 3:

Link: <https://us02web.zoom.us/j/87105063568?pwd=S3hUWWV6cUVnY0ljdj0Ry9ETHRPdz09>

Webinar ID: 871 0506 3568 Passcode: naccl32

Zoom Webinar 4:

Link: <https://us02web.zoom.us/j/84094031571?pwd=NDh2NTI4TUo1UUUpjT2V5U2dFcUUxQT09>

Webinar ID: 840 9403 1571, Passcode: naccl32

Zoom Webinar 5:

Link: <https://us02web.zoom.us/j/88395730781?pwd=T0gyVm0vcEFNSDdPdVFwRUdqRm9Ndz09>

Webinar ID: 883 9573 0781 Passcode: naccl32

Zoom Webinar 6:

Link: <https://us02web.zoom.us/j/88291168973?pwd=NINPMHlElcxeG4rU3FmZC9UeWRLUT09>

Webinar ID: 882 9116 8973 Passcode: naccl32

| | Session 5-A (Zoom Webinar 2) Classifiers/syntax | Session 5-B (Zoom Webinar 3) Phonetics & phonology | Session 5-C (Zoom Webinar 4) Syntax | Session 5-D (Zoom Webinar 5) Syntax/corpus linguistics | Session 5-E (Zoom Webinar 6) Syntax & semantics |
|-------------|---|--|--|--|--|
| 8:00 – 8:30 | Nick Huang (National University of Singapore and the University of Connecticut) Nominal expressions without nouns in Mandarin | Jisheng Zhang (East China Normal University) A Study of Underlying Vowels of Mandarin Chinese in Light of Radical Underspecification | 王珊、王少茗 (澳門大學) 放置動詞的多模態人機交互架構 | Zhong Chen, Yuhang Xu, & Zhiguo Xie (Rochester Institute of Technology, University of Rochester, Ohio State University) | Aili Zhang (Shandong Jianzhu University) The interpretation of Chinese overt pronoun |

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| | | | | Assessing the reliability of informal judgment data in The Syntax of Chinese | sentence: Data from Mandarin native speakers |
| 8:30 – 9:00 | Pin-His Chen (Purdue University) How sub-event classifiers and numerals are related to telicity in Taiwan Mandarin: From a constructionist perspective | Yang Liu & Lori Repetti (Stony Brook University) Restrictions on Consonant + Glide (CG) Sequences in Chinese Varieties | Ling Sun (Indiana University Bloomington) The role of polarity in measure phrase constructions | Shaohua Fang (University of Pittsburgh) The primacy of animacy for the subject grammatical function in Mandarin Chinese | Khai-in Lim & Kamil Deen (University of Hawaii) Unaccusative and unergative verbs in Child Mandarin Chinese |
| 9:00 – 9:30 | Bing Mu (University of Rhode Island) Conceptualizing the Volitional 要 yào as an Intention Marker | Yi Jen Chen (National Chengchi University) The Moraic Structure of Mandarin Contractions | Hanzhu Chen (LETTRES PARIS SORBONNE) (In)definiteness in a language without articles: a study of the syntax-pragmatics interface in Mandarin Chinese | Yihan Zhou (University of Illinois at Urbana-Champaign) Trends in Chinese linguistics from 2000 to 2019 - a corpus analysis of one thousand journal articles | Carmen Lepadat ("Sapienza" University of Rome) Right dislocations: function and form in spoken Mandarin Chinese |
| 9:30 – 10:00 | Shuyan Wang (University of Connecticut) A Prosodic Analysis of Mandarin Classifiers | Jiang Liu & Seth Wiener (University of South Carolina & Carnegie Mellon University) Second language learners' Mandarin syllable-tone word production: effects of task and prior phonological and lexical learning | 张晨迪 (中山大学) 倚变句的句法语义联动分析 | 张瑞朋 (中山大学) 汉字文化圈和非汉字文化圈高级水平留学生别字偏误对比分析--以韩国和英美国家留学生为例 | |
| 10:00- 10:10 Virtual coffee break | | | | | |

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|---------------|---|---|--|---|--|
| | Session 6-A (Zoom Webinar 2) L2 phonetics & phonology | Session 6-B (Zoom Webinar 3) Syntax | Session 6-C (Zoom Webinar 4) L2 pronunciation | Session 6-D (Zoom Webinar 5) Syntax & semantics | Session 6-E (Zoom Webinar 6) Syntax & semantics |
| 10:10 – 10:40 | Wenhua Jin (Kennesaw State University) Not just in conversational speech: the case of Chinese T2 Sandhi | Qian Wang (The Ohio State University) A derived measure function-based analysis of bǐ 'than'-comparatives | Yu Liu (Brigham Young University) The role of vocabulary knowledge in second language speaking fluency | Alex Cherici, Yung-Yung Chang, & Nozomi Tanaka (Indiana University) Elicited production of Chinese relative clauses Data from | Jian Gang Ngui (University of Arizona) A unified analysis of Mandarin bei in long and short bei-passives |

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|---|--|---|--|--|---|
| | | | | L1-English learners of Chinese | |
| 10:40 – 11:10 | Yang, Seojin (The Ohio State University) Acoustic Variation and Sajian Speech Style: A Case Study | Xue Shen (Seoul National University) 语义地图视角下的现代汉语介词“跟”的语义功能分析-以韩国学习者为中心 | Yuyun Lei (University of Illinois at Urbana-Champaign) Exploring speaking fluency and disfluency in L2 Chinese | Yina Ma & Yoshihisa Kitagawa (Indiana University) On the so-called gapless relative clauses in Chinese | Jackie Y.-K. Lai (University of Chicago) V-doubling and Durative/Frequency Expressions in Chinese |
| 11:10 – 11:40 | Kaidi Chen & Chunsheng Yang (The University of Connecticut) Effects of F0 and context on L2 Chinese intelligibility: A pilot study | | Nan Meng (University of Connecticut) “Repeat after me”: Is There a Better Way to Correct Tone Errors in Teaching Chinese as a Second Language? | Yuyin He (Harvard University) When NONFUT Tense Meets Perfective Aspect | Chung-yu Chen (University of Illinois at Urbana-Champaign) An experimental investigation of Mandarin reflexive ziji |
| <p style="text-align: center; color: red;">Thanks for attending NACCL-32! Stay safe and well!</p> | | | | | |

ABSTRACTS

Plenary Sessions



Dialect-Writing, Transcribing, and Other Forms of Translanguaging: Literacy in the Modern Era

Marjorie K.M. Chan (陳潔雯)

The Ohio State University

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The oft-quoted slogan from the written language reform in the early twentieth century, Wǒ shǒu xiě wǒ kǒu 我手寫我口 (‘My hand writes down what comes out from my mouth’), was originally a line of poetry from late Qing scholar-official and poet, Huang Zunxian 黃遵憲 (1848-1905), from today’s Meixian (梅縣), Guangdong Province. Taken at its face value, advocacy of that slogan should not only support Mandarin-based baihua but extend also to dialect-writings of other varieties of Chinese, such as Wu, Min, Cantonese (Yue), and so forth. Over the centuries, non-Mandarin dialects of Chinese have, in fact, left written records of their vernacular literature. The earliest known Wu dialect work, for example, is Feng Menglong’s (馮夢龍, 1574-1646) Shan Ge 山歌 (Mountain Songs). The earliest extant Southern Min work may be the mid-16th century drama, Li Jing Ji 荔鏡記 (Romance of the Litchi Mirror), written in a mix of Quanzhou and Chaozhou dialects of Southern Min (Wu 2001, cited in Lien (2010). And for Cantonese (Yue), the love ballad, Huajian Ji 花箋記 (Romance of the Fancy Note-paper), is the oldest work that likely dates back to late Ming dynasty, but the preface date of the earliest extant copy is from 1713. These works were written using Chinese characters supplemented by vernacular characters to transcribe the spoken regional variety.

In the modern era, bi-/multilinguals are not limited by a single script and a single language in their dialect-writing; they can supplement it by using multiple linguistic and semiotic resources through the dynamic process of translanguaging, such as can be found in Kongish, with its mixed code of written Cantonese, romanization, and English. The intermixing of linguistic codes can even penetrate down to the script level via transcribing (Li and Zhu 2019), where a graph may be formed consisting of (standard or vernacular) Chinese character components intermixed with Roman letters or Arabic numerals.

This presentation introduces some early Chinese dialect-writing materials and then explores translanguaging and the very creative transcribing in the modern era.

Chan, Marjorie K.M. 2005. Cantonese opera and the growth and spread of vernacular written Cantonese in the twentieth century. In Proceedings of the Seventeenth North American Conference on Chinese Linguistics (NACCL-17), edited by Qian Gao, 1–18. GSIL Publications, University of Southern California.

Chan, Marjorie K.M. 2010. The Huajian Ji (花箋記): Glimpses into early 18th century vernacular written Cantonese. The 2010 Midwest Conference on Asian Affairs, 1–3 October 2010, Ohio State University, Columbus, Ohio.

Li Wei & Zhu Hua (2019) Transcribing: Playful subversion with Chinese characters, *International Journal of Multilingualism* 16:2: 145-161.

Lien Chinfa. 2010. The dual function of Liah 力 in Li Jing Ji. *Journal of Chinese Linguistics* 38.1: 45–69.

Wu Shouli. 2001 (Ed.) *Ming Jiaqing Kan Li Jing Ji Xiwen Jiaoli* (Annotated Texts of the Romance of Li Jing Ji of Ming Jiaqing Edition). Taipei: Congyi Workshop.

More on Locality, Focus and Covert Movement

C.-T. James Huang

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One of the early arguments for the ‘Syntax of LF’ with covert movement was based on the phenomenon of ‘weak crossover’, a configuration which prohibits variable binding, as observed with both overt wh-constructions and other in-situ quantificational sentences. Chomsky’s (1976) argues that a unified explanation is available in the form of what was later dubbed the ‘Leftness Principle’, if LF covert movement is assumed for quantified NPs and in-situ wh-phrases, as well as NPs bearing focus (as signaled by stress, only or even). Rooth (1985) and others seek to do away with covert focus movement based on the observation that focus association appears not to obey well established island constraints on movement.

In this talk I return to the topic of locality theory in Chinese topic and relativized structures, capitalizing on a set of apparent counterexamples to the theory of Generalized Control (Huang 1989, et seq.) and other locality principles such as Subjacency, CED, and LBC. In light of Zhang (2009) it is shown that the problematic cases arise when the crucial elements are contained in a constituent bearing focus—be it contrastive, exhaustive, or scalar focus. Once it is assumed that the focused elements undergo covert movement, such cases are brought under the purview of the GCR at LF and cease to be problems. I further examine the nature of the focalized constituents and speculate on the potential role of a covert exhaustification operator in grammar.

The stroke number effect in visual word recognition among CSL learners

Nan Jiang

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The process of visual word recognition can be analytic or holistic. They differ in a) whether the processing units are lexical or sublexical or b) whether component units are processed serially or in parallel. Analytic word recognition can be assessed through the stroke number effect. It refers to a longer processing time associated with Chinese characters with more strokes. Results of two studies demonstrated that learners of Chinese as a second language are more likely than native speakers to adopt an analytical word recognition strategy. The theoretical and pedagogical significance of the findings is discussed.

Parsing and interpretation: a case study of Mandarin wh-in-situ construction

Ming Xiang

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A great amount of sentence processing work has focused on revealing how the parser incrementally integrates each incoming word into the current linguistic representation. It is often explicitly or implicitly assumed that the representation preferred by the parser would determine the ultimate interpretation of the sentence. The current study investigates whether the interpretive bias in sentence comprehension necessarily tracks the parsing bias. Our case study is concerned with the locality bias in non-local dependencies, specifically, the Mandarin wh-in-situ scope dependencies. Our findings suggest a misalignment between the local parsing decisions and the global interpretative decisions. In particular, for Mandarin wh-in-situ constructions that involve scope ambiguity, there is a locality bias in parsing, but there is an anti-locality bias in interpretation. We propose a bayesian pragmatic inference model to account for these findings. Under this proposal, the seeming conflict between parsing and interpretation will ultimately disappear because in the proposed model parsing preferences will be naturally embedded under the pragmatic reasoning process to derive the ultimate interpretation. The current study therefore makes novel contributions, both empirically and theoretically, to address questions about the relationship between parsing and interpretation.

Toward modeling-based linguistic research

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Almost anywhere we look in the field of linguistics, there are plenty of research efforts and plenty of theories, but little consensus. The lack of consensus is often even at the most basic levels. This situation has become a major obstacle to healthy advancement of the field. One way to address this problem, as will be argued, is to translate theories into computational models that are capable of processing and generating raw speech data, i.e., surface linguistic forms. In such modelling-based research, the strength of a theory is assessed in terms of not only its ability to generate complex analyses and make elegant arguments, but also how well it can, through its derived model(s), handle and generate raw speech data. Theories that cannot handle raw data should no longer be considered viable, and those that can, can be compared to each other both analytically and quantitatively. Examples presented in support of this proposal will mostly be drawn from phonetic research. But the principle illustrated should also be applicable to other areas of linguistics.

Invited speakers

中国英语学习者语调习得的启示

What can be Learned From the Acquisition of English Intonation by Chinese Students

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汉语是一种声调语言，母语为声调语言的中国学生在英语语调习得过程中或多或少体现了汉语语调对其英语语调习得的影响，同时也给我们的汉语语调研究带来了许多重要信息。中国学生为什么英语单词说得好、说得准但语调为什么说不好？从以往的中国英语学习者语调习得的表现上看，汉语是否真的存在像英语那样的语调模式？声调与语调构成什么样的关系？汉语是否有某种像英语那样独立完整的语调模式体系？

这里首先需要指出的是，何为语调？我们知道，语调有语言学的功能，也有非语言学的语用和社会功能。这里所说的语调是语言学意义上的，语言学意义以外的语调不在本文的讨论范围之列。当然，二者的区别并不是那么明显，但有一点很清楚，语言学意义上的语调一定是具有离散性和结构性的。由语调的AM理论（Pierrehumbert 1980, Ladd 1996/2008等）可以推知几个语调结构的构成成分，那么中国学生在英语语调学习过程中是不是遵循这样一种语调模式去习得英语语调的呢？

本文将从中国学生实际的英语语调习得表现出发，分析和研究中国学生在英语语调习得过程中所欠缺的英语语调结构成分，由此分析和推断相应汉语语调中所具有的成分情况，指出汉语语调具体在哪些方面有别于英语语调模式。

从激进不充分赋值看汉语底层元音音位

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关于汉语有多少元音一直有很多争论。传统汉语研究不主张研究汉语元音音段，而强调汉语韵母，把一个韵母看成不可分割的整体。随着普通语言学理论在汉语研究领域的深入，越来越多的汉语研究者开始关注汉语音段库的结构。由于汉语音段底层与表层差异较大，确定汉语元音音位变得十分复杂。关于汉语有多少元音，众说纷纭。一般教科书说汉语有 10 个元音或 9 个元音，有人说 8 个，有人说 7 个，有的说 6 个，更多人说底层音位只有 5 个，也有人说汉语底层只有 4 个元音音位。一般而言，关于汉语元音音位中的高元音和低元音争议不是很大，主要焦点是有哪几个中元音是底层音位。本文根据生成音系学的激进不充分赋值理论，解读汉语底层中元音音位。

人类语言音系底层结构是看不见听不到的，底层结构通过表层结构的推导而产生。汉语表层有 14 个元音音段，分布如 (1)：

- (1)
- 1) [i]: [ti] ‘低’

2) [ɿ]: [tsɿ] ‘资’

3) [ʅ]: [tʂʅ] ‘之’

4) [y]: [tɕy] ‘句’

5) [u]: [tu] ‘都’

6) [ɛ]: [tiɛn] ‘店’

7) [ɤ]: [tɤ] ‘得’

8) [o]: [tuo] ‘多’

9) [e]: [lei] ‘勒’

10) [ə]: [ə] ‘儿’

11) [ə]: [tə̃] ‘灯’

12) [a]: [ta] ‘搭’

13) [æ]: [tæn] ‘单’

14) [ɒ]: [tɒŋ] ‘东’

一般认为汉语高元音底层音位有三个 (i y u)，表层的两个舌尖音 (ɿ ʅ) 是 /i/ 的音位变体；低元音底层只有 /a/ 一个元音音位，表层 [æ] 和 [ɒ] 是 /a/ 的音位变体。汉语表层中元音有 6 个：[e o ə ɤ ɛ ɶ]。但其中有多少，有哪些是底层音位？黄伯荣、廖序东 (1981) 和林祥楣 (1991) 说有 4 个 (e o ə ɶ)，李兆同、徐思益 (1981) 设 3 个 (e ə o)，周同春 (1982) 设 2 个 (E ə)，王理嘉 (1991) 认为是 /ɤ/ 和 /ə/，郑锦全 (1973)、薛凤生 (1986)、王洪君 (1999) 认为应该只有一个，但不好说是哪个。Wu (1994) 认为汉语底层是一个不充分赋值的中元音 ([-high, -low])，没有语音形式。汉语表层 6 个中元音的特征赋值如 (2)：

(2)

| | ə | ɤ | o | e | ɛ | ɶ |
|-------|---|---|---|---|---|---|
| [后位性] | + | + | + | — | — | + |
| [圆唇性] | — | — | + | — | — | — |
| [紧张性] | — | + | + | + | — | — |

| | | | | | | |
|-------|---|---|---|---|---|---|
| [卷舌性] | — | — | — | — | — | + |
|-------|---|---|---|---|---|---|

激进不充分赋值理论（Trask 1996）认为，在每个音系位置中，每个特征的其中一个值或另一个值是无标记

值，从而这个无标记值在底层就不赋值；因此，所有底层

特征赋值是有标记特征值。根据音系标记性理论（Chomsky & Halle 1968），越普遍性高的结构比普遍性低的标记性弱，简单结构比复杂结构标记性弱。因此，上述 6 个元音的无标记特征值和激进不充分赋值可分别表示如（3）和（4）：

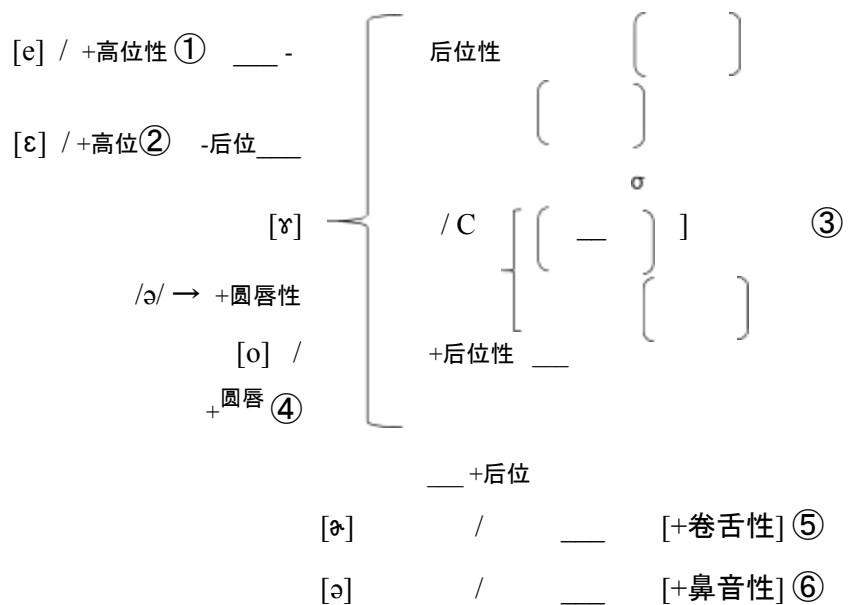
| 无标记特征值 | | | | | | | |
|--------|---|---|---|---|---|---|----|
| [后位性] | + | | | | | | |
| [圆唇性] | — | | | | | | |
| [紧张性] | — | | | | | | |
| [卷舌性] | — | | | | | | |
| | | ə | ɤ | o | e | ɛ | ə̃ |
| [后位性] | | | | | — | — | |
| [圆唇性] | | | | + | | | |
| [紧张性] | | | + | | + | | |
| [卷舌性] | | | | | | | + |

（3） （4） 汉语 6 个中元音的激进不充分赋值

根据表（4），央元音[ə]是最无标记的，因此，本文认为汉语底层中元音应该是最无标记的央元音/ə/。底层元音/ə/由于受到前后不同语音环境的影响产生了同化，在表层表现为[e o ə ɤ ɤ̃ ɛ]6 个不同音段。其中，

[e o ɤ ɤ̃ ɛ]都是音位/ə/的音位变体。其变化的音系规则可表示如（5）：

（5） /ə/的音变规则



规则 (5) 说明：底层央元音 /ɜ/ 在表层会发生如下变化：

- 1) 后跟前高元音时变为[e], 如[ei];
- 2) 跟在前高元音后会变为[ɛ], 如[iɛ]、[yɛ];
- 3) 在声母后单独出现时会变为[ɤ], 如[tɤ]、[kɤ];
- 4) 在圆唇后元音前或后会变为[o], 如[uo]、[ou];
- 5) 后跟卷舌音时会融合成[ə], 如'er[ə]; 6) 后跟鼻音时保留底层形式[ə]。

规则 (5) 不仅说明了底层央元音 /ə/ 上述 6 种变化的音系环境和规则, 也充分展现了变化的音系理据。

综上所述，现代汉语表层有 14 个单元音，但底层只有 5 个元音音位，它们是 /i y u ə a/。

A historical-linguistic analysis of the origins of Sino-Khmer numerals

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Research on the linguistic relationship between Sinitic languages and the neighboring Austroasiatic languages has long been a subject of study used as a point of reference in research on Chinese historical linguistics. Such research includes Sagart (1994), which argues that morphological similarities between the Austronesian, Austroasiatic, and Sino-Tibetan language families potentially reflect an expansive Sino-Austic language family; and Norman and Mei (1976), which examines lexical similarities between Austroasiatic languages and Chinese. However, lacking in this research is sufficient examination of the specific relationship between Khmer and Chinese. While some lexical commonalities between Khmer and Chinese are addressed in Norman and Mei (1976), for these examples, Khmer was mostly cited secondarily to other Southeast Asian languages. Furthermore, the research focused on borrowing between Old Chinese and Proto-Mon-Khmer, in which the direction of borrowing was from Mon-Khmer to Chinese. In particular need of examination is disagreement on the origins of Khmer numerals, with Jacob (1965) identifying them as of Thai origin, whereas Wilmott (1967) argues that they were adopted from Cantonese. I argue that certain shared phonologically rare changes (eg. /g/ > /h/ in both the Thai and Khmer for 50) indicate that it is unlikely that Thai and Khmer independently adopted Sinitic numerals. Furthermore, the presence of certain patterns in Khmer numerals, such as the partial adoption of loaned words, which is not present in Thai numerals (as in the numbers 30 through 99. see 31 and 32 below), indicates that Khmer numerals are secondarily adopted from Sino-Thai numerals. Contrary to previous research, the ultimate origin of Khmer's numerals is neither Thai nor Cantonese. Rather, phonological evidence suggests an ultimate origin in some variety of Chinese close to Hokkien. Additionally, the presence of Sinitic origin [ɗap] in both Old and Modern Khmer reflects a two stage adoption of Chinese numerals in which some words may have been initially directly adopted from Chinese prior to a broader adoption of Chinese numerals through `Thai. Through the use of historical evidence via Willmott's framework of contact between Cambodia and China as well as phonological evidence via examinations of similarities between the numeric systems of Sinitic, Thai, and Khmer, I conclude that modern Khmer's numerals are a hybrid system of Sinitic-origin words that reflect a complex strata of selective borrowing through Thai as an intermediary.

| Old Khmer & Middle Khmer | Modern Khmer | Middle Chinese | Hokkien | Thai | Value |
|-----------------------------|-----------------|--------------------------|--|----------------------|-------|
| /tap/ [ɗap] ^M | [ɗap] | [dʒiɪp] | [sip ⁴] or [tsap ⁴]* | [sɪp] | 10 |
| | [saːm səp] | [səm dʒiɪp] | [sam ⁴⁴ sip ⁴] | [sǎːm sɪp] | 30 |
| | [saːm səp muəj] | [səm dʒiɪp ʔiɪt] | [sam ⁴⁴ sip ⁴ it ³²] | [sǎːm sɪp ʔèt] | 31 |
| | [saːm səp piː] | [səm dʒiɪp ŋiɪH] | [sam ⁴⁴ sip ⁴ ji ²²] | [sǎːm sɪp sǒː ːŋ] | 32 |
| /plon/ | [sae səp] | [siɪ ^H dʒiɪp] | [si ²¹ tsap ⁴]* | [siː sɪp] | 40 |
| | [haː səp] | [ŋuo ^X dʒiɪp] | [gɔ ²² tsap ⁴]* | [hâː sɪp] | 50 |

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Conceptual effects of verbal reduplication in Mandarin Chinese

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Full or partial reduplication of words has long been known to induce non-truth-conditional effects on how people conceptualize a referent (e.g., Ghomeshi et al., 2004; Inkelas and Zoll, 2005), but the conditions and mechanisms of this effect are in some cases not very well understood. In this paper, we explore how verbal reduplication affects the way Mandarin speakers conceptualize events. Reduplication is frequent in Chinese, and has traditionally been analyzed as inducing a diminishing, ‘fast’ meaning: According to Melloni and Basciano (2018) and Arcodia et al. (2015), *walk-walk around the pond* would denote a faster and shorter event than *walk around the pond*. However, the meaning of reduplication may also vary across Chinese dialects (Fu and Hu, 2012; Arcodia et al., 2014), and potentially, interpretation is influenced by the emotive content of the verb (Arcodia et al., 2015). This last factor is connected to semantic specificity – frequent, basic-level words may pattern differently from expressions denoting a more complex semantic content (Rice and Bode, 1993). This work investigates the empirical validity of these claims, and proposes tentative routes towards explanations of the data pattern: 1) Dialectal differences, 2) emotive content of the events themselves, and 3) semantic specificity.

Methods. 115 Chinese native speakers, 69 of whom knew a dialect other than Modern Standard Mandarin (Mandarin: 42, Yue: 21, Wu: 15), performed a forced choice task to indicate whether an event described with a simple verb phrase or with the verb’s reduplicated form took longer. We created 37 stimuli pairs (see Table below). Those pairs were split into three different conditions to test for the effect of emotivity: Positively rated events (n = 16), their negatively rated counterparts, and neutral events (according to post-hoc ratings, as well as Gruhn’s 2016 EMOTE database). For now, we operationalized semantic specificity through frequency (Sharoff, 2006; McEnery and Xiao, 2004), since more general meanings result in higher frequency counts (Rice and Bode, 1993; Pinker, 1989).

| Emotivity | Unreduplicated | Reduplicated | Translation |
|-----------|------------------------|-----------------------------|----------------------|
| Positive | 听音乐 <i>ting yinyue</i> | 听听音乐 <i>tingting yinyue</i> | ‘listen to music’ |
| Negative | 听新闻 <i>ting xinwen</i> | 听听新闻 <i>tingting xinwen</i> | ‘listen to the news’ |

Results. Our DV was the proportion of reduplication chosen for longer events. Contrary to what would be predicted based on Melloni and Basciano (2018) and Arcodia et al. (2015), 24% of the time participants judged the reduplicated answer choice as having a longer duration than its unreduplicated counterpart. Initial

analysis suggests dialectal differences (significant effect of emotivity in Yue speakers, $p < 0.04$). Finally, log frequency only had a marginally significant effect on reduplication choice ($p < 0.08$). No other effects were significant.

Discussion. The results of these preliminary experiments do not support Melloni and Basciano's (2018) claim that the reduplicated form always has diminishing semantics. The results point to a possible effect of verb semantics and dialect on duration construal, both of which we will explore in future work. We will also explore in depth the relationship between boundedness and verbal reduplication, and how it affects event construal in Chinese reduplication patterns (Paris, 2011).

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汉语个体量词认知功能的研究

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量词是汉语特有的一种词类。量词的研究已有百余年的历史。其中，汉语语言学的研究确定了量词的定义、分类和演化等问题。但在量词从静态到动态的研究中，尚存在不少有争议的问题。例如，量词的“个”化问题，量词的合并问题等。这些问题都牵涉到量词的功能。汉语言学认为，量词具有分类和强化形象两大功能，但却无法解决上述争议。认知心理学的发展给汉语量词研究提供了新的视角。量词不但具有认知基础，还具有认知功能，即能影响人们对与之组合的名词的认知。

本研究从认知心理学角度设计三个实验来研究量词的认知功能。

实验 1 为纸笔实验，同一名词与两个形象程度不同的量词搭配，让两组不同视觉表象清晰度的被试对名词特点做出判断。结果表明，量词形象性影响人对名词的认知加工，高视觉表象清晰度的人从量词形象性中获益更多。

实验 2 也是纸笔实验，同一个量词与两个具有尊卑贵贱的不同意义的名词组合，

让被试选出哪个名词前的量词更可以用“个”来替代。结果表明，人们不但用量词来标记名词，同时通过量词来强调中心名词的重要性，即反应名词的价值。量词具有表敬性和表贬性。

实验 3 采用启动实验范式和命名任务，观察定配性高、中、低三类量词在无启动条件、SOA=100ms、SOA=200ms 时，被试命名名词的反应时。结果发现，定配性高的量词对名词的启动发生最快，即量词对名词有预测作用和反制约作用。

关键词：量词，量词形象性，量词“个”化，量词定配性

试论汉语话题结构与回指的互动演变

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话题结构与回指的关系历来受学者关注，一般把述题中存在与话题同指的代名词的结构称为左置结构，把述题中存在与话题同指的空位（或曰空代词）的结构称为话题化结构。两种结构是论元同指型结构，是最基本的话题结构类型。

先秦汉语存在多种话题结构。这些话题结构的早期形式强制要求述题中存在与话题同指的回指词，到汉代才出现省略回指词的情况。例如：

- (1) 受事结构：宾语位置上的回指词消失夏礼，吾能言之。（论语）
群盗，郡守尉方逐捕Ø。（史记）
- (2) 判断结构：主语位置上的回指词虚化富与贵，是人之所欲也。（论语）
刘子政、子骏、伯玉三人，Ø俱是通人。（新论）
- (3) 极比结构：旁格位置上的回指词消失其心曰是何足与言仁义也云尔，则不敬莫大乎是。（孟子）此皆阿主惑上，不忠莫大Ø。（潜夫论）

还有些话题结构较早出现回指词有无的交替，但其原型结构仍是存有回指词的形式，如譬喻结构和领属结构（例见正文）。

回指词消失使话题结构紧缩并发生不同程度的句法化（syntacticization）。汉语一些特殊句式的产生与此有关，如受事主语句、系词判断句、主谓谓语句、领主属宾句等。论文分个案讨论了不同话题结构的演变结果和句法化程度。

话题结构与回指的互动演变，其语用动因在于话题相关性。话题相关性的增强促使结构从左置型向话题化型演变。论文根据前人研究和古汉语文献调查，指出三种句法结构的容许度和话题相关性的关系，如表：

| | 非话题 | 非严格相关 | 严格相关 |
|-------|-----|-------|------|
| 主谓句 | + | + | + |
| 左置结构 | — | + | + |
| 话题化结构 | — | — | + |

话题相关性有助于统一解释汉语话题结构的演变。不同话题结构演变为话题化结构时都展现出话题相关性的增强：受事结构中回指词消失依赖于评注性成分“不、难、可、尽、益”等；判断结构发生从指别到说明的语义变化；极比结构发生从事实比较到属性评判的语义变化；譬喻结构中的后续阐述从描写喻体转移到描写本体的变化。

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An acoustic and articulatory investigation of [ou] in Taiwan Mandarin vs. Beijing Mandarin

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Much research that investigates how segmental features are realized differently across dialects of Mandarin has focused on consonants (e.g., the alveolar-retroflex contrast, as in Chang & Shih, 2015). The current study examines whether the realizations of the diphthong [ou] vary as a function of regional accents—specifically, between Taiwan Mandarin and Beijing Mandarin. Given that phonetic differences between these two variations of Mandarin have often been attributed to the influence of Southern Min on Taiwan Mandarin (e.g., Kubler, 1985), [ou] presents an interesting case, as the diphthong [ou] is absent in Taiwan Southern Min (the closest vowel Taiwan Southern Min has to [ou] is [o]). If the transfer effect is robust, then a monothong [o] or a less diphthongized [ou] would be expected in Taiwan Mandarin. To test this, we had 9 Beijing and 9 Taiwan Mandarin speakers produce the word 歐 ([ou] carrying Tone 1), along with non-target testing materials, 6 times in isolation and in randomized order. The audio and the video lip imaging were recorded and synchronized. Two measures that characterize the temporal organization of the two elements in [ou] were employed: diphthong transition onset (characterized by a decrease in the F1-F2 separation by 20 Hz over 20 ms, in light of Tasko & Greilick, 2010) and the onset of maximal protrusion for [u] (defined as the point when the upper lip is maximally displaced from the onset of [o]). The results show that the onset of diphthong transition in Taiwan Mandarin speakers' [ou] productions occurred significantly later than that in Beijing Mandarin speakers'. In addition, the onset of maximal protrusion for [u] in Taiwan Mandarin speakers' [ou] also occurred significantly later than their Beijing Mandarin counterparts. Together, [ou] was concluded to have distinct realizations in Taiwan Mandarin vs. Beijing Mandarin with regards to the temporal organization of the two elements of the diphthong. Whether this distinction in production conveys social-indexical information that can be used in dialect perception requires further perceptual investigations.

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Estimating cue strengths in L1 Chinese input and output: A Competition Model approach to corpus data

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Mandarin Chinese is a topic-drop language known for its sparse morphology and its flexible word order. Thus, the input Chinese children receive with respect to verb-argument structure seems indeterminate, unlike languages with rigid word order like English or languages with rich verbal inflection like Italian.

The present study uses corpus data to examine the information that helps Chinese children learn transitive verbs in their L1, namely, what kind of information is available in child-directed speech (input) and how they use that same information in their own production (output). We focus on the following “cues” typically used to encode transitive events in Chinese: word order (WO, canonically SVO), animacy contrast (AC, animate nouns are typically subjects and inanimate nouns typically objects), the object marker *ba* (optionally marks the object in non-canonical SOV sentences), and the passive marker *bei* (also signals non-canonical word order).

We adopted the methodology reported in Kempe & MacWhinney (1998) and Tanaka & Shirai (2014), which was developed within the framework of the Competition Model (Bates & MacWhinney 1989). We estimated cue availability (how often the cue is present), reliability (how often the cue leads to the correct interpretation), and validity (the product of availability and reliability, i.e. the primary predictor of cue strength) to evaluate the relative importance of these cues. For example, if both nouns are animate, animacy information itself is not useful to establish a transitive relation, and thus the AC cue is unavailable. If one noun is animate and one inanimate, the contrast is potentially useful and therefore the cue is available; however, the cue is reliable only with an animate subject and an inanimate object. The AC cue is unreliable in the reverse pattern, as the reliance on animacy will lead to an incorrect interpretation. We also looked at coalition (cues working in combination) and competition (cues working against each other). Previously, Li et al. (1993) had suggested the hierarchy *bei*>AC>WO>*ba* for adult native speakers.

So far, 1,221 child utterances and 2,298 adult utterances from the Taiwan Corpus of Child Mandarin (Cheung & Chang 2011) in CHILDES (MacWhinney 2000) have been analyzed. Preliminary results suggest that AC had the highest validity (adults: 76.36%, children: 74.61%), followed by WO (adults: 49.41%, children: 41.11%). Speakers also frequently used these two cues in combination, but

AC alone proved always more reliable than WO alone. *Ba* had low availability (adults: 4.09%, children: 2.70%) but high reliability (adults: 100%, children: 87.88%). Similarly, *bei* was rarely available (adults:

1.35%, children: 0.90%), despite the high reliability (adults: 100%, children: 100%).

We suggest the following hierarchy based on our results: AC>WO>*ba>bei*; that is, animacy is the most important cue in expressing transitive events in Chinese-speaking children's input and output. Our study is the first to draw on naturalistic corpus data to evaluate cue strengths in Chinese.

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The Fate of Round Vowels in Cantonese Varieties of the Pearl River Delta

—with a Focus on the Doumen Dialect

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In Standard Cantonese, there are six round vowel phonemes: /u/, /o/, /ɔ/, /ɵ/, /y/, and /œ/. However, not all of these round vowels are retained in its dialects in the Pearl River Delta surrounding Guangzhou, the capital of Guangdong Province, China. The dialects spoken in this area also vary in the ways that they realize the round vowels of standard Cantonese (Zhan, 2004; Zhan & Zhang, 1987). For example, while the Huashan dialect maintains the round vowel /y/ in all phonological contexts, it has the realizations of [ɐ] or [o] for standard Cantonese /ɵ/ depending on the context; the Taishan dialect replaces /y/ with [i], [u], or [uɔ] and /ɵ/ with [u]. This study first seeks to describe the different realizations of the round vowels of standard Cantonese in 27 different varieties spoken in the Pearl River Delta, with the aim of adding to our knowledge of Cantonese dialectology. We then specifically consider the Doumen dialect and offer an analysis of round vowel realization within the framework of Optimality Theory.

In the Doumen dialect, all the front round vowels of standard Cantonese are categorically avoided. While the high front round vowel /y/ is typically realized as [i] in Doumen (e.g. /tyn/-[tin] “短” meaning *short*), the mid front vowel /œ/ typically undergoes breaking (diphthongization), being realized as [iɐ] or [iɔ] as in the dialectal form [hiɐ] (“靴”) *boot* and [tsiɔk] (“雀”) *bird* where the difference is determined by the presence of a following velar consonant. Concerning back round vowels, while standard /o/ and /u/ are often retained in the Doumen dialect, the mid back lax vowel /ɔ/ is only retained before velars; otherwise it undergoes breaking as in [tuɐ] (“多”) *much* for standard /tɔ/.

With respect to the optimality-theoretic analysis of the Pearl River Delta varieties, focusing on Doumen, we reference constraints such as the high-ranked (1) *[round][-back]: a vowel should not be both non-back and round; (2) RV-velar: A round back mid lax vowel must be followed by a velar consonant; and (3) Ident[±back]: if two vowel sounds are in correspondence, then they should have the same ±value for the feature [back]. The faithfulness constraints that strive to preserve the features [+high], [+low], and [+round] and avoid Breaking (i.e. realizing a single vowel in the input as more than one in the output) are ranked relatively low in the Doumen variety. The variation in the rankings of these constraints gives rise to the difference in the realization of round vowels across the Pearl River dialects. As one example, standard Cantonese high front /y/ is realized as [u] in other Pearl River varieties but as [i] in Doumen. This difference can be analyzed with a high-ranked *[round][-back] constraint but with variant rankings of lower-ranked constraints depending on the specific dialect resulting in the different realizations.

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Two Effects of the Utterance-final Particle *hao-bu-hao* in Mandarin Chinese

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Phenomenon and goal The utterance-final particle *hao-bu-hao* 'good-not-good' in Mandarin Chinese has two effects: **request** and **emphasizing the mutually known fact**. The preceding utterance (anchor) decides which effect applies: if the anchor is an imperative expressing a directive or an exhortation, *hao-bu-hao* adds an effect of request often together with a second effect of politeness; if the anchor is a declarative assertion, *hao-bu-hao* achieves the effect of emphasizing the mutually known fact. I am to provide an account of two effects with the focus on their commonalities and dissimilarities, explaining why one particle can derive two effects.

(1) anjing yi-dian, **hao-bu-hao**? (2) ni bang le wo , **hao-bu-hao**? quiet a-bit good-not-good you help ASP me good-not-good

Be quiet, OK?' (**Anchor**: directive) 'You did help me, OK?' (**Anchor**: declarative assertions)

Previous studies Peng and Fu (2008) argue that *hao-bu-hao* is grammaticalized from the predicate to the sentence periphery, thus expressing the request attitude. This account is empirically problematic in neglecting the effect of emphasizing and theoretically weak in lacking a synchronic account. Yu and Yao (2009) adopt Face-saving theory and propose that adding *hao-bu-hao* is a politeness strategy to save the hearer's face. However, the representation declaration effect is not face-saving, but face-threatening in indicating the hearer's inability to notice the fact.

Proposal The attachment of *hao-bu-hao* generates a question (commonalities), and different effects are derived from the interactions between anchor and question. The interactions generate two types of noncanonical questions: inclination questions and rhetorical questions in the sense of Dayal (2016) (dissimilarities). **Commonalities** Two types of utterances are both questions. They can pass the test for questions, which requires a direct answer as a felicitous response.

(3) **A**: anjing yi-dian, hao-bu-hao? **B**: hao-a (4) **A**: ni bang le wo ,hao-bu-hao? **B**: hao-ba.

Dissimilarities [*imperatives+hao-bu-hao*] is an inclination question expressing a complex indirect speech act (ISA), **request-question**.

Superficially, this *hao-bu-hao* sentence asks the hearer whether it is good to do something, but actually expresses a request, thus encoding the two speech acts (request and question) at the same time. This argument can be evidenced by the acceptability of inserting *qing* 'please' (for request) and a

positive response *hao-a* 'OK!' (for question). Two speech acts in one utterance are analyzed as a particular type *dot* that's formed from two incompatible types (Asher and Lascarides 2001). When this dual communicative role is conventionalized, an extended notion of grammar assigns the ISA a complex semantic *dot* type.

(5) **Conventionalized Indirect Speech Acts** supposes that β is uttered in the context τ , of which α is part. Then is a conventionalized ISA (written *conv*-ISA(β)) iff:

$$C, \langle \tau, \alpha, \beta \rangle \vdash \text{dot}(\beta)$$

(Asher and Lascarides 2001:23) The *dot* type here is request-question, interpreted as the

request speech act is performed indirectly by performing the question speech act. The second effect of politeness follows from the question. The question asks for the hearer's involvement rather than directly moves the content to Common Ground, which shows politeness. [declarative assertions +hao-bu-hao] is identified as a rhetorical question. This utterance can pass "after-all" and "yet" tests of rhetorical questions. Different from an ordinary question for soliciting answers, an interrogative is interpreted as a rhetorical question if for each proposition p in the Common Ground, each participant is not only taken to believe p , but also to be aware that the other participants believe p as well (Caponigro and Sprouse 2007). Since the declarative assertion (p) is mutually known, the effect of emphasizing naturally emerges.

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An experimental investigation of Mandarin reflexive *ziji*

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This study investigates how Mandarin native speakers interpret Mandarin reflexive *ziji*. Unlike English, Mandarin has two types of reflexives, the complex reflexive *taziji* (‘himself/herself’) and the simplex reflexive *ziji* (‘self’). As shown in (1) and (2), *himself* and *taziji* both require local antecedents; in contrast, *ziji* allows both local and long-distance (LD) antecedents, as in (3). Huang and Liu’s [2] non-uniform approach argues that there are two kinds of *ziji*: a syntactic anaphor (which is locally bound) and a pragmatic logophor (which typically has the LD reading). The former is subject to syntactic constraints while the logophor is subject to pragmatic constraints at the syntax-discourse interface. While *ziji* has been much studied in theoretical syntax, exactly what licenses the interpretation of *ziji* remains unclear. This present study provides experimental judgement data to the interpretation of *ziji*.

(1) John_i thinks Peter_j trusts himself_{*i/j}.

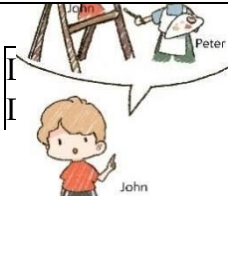

(2) John_i rènwéi Peter_j xiāngxìn tāzìjǐ_{*i/j}.
‘John thinks that Peter trusts himself.’

John think Peter trust himself

(3) John_i rènwéi Peter_j xiāngxìn zìjǐ_{i/j}.
John think Peter trust self

‘John thinks that Peter trusts himself/him.’

Participants completed a picture-based Truth Value Judgment Task (TVJT; adapted from [1], which in turn was adapted from [3]). Each TVJT item consists of a picture and a sentence; participants indicate whether the picture and sentence match by selecting either TRUE or FALSE. The TVJT crossed the factor ‘anaphor type’ (three levels: the pronoun *ta*, *ziji*, and *taziji*) with the factor ‘picture type’ (two levels: LD vs. local readings of the anaphor); see Table 1. Conditions on *ta* and *taziji* are the controls. The matrix verb is *shuō* ‘say’, so the first-mentioned name may be understood as the source antecedent of logophoric *ziji* [2]. The anaphors are the embedded objects. There are six tokens per condition. The sentences with *ziji* are expected to elicit a TRUE response with both LD and local readings, but the sentences with *taziji* – only with local reading and the sentence with *ta* – only with LD reading. Table 1. *A sample token in the TVJT*

| | | |
|---|--|---|
| |  |  |
| John shuō Peter huà-le tā . ‘John said Peter drew him’ | TRUE | FALSE |
| John shuō Peter huà-le zìjǐ . ‘John said Peter drew self’ | TRUE | TRUE |
| John shuō Peter huà-le tāzìjǐ . ‘John said Peter drew himself’ | FALSE | TRUE |

Data from 62 Mandarin speakers were analyzed using a mixed-effects model in R. The independent variables – anaphor and antecedent – are modeled as fixed effects; speakers are random effects. The dependent variable is the response (TRUE responses coded as 1; FALSE responses coded as 0). As predicted, speakers accept only LD readings of *ta* (98% TRUE) but not local readings (2% TRUE); they accept only local readings of *taziji* (99% TRUE) but not LD readings (11% TRUE). However, for *ziji*, they did not fully accept LD vs. local readings (57% vs. 67% TRUE). Considering dialectal differences, speakers of mainland Mandarin (n =22) accept more LD readings than speakers of Taiwan Mandarin (n=40) (70% vs. 51% TRUE), and accept fewer local readings than speakers of Taiwan Mandarin (53% vs. 75% TRUE). This study shows that even when contexts are established, neither pragmatic logophor nor syntactic anaphor reading of *ziji* is consistently available.

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Towards a Classifier Parameter

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Cheng and Sybesma (1998, 1999) refer “*ge*”, “*zhi*”, “*ben*” in (1) as count-classifiers for countable nouns, and “*ping*”, “*ba*”, and “*wan*” in (2) as mass-classifiers for uncountable nouns. Yi (2009, 2011) also distinguishes count nouns from mass nouns for Chinese. Scholars like Chierchia (1995) and Krifka (1995) claim that Chinese nouns are mass nouns, suggesting the obligatory presence of classifiers in all cases. The English counterparts in (3) and (4) shows that in English when the nouns are countable, the numeral “three” can apply directly, and the quantifiers “bottle”, “handful” and “bowl” are required when the nouns modified are not countable.

- | | |
|---|---|
| 1. a. san ge ren three CL person three persons | 2. a. san ping jiu three CL wine three bottles of wine |
| b. san zhi bi three CL pencil three pencils | b. san ba mi three CL rice three handfuls of rice |
| c. san ben shu three CL book three books | c. san wan tang three CL soup three bowls of soup |
| 3. a. three persons b. three pencils c. three books | 4. a. three bottles of wine b. three handfuls of rice c. three bowls of soup |

By investigating the Chinese classifiers and the related data in English and other languages, this paper proposes a classifier parameter along the lines of Principles and Parameter (Chomsky, 1981) and Generative Typology (Baker, 2015). That is, plurality for nouns must be marked by classifier, as in Chinese, Japanese, Korean; plurality for (countable) nouns must be marked by morphology, as in English, French, Spanish (Chen, 2018). The author argues that a parametric approach towards the phenomenon of classifiers captures similarities and variations across different typological languages. It also provides an account of L1 language acquisition by Chinese native children and L2 acquisition of Chinese by English-speaking adult learners.

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(In)definiteness in a language without articles: a study of the syntaxpragmatics interface in Mandarin Chinese

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For Chinese noun phrases, the complexity in the definite or indefinite interpretation and their position in sentence has been a controversial topic for a long time. The paper presents a detailed analysis of the interpretation of the noun phrases with different forms – yi(one) + classifier, Bare NPs and numeral NPs – in different positions in a sentence – the subject position and the object of *ba*. It is well known that the Chinese is a language which is claimed to have no functional equivalents of the definite and indefinite article in western languages, by which the concept of definiteness has been biased. But we speak of definite vs indefinite term operators when the orientational parameter only concerns the question whether or not the intended referent is presumed to be already available in addressee's pragmatic information [Dik, 1997, p.184]. In Mandarin Chinese, yi + classifier NP is the lexical form mainly used for indefinite referents, while bare NPs and numeral NPs by themselves are neutral in respect of the interpretation of definiteness. And it is said that there is a strong tendency in Mandarin that the subject of a sentence or the object of *ba* has a definite reference. However, this concept is quite vague and needs further specification. After our counting up corpus of spoken and written Chinese, literature, news and scientific style, we found out that the indefinite NPs can occur in the subject position and the *ba*-NP position in Chinese sentences. Indefinite NPs can take the subject role with or without an existential syntactic marker, we noticed three types of situations: a. it is necessary to have the existential syntactic marker *you* before the yi(one)+classifier NPs; b. the existential syntactic marker *you* is optional; c. it is not appropriate to have the *you* for some sentences. As for the indefinite *ba* NPs, they are actually indefinite reference NPs, which includes indefinite specific and, contrary to expectation, indefinite non-specific NPs and definite NPs.

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Verbal Classifiers, Numerals, & Telicity in Taiwan Mandarin: An Exo-Skeletal Analysis

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This study discusses the structure of verbal classifiers and numerals in Taiwan Mandarin as well as the roles they play in event structure. Sentence (1) is an example, in which the morpheme *dao* (“CL-knife”) is a verbal classifier. It has been claimed (e.g., Matthew & Leung 2004, Zhang 2017) that verbal classifiers divide an event into countable sub-events, and that the number of the sub-events is specified by a numeral. Using the Exo-Skeletal Model developed in Borer (2005), **I claim that the numeral ends up in SpecAsp_QP and determines the telic status of the sentence.**

(1) Ta (zai san miao nei) qie_i le (dangao) [Asp_QP liang [CLvP **dao** [VP t_i]]].
3rd (be-at three second inside) cut PFV (cake) two CL-KNIFE

“S/he cut (the cake) twice with a knife (in three seconds).”

Along the line of previous studies, I analyze Mandarin verbal classifiers as event dividers that break down an event into countable sub-events, thereby licensing the presence of a numeral. (Note: this study doesn’t discuss event classifiers like *ci*. See Zhang 2017 for the distinction.) Sentence (1) denotes an event that comprises sub-events of cutting, individuated by the classifier *dao*. The number of the sub-events is specified by the numeral *liang* (“two”). In formal terms, **I propose, when an event is divided by a verbal classifier, a verbal classifier phrase (CLvP) becomes available in the structure, and its empty head is assigned range by the verbal classifier in SpecCLvP. The CLvP then merges with a functional head called Asp_Q, which projects into Asp_QP with a numeral in its specifier position. I further propose the numeral assigns range to the empty head of Asp_QP, thereby giving rise to a telic reading of the whole event.** Crucially, this study differs from previous ones in that it highlights and formalizes the connection between the numeral and telicity in verbal classifier constructions. The present analysis uses the ExoSkeletal model developed in Borer (2005). It assumes a functional projection is projected from an empty head, which needs to be assigned range (semantic content) by certain elements. The projection responsible for telic interpretation is Asp_QP. I argue in verbal classifier constructions, the Asp_Q head is assigned range by the numeral, and that an internal argument is not needed for telicity.

I present three arguments that the numeral in a verbal classifier construction is responsible for telicity. **First**, sentence (2) does not have an internal argument but is telic, evidenced by the fact that it is compatible with an “in x time” phrase.

- (2) Ta (zai san miao nei) xiao_i [Asp_QP liang [CLvP sheng [VP t_i]]].
 3rd (be-at three second inside) laugh two CL-SOUND

“S/he laughed twice (in three seconds).”

Second, motion predicates have been argued to have a telic reading only if there is a preposition or verb marking the reaching of an endpoint (Chen et al., 2019). In (3), the verb *dao* (“arrive”) assigns range to the Asp_Q head and makes the event telic. Importantly, when a verbal classifier and numeral are added to the sentence, it becomes unacceptable for the single-event interpretation, i.e., the nail being hammered in three consecutive hits and ending up inside the cube as a result. This shows the numeral is competing with *dao* for Asp_Q. It is the competition between the two that results in the ungrammaticality of (3).

- (3) Mu-ding bei qiao (*san xia) dao mu-kuai li.
 wooden-nail BEI hammer (*three CL-TIME) arrive wooden-cube inside
 “The wooden nail was hammered (*thrice) into the wooden cube.”

Third, the sole argument of an unaccusative verb is commonly treated as the internal argument and thus linked to telicity. In (4), the definite subject originates in SpecAsp_QP and is responsible for assigning range to Asp_Q and yielding telicity. In (5), it competes with the numeral to assign range to Asp_Q, hence

unacceptable.

- (4) Hua-ping_i (zai san miao nei) po_j -le Vase (be-at [Asp_QP t_i [VP t_j]].
 three second inside) break-PFV
 “The vase broke (in three seconds).”
 (5) *Hua-ping_i (zai san miao nei) po_i -le [Asp_QP liang t_i [CLvP xia [VP t_j]].
 Vase (be-at three second inside) break-PFV two CL-TIME
 “The vase broke twice (in three seconds).”

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Production of Mandarin Rhotic Onset [ʀ] by Indonesian Learners of Mandarin

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The acquisition of Mandarin rhotic onset [ʀ] has been a difficulty for many second language learners, including Indonesia learners. The Indonesian consonant system has a trill [r] but lacks the Mandarin approximant [ʀ]. Studies show that there was a relatively high error rate of [ʀ] pronunciation as an onset by Indonesian learners (e.g. Deng, 2012; Li, 2013). However, few studies have investigated the error patterns of the production of Mandarin [ʀ] by Indonesian learners with objective acoustic analysis. The present study thus aimed to empirically examine the different acoustic realizations of Mandarin rhotic sound between L1 and L2 speakers to reveal the error types of rhotic sound [ʀ] produced by L2.

10 Indonesian-L2 Mandarin speakers (F=5, M; age=21.2 years) of intermediate Mandarin level (HSK3-4), and 6 L1 Mandarin speakers (F=3, M; age=24.5) participated in the study. 34 stimuli were included in the production task, which consists of all the possible rhymes and tones combined with the onset [ʀ]. Speakers were asked to produce each monosyllabic word once without repetition.

The recorded data were measured in two steps. First, we annotated the number of contacts (the tip of the tongue against the alveolar ridge following Hualde, 2005) in each rhotic segment according to the intensity lines and the spectrum. Previous studies found that the error types of Indonesian speakers are mainly trills and taps. Through the information of contact numbers, the manner of error pronunciations could be obtained. Secondly, we measured the F1, F2, and F3 at two time-points of the vowels after the rhotic onsets, 10 ms after the vowel onset and the mid-point of the vowels. Since formants of taps and trills were reported to be unreliable, therefore, we measured the formants of the vowels near the rhotic consonants. Different effects of rhotic sound on the vowels between L1 and L2 could be seen from the changes of the formant value.

Results showed that the production of [ʀ] by Indonesian speakers could be concluded as five types: tap [ɾ], trill [r], lateral [l], approximant [ʀ] and fricative [ʐ]. Among these types, approximant [ʀ] and fricative [ʐ] are continuants while tap [ɾ], trill [r], lateral [l] are non-continuants. The error rate of each type of non-continuants was 11.5%, 4.4%, and 0.6% respectively. For acoustic analysis, different types of vowels were divided into a single category (i.e. [ɤ] and [ə] are in the [e] category; Diphthongs here are eliminated). There was a similar pattern of Δ Formant (vowel midpoint minus 10ms after the vowel onset) in [a], [e], [u] and [o]. Both L1 and L2 had a lowering effect on F3 and F1 but a rising effect on F2. For [i] vowel, both L1 and L2 showed a rising effect on F3; in F1 and F2, L1 showed a slightly rising effect while L2 showed a lowering effect. Besides, across all the five vowels F2 of L2 was significantly lower than that of L1.

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The Moraic Structure of Mandarin Contractions

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In natural Mandarin conversations, two syllables are often contracted into a monosyllabic contraction, as in (1), and its rhyme duration can be longer than that of a lexical monosyllable. During contraction, the coda of the first syllable and the onset of the second syllable are usually lost, but the vowels of the two syllables combine to form *a considerably lengthened vowel* (Chung, 2006).

- (1) Uncontracted disyllabic word Monosyllabic contraction *xie xie* ‘Thanks’ [ɕiɛ53 ɕiɛ53] [ɕiɛː53] *gang gang* ‘just now’
[kɑŋ55 kɑŋ55] [kɑːŋ55]
tian tian ‘daily, every day’ [tʰjɛn55 tʰjɛn55] [tʰjɛː55]

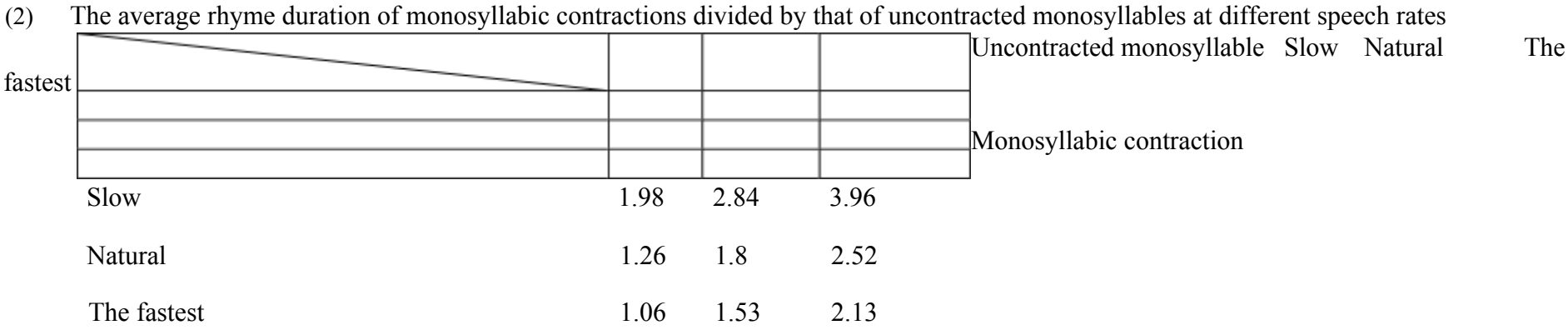
Studies of Mandarin contraction focused primarily on segmental loss or tone change (Cheng, 2004; Tseng, 2005; Chung 2006, etc.), yet, none has discussed the loss of moras in contraction. Given that rhyme durations reflect the moraic structures of syllables (Duanmu, 1993; Broselow, Chen, & Huffman, 1997; Wu & Kenstowicz, 2015), this study proposes two research questions:

- (a) Do monosyllabic contractions differ from monosyllabic lexical words in rhyme duration?
- (b) What does rhyme duration reveal about the moraic structure of monosyllabic contractions?

To elicit monosyllabic contractions and uncontracted monosyllabic words, we invited four native speakers of Taiwan Mandarin to read a carrier sentence with 20 target words at three different speech rates: slow, natural, the fastest. All target words were disyllabic, comprising identical syllables. The experiment collected most *uncontracted monosyllables* at the slow speech rate and most *monosyllabic contractions* at the fastest speech rate. The rhyme durations of these two types of monosyllables were measured via *Praat 6.0.53* and compared to investigate the loss of moras during contraction. The findings of this study are captured in (2).

In answer to the first question, the average rhyme duration of monosyllabic contractions is longer than that of uncontracted monosyllables at all speech rates (all ratios > 1). Moreover, it can be inferred that the rhyme duration of monosyllabic contractions is approximately 1.5 times longer than

that of uncontracted monosyllables in natural speech. This is concluded by adopting the rhyme duration of monosyllabic contraction collected *at the fastest speech rate* and that of uncontracted monosyllables collected *at the natural speech rate* for the following reasons. The most natural context for contractions to occur is the fastest speech rate, which is also the context where we elicited the most tokens of monosyllabic contraction. Also, the duration of uncontracted monosyllables is indubitably the most natural at the natural speech rate. By comparing these durations, we can get a realistic picture of how many moras are lost after contraction in natural speech.



Since rhyme duration is proportional to the number of moras (Broselow et al., 1997) and that a full Mandarin syllable contains 2 moras (Duanmu 1993), a monosyllabic contraction, which is 1.5 times longer than a full syllable, contains three moras ($2 \times 1.5 = 3$). Namely, in contracting two syllables, one mora is lost. This may serve as a reference for theoretical templates of Chinese contractions (e.g. Chung’s (1997) *Edge-in Model* or Hsu’s (2003) *Sonority Model*).

An experimental investigation of the reconstructed effects of the head quantifier phrase in Chinese relative clauses

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Aoun and Li (2003) argued that evidence for head derivation in Chinese relative clauses (RCs) is conflicting. When an anaphor *ziji* ‘self’ or a bound pronoun *ta* ‘him/her’ occurs within the head, it can be bound by the RC subject. The possible co-indexation between the anaphor/bound pronoun and the RC subject implies that the head can reconstruct into the RC to be bound by the RC subject at Logical Form (LF). Under the assumption that reconstruction occurs only when syntactic movement is involved (Chomsky, 1993), the head must be raised from within the RC in Chinese. However, Aoun and Li observed that such reconstruction is not always available when it comes to scope interaction.

(1) wo hui zhengli [[mei-ge-ren dou hui kan t de] san-ben shu]

I will arrange every-CL-person all will read DE three-CL book ‘I will put the three books that every person will read in order.’ (Aoun & Li, 2003)

Aoun and Li claimed that when *dou* ‘all’ occurs inside the RC, as in (1), the head quantifier phrase (QP) *sanben shu* ‘three books’ cannot reconstruct into the RC and the RC subject QP *meige ren* ‘every person’ cannot have a scope over it, which means the three books cannot be different ones read by every person respectively. The only available interpretation is ‘head QP > RC subject QP’ (the same three books read by every person). By contrast, when (1) does not have *dou*, the reconstruction of the head QP can occur and the RC subject QP can have a scope over it. Based on this contrast, Aoun and Li argued that reconstruction of head QPs is in fact not available in Chinese RCs. When *dou* does not occur inside the RC, the RC subject QP can be raised out of the RC to have a scope over the head QP. In contrast, when *dou* occurs, such raising is prohibited by the domain requirement between *dou* and the RC subject QP. However, there is a question why the head QP cannot reconstruct into the RC while the head NP with *ziji* or *ta* can.

This study investigates whether the claimed contrast regarding the presence of *dou* really exists, i.e., whether the presence of *dou* affects the reconstruction of the head QP in Chinese RCs. A truth value judgment experiment (Crain & Thornton, 1998) involving sentence picture matching was created to address the following research question: is it the case that when a *dou* occurs inside the RC, the RC subject QP cannot have a scope over the head QP while it can when the *dou* disappears? In the experiment, there were 20 critical items, each of which had two conditions: Condition A (non-existence of *dou*) and B (existence of *dou*). Two lists were created, each of which included only one condition of each critical item. There were additional 40 fillers included in each list. A total of 24 native Chinese speakers participated in this experiment.

Since there are 10 items in each critical condition, based on the binominal distribution, if a participant accepted/rejected 8 items or more in one condition, she would be considered to have consistently accepted/rejected the items in that condition. The results showed that 8 participants (33.3%) consistently accepted both critical conditions, which indicates the RC subject QP can have a scope over the head QP even if there is a *dou* in the RC. There were also 8 participants (33.3%) who consistently rejected both critical conditions, which implies that they did not accept either condition. These participants might only get the surface scope interpretation, i.e., the head QP has a scope over the RC subject QP. There were only 4 participants (16.67%) who behaved like what Aoun and Li predicts: they consistently rejected items with *dou* but consistently accepted items without *dou*. To conclude, the experimental results suggest that the head QP can reconstruct into the RC and the RC subject QP can have a scope over it, regardless of whether there is a *dou* or not. However, such interpretation (RC subject QP > head QP) might be harder to get if a *dou* occurs, which needs further examination.

Assessing the reliability of informal judgment data in *The Syntax of Chinese*

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The judgments about sentences' well-formedness have long been used as the primary data source for syntacticians. The data collection process, however, is often informal, which reflects the intuition of only the linguist and occasionally feedback from colleagues and reviewers. In recent years, the reliability of data in the literature of generative syntax is increasingly subject to scrutiny (e.g. Gibson & Fedorenko, 2010; Gibson et al., 2013). The critics have largely targeted the introspective judgments on the basis of not following prevalent methodological protocols adopted in other fields, e.g. experimental psychology, and a lack of applying statistical techniques to the analyses. Although a number of experimental studies have replicated the vast majority of English judgments published in a textbook (Sprouse & Almeida, 2012) and in peer-reviewed journal articles (Sprouse et al., 2013), the status of non-English data has yet to be examined (c.f. Linzen & Oseki, 2018, for an attempt in Hebrew and Japanese).

In this work, we employed formal quantitative methods to evaluate the reliability of judgments in the widely used textbook, *The Syntax of Chinese* (Huang, Li, & Li, 2009, Cambridge University Press). In Experiment 1, we assessed all 471 testable data samples in the book based on the judgments from 148 native Mandarin Chinese speakers who rated sentences in a seven-point Likert scale. The results captured the overall difference between acceptable, questionable, and unacceptable sentences. Following previous studies, we focused on sentence pairs with an acceptable condition and an unacceptable counterpart. The majority of examples in the book were in this category as they demonstrated the most direct pairwise comparisons in terms of syntactic acceptability. Results suggest that 141 of 158 pair contrasts replicated, such that an originally reported acceptable sentence was rated significantly higher ($p < 0.05$) than its counterpart in the same contrast. We further explored the potentially problematic sentence pairs in Experiment 2, a target forced-choice task, by asking 86 participants to compare the two members within a contrast directly. The sentences predicted to be acceptable were much likely to be chosen as the preferred one with 12 more pair contrasts replicated.

The results taken together suggest an eminently successful replication of judgments in the book: out of the 471 data samples tested, only five sentence pairs which failed to replicate in both experiments require further investigation. To the best of our knowledge, this large-scale study represents the first attempt to replicate the judgments in a non-English syntax textbook. We implemented a practical experimental framework in the hope of bridging the gap between the informal data-collection in Chinese linguistic research and the protocols of experimental cognitive science. By covering sentence examples of a wide range of phenomena in Chinese syntax, this work provides informative judgments by naïve Chinese speakers and establishes a quantitative baseline for future research.

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An A-bar movement analysis of Mandarin ‘even’-focus constructions

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Using systematic syntactic diagnostics, this paper argues that Mandarin preverbal ‘even’-focus constructions involve A-bar movement (cf. A-movement in Shyu 1995, Ting 1995, Badan & Del Gabbo 2015) of object DPs from their base positions. An ‘even’-focus construction is illustrated in (1), where the internal argument of a transitive verb that is otherwise canonically postverbal (1a) occurs in a preverbal *lian...dou* construction (1b):

- (1) a. Zhangsan chi liulian. b. Zhangsan lian **liulian** dou chi.
Z. eat durian Z. even durian all eat
‘Zhangsan eats durians.’ ‘Zhangsan eats even durians.’

The A-bar properties of ‘even’-focused DPs like *liulian* ‘durian’ in (1b) are evident in the following diagnostics: a) the movement of ‘even’-focused DPs can cross a finite clause boundary (2); b) ‘even’-focused DPs show reconstruction effects of anaphoric binding (3) and do not bleed Condition C violations (4); c) they license parasitic gaps (5); d) they allow resumption in double object constructions (6).

- (2) a. Lisi juede [Zhangsan chi-guo liulian]. b. Lisi lian **liulian**_i dou juede [Zhangsan chi-guo *t*_i].
L. think Z. eat-EXP durian
‘Lisi thinks that Zhangsan ate durians.’

- (3) a. wo-men_i gei-le Lisi_j ta-ziji_{i/*i} de zhaopian.
1PL give-PERF L. 3SG-self DE photo
‘We_i gave Lisi_j pictures of himself_{i/*i}’

- b. wo-men_i lian [**ta-ziji**_{i/*i} **de** **zhaopian**]_k dou gei-le Lisi_j *t*_k
(4) a. *Zhangsan gei-le ta_i Lisi_i de zhaopian.

- Z. give-PERF 3SG L. DE photo
Intended ‘Zhangsan gave him_i Lisi_i’s pictures.’

- b. *Zhangsan lian [**Lisi**_i **de** **zhaopian**]_i dou gei-le ta_i *t*_j.
(5) a. *Lisi [zai jian-le zhihou] mei renchu aobama.

L. in see-PERF after NEG.PERF. recognize Obama
 Intended ‘Lisi didn’t recognize Obama_i after meeting (him_i).’

b. Lisi lian aobama_i dou [zai jian-le pg_i zhihou] mei renchu t_i.

(6) a. Lisi song-le Zhangsan yi-ben shu.
 L. give-PERF Z. one-CL book

‘Lisi gave Zhangsan a book.’

b. Lisi lian Zhangsan_i dou song-le (ta_i) yi-ben shu.

Meanwhile, Tsai’s (2015) base-generation and *pro* analysis cannot easily explain why *pro* can be verbal (7b), or why *pro* co-varies with the universal quantifier when the quantifier does not c-command *pro* in the surface structure (8b), whereas neither is problematic under an overt movement-based analysis.

(7) a. Zhangsan lian [vp hua shi kuai qian] dou bu yuanyi.
 Z. even spend ten yuan money all NEG.IMP. be willing to

‘Zhangsan is not willing to even spend ten yuan.’

b. [TP Zhangsan [ModP [PP lian [vp hua shi kuai qian]] [ModP pro₁ [Mod’ dou [NegP bu yuan yi t_i]]]]]

(8) a. Zhangsan lian mei-ge bangzhu-guo ta de ren dou taoyan. Z. even every-CL help-EXP 3SG DE people all hate

‘Zhangsan hates even every person who has helped him.’

b. [TP Zhangsan [ModP [PP lian [QP mei-ge bangzhu-guo ta de ren]] [ModP pro₁ [Mod’ dou [vp taoyan t_i]]]]] Furthermore, if the A-bar movement analysis is on the right track, the abovementioned A-bar properties are expected to be also attested in similar operations that affect the information structure across different Chinese dialects, e.g. bare object preposing (cf. Badan 2008). This is borne out in Shanghainese, a Chinese dialect that allows bare object preposing more productively than Mandarin (Liu 2001), e.g. both shortdistance (9b) and long-distance (9c) movements are allowed:

(9) a. ngo guode [xiowang qie-le ve]. b. ngo guode [xiowang ve_i qie-le t_i]. 1SG think X. eat-PERF rice c. ngo
 ve_i guode [xiowang qie-le t_i].

‘I think that Xiaowang ate rice.’

Elicited production of Chinese relative clauses: Data from L1-English learners of Chinese

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In language acquisition and processing, the preference for subject relative clauses (SRCs, e.g. *the girl who drinks coke*) over direct object relative clauses (ORCs, e.g. *the coke that the girl is drinking*) is well-attested in languages with postnominal relative clauses like English. The picture is less clear in Mandarin Chinese, where RCs are prenominal, followed by relativizer *de*. While some studies report an SRC advantage in Chinese (e.g., Hsu et al. 2009), others report an ORC advantage (e.g., Hsiao & Gibson 2003), including L2 processing studies (e.g., Cui, 2013). There are two possible explanations for the ORC advantage. First, in prenominal RCs, the distance between the gap and the head is shorter in ORCs than in SRCs, requiring less memory load (Hsiao & Gibson 2003). Second, Chinese ORCs, in terms of word order, are more similar to canonical SVO sentences than SRCs (Diessel 2007). Prior studies on Chinese RCs focus on comprehension, with an exception of the child language study by Hsu et al. (2009). Data from an elicited production task are important, as such a task would give participants an opportunity to build RCs ‘from scratch,’ providing a clear test of their knowledge of RCs (Kim & O’Grady 2016). The current study addresses this gap by investigating whether L1-English learners of Chinese show an SRC advantage in production.

Twenty-five learners of Chinese enrolled in 2nd-year ($n=10$) and 3rd-year ($n=15$) Chinese classes at a large Midwest university and ten native controls participated in an elicited production task, in which they were shown a panel of two pictures and asked to verbally describe the person or object indicated by the arrow. There were 20 items: ten each in two animacy conditions (animate agent and theme (AA) $n=10$), animate agent and inanimate theme (A-I) $n=10$), split between two RC types (SRC, ORC).

Our findings point toward a subject RC advantage in Chinese. First, both groups of speakers show a trend where more targeted RCs in the SRC condition than in the ORC condition (Figures 1, 2). Native speakers frequently produced passive RCs (e.g. *The doctor who is hit by the girl*) instead of ORCs, essentially converting ORCs into SRCs. Learners made more errors in ORC than in SRC production, mistakenly uttering an SRC in lieu of an ORC. The opposite pattern was much less frequent. Individual results also indicate that majority of learners performed better with SRCs than ORCs. All things considered, native speakers and L1-English learners of Chinese show an SRC advantage in production.

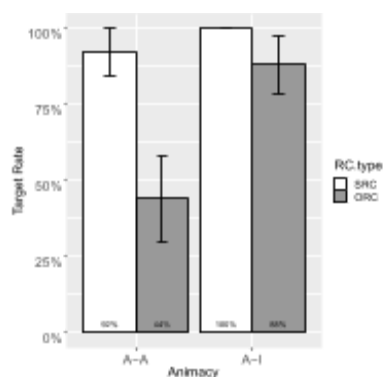


Figure 1. Native speakers' target rate

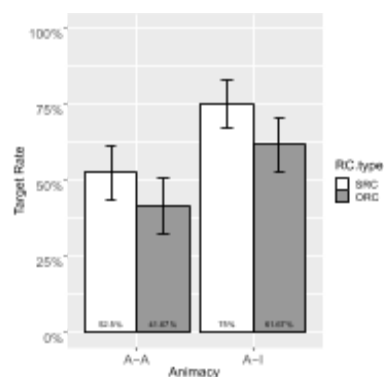


Figure 2. Learners' target rate

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抚顺话声调的协同发音与连读变调

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连读变调和协同发音都是声调相连时所产生的声学变化，前人关于声调的协同发音问题以及连读变调和协同发音之间的关系研究较少，如何结合声学语音学和音系学的证据来厘清两者之间的关系，是值得进行深入研究和讨论的。本文拟从东北官话抚顺话的声调研究入手，使用声学分析的方法，着眼于对 f_0 变化模式的客观分析，来进一步探索汉语方言连读变调与协同发音的关系。研究发现，虽然抚顺话的单字调调型与北京话非常相似，但其两字组连读变调模式与北京话有明显不同；抚顺话中的协同发音作用既遵循了前人归纳的跨语言的普遍共性，同时也保留了某些方言的特异性。另外从本文的结果来看，连读变调和协同发音之间也有着紧密的联系，连读变调很可能是声调间协同发音作用的固化结果，而固化后的音系层面的连读变调可能又会进一步发生语音层面的协同发音作用，进而导致声调产生更细微的差异。

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Language Transmission among Multilingual Chinese Immigrant Families in Northern Netherlands

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Maintaining heritage languages is of vital significance for immigrant families (Lanza & Li 2016; King & Fogle 2013). We present a study of Mandarin language and culture transmission among Chinese immigrant families in Groningen (The Netherlands). Previous research has shown that families' motivations for transmitting their heritage languages goes beyond necessity and opportunity, as they are often closely related to integrative and personal values (Zhu & Li 2016; Daussà 2013). Relatively little is known about European contexts. Against this backdrop, we set to figure out the factors influencing linguistic attitudes and language choices among immigrant families recruited from *Stichting Chinese School Groningen*, a Saturday heritage school. Data comes from semi-structured interviews with ten parents, combined with a brief targeted questionnaire. Results indicate, not surprisingly, that parents who themselves have high proficiency in Mandarin, have the highest success in transmitting their language to their children, and that relatively frequent trips to China also play a role. Personal values, integrative values (both regarding the immediate and the extended community), and instrumental values all have a balanced role in determining Chinese immigrant parents' choices. Remarkably, with general positive attitudes towards multilingualism in Dutch society (May 2013), Chinese immigrant families too hold positive attitudes towards the maintenance of their heritage language. Nevertheless, they report receiving negative feedback from the immediate community, including lack of support for Mandarin from local schools or institutions, and criticisms about their own ability to belong in Dutch society. On this line, parents manifest their wish that teachers in Dutch schools would attach more importance to their heritage languages, since at present they only lay emphasis on children's learning of Dutch (and English), and they also wish that their own multiculturalism (and not only that of their children) would be embraced with more respect and inclusion in the community. Likewise, parents are also critical of the Chinese school's traditional teaching methods and approaches, and wish teachers would adapt better to the sensitivities and practices their children are used to from their Dutch school experience.

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Rethinking the Sentence-Final Particle (SFP) system in Mandarin:

The Status of *le* (了)

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This paper argues (i) that the traditionally analyzed Class 1 Sentence Final particle (SFP1 hereafter) *le* (了) should not be treated equally with other Class 1 members *laizhe* (来着), *ne* (呢) and *eryi* (而已) in syntactic structure, (ii) that *le* is closer to VP than the other three members of Class 1, and (iii) that *le* should be treated as a separate class and the SFP system should have four classes instead of three.

Previous analysis First observed by Chao (1968) and later analyzed by Erlewine (2017), Mandarin SFPs can be categorized into three classes. SFP Class 1 c-commands VP and is ccommanded by T, Class 2 occupies the head of CP and functions as a C, and Class 3 is the sister of the whole CP and functions as the head of an Attitude Phrase.

Data and current analysis This system has two predictions, namely members of the same class should always be in complementary distribution and particles of different classes should always be compatible. Corpus data from the CCL corpus (Center for Chinese Linguistics, Peking University) reveals that the first prediction cannot hold with *le* being able to combine with *laizhe*, *ne* and *eryi* in the same sentence, undermining the SFP1 membership of *le*. There is 1 example with *le* combining with *laizhe*, 3747 examples with *le* combining with *ne*, and 51 examples with *le* combining with *eryi* in the corpus. Examples are shown in (1):

- (1) a. jintian jiahao *le laizhe?* b. zuo shenme qu *le ne?* today what date LE LAIZHE do what
 go LE NE ‘What date is it today?’ ‘What is someone going to do?’ c. xing *le eryi* wake up
 LE ERYI
 ‘Someone just does the action of waking up (there is not a big deal).’

Using the conjunction *ye* as a reference, the contrast between (2) and (3) clearly shows that *le* is closer to VP than *laizhe*, *ne* and *eryi* since *ye* can take scope over *le* as in (2) but not *laizhe*, *ne* and *eryi* as in (3).

- (2) a. wo chi fan *le ye* shuijiao *le*

I eat dish LE YE sleep LE

‘I have eaten dishes and also slept (this status is currently relevant).’

(3) a. *wo chi fan *laizhe/ne/eryi* ye shuijiao *laizhe/ne/eryi*

I eat dish LAIZHE/NE/ERYI YE sleep

LAIZHE/NE/ERYI

(Intended)‘I have eaten dishes and also have slept (this event happens in recent past).’/

(Intended)‘I have been eating dishes and also been sleeping.’/

(Intended)‘I have only eaten dishes and also only slept.’

This fact is confirmed by the grammaticality of the sentences in (4) where *laizhe*, *ne* and *eryi* can take can scope over *ye* and of course *le*.

(4) a. wo chi fan *le* ye shuijiao *le* *laizhe/ne/eryi*

I eat dish LE YE slept LE LAIZHE/NE/ERYI

‘I have eaten dishes and also slept (this event happens in recent past).’/

‘I have been in the status of having eaten dishes and also slept.’/

‘I have only been in the status of having eaten dishes and also slept.’

Conclusion In Mandarin, since *le* is syntactically lower than SFP1 particles and therefore forms a class of its own, there are four classes of Sentence-Final Particle.

The primacy of animacy for the subject grammatical function in Mandarin Chinese

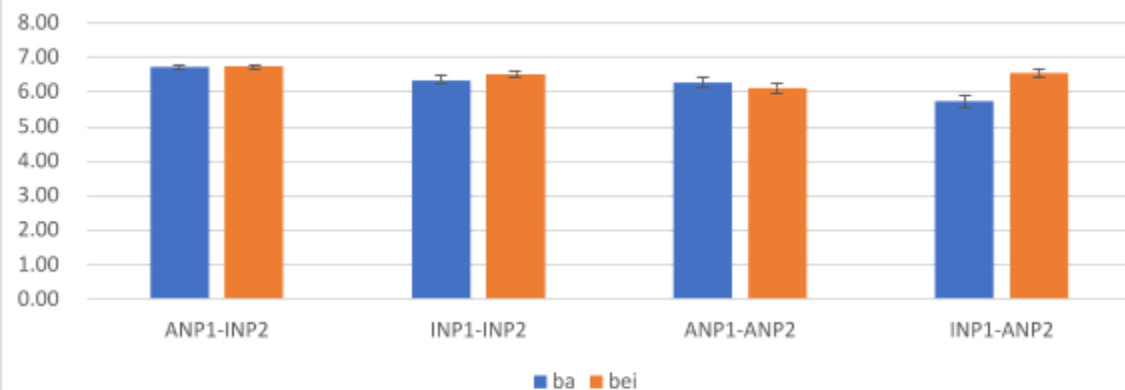
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In the Unified Model (MacWhinney, 2008), the meaning of a given sentence structure is largely determined by the relative weight of each cue that is employed during interpretation. Cues used for sentence meaning are weighted differently crosslinguistically. In English, word order is a primary cue for the first NP to be assigned the subject. However, such a cue may be less reliable in Chinese in that the animacy of NPs can be a comparatively stronger cue than word order for the grammatical functions of NPs to be identified (Li, Bates & MacWhinney, 1993; He & Chen, 2013). Chinese has a canonical SVO word order (Sun & Givón 1985) such that the effects of the word order and animacy cues would be hard to separate given an active sentence with an animate subject. To tease apart the effect of word order and animacy, we manipulated the animacy configurations of NPs in BA and BEI constructions whose word order are NP *ba*/bei NP V. (We analyze the NP1 in a *bei* construction as a grammatical subject). Therefore, our goal was to provide experimental evidence to further examine the roles that animacy and word order play in establishing grammatical functions in Chinese. To this end, we collected acceptability judgments in a Latin square design via Qualtrics from 149 native speakers of Chinese using a 7-point Likert scale with both ends labeled. Participants read only 8 test sentences out of a total of 64 trials so that they could not identify the target structure. Mixed model effects using R (lme4 Bates et al, 2015) were used in which the animacy of NP1 & NP2 and Construction Type were treated as fixed effects and subjects as random effects. Results showed a strong main effect of the animacy of NP1 and NP2. We also observed a three-way interaction among animacy of NP1 and NP2 and construction type. The data in Figure 1 show that in Chinese the subject grammatical function (and NP1) shows a preference for animate NPs, regardless of the *ba* or *bei* construction: NP1 Animate and NP2 Inanimate are ranked highest for both constructions. The least acceptable sentences are NP1 Inanimate/ NP2 animate in the *ba* construction, suggesting that an animate NP2 will compete for subjecthood in *ba*. The requirement for an animate Subject is mitigated in the Inanimate NP1 bei Animate NP2 construction due to the *bei* morpheme, which promotes a Theme to Subject. If the both NPs are inanimate or animate in either construction, no animacy competition for subject grammatical function is set up; thus, acceptability is between Animate NP1/Inanimate NP2 and Inanimate NP1 and Animate NP2 with *ba*. We therefore conclude that animacy is a vital cue for interpretation of grammatical functions in Mandarin Chinese.

Figure 1. Interaction of NP Animacy and ba/bei in acceptability.
(Error bars indicate SE; ANP=Animate NP; INP= Inanimate NP)



Agreement verbs with weak hand classifier in Shanghai Sign Language

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Introduction: In sign languages, agreement verbs refer to a set of verbs that are modifiable in direction, facing, and localization of the hand to mark person (and number) across sign languages (Lillo-Martin & Meier 2011, Mathur & Rathmann 2012). In Shanghai Sign Language (Shanghai SL), there exists a group of two-handed signs that are modifiable for person agreement. Of the two hands, the weak hand is static while the strong hand executes some motion onto the weak hand, in conformity with the dominance condition on the two-handed lexical signs (Battison 1978). The weak hand is characterized by a classifier handshape ‘A’ (thumb-up) or ‘Y’ (both thumb and pinky extended) that stands for an animate being. This group of verbs with weak hand classifier is also attested in other East Asian sign languages such as Taiwan Sign Language (TSL: Smith 1990), Japanese Sign Language (JSL: Mathur 2000), and Hong Kong Sign Language (HKSL: Tang 2007). Despite the sporadic description (see Ni 2007), a systematic investigation of such verbs in Shanghai SL is lacking. This study provides a fine-grained analysis of the agreement verbs with weak hand classifier in the following two respects: (1) the morphophonological realization of the agreement forms; (2) the morphosyntactic properties of these verbs in terms of word order and negation.

Data and Research Methods: Five signers (mean age: 41, two males, three females) participated in this study, with four native (born into deaf parents) and one near-native (early learners born into hearing family). They were asked to produce 40 elicited sentences based on vignette stimuli, of which each contains a target sign, i.e., a verb with weak hand classifier. Two sets of grammaticality judgments were then done on the five signers, with the first set on the validity of agreement realizations (1st and non-1st person subject/object agreement forms) and the second set on the various word orders (SVO, SOV, OSV) and position of negation in sentences that involve verbs with weak hand classifier in comparison to body-anchored verbs, which are found to inhibit the agreement process (Friedman 1976, Padden 1983, Hou & Meier 2018).

Findings: As summarized in **Table 1**, **(A)** In contrast to body-anchored verbs, all the 40 verbs investigated are arguably agreement verbs. The patterning of agreement verbs in contrast to non-agreement bodyanchored verbs is corroborated by their distinct morphosyntactic properties. Verbs with weak hand classifier are found to allow more flexible word order (SVO, SOV, OSV) whereas body-anchored verbs marginalize SOV order. **(B)** There is also a division among the agreement verbs with weak hand classifier in respect to the allowable agreement forms and agreement devices: **(B-i)** Apart from one intransitive verb which only allows non-1st person subject agreement, three verbs are found to resist 1st person object agreement. Only localization is the possible device for agreement realization in these four verbs due to the existing specialized lexical movement or facing that is not prone to agreement modification. **(B-ii)** The rest of the verbs are observed with all forms in the agreement paradigm. Despite the

various agreement device combinations, all full-paradigm agreement verbs pattern the same with respect to word order and negation. **(B-iii)** The partition between partial agreement and full agreement in the verbs with weak hand classifier is confirmed by the fact that full-agreement verbs allow more flexible positions of negation while at least one type of negation is disallowed when it is positioned between subject and object (*/? S Neg O V) in verbs with partial-agreement paradigm, which makes them behave more like non-agreement body-anchored verbs.

Table 1 Agreement pattern of verbs and their interaction with word order and negation

| Verbs | Agreement forms | Agreement devices | Word order | Negation |
|---------------------------------|--|--|---------------------------------|----------------------|
| Verbs with weak hand classifier | Both 1 st and non-1 st person subject/object agreement | Movement direction, facing, localization | SVO, SOV, OSV | flexible |
| | | Facing, localization | SVO, SOV, OSV | flexible |
| | | Movement direction, localization | SVO, SOV, OSV | flexible |
| | No 1 st person object agreement | Localization only | SVO, SOV, OSV | */? S Neg O V |
| | Only non-1 st person subject agreement | Localization only | Intransitive verb: SV, VS | n.a. |
| Body-anchored verbs | No agreement | | SVO, */? SOV, OSV | */? S Neg O V |

Mandarin Self-referential Expressions: A Sociolinguistic Study

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Mandarin speakers often use the first-person singular pronoun *wǒ* 我 to refer to themselves, but they may also use other expressions to call themselves. This paper explores the social meaning of the expressions people call themselves rather than *wǒ* in Mandarin. This study is in some sense unprecedented in that: first, it explores the relationship between social factors and self-referential usages by large sample size quantitative analysis; second, it incorporates Mandarin self-reference users' comments into scholars' analysis; third, it studies some unconventional usages of Mandarin referential expressions not mentioned in the previous literature.

Based on 1135 questionnaires from all age groups and 29 provinces in China, the quantitative study supports the hypothesis that social factors (gender, sexual orientation, occupation, age, geographical area, industry, educational background, and income) statistically significantly correlate with the usage of self-referential expressions (*běn rén* (I myself 本人), *bǎo bao* (baby 宝宝), *bà ba* (dad 爸爸), *rén jiā* (that person 人家), and *lǎo zi* (old man 老子) of Mandarin speakers. I found that the social factor of gender, sexual orientation, and occupation are statistically significantly related to the frequency of referring to oneself by all the five Mandarin expressions in question. Other social variables, namely, age, geographical area, industry, and income, also statistically significantly correspond to most self-references. This study also involves interviewing twenty-one Mandarin speakers with various demographic backgrounds. Interviewees were asked to talk about their usage and attitude towards five self-referential Mandarin expressions.

There are interesting findings for each expression. For example, I have found that significantly more female speakers use *bǎo bao* (宝宝) as self-reference than male speakers. Also, for adult speakers, the frequency of using *bǎo bao* (宝宝) as self-reference decreases with age. These provide empirical evidence to the previous speculations that young people and female speakers are more likely to call themselves *bǎo bao* (宝宝). The finding that *rén jiā* (人家) is irrelevant to age contradicts some speculations of scholars. However, the result that there are significantly more female speakers who use *rén jiā* (人家) as self-reference supports the proposition of previous researchers that this expression is associated with gender. Moreover, *bà ba* (爸爸) traditionally can be used by a father when talking to his children. There is an unconventional usage that some speakers (male or female) call themselves *bà ba* (爸爸) when talking with their peers. There is no previous research on this unorthodox usage of this kinship referral pronoun. The quantitative study shows that young people are more likely to use the term unconventionally. Interviewees who use the term unconventionally express various communicative purposes.

The research extends the scope of self-referential studies to the testable level and discovers that some speaking habits are relevant to objective external factors besides the established subjective internal considerations. Using quantitative analysis, the study pushes self-referential studies in Mandarin beyond speculative analysis.

The Ideal Foreign-oriented Definition Model of Words with Chinese-characteristics

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More and more people from all over the world learning Chinese language requires us to seek for more satisfactory definition of Words with Chinese characteristics (WCCs) which refer to the category of words that bear characteristics of Chinese ethic, life context, natural environment, customs and religious belief, etc. which reflect the accumulation of Chinese culture. Learning Chinese language is inseparably associated with acquiring certain Chinese culture knowledge. As what Humboldt said, a nation's language is a nation's spirit (Yao Xiaoping 2005).

This study aims at constructing a model for satisfactorily analyzing WCCs from foreigners' perspective as an important preparing procedure for defining them in the foreign-oriented learning dictionaries. Based on Ideal Cognitive Model (ICM), a construction way by which people constantly organize their knowledge (Lakoff 1986, Ungerer&Schmidt2008, Wang Yin 2007), a new model will be effective in describing the WCCs within a theoretical framework connecting language, cognition and culture.

Practically, this study provides samples of defining WCCs and sets up a model of defining them for foreign-oriented dictionaries, helpful for Chinese language learning as SLA, such as "大同"(A thinking of a society in which interpersonal or national relationship is harmony), "发场正气"(encourage the practices that are healthy, righteous and honest).Theoretically, the analysis of these words offers an approach to bringing deeper insight into Chinese language, and to appropriately interpreting more culture-loaded words. Furthermore, this study proves the feasibility and advantage of application of cognitive linguistic theories in construing and interpreting language.

Keywords: words with Chinese characteristics (WCCs) foreign-oriented dictionary

Ideal Cognitive Model (ICM) cultural contradiction cultural vacancy

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The mechanism of lexicalization in *hen-shi* (很是)

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This paper focuses on the phenomenon that monosyllabic degree adverbs *hen*(很), *shen*(甚), *ji*(极), *po*(颇), *lue*(略), *shao*(稍), *jiao*(较), *geng*(更), and *zui*(最) can be followed by *shi*(是) or *wei*(为).

(1) *baoping hen-shi fenkai*. (宝庆很是愤慨。) (2) *yun liang ji-wei fangbian*. (运粮极为方便。) *baoping* very-be angry
transport grains very-BE convenient

‘Baoqing is very angry.’

‘It is very convenient to transport grains.’

(*Gu-shu-yi-ren*, by Laoshe)

(*Ba-qian-Sui*, by Wang Zengqi)

This paper argues that the adverb-*shi/wei* combination results from lexicalization which forms new degree adverbs like *hen-shi*(很是), *shen-wei*(甚为), *shen-shi*(甚是), *ji-wei*(极为), *ji-shi*(极是), *po-wei*(颇为), *po-shi*(颇是), *lue-wei*(略为), *shao-wei*(稍为), *jiao-wei*(较为), *geng-wei*(更为), *geng-shi*(更是), *zui-wei*(最为), *zui-shi*(最是) and similar. The originally monosyllabic degree verb contributes semantically and syntactically to the combination after reanalysis. Although the head phrases vary in adjectival, verbal and nominal phrases, they all encode property in their lexical meaning, supporting the analysis of *hen-shi*(很是) as a degree adverb. Moreover, *hen-shi*(很是) and *hen*(很) do not present core syntactic difference, only stylistic distinction. Compared with copula, sentences are grammatical either with or without *shi*(是) and *wei*(为) in Chinese, while omitting *be* leads to ungrammaticality in English:

(3) a. *zhangsan hen-shi congming*. (张三很是聪明。) b. *zhangsan hen congming*. (张三很聪明。) *zhangsan* very-be intelligent *zhangsan* very intelligent
‘Zhangsan is very intelligent.’ ‘Zhangsan is very intelligent.’

(4) a. John is very intelligent.

b. *John very intelligent.

Parallel to morphologization in languages with affixes, *shi*(是) and *wei*(为) become opaque wordinternal elements due to lack of inflectional affixes in Chinese, which counts as lexicalization in a broad sense. Lexicalization refers to a process of grammaticalization where a form undergoes further steps in the cline of grammaticality emphasized by Hopper and Traugott (1993). Similarly, adverbials like *haoxiang-shi*(好像是) and *zong-shi*(总是)

indicates that *shi*(是) is lexicalized through sentence-initial grammaticalization (Dong, 2004), however, *hen-shi*(很是) discussed here follows a quite different path.

Conducting an investigation of the diachronic language data in Chinese, this paper summarizes the age of appearance of the combinations mentioned above and discovered that *zui-wei*(最为) occurred first, dating back to the Old Chinese period. Primitively, *wei*(为) is a verb taking a nominal phrase where property can be encoded, meaning that the whole *wei*-NP combination as a verbal phrase can be modified by degree adverbs. Since adjectival or verbal phrases express property even more frequently than nominal phrases, *zui-wei*(最为) is reanalyzed as a degree adverb which probably insinuates emphasis, especially when a comparative set like *wu hai zhi shu* (五害之属) ‘five harms’ in *Guan-zi* (《管子》) and *qi-shi zi zhi tu* (七十子之徒) ‘seventy students’ in *Shi-ji* (《史记》) occur overtly, notwithstanding *zui*(最) can stand alone since the Pre-Qin period. A series of data will be demonstrated.

(5) *wu hai zhi shu, shui zui-wei da.* (6) *qi-shi zi zhi tu, ci zui-wei raoyi.*
five harm ZHI category water most-be great seventy student ZHI people Ci most-be rich ‘Among the five harms, water is the greatest.’ ‘Among the seventy students, Ci is the richest.’

(五害之属，水最为大。) (七十子之徒，赐最为饶益。)

Zui-wei(最为) initiates the trend of reanalysis. By analogy, it expands to other monosyllabic degree adverbs in Medieval Chinese driven by the shift from monosyllabic to disyllabic (Huang, Li, & Li, 2009), explaining why the lexicalization of *shi*(是) are blocked with disyllabic degree adverbs:

(7) a. **shifen-shi* (十分是) b. **feichang-shi* (非常是) c. **jiqu-shi* (极其是) d. **wubi-shi* (无比是)

In addition, slight difference between *hen*(很) and *hen-shi*(很是) is observed in negation and embedded clauses, judged by the native speakers in Mandarin Chinese. Nevertheless, it is attributed to the phonological requirement of the negative morphemes (Ernst, 1995) and dialectal variations.

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Learning a tonal language: Does high F0 signal an aspirated stop?

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Consonant-induced F0 perturbation in the post-onset vowel has been observed in Mandarin speakers' production of aspirated and unaspirated stops (Xu & Xu 2003, Luo 2018). However, F0 perturbation in Mandarin seem to be shorter in duration, and potentially inconsistent, compared to those in non-tonal languages, arguably because F0 conveys tonal information. It is also unclear whether native listeners of Mandarin use F0 at the vowel onset as a cue for consonant aspiration. This study asks whether L2 learners of Mandarin with a non-tonal native language produce target-like F0 perturbation patterns and use F0 information when perceiving consonant aspiration.

Novice American learners of Mandarin (n=14) were tested in a perception and a

production experiments using Mandarin /t^h/-/t/ contrast. In a forced-choice identification task, the learners were tested along with Mandarin native controls (n=24). Participants heard a Mandarin syllable, and identified the syllable by selecting the matching character from the aspirated and unaspirated pairs (e.g., 突 /t^hū/ vs. 督 /tū/). The stimuli were made from four base tokens with different tones (i.e., /t^hū/, /t^hú/, /t^hǔ/, /t^hù/), naturally produced by a Mandarin native speaker. Each base token was manipulated so that the initial stops co-varied in their VOT and post-stop F0, by fully crossing 7 steps of post-stop F0 and 7 steps of VOT, yielding 49 stimulus syllables. Participants' /t/-/t^h/ judgments were statistically analyzed to determine the influence of VOT, F0, and Tone, on the perception of consonant aspiration. Results revealed that both the learners and the natives relied mainly on VOT for /t^h/-/t/ contrast, but the effect of VOT interacted with F0 and Tone. Specifically, only when VOT was ambiguous, syllables with lower F0 induced more /t/ responses than those with higher F0. This pattern held consistent across four tones, but the tones starting at a lower pitch range

(Tones 2 and 3) elicited more /t/ responses than those starting at a higher range (Tones 1 and 4). This suggests not only the natives but also the learners were sensitive to consonant-induced F0 patterns, associating high F0 to aspirated onset, when perceiving Mandarin syllables.

In the production experiment, the same learners produced monosyllabic Mandarin words, beginning with /t/, /t^h/, and /w/, in four tonal contexts, embedded in a carrier sentence. To examine the perturbation effect, F0 values were extracted from five equidistant points of the first half of the vowel, and statistically analyzed. Preliminary results (4/14 learners analyzed to date) demonstrate the learners' F0 contour was influenced by the speaker gender and lexical tone, but not by the onset consonant. The learners, in their L2 Mandarin productions, did not demonstrate target-like F0

perturbation patterns (e.g., Luo 2018), nor did they maintain their native patterns (e.g., Hombert et al. 1979). This arguably suggests that F0 perturbation patterns are language-specific and involve speakers' intentional manipulation, rather than being an automatic consequence of the laryngeal setting of consonants.

Taken together, the current outcomes suggest a mismatch between the learners' perception and production in using F0 information. In production, the learners failed to encode both the tonal and the consonantal information in F0. In perception, however, they could extract both information from F0. The differences between the natives and the learners will be further discussed in presentation.

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When NONFUT Tense Meets Perfective Aspect

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Mandarin root clauses involve the following properties: (i) Statives and imperfective constructions (bare eventives denoting generic readings or eventives with the progressive marker) are compatible with present and past time adverbs. Future time adverbs require overt marking of modals (Sun 2014). (ii) Eventive sentences marked with perfective aspect are interpreted with past topic time (Smith 1997, Lin 2006, Sun 2014 a.o.). To capture (i), Sun (2014) proposes a covert non-future tense (NONFUT) that constrains the topic time to past or present, as illustrated in (1a). To capture (ii), Lin (2006) proposes that Mandarin perfective aspect is a tense-aspect operator with the semantic template below in (1b).

- (1) a. $\| \text{NONFUT} \|^{g,c} = \lambda t : t < t_c \text{ or } t \supseteq t_c.t$ (Sun 2014: 192)
b. $\| \text{PERF} \| = \lambda P_{\langle i,t \rangle} \lambda t_{\text{Top}} \lambda t_0. \exists t [t \subseteq t_{\text{Top}} \wedge P(t) \wedge t_{\text{Top}} < t_0]$ (Lin 2006: 6)

We only focus on Mandarin perfective *le* in this talk. Treating perfective aspect markers as tense-aspect operators fits well into a tenseless framework (Lin 2006), but the interaction between NONFUT and the perfective aspect with the semantics in (1b) is not explored in the literature. We argue that the current analyses run into problems as follows. If we assume that a temporal adverb denotes an interval, as Sun (2014) points out, Lin's analysis to perfective in (1b) yields contradictions for the sentence in (3a) with a time adverb that denotes an interval that overlaps with the utterance time (*jinnian* 'this year'). Sun's revision of perfective in (2), however, is not strict enough to prevent a sentence like the one in (3b) with a temporal adverb that denotes an interval spanning from the past to the future (*1987 nian zhi 2030 nian*, 'From 1987 to 2030'). Moreover, both (1b) and (2) suggest that aspectual phrases in Mandarin are of different semantic types ($\langle i,t \rangle$ for imperfective phrases and $\langle i, it \rangle$ for perfective phrases). The system needs two lexical entries to a category (time adverbs or the tense operator) to handle the different semantic types.

- (2) $\| le \| = \lambda P_{\langle v,t \rangle} \lambda t' \lambda t. \exists e [P(e)=1 \wedge t' \supseteq \tau(e) \wedge \tau(e) < t]$ (Sun 2014: 75)
(3) a. *Jinnian, Moyan fabiao le Hong Gaoliang Jiazu. this-year Moyan publish PERF Red Sorghum Clan*
'This year, Moyan published *Red Sorghum Clan*.'
b. *#1987 nian zhi 2030 nian, Moyan fabiao le Hong Gaoliang Jiazu.*
1987 year till 2030 year Moyan publish PERF Red Sorghum Clan
'# From 1987 to 2030, Moyan published *Red Sorghum Clan*.'

We propose a new analysis to NONFUT and perfective *le* to solve the aforementioned problems, so that a NONFUT tense operator works well with perfective aspect to capture the properties in (i) and (ii) for Mandarin root clauses. In (4a), the tense operator has a numerical subscript n like a pronoun (Partee 1974) and an index j . n picks out the topic time via assignment function g while j picks out the evaluation time. The generalization in (i) is captured by a presupposition in NONFUT such that the context salient time $g(n)$ precedes or equals to the evaluation time t_j . Perfective co-indexes with the tense operator and poses a

presupposition on the time argument so that the topic time precedes the evaluation time. Time adverbs denote a property of time and are restrictors of the tense operator, shown in the structure in (4c). According to (4), the denotation of the sentence in (3a) gives us the desired reading in (5c): the runtime of the event is in a past time within this year. (3b) is odd because of a presupposition failure since the interval from 1987 to 2030 does not precede or overlap with the evaluation time (the utterance time s^*).

- (4) a. $\| \text{nonfut}_n \|^{i,g} = \lambda p_{\langle i,t \rangle} : g(n) \leq t_j \wedge p(g(n)). \lambda q_{\langle i,t \rangle}. [p(g(n)) \wedge q(g(n))]$
 b. $\| le \|^{i,j} = \lambda P_{\langle v,t \rangle}. \lambda t : t < t_j. \exists e [P(e) \wedge \tau(e) \subseteq t]$
 c. $[_{TP} [_T \text{Adv NONFUT}_n] [_{AspP} \text{PERF/IMPF vP}]]$
- (5) a. $\| \text{jinnian} \| = \lambda t [t \subseteq \text{the year tht includes } s^*]$
 b. $\| 1987 \text{ zhi } 2030 \| = \lambda t [t = \text{the interval from 1987 to 2030}]$
 c. $\| 3a \|$ is defined iff $g(7)$ is context salient time such that $g(7) < s^* \wedge g(7) \subseteq \text{the year that includes } s^*$, once defined, $\| 3a \| = \exists e [\text{publish}(e) \wedge \text{Agent} = m \wedge \text{Theme} = h \wedge \tau(e) \subseteq g(7) \wedge g(7) \subseteq \text{the year that includes } s^*]$

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“這麼一V”與“這麼V來”篇章表現差異及成因分析

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本文選取認知語用學中的關聯理論及語法化理論作為理論框架，著眼於構形相似的漢語構式

“這麼一V”與“這麼V來”，從BCC語料庫中選取動詞數量佔有絕對優勢的“這麼一說/看”與“這麼說/看來”作為主要研究對象，從語篇層面對兩種構式的篇章表現共性與差異進行比較分析。

首先，本文結合“語法化”發生條件及篇章標記語特征，將“這麼一說/看”與“這麼說/看來”劃分為“已語法化”及“未完全語法化”兩個類別。本文以關聯語境為視角對已語法化“這麼一說/看”與“這麼說/看來”語料的描寫與對比，發現“這麼一說/看”與“這麼說/看來”作為篇章標記語時，均具備回指及話輪轉換功能。因此，兩種構式篇章表現一致，在篇章中可互換使用。

其次，本文將“這麼一說/看”與“這麼說/看來”在篇章中不可互換使用的情況，即篇章表現差異，歸因於兩種構式的語法化程度差異。通過對未完全語法化“這麼一說/看”與“這麼說/看來”語料的統計與分析，本文發現“這麼一說/看”中的動詞“說/看”保有實詞語義的情況更多，且構式可與更為豐富的詞類及句法形式並置。由此說明“這麼一說/看”的語法化程度低於“這麼說/看來”。這一差異進而揭示出“這麼一V”與“這麼V來”的語法化程度差異，即“這麼一V”的語法化程度低於“這麼V來”，故“這麼一V”中動詞保有實詞語義的情況更多，構式篇章表現也更為豐富。

最後，基於對語料的細化描寫、統計與分析，本文較為詳盡地揭示了“這麼一說/看”與“這麼說/看來”篇章表現的共性、差異及差異成因，這在一定程度上填補了“這麼一V”與“這麼V來”對比研究的空白。本文對相似構式篇章表現的對比分析，為關聯理論及語法化理論在語篇層面的研究發展提供了些許參考，並希望能夠對日後相似構式的對比研究有所啟示。

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Finiteness as anchoring: Evidence from Cantonese

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Using Cantonese data, this paper revisits the finiteness debate in Chinese and offers new evidence for the contrast between finite and control clauses. Adopting Bianchi (2003) and Wiltschko’s (2014)’s proposal of finiteness as anchoring, I present evidence that finite clauses in Cantonese can anchor to an external center of deixis whereas infinitives must anchor to an internal center of deixis. This proposal explains distributional differences of some seemingly unrelated linguistic expressions in these two contexts. First, speaker-oriented adverbs such as *jat1ding6* ‘definitely’ can occur in complements introduced by *zi1dou6* ‘know’ or *waa6* ‘say’ but are exclusively ruled out in the clauses embedded under *hei1mong6* ‘hope’ and *hyun3* ‘persuade’ (1). Verbs of the latter type are those involving the bouletic attitude of the internal speaker (the subject of the matrix predicate) (Landau 2015), which renders the embedded context incompatible with speaker-oriented adverbs pointing to the external speaker in the actual world.

- (1) Zoengsaam zi1dou6/waa6 *hei1mong6/*hyun3 Leisei jat1ding6 heoi3 mei5gwok3
Z. know/say hope/persuade L definitely go USA
‘Zoengsam knew/said that Leisei would definitely go to America.’

This approach predicts that markers pointing to internal speakers, such as the imperative function of the SFP *jek1* (Fang 2004), are allowed only in bouletic contexts. This is borne out:

- (2) Maa1mi4 *soeng1seon3/*zi1dou6/giu3 Siu2hung4 maa5 ni1 gin6 saam1 jek1 mom believe know ask S. buy this CL
clothes SFP
‘Mom asked Siuhung to buy this clothing!’

This contrast is further evidenced by the distributional differences of negative markers in both contexts. The imperative negative marker *mai5*, relating to the internal speaker, is allowed in contexts in which the denotation of linguistics expression is determined relative to the bouletic state of the internal speaker (4), not the absolute speaker in the actual world.

- (3) Zoengsaam zi1dou6 Leisei *mai5/m4 heoi3 gwo2 dou6.
Z. know L. NEG go that place
‘Zoengsam knows Leisei is not going to/hasn’t gone there.’ (4) Zoengsaam hyun3 Leisei mai5 /*m4 heoi3 gwo2
dou6.
Z. persuade L. NEG go that place
‘Zoengsaam persuaded him not to go there.’

Syntactically, I propose that the embedded bouletic contexts that allow *jek1* and *mai5* (but disallow speaker-oriented adverbs) are infinitival clauses whereas their counterparts are finite clauses. Supporting evidence comes from the distribution of *pro*. *Pro* is exclusively ruled out in the former context while it can be available in the latter if there is a clearly identifiable referent (k) in the discourse.

(5) Maa1mi4_j giu3 Siu2hung4 [____{j/*k}/maai5 ni1 gin6 saam1]. mom ask S. ____{j/*k} buy this CL clothes
 ‘Mom asked Siuhung to buy this clothing!’

(6) Maa1mi4_j zi1dou [____{j/k} wui3 maai5 ni1 gin6 saam1]. mom know ____{j/k} will buy this CL clothes
 ‘Mom knew that she(herself)/someone would buy this clothing!’

These findings suggest that finiteness distinction is attested in Cantonese: infinitival clauses must anchor to the internal center of deixis relating to the attitude to the internal speaker while finite clauses can anchor to the external center of deixis where an external speaker is permitted.

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Diachronic study of the concessive mechanism in Chinese

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The conjunction, as one of the most important functional categories, was introduced in an independent chapter in the first systematic work on Chinese's grammar *Ma Shi Wen Tong* (The grammar of Ma) in 1898. One of its sub-classifications, the concessive conjunctions, is always the most problematic category because of the reduced morphology system of Chinese. Without any morphological markers to distinguish the mode, most linguists (J. Ma: 1898, J. Li: 1924, S. Lü: 1956, J. Lu: 1983, etc.) classify 即使 *jí shǐ* and 哪怕 *nǎ pà* “even if” “although” as hypothetic concessive conjunctions. The dependent clause introduced by them is a hypothesis. However, 虽然 *suī rán* “despite this” is an assertive concessive conjunction which introduces the assertion.

Regardless of the classification, the intuitive semantic link inside a concessive phrase is same: the assertion or the hypothesis introduced in the dependent clause q should prevent the consequence of the main clause p in the “universe of belief” (U) (R. Martin 1987: 36): (if q , $\neg p$), while it does not in the “anti-universe of belief” (\bar{U}) (R. Martin 1987: 38): \neg (if q , $\neg p$). In other words, the concessive clause q can be considered as an “ineffective cause” (O. Soutet, 1990: 11).

Our work, from a semantic-logical, syntactic-discursive and diachronic point of view, aims at exploring the concessive mechanism in Mandarin via studying the three concessive connectors mentioned above: 即使 *jí shǐ*, 哪怕 *nǎ pà* “even if” “although” and 虽然 *suī rán* “despite this”. By analyzing their grammaticalization process, our research involves various corpora from archaic Chinese (dating back to Zhou Dynasty (from 1046 to 771 BC)) to contemporary Chinese as well as technical linguistic methodologies to categorize and translate the extracted examples.

According to the results obtained, we drew the conclusion that concession is a “composed” notion combining many complex linguistic subjects: the study of 即使 *jí shǐ* involves the use of temporality (即 *jí*) and causality (使 *shǐ*) to express concession; the grammaticalization of 虽然 *suī rán* “despite this” illustrates the role of subjectivity in concessive markers' formation; we deepened into the problems of rhetorical intensity, negation, modality and psychological operations during the analysis of 哪怕 *nǎ pà*. It is therefore the reason why concessive conjunctions are mostly “combined” markers, and the number of concessive morphemes is very limited in archaic Chinese.

In the end of our research, we also highlighted the rapprochements between the studied Chinese concessive conjunctions and its equivalents in French (*cependant*, *même si*, *bien que*) during their grammaticalization processes. We surprisingly found many similarities in terms of the establishment of concessive mechanism despite enormous etymological and typological divergences of these two languages.

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Mandarin Chinese classifiers are for numerals, not nouns

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Many languages, including varieties of Chinese, require classifiers to co-occur with numerals and nouns in nominal expressions that express cardinality (1a). Why this is so is the subject of debate. A number of theories claim that in these languages, nouns themselves are not countable (for instance, they are mass nouns); classifiers are necessary as they “make” nouns countable (e.g. Chierchia 1998). Alternatively, it is claimed that numerals vary semantically across languages (e.g., Krifka 1995). In some languages, numerals contain a measure function required for expressing cardinality. Languages like Chinese do not, and have to rely on classifiers to provide the measure function.

The first “classifiers for nouns” hypothesis predicts that nouns and classifiers co-occur, while the second “classifiers for numerals” hypothesis predicts that numerals and classifiers co-occur. This paper gives a novel syntactic argument for the second hypothesis, with support from a set of exceptional Mandarin Chinese nominal expressions that are **bipartite**, consisting of just a numeral and a classifier (thus supporting Wilhelm 2008; Bale & Coon 2014; Sudo 2016).

Data. Bipartite structures have been previously observed for time interval expressions (1b) (e.g. C.-C. J. Tang 2005, S.-W. Tang 2013); here I show that they also occur for lexical items like *hua* “pen stroke” (1c) and *bu* “step” (1d). Morphosyntactic evidence shows that these lexical items are **classifiers**; they are in complementary distribution with plural *xie* (2) and can be reduplicated (3) (cf. S.-W. Tang 2013). They are also **not nouns**; unlike nouns, they cannot occur alone in argument positions (4a), nor be modified with relative clauses (4b).

I also argue that there is **no null noun** in these structures (5a) (*contra* S.-W. Tang 2013); if there were, the null noun should co-occur with plural *xie* (5b) (given the right context) and be modifiable with relative clauses (5c). Neither prediction is borne out. Finally, these expressions are unlikely to reflect NP ellipsis, as they can appear in out-of-the-blue contexts that do not license ellipsis.

Implications. Bipartite structures pose a problem for the “classifiers for nouns” hypothesis: since there are no nouns in these structures, it is unclear why classifiers are present. In contrast, the data are consistent with the “classifiers for numerals” hypothesis: in bipartite structures (1b-d) (as in canonical tripartite structures (1a)), classifiers are present because they provide numerals with the measure function necessary for expressing cardinality. Finally, I suggest that classifiers like *hua* also happen to have richer, noun-like semantics, so the absence of a noun has no impact on interpretation.

(1) a. yi *(tiao) bihua b. yi nian c. yi hua d. yi bu one CL penstroke one year one stroke one step
 “one stroke of the pen” “one year” “one stroke [of the pen]” “one step”

(2) a. yi xie (*tiao) bihua b. *yi xie hua (3) a. yi tiao tiao bihua b. yi hua hua one PL CL penstroke one PL stroke one CL CL penstroke one stroke stroke

Intended: “some strokes of the pen”

Intended: “stroke by stroke”

(4) a. Ni xie cuo le {bihua / *hua}. b. [_{RC} xie cuo de] {bihua / *hua} you write wrong PERF penstroke stroke write wrong MOD penstroke stroke
 “You wrote (some) strokes incorrectly.” “strokes that were written incorrectly”

(5) a. [yi hua [_{NP} Ø_{stroke}]] = “one stroke,” where Ø_{stroke} has the same meaning as *bihua*

b. Xiaohai xie cuo le yi xie {Ø_{stroke} / bihua}.
 child write wrong PERF one PL penstroke

“The child wrote some strokes incorrectly.”

c. *yi hua [_{RC} xiaohai xie cuo de] Ø_{stroke}
 one CL child write wrong MOD

“a stroke that the child wrote incorrectly”

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Wanting the future: the case of desire and future *yao*

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Cross-linguistically, desire predicates often acquire future readings (Bybee et al. 1994, a.o.). This paper looks at Mandarin *yao* 要, where desire and future readings co-exist. We show how the two *yao*s have distinct syntactic properties and discuss implications for theories of grammaticalization, arguing that *yao* favors theories that analyze this change as driven by syntactic ambiguity.

In Mandarin, this grammaticalization process produces two distinct *yao*s, and not a single semantically-underspecified *yao*. We show this with tests using conjunction and negation: e.g., one can negate desire *yao* with *bu*, but not future *yao* (1) (Li & Thompson 1981).

We propose that future *yao* is a syntactically low, aspect-like functional head, following Lin 2011. We give novel arguments for this hypothesis: *yao* patterns with aspect markers 在 *zai* and 着 *zhe*: all three can appear in a position after the particle 正 *zheng* “right then/now” (2). It also points toward a principled account of why future *yao*, unlike a verb, does not impose semantic requirements on its subject, and why future *yao*, unlike epistemic modals (e.g. 可能 *keneng* “might”) and modal auxiliaries (会 *hui* “will”), cannot co-occur with a VP headed by 是 *shi* “be” (3) or precede temporal adjuncts (4). These results are theoretically significant, given recent claims that future *yao* is epistemic and/or is syntactically high (Wu & Kuo 2010, Santana LaBarge 2016).

The case of *yao* also sheds light on the question of how desire markers change into future markers. We argue that it supports theories in which syntactic change is driven by morphosyntactic ambiguity (Roberts & Roussou 2003, Hacquard & Cournane 2016). As a desire verb, *yao* takes a complement clause (5a). However, because Mandarin is morphologically impoverished, from the learner’s perspective, this structure is ambiguous: there is an alternative analysis in which *yao* is a functional head that takes a VP-like complement (5b). We show how this reanalysis might lead learners to give *yao* the semantics of “low” functional heads (like aspect or root modals) instead of “high” functional heads (like epistemic modals) (in the sense of Cinque 1999, Hacquard 2006). We contrast these theories with alternative functionalist-inspired, meaning-based accounts, which do not make concrete predictions about the syntactic change in *yao* and its counterparts in other languages (Sweetser 1984, 1990, Bybee et al. 1994, see also von Stechow 1995, Grano 2015).

(1) a. Lisi yao shuijiao (1e). b. Zhangsan bu yao shuijiao (1e). Lisi YAOsleep PRT Zhangsan not YAO sleep PRT
Desire: “Lisi (now) wants to sleep.” “Zhangsan doesn’t want to sleep.” Future: “Lisi is going to sleep.” Not OK: “Zhangsan isn’t going to sleep.”

(2) a. Lisi **zheng** zai shuijiao. b. Lisi **zheng** yao diedao.

Lisi right.then PROG sleep

Lisi right.then YAO fall

“Lisi is sleeping now.” (**zai zheng* ...)

“Lisi is/was just about to fall.” (**yao zheng* ...)

(3) Zhe bu dianying {keneng / hui / *yao} **shi** Aoshika jiang de zuijia yingpian. this CL movie might will YAO be Oscar award POSS best movie
“This movie {might/will/is going to} be the Best Picture at the Oscars.”

(4) Guo-shu {keneng /hui / ??yao} **mingtian** kaihua. fruit-tree might will YAO tomorrow bloom

“The fruit tree {might/will/is going to} bloom tomorrow.” (but OK: ... **mingtian yao** kaihua...)

(5) Lisi yao shuijiao.

a. Verbal *yao* takes clausal complement: Lisi [_{VP} yao [_{clause} shuijiao]].

b. Functional *yao* takes VP-like complement: Lisi [_{FP} yao [_{VP} shuijiao]].

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Formation of Reduplicative Polysyllabic Onomatopoeia in Mandarin

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Most polysyllabic onomatopoeia in Mandarin derive from monosyllabic or disyllabic ones by reduplication, which is reflected in segmental similarity between syllables. For example, the word [pʰi li pʰa la] originates from [pʰa] by reduplicating twice, making the first and second foot with the same pair of onset and syllables in the same foot with the same rhyme. Previous studies have summarized several patterns of reduplicative onomatopoeia (Dexi, Z. 1982; Hongjun, W. 1996; Yuzhi, S. 1995). However, their description of phonotactic constraints is insufficient to cover all the well-formed segmental changes during reduplication since there are quadrisyllabic onomatopoeia that seem to violate the rules such as [xua li xua la] (violating the ‘brightness’ principle) and [tɕʰi tsʰi kʰa tɕʰa] (without changing consonants). This paper makes further analysis of different patterns of polysyllabic onomatopoeia stemming from reduplication, defines phonotactic constraints for segmental changes by Optimality Theory, illustrates different rankings of constraints for each pattern and summarized a hierarchy of restriction on different patterns, which corresponds to the frequency of occurrence and perception by native speakers.

Based on the dataset drawn from Modern Chinese Dictionary (by python programming), word source of articles and dissertations as well as self-introspection, this paper modifies the reduplicative patterns proposed by Jingmin, S. (1981) to be 9 patterns of polysyllabic onomatopoeia in Mandarin, with 3 of them formed by segmental changes, and analyzes the derivational relationship between patterns. It turns out that different reduplicative patterns result from different rankings of correspondence, alignment and markedness constraints during reduplication. This paper focuses on patterns going through segmental changes since they are not well-explained by former research and proposed two markedness constraints Differ-BR-N and Differ-BR-O. Moreover, compared with patterns without segmental change, those changing patterns have higher ranking of markedness constraints but lower ranking of Ident-BR, which is base and reduplicant correspondence. Patterns with changed segments differ from each other in alignment constraints, i.e., whether each morpheme aligns with a prosodic word or a foot.

The paper makes use of tableaux to show the interaction of different constraints for quadrisyllabic patterns in detail. Trisyllabic ones, however, can be regarded as a composition of total and partial reduplication. A hierarchy of restriction on reduplicative patterns is summarized at the end. It can be seen that quadrisyllabic onomatopoeia with [li] in the second syllable and [la] as the last syllable is the most common form of onomatopoeia since it is allowed by all the patterns. The mirrored shape of sonority contour between the first and second foot in pattern BDAC and CDAB, which is a typical form of reduplicative quadrisyllabic onomatopoeia, is similar to a small wave followed by a big wave, showing that even though the segments have gone through different changes, the sonority contour is maintained by simulation during reduplication.

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Not just in conversational speech: the case of Chinese T2 Sandhi

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Mandarin Chinese has an extensive suprasegmental feature called tone sandhi---a process that alters the phonetic shape of adjacent tones when they come into contact with each other in a sequence of syllables (Chen, 2000). While great efforts have been made on the perception and production of the categorical lexical tones, research efforts on the L2 acquisition of Chinese tone sandhis remain limited (H. Zhang 2007; Yang, 2016).

With an aim to help fill the gap in the literature, this study focuses on the acquisition of T2 sandhi by English speaking learners of Chinese. T2 sandhi is a process that changes a T2 into T1 in conversational speech (Chao, 1968) when it is the second tone in a trisyllabic word or phrase in which the first syllable is either T1 or T2. Fifty-three L2 learners of Chinese from four different levels of classes in a public university in US participated in this study. Data collection relied on passage readings, where three-syllable words/phrases were embedded, depicting all the environments where T2 sandhi may occur (Lin, 2007). The recording was conducted by the researcher in a quiet room on the university campus with LogicPro X software installed in a MacBook Pro laptop at the sampling rate of 44.1kHz, using a unidirectional Shure MS58 microphone attached to the computer. The researcher and another qualified Chinese native speaker transcribed target words/phrases independently, yielding an inter-judge consistency rate of 93.8%. The final transcribed tone data were submitted to SPSS v.25 for statistical analysis.

Results of the study revealed a surprising 32.8% of T2 Sandhi occurrence in the students' passage readings, despite the fact that it is typically expected to occur in conversation speech. Of all the cases of T2 Sandhi occurrence, 63.3% happened in T1+T2+OtherT environment, while 36.7% occurred in T2+T2+OtherT environment. Independent Samples T test revealed a statistically significant difference ($t=2.567$, $p=0.012$ at 95% confidence interval). Thus, T1 of the first syllable in trisyllabic words and phrases in Chinese exerts greater tonal carryover effect on the second syllable than T2 of the first syllable. We found no significantly different effect from the tone of the third syllable on T2 sandhi. The flattening effect of the T2 in the second syllable was mainly due to the coarticulatory effect from the preceding tone in the first syllable rather than the following tone.

In addition, we found that for T2 Sandhi, it was the lower level students who produced more tone sandhi cases, resulting in a ranking pattern of Level 1 > Level 2 > Level 4 > Level 3. Group comparison of lower level (levels 1 and 2) and upper level (levels 3 and 4) revealed a significant difference in T2 Sandhi occurrence between the two larger groups ($t=2.714$, $p=0.008$ at 95% confidence interval). We believe the strong phonetic motivation of tonal assimilation naturally overrides the pedagogical effect in the field. Learners' sense of norm also plays a role in their acquisition process.

The Peripheral Applicative *gei* in Mandarin Chinese

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In this paper I focus on the applicative *gei* which is located in the ν P periphery. Tsai (2017) has examined a kind of applicative *gei* higher than the TP domain. An example is shown in (1) and its derivation is shown in (2). In (2), the applicative projection is higher than TP, which is quite different from the high or low applicatives inside the ν P domain as discussed in Pylkkänen (2008).

(1) Ta juran gei wo pao-le!

He unexpectedly GEI me run-ASP 'He ran away on me unexpectedly!'

(2) [_{TopP} Ta_i [_{EvaP} *juran* *gei*_j [_{ApplPhigh} wo t_j [_{TP} t_i]

Tsai proposes that this particular applicative *gei* is applicative-related since only the first person singular pronoun is allowed to be the affectee, and an exclamatory force and evaluative mood is required by having the adverb *juran*. These two facts are shown in (3) and (4) respectively.

(3) *Ta juran gei women/ni/nimen/ta/tamen pao-le!

He unexpectedly GEI us/you/you(pl.)/him/them run-ASP

(4) ??Zuotian ta gei wo pao-le.

Yesterday he GEI me run-ASP 'Yesterday he ran away on me.'

Compared to the very high applicative *gei*, I propose that a lower applicative *gei* can also be observed in Mandarin Chinese. Unlike the *gei wo* phrase in (1), the one in (5) exhibit an order and force mood. In addition, the appearance of the adverb *juran* is incompatible with this lower *gei wo* as in (6). Finally, the sentence in (1) denotes a telic situation, while the sentence in (5) is an atelic one.

(5) Ni gei wo guolai!

You GEI me come 'You, come here!'

(6) Ni (*juran) gei wo guolai!

Since the lower applicative *gei* can be higher than the *Ba* phrase as in (7), I propose that this is a lower applicative *gei* in the vP periphery when compared to the very high applicative *gei* in the TP periphery as in Tsai (2017). Note that the *Ba* phrase has been proposed to be located around vP (see Li 2006). Following the derivation in Tsai (2017), I therefore propose that *wo* in (5) is located in Spec, peripheral ApplP (i.e. Kim 2012), and the applicative *gei* undergoes head movement to Deontic Modal Phrase (i.e. Tsai 2015), which conveys the order or force mood.

(7) Ni [gei wo] ba zhe jian shi zuowan!
 You GEI me BA this CL matter finish ‘You must finish this matter!’

(8) [TP Tai [MPDEO geij [peripheral ApplP WO tj [vP ti]]]]

While the very high applicative *gei* in Tsai (2017) is located in the complementizer layer (TP), this lower applicative *gei* is located in the inflectional layer (vP) instead. This discussion of the peripheral applicative *gei* then provide us with more understanding of the functions and the syntactic diversity of *gei*.

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Prepositions and the illusion of double object constructions in Cantonese

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claim Analyzing understudied patterns of relativization and parasitic gaps, I argue that all Cantonese dative constructions, which express events where agents cause themes to be possessed by affectees, contain a potentially null preposition selecting the indirect object. Ostensible double object constructions (DOCs) really involve null prepositions at logical form (LF) or prepositional deletion at phonological form (PF). data The three traditionally recognized dative constructions in Cantonese (herein called A, B, and C) are:

- | | | |
|--|---|---|
| (1) Dative A (S V DO P _{bei} IO) ‘Overt-<i>bei</i> prepositional’ ngo ⁵ bei ² /deng ³ [go ² di ¹ syu ¹] 1sg give/throw [dem cl book] bei² [go ² di ¹ jan ²] dat [dem cl person] ‘I give/throw the books to the people.’ | (2) Dative B (S V DO IO) ‘Inverse double object’ ngo ⁵ bei ² [go ² di ¹ syu ¹] 1sg give [dem cl book] [go ² di ¹ jan ²] [dem cl person] ‘I give the books to the people.’ | (3) Dative C (S V IO DO) ‘Regular double object’ ngo ⁵ gaau ³ [go ² di ¹ jan ²] 1sg teach [dem cl person] [go ² di ¹ zi ⁶] [dem cl letter] ‘I teach the letters to the people.’ |
|--|---|---|

The theme-DO precedes the affectee-IO in A+B, but follows it in C. The DO is always bare. The overt dative preposition *bei²* 畀 introduces IO in A, but not in B+C. Verbs select these constructions: *bei²* 畀 ‘give’, only A/B; *gaau³* 教 ‘teach’, *zuk¹* 祝 ‘wish’, only C; other verbs (*deng³* 掙 ‘throw’, *waan⁴* 還 ‘return’ etc), only A. analysis Relativization confirms Tang’s (1998) claim that A+B are underlyingly prepositional and derivationally related; prepositional *bei²* occurs in A at LF+PF, but is optionally deleted in B at PF under haplology with verbal *bei²* when the DO is phonologically light. B thus does **not** exemplify the typologically rare inverse doc found in Manchester English (Haddican 2010). Furthermore, contra Tang, I argue that C is prepositional rather than a regular doc, but C is unrelated to A+B, since its preposition is always null:

- (4) **Dative B**^{5,2} (S V DO² P_{bei} IO)¹ **bei** ‘Covert-² [go*bei²* diprepositional’¹ jan²] (5) **Dative C** ngo⁵ gaau³ (S V P_ø [øgoIO DO)² di¹ jan ‘Null prepositional’²] [go² di¹ zi⁶] ngo bei [go di syu]

1sg give [dem cl book] dat [dem cl person] 1sg teach dat [dem cl person] [dem cl letter] ‘I give the books to the people.’ cf. (2) ‘I teach the letters to the people.’ cf. (3)

In all constructions, the bare DO is relativizable by gapping. In contrast, the IO triggers obligatory resumption, indicating its dependence on a preposition, whether overt in A, deleted at PF in B, or always null in C:

| | | |
|---|---|--|
| 1sg give/throw [dem cl book] | 1sg give [dem cl book] dat | 1sg teach dat 3pl [dem di ¹ zi ⁶] [|
| bei ² *(keoi ⁵ dei ² _i) [go ² di ¹ jan ² _i] dat 3pl [| *(keoi ⁵ dei ² _i) [go ² di ¹ jan ² _i] | go ² di ¹ jan ² _i] cl letter] [dem cl |
| dem cl person] | 3pl [dem cl person] | person] |
| A: ‘the people that I give/throw the books to’ | B: ‘the people that I give the books to’ | C: ‘the people that I teach the letters to’ |
| (6) ngo ⁵ bei ² /deng ³ [go ² di ¹ syu ¹] | (7) ngo ⁵ bei ² [go ² di ¹ syu ¹] bei ² | (8) ngo ⁵ gaau ³ ∅ *(keoi ⁵ dei ² _i) [go ² |

Similarly, bare DOs license parasitic gaps (Cheung 2015), but prepositional IOs cannot, requiring resumption:

- (9) a. hai⁶ mat¹ je⁵-je⁵_i, ming⁴ zai² ^ [mou⁵ waan⁴-dou³ **PG**_i bei² keoi⁵] / ^B [mou⁵ bei²-dou³ **PG**_i bei² keoi⁵] / ^C [mou⁵ is what-thing Mingzai [neg return-compl dat 3sg] / [neg give-compl dat 3sg] / [neg gaau³-dou³ ∅ keoi⁵ **PG**_i] ji⁴ gaa¹ zung⁶ m⁴ gin³-zo² e_i tim¹ aa⁴ teach-compl dat 3sg] now even lose-pfv prt q
- ‘What is it that Mingzai has now lost without ^Areturning / ^Bgiving / ^Cteaching to him?’ DO
- b. hai⁶ bin¹ go³_i, ming⁴ zai² ^ [mou⁵ waan⁴-dou³ go² di¹ zi¹ liu⁶ **bei**² *(keoi⁵_i)] / ^B [mou⁵ bei²-dou³ go² di¹ zi¹ liu⁶ is who Mingzai [neg return-compl dem cl info dat 3sg] / [neg give-compl dem cl info
- bei**²*(keoi⁵_i)] / ^C [mou⁵ gaau³-dou³ ∅ *(keoi⁵_i) go² di¹ zi¹ liu⁶] zau⁶ caau²-zo² e_i aa⁴ dat 3sg] / [neg teach-compl dat 3sg dem cl info] then fire-pfv q

Intended: ‘Who is it that Mingzai has fired without ^Areturning / ^Bgiving / ^Cteaching the info to?’ IO All the dative constructions are thus prepositional. Contra Tang, privative verbs (*zaang*¹ 爭 ‘owe’, *tau*¹ 偷 ‘steal’ etc) do not take C, whether as a regular DOC or null prepositional dative, but are monotransitives with possessed themes: *ngo*⁵ *tau*¹ **keoi**⁵ **di**¹ **syu**¹ ‘I steal **he cl books**’ = ‘I steal his books’. Unlike true C verbs, they license external possessor passives (Huang et al. 2009): contrast *keoi*⁵ *bei*² *ngo*⁵ **tau**¹-zo² *di*¹ *syu*¹ ‘He pass I **steal**-pfv cl book’ ~ ‘He was book-stolen by me’ with **keoi*⁵ *bei*² *ngo*⁵ **gaau**³-zo² *di*¹ *zi*⁶ ‘He pass I **teach**-pfv cl letter’ ~ ‘He was letter-taught by me’ (intended). references Cheung, C. C.-H. 2015.

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V-doubling and Durative/Frequency Expressions in Chinese

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This paper describes, and tackles, a novel puzzle on Chinese Durative/Frequency Phrases (DrP/FrPs).

(1) a. Lisi qi-le nei-pi ma (san-tian / si-ge xiaoshi) [canonical sentence]

Lisi ride-PFV that-CL horse three day four-CL hour

'Lisi rode the horse (for three days/for four hours).'

b. Lisi **qi** nei-pi ma **qi**-le *(san tian / si-ge xiaoshi) [V(erb)-doubling sentence]

Lisi ride that-CL horse ride-PFV three day four-CL hour

The new observation is that DrP/FrPs, otherwise optional in (1a), become *obligatory* in a V-doubling sentence (1b). If optionality indicates adjuncthood, why should this be? What does this reveal about the nature of DrP/FrPs, and the mechanisms of Chinese V-doubling, both highly contested theoretical issues in the literature (see Huang 1982, 1992; Paul 2002; Cheng 2007 a.o. for different proposals)? **Is the puzzle real?** A simple answer is perhaps that *qi* 'ride' is transitive, and hence (1b) without a DrP/FrP is bad, on a par with **Lisi qi-le*. However, under a question-answer pair, *Lisi qi-le* may serve as a felicitous answer to a question. But no context would improve the status of (1b). Moreover, there're clear examples where an intransitive verb is doubled, and yet a DrP/FrP remains obligatory.¹

(2) Lisi **shui** keneng **shui**-le *(san tian / si-ge xiaoshi)

Lisi sleep maybe sleep-PFV three day four-CL hour

'Lisi slept (for three days / for four hours) maybe.'

Note that *Lisi shui-le* 'Lisi slept' is perfect out-of-the-blue. One thus cannot attribute the obligatoriness of DrP/FrPs in (1b) to unsaturated θ -roles; rather, the correct characterization seems to be that DrP/FrPs become obligatory whenever we have V-doubling. Let's make this an *explanandum*.

Proposal. I'll thus pursue a new mechanism of V-doubling which has this desired correlation. Following some recent works (Abels 2001; Vicente 2007; Hein 2018 a.o.), I assume that extraction of a head out of an XP undergoing remnant movement will *not* result in silence of the head within that XP in its terminal position. The core idea is then V-doubling is basically ('remnant') VP-fronting. If so, we then not only yield V^o-doubling, but can also ground the DrP/FrP obligatoriness on a standard constraint on movement: that movement is 'anti-local' (see Abels 2003; Bošković 2005 a.o.).

¹ The use of an intervening adverbial like *keneng* 'maybe' in (2) is necessary for intransitive V-doubling to be possible in Chinese. This may have to do with some general OCP-like effect that bans identical adjacent elements (Leben 1973; Goldsmith 1976; Sze-Wing Tang 2000 a.o.).

- (3) a. ✓ [_{VP} [_ν [_{FP} DrP/FrP [_F [_{VP} V Obj]]]]] b. ✗ [_{VP} [_ν [_{VP} V Obj]]]

Fronting of VP must first stop at the edge of ν P (which constitutes a phase; see Chomsky 2000). In the absence of a DrP/FrP (i.e. the absence of the DrP/FrP-introducing functional head F^0), the movement would instantiate Compl-to-Spec movement in (3b), violating antilocality. In canonical sentences like (1a), there's no VP-fronting, and thus whether or not we select F^0 in the numeration makes no difference. **Evidence.** Due to space, I'll present only two main pieces of evidence for movement in V-doubling:

(i) idiomatic interpretations are available; (ii) lexical identity effects exist for both Vs.

- (4) Lisi **kai** dao **kai**-le liu-ge xiaoshi (5) *Lisi **du** shu **kan**-le liang tian

Lisi open knife open-PFV six-CL hour Lisi read book read-PFV two day

'Lisi performed medical operations for six hours.' 'Lisi read for two days.'

Consequences. As compared to the existing proposals, the proposed mechanism of V-doubling avoids the needs of positing of a new 'placeholder' category Proxy^o (as in Paul 2002), and of relying on an optional postsyntactic fusion operation that leads to multiple chain-link spell-out at PF (as in Cheng 2007). In fact, the current proposal is more in line with Huang's (1982, 1992) seminal proposals on Chinese V-doubling (although Huang base-generates the VP). Furthermore, the current work bears on the argument—adjunct distinction fundamental in linguistic theorizing. In fact, disagreements on the exact status of DrP/FrPs exist, e.g. Huang (1992) treats them as complements; Soh (1998) treats them as VP-adjuncts. The current outcome thus supports treating these adverbials as *specifiers* (Cinque 1999) being introduced by a low F^0 , which allows us to combine it with the notion of antilocality to solve the current puzzle. Crucially, none of the existing accounts has the same potential even with the same assumption. The new puzzle, hence, helps illuminate the underlying mechanisms of V-doubling.

The AABB-Like Reduplication of Disyllabic Adjectives and the Related Commendatory/Derogatory Senses

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There are plentiful reduplications of disyllabic words in Chinese, with AABB pattern being one of them. Among previous studies on AABB reduplication, most of them focus on the precipitating (or limiting) factors of disyllabic adjectives reduplicated in AABB form. These factors include but not limited to subjective evaluation (Zhu 1956; Li and Lu 2016), sentimental color (Zhu 1956; Hua 2002a; Li and Lu 2016), positive and negative words (Liu 1995), willingness (Hua 2002b; Hua 2003), subjective emotion (Hua 2002b; Hua 2003), pragmatic mentality (Hua 2002b; Hua 2003) and commendatory (or derogatory) meanings of words (Hua 2002b; Hua 2003), neither of which is exactly the same as another, but to a certain extent.

However, there were many issues to be clarified on the previous research methods. 1) The number of given proof is highly limited. On one hand, only enumeration, not exhaustive, was used to select the evidence in their favor. On the other hand, the adverse evidence is deliberately exclusive in their logical argumentation (Zhu 1956; Liu 1995; Hua 2002a; Hua 2002b; Hua 2003; Li and Lu 2016). Few examples were sufficient to generalize a rule. 2) Mainly through the view of introspection, previous researchers made judgments based solely on their own language instinct and experience, which was not convincing.

Previous researchers concluded that commendatory words can be reduplicated in AABB pattern effortlessly, while derogatory ones are exactly the opposite. In this paper, we use the combination of language instinct test and data analysis to prove the positive correlation between AABB reduplication and commendatory meanings of the words. The corpora used in the research include *Modern Chinese Dictionary* (7th edition, 2016) and *Dictionary of Adjective Usage* (1991). Xue and Duanmu's method (2016) for perception test sets as a salutary reference and model in this essay. Synchronically, the more participants involve, the more data we acquire. Diachronically, tracking tests help us trace language changes.

We hold the opinion that in addition to AABB, other forms of duplications, such as AA, AAB, ABB, A li AB and ABAB, are more or less related to the commendatory meanings of the words as well.

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Tonal Inventory and Segmental Complexity in Chinese

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It is well known that Chinese has enormous diversity among its varieties due to the long history, vast geographic distribution and speakers' demographic dynamics. Since Li Fang-kuei's classification early in 1937 (Li 1937), Yuan Jiahua (1960) has classified the Chinese dialects into 7 groups: Mandarin, Wu, Xiang, Gan, Kejia (Hakka), Yue (Cantonese), and Min. Dividing the dialects into three larger groups – the Northern group, the Central group (Wu, Gan, and Xiang), and the Southern group (Kejia, Yue, and Min), Norman (1988) further points out that unlike the Northern group, the Central and Southern groups exhibit an extraordinary diversity, particularly in phonology and lexicon (Norman 1988).

It is often assumed that languages are likely to compensate simplicity in one subsystem by complexity elsewhere. In other words, phonological complexity may negatively correlates with morphological or syntactic complexity. Similarly, there may be a negative relation between the size of segmental inventory and syllable structure complexity. Recent cross-linguistic studies, however, find that the hypothesis of complexity compensation among subsystems of a language may not necessarily be supported by linguistic evidence (e.g., Shosted 2006, Maddieson 2005ab, 2013, Maddieson *et al.* 2011). For instance, it has been found that while consonant and vowel inventory sizes show no correlation with each other, complex syllable structure shows some association with absence of tone (Maddieson 2005ab).

The present study aims to understand the relation between tonal inventory and segmental complexity in Chinese from a typological perspective. Of particular interest is to examine Wu varieties and Min varieties. While Wu and Min are known to preserve various ancient features of the language, they substantially differ from each other in phonology. In particular, the Wu phonology contains a larger inventory of consonants and vowels whereas a noticeably smaller segmental inventory is found in many Min varieties (叶晓锋 2011). Given the considerable difference of segmental complexity, the two dialects provide a source of data to investigate the relation between segmental and tonal inventories. Results of a quantitative analysis in the present study reveal that segmental complexity positively correlates with tone system complexity in that marked tone types tend to occur more frequently in Wu varieties than in Min varieties. Therefore it is suggested that segmental simplicity may not be compensated by tone system complexity in Chinese.

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Factive island is not an island in Mandarin

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It has been cross-linguistically reported that the *wh*-extraction from factive complements is restricted as shown in (1).

- (1) a. *Who did Peter whisper that Mary likes __?
b. Who did Peter think that Mary likes __? (Sabel 2002)

Such a phenomenon is often called factive island, a type of weak islands. In the previous literature including Haegeman and Ürögdi (2010) and Basse (2008), the ungrammaticality of the extraction has been explained in terms of blocking effect of the intermediate event operator in a Relativized Minimality fashion. This study challenges to that analysis by showing that matrix interpretation of *wh*-phrases embedded in factive complements is possible in Mandarin Chinese. We argue that the intermediate event operator does not block the extraction at LF and a factive island, therefore, is not an island in Mandarin comparing the empirical data of another weak island (i.e. a *wh*-island).

Experiment: We hypothesized that if a factive island effect exists at LF, the matrix scope reading of *wh*phrases in an embedded clause in (2) should be unavailable. In order to test this, we included two sentence final particles particles *-ma* (YNQ) and *-ne* (WHQ) which lead to a specific scope reading. According to the hypothesis, the ungrammaticality of (2b) is expected.

- (2) Zhengzhi zhidao Lisi chuban-guo na-ben-kehuanxiaoshuo ma/ne?
Zhengzhi know Lisi publish-ASP which-CL-science.fiction Q-particle

- a. 'Did Zhengzhi know Lisi has published which book?' (embedded scope reading of *wh*)
b. 'Which science fiction did Zhengzhi know Lisi has published?' (matrix scope reading of *wh*)

Due to the lexical ambiguity of *wh*-phrases (such as *shui* 'someone' or 'who'), we used D-linked *wh*-phrases which are interpreted as *wh*-phrases in most cases. *Wh*-phrases always occurred at object positions in the embedded clauses. In our experiment, five different matrix verbs (*yishidao* 'realize', *zhidao* 'know', *xiangxin* 'believe', *wen* 'ask', *diaocha* 'investigate') were tested. Total 40 target sentences (= 4 sets x 5 verbs x 2 markers) mixed with fillers were distributed across four sets in a Latin square design. 32 Mandarin speakers were asked to judge the acceptability of the given sentences with a seven-point scale.

Result: The results in (3) show that three different types of verbs behave differently. When the matrix verb is a factive verb (realize and know), the *wh*-extraction at LF for the matrix scope reading is permissible. In fact, the matrix scope reading is preferred to an embedded scope reading. In addition, the

scores of acceptability of matrix scope reading are significantly higher in the factive island verb sentences than in the other island verb sentences (Logistic regression: $p < .001$). These results suggest that LF movement is not subject to factive islands.

| | Factive island | | Neither | Wh(ether)-island | |
|---|----------------|------|---------|------------------|-------------|
| Acceptability (0: the least - 6: the most) | realize | know | believe | ask | investigate |
| -ma (embedded scope) | 2.81 | 3.58 | 3.12 | 5.45 | 5.52 |
| -ne (matrix scope) | 4.05 | 4.95 | 3.85 | 2.96 | 3.78 |

(3)

In addition, we found the strong preference of embedded scope reading in *wh(ether)* island sentences. As it is known as a weak island, the matrix scope reading is not unavailable.

Conclusion: This study shows that factive verbs do not create an island in Mandarin. The analysis based on the blocking effect of an event operator is not applicable to Mandarin data, which undergoes LF *wh*movement.

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Strength in deontic modals as acceptability and optimality

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Backgrounds: (a) In the modal logic tradition, necessity modals (MUST) stand in dual relation to possibility modals (MAY), where $MUST(p) \leftrightarrow \neg MAY(\neg p)$. (b) A cross-linguistic distinction is made among necessity modals, where the 'strong' MUST asymmetrically entails the 'weak' SHOULD (von Stechow & von Stechow 2008).

Proposal: This paper entertains a logical possibility entailed by (a) and (b): a modal that (i) stands in dual relation to SHOULD and (ii) displays an asymmetrical entailment relation to MAY. Following the spirit of Beddor (2017), this paper argues that the expression *you-liyou* 'have reason' in Mandarin satisfies both (i) and (ii). It is best characterised as a 'strong' (deontic) possibility modal, an understudied piece in the study of deontic modality (see Fig. 1 below).

(a) Force difference. Provided that the Chinese counterpart of SHOULD is *yinggai* (Huang, Li & Li 2009), the dual relation between *yinggai* and *you-liyou* is confirmed in (1). Assuming a deontic conversational background, (1a) and (1b) are logically equivalence.

- (1) (a) ni **yinggai** qu \leftrightarrow (b) ni **meiyou-liyou** bu qu *SHOULD* (p) \leftrightarrow \neg *YOU-LIYOU*($\neg p$) you should go you not.have-reason not go 'You should go.' 'You have no reason not to go.'

The status of *you-liyou* as a possibility modal can be demonstrated by (2). Modals with contradicting prejacent can be coherently conjoined only if they are possibility but not necessity ones.

- (2) ni {a. **you-liyou**/ b. **#yinggai**} qu, dan ni ye {a. **you-liyou**/ b. **#yinggai**} bu qu you have-reason should go but you also have-reason should not go

a. 'You have reason to go, but you also have reason not to go.'

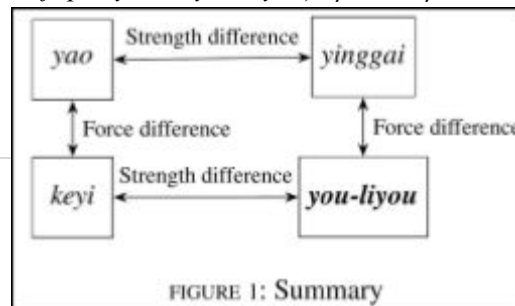
→ *coherent reading*

b. # 'You should go but you also should [not go].'

→ *incoherent reading*

(b) Strength difference. The asymmetrical entailment relation between *keyi* 'may' and *you-liyou* is revealed in (3) and (4). (3) suggests that *you-liyou* is stronger than *keyi* (hence asymmetrical entailment), since the latter can be reinforced by the former by *shenzhi* 'if.not' (but not vice versa). In (4), the conversational implicature that comes with the weaker modal in the first conjunct can be cancelled by negating the stronger modal in the second as in (4a), but not vice versa as in (4b).

- (3) ni **keyi**, shenzhi **you-liyou** qu (*Infelicitous if we flip keyi and you-liyou*) you may if.not have-reason go 'You may, if not have reason to, go.'



- (4) (a) ni **keyi** qu, dan ni **mei-liyou** qu you may go but you not.have-liyou qu 'You may go, but you do not have reason to go.' (b) # ni **you-liyou** qu, dan ni **bu keyi** qu you have-reason go but you not may go
'You have reason to go but you [may not] go.'

Analysis: (1)-(4) show that *you-liyou* is the possibility counterpart of *yinggai* and the logically stronger version of *keyi*. The split between strong and weak necessity modals is mirrored by an analogous split within possibility modals. Instead of attributing the strength to a gradable scale (e.g. Lassiter 2017, i.a.), I follow the Kratzerian framework and Silk's (2012) modelling of modal weakness and suggest the strength is best understood as *acceptability* and *optimality* among modals with the same quantificational force. Optimality modals like *yinggai* and *you-liyou* involve an extended modal base with a set of contextual assumptions made by the speaker (i.e. $C_{g(w)}$), unlike acceptability modals.

$$(5) \llbracket \text{you-liyou} \rrbracket^{C,w} = \lambda f. \lambda g. \lambda p. \exists w' \in \text{MAX}_{<g(w)} (\cap (f(w) \cup C_{g(w)})): p(w') = T$$

$$(6) \llbracket \text{keyi} \rrbracket^{C,w} = \lambda f. \lambda g. \lambda p. \exists w' \in \text{MAX}_{<g(w)} (\cap f(w)): p(w') = T$$

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Exploring speaking fluency and disfluency in L2 Chinese

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This study explores different fluency and disfluency features of oral responses produced by second language (L2) learners of Chinese, as an effort to investigate how these features differ and develop at different proficiency levels of L2 Chinese. Fluency has been extensively researched in the field of second language acquisition, as it is crucial for characterizing performances of L2 speaking, describing trajectories of L2 development, and revealing cognitive processes of speech production. However, little research has been devoted on speaking fluency and disfluency in L2 Chinese, with only a handful of studies dealing with advanced level L2 Chinese learners (Shih & Wu, 2011; Zhai, 2011; Jin & Mak, 2013; Chen, 2015). It is still under-addressed how fluency and disfluency differ across different proficiency levels of L2 Chinese including lower level learners. The present study thus included all levels of L2 learners typically found in a university-level Chinese language program and examined fluency and disfluency features of their oral responses. Twenty L2 Chinese learners from four course levels in the Chinese language program of a U.S. university were recruited in the study. Their responses to an independent speaking task were rated first and then analyzed on twelve fluency and disfluency features, comprising three sub-categories: rate and amount of speech, pausing and repair. The results showed that rate features of speech is the best predictor of oral proficiency levels of L2 Chinese learners. The other important factor is silent pausing. The findings of this study can have implications for teaching and assessment on speaking in L2 Chinese.

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Right dislocations: function and form in spoken Mandarin Chinese

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Probably better known as right dislocations (RDs), the constructions in which constituents are uttered at the end of a sentence instead of their unmarked sentence-internal position have been subsumed under different labels, and analysed from different perspectives and with different approaches. The first descriptions of RDs were in terms of 'afterthoughts' or corrective constructions (Tomlin 1986), while subsequent studies focused on their discourse-organization function (Lambrecht 1994). Yet another trend of research addressed the emphatic or attributive function of RDs (Aijmer 1989, Grosz & Ziv 1998). Despite a certain degree of overlapping of these constructions, many scholars have pointed out differences in their functions (Lee 2013) and in their co-referential and prosodic profiles and as well as tendencies to occur in different types of sentences (Crocco & Badan 2019).

Nevertheless, unlike Indo-European languages, many aspects of Chinese RDs remain yet to be addressed and defined. This study seeks to contribute to a better understanding of referential right dislocations in Mandarin Chinese through a corpus-based analysis of ca 22 hours of unscripted telephone conversations between native speakers of Mandarin Chinese (CallFriend Corpus, available from <http://talkbank.org>). The analysis focuses on referential RDs' degree of activation, co-referential forms, sentence-types and degree of prosodic integration. Based on the results of the statistical models run with R, i) there are at least two significant functions of RDs, the first linked to discourse organization (referential function) and the second one to (inter)personal relationship (interactive function), exemplified by (1) and (2) respectively; ii) the degree of activation of the dislocated referents is strongly connected with the sentence-type it occurs in; iii) the co-referential and the prosodic profile of RDs are connected with all the tree elements above.

(1). 海蟹啊, 一块六到两块钱吧, 一磅[...]
Sea.crabs PRT, one CLF six arrive two CLF money PRT, one pound
'Sea crabs! One dollar sixty up to two dollars, one pound'

(2). 你 不是要考那个 医生 吗 那个
2SG NEG be must take that.CLF doctor PRT that.CLF
'Didn't you say you have to take that doctor (thing), that?'

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论汉语书面语文白混杂的风格对汉语“词”的定义的挑战

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作为多级语法单位（语素、词、词组、句子）中重要的一环，词的定义一直是语法界一个具有挑战性的问题。现在对于词还没有形成一个简单的概括性的定义，而是多用一种多维综合的方式来定义，包括：可以单说，也即能够独立成句的最小的语法单位是词，如：好、看；不能单说，但可以单用，也即不依附于别的语言单位而能具有一定语法功能的语法单位是词，如都、已经；既不能单说也不能单用，但把所有确定是词的单位提开之后单独留下的也是词，如语气助词吗、呢和结构助词了、的等。换一个角度，我们也可以总结为，位于句法树(syntactic tree)终端节点下面的语法单位都是词。

从近年来提出的韵律语法理论的角度来看，我们还可以从语素的类型来看词的定义。从该角度，汉语里最常见的语素包括两大类型：句法自由、韵律自由语素（如好、看），和句法黏着、韵律黏着语素（如伟、民）。前一种语素便是（单音节）词，而后一种语素不能单独成词，必须跟其他语素结合才能构成词，如伟大、人民。逻辑上的第三种可能性是句法黏着、韵律自由语素，这种可能可以用来表示单音节虚词，如从、才、吗、了。这种情况也是词。这三种情况跟从句法树终端节点的角度得出的结论是吻合的。

问题出在语素类型的第四种逻辑上的可能性上，也即句法自由、韵律黏着语素。这类语素可以单独充当句子里的一个成分，如状语、宾语，但又明显不能单用，而一定要与其他语素构成一个嵌偶词才能使用。比如：倍感、倍增、倍尝、倍觉，倍受中的倍，它具有相当的能产性，可以在句中作状语，如“一个人时他倍觉凄凉”。再比如案发，案中、本案、此案、（连犯）三案中的案，也不是一个成词语素，可上述例子似乎决不能分析为词，而是一种在词组层面的组合。这种情况给现代汉语关于“词”的定义提出了挑战。

根据现代汉语语体的分类，上面这第四种情况在汉语书面语里的典雅体里使用最多。上述用法直接来源于古代汉语，是古代汉语在现代汉语里的遗留，这些词语跟现代汉语的其他成分结合在一起，形成一种文白混杂的语体风格。我认为，古代汉语跟现代汉语最大的区别就是语素结构，在古代汉语里，几乎所有的语素都单独成词，进而成句，而无需跟别的语素结合先成词再成句。而在现代汉语的典雅体中，文白杂糅，那它们是词还是不是词呢？我们是否应该用同样的标准去检验它们呢？本文将对问题进行初步的思考和初步的分析。

Focus But Not Focus Movement: the Syntax of the Mandarin *lian...dou* Construction

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The Puzzle

Most existing studies on the syntax of *lian...dou* have focused on examples like (1), where the *lian* phrase is the focus and has undergone movement driven by a focus feature (Shyu, 1995) or a maximality feature (Constant & Gu, 2010).

(1) Lian pingguo ta dou bu xihuan chi.

Lian apple he dou not like eat

'He doesn't even like to eat [apples]_{FOC}.'

But *lian...dou* can evoke VP-focus and sentential-focus as shown in (2a) and (3), in which only part of the focus has moved. These examples challenge the above-mentioned analyses because feature checking cannot happen between the probe and a partial element of the goal. (2) Context: His girlfriend didn't want to get married, but... Lian fangzi ta dou mai-LE.

Lian house he dou buy-ASP

a. 'He even [bought the house]_{FOC}.'

b. 'He even bought [the house]_{FOC}.'

(3) Chuntian lai-LE. Lian shu dou zhang-Le xin zhiya Spring come-ASP Lian trees dou grow-ASP new twig

'The spring is here. Even [the trees have grown new twigs]_{FOC}.'

Solving the Puzzle

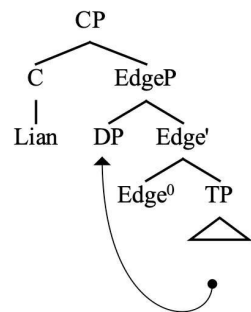
We follow Fanselow and Lenertová (2011) and assume that an element with structural stress must undergo immediate linearization at merge while an element with contrastive stress doesn't have to. This gives rise to a side-effect of linearization: an element with structural stress cannot move across another element that also bears structural stress. Otherwise, the derivation crashes.

We propose that *lian...dou* has a syntactic structure in (4). *Lian* is a complementizer and selects an EdgeP. Edge⁰ is a functional head. It has an unselective edge feature (Chomsky, 2008) and requires its specifier position to be filled.

In (1), the object DP bears contrastive stress and is not linearized immediately. Thus, whether the higher subject DP bears structural stress or not, it won't block the movement of the object DP to Spec,EdgeP.

In (2), the focused element contains a VP. The contrastive stress falls on the object DP (Ladd 1983; Welby 2003). Thus, like in (1), the object DP is not linearized immediately and can further move across the higher subject DP to reach Spec,EdgeP.

Example (3) has a broad focus and in literature it has been treated as not focusing anything at all (Selkirk, 2008; Katz & Selkirk, 2011). The entire sentence is the new information and both arguments have structural stress (Selkirk 1995; Kratzer & Selkirk 2007). This means that both arguments should undergo immediate linearization. By the time the higher argument is merged, an ordering statement has been established with the higher argument preceding the lower one. Moving the lower across the higher is not allowed as it will contradict the existing ordering statement. (4)



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Why *er* is not the ancestral form of *ne*

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Ne is multifunctional in Mandarin Chinese. There are several positions of *ne* in the sentence: being a topic marker, this particle is found in the sentence-initial position behind the topic component; being a sentence final particle in narrative sentences, this *ne* is used as a mood particle (Constant, 2011; Shen, 2009; Cao, 2000 ; Wang, 2007). In interrogative sentences, *ne* can also exist and it has multiple functions.

Finding out the previous form of *ne* is appealing because when finding out the previous form, we can then find out the grammaticalisation process of *ne* and find out which features are retained and which features are abandoned through the changing process. Previous studies bring out the argumentation that *er* is the ancestral form of *ne* due to phonological reasons. A large-scale corpus study makes it possible to refute this argument.

A two-phase large-scale corpus study is conducted. The corpus I use is the BLCU corpus because the characters included in this corpus is around 15 billion characters (newspaper: 2 billion; literature: 3 billion; *weibo*: 3 billion; technology: 3 billion; others: 1 billion; archaic Chinese: 2 billion). BCC corpus is one of the largest existing Chinese corpora nowadays. In my analysis, I use only the archaic Chinese section and this section covers the materials from 2070BC to 1912AD. In the first phase, I analysed the following 44 books (including the approximate date of writing of the book) taken from the history. In the second phase, I analysed all the interrogative sentences containing *er* as a sentence final particle in the archaic Chinese section in BCC corpus. Data shows that the usage of *er* is little and there is little function overlap between *er* and *ne*. Since there is a 1000-year gap between *er* and *ne*, the phonological relationship between these two particles is not convincing. Therefore it is hard to draw the conclusion that *er* is not the ancestral form of *ne*. Keywords: question particle; historical form; grammaticalisation

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东乡语-汉语双语者的语言迁移研究 ——以东乡族学生英语词汇习得为例

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东乡族是中国境内的少数民族之一，因其主要聚居于甘肃临夏东乡县而得名。东乡族拥有本民族语言东乡语，但因为它没有成系统的文字，且长期以来又与汉族有着较多经济文化交流，该族人民大多都兼通汉语。而这种强势语言-弱势语言、社区语言-继承语言的模式在中国是十分具有代表性的——许多少数民族裔者都是双语者。那么，以东乡语为例，作为母语的少数民族语言和作为二语的汉语，究竟在语言运用中扮演了什么角色？对于这个问题，本文选择以语言迁移这一

具体场景来进行研究。而又因为词汇是语言学习的基础，这个过程就成为了一个绝佳的切入点。

本研究采取的方法主要是对比假设法和问卷调查法。基于对比语言学，本文分析了语言之间的异同点，预测不同母语的学生可能出现的迁移行为和程度，并通过调查问卷的方式，证实或推翻了这些预测。调查对象则是来自甘肃兰州清华小学和东乡县大板镇中学的东乡族和汉族学生。在有效问卷反映的个体中，共有汉语单语者123人，东乡语单语者34人，东乡语-汉语双语者60人。

在对调查数据进行了科学的考察和分析后，针对对汉语和其他学语言之间在语言迁移时的相互作用，本文得到了以下结论：

实验对象语言迁移的发生情况：汉语单语者和东乡语-汉语双语者都存在显著的汉语迁移行为，但汉语单语者的迁移行为更加显著；东乡语-汉语双语者的东乡语迁移行为不显著，这与他们对使用汉语迁移的主观积极性显著高于东乡语迁移有密切的关系；城市（清华小学）东乡语-汉语双语者使用汉语迁移的积极性显著高于乡村（大板镇中学）的东乡语-汉语双语者，而两者在使用东乡语进行迁移的积极性上没有明显差别。

实验对象对语言的心理距离：影响语言迁移的还包括认知因素。但数据显示不同母语的学习者对于各语言的心理距离并不存在显著差异。这一方面是因为双语者并非平衡双语者，不能在元语言意识上展现出更明显的优势；一方面是因为元语言意识的发展与年龄等因素密切相关。

实验对象的语言态度和学习动机：调查数据显示，语言态度和学习动机存在多重共线的情况。在将两者合并为情感因素，并以该因素作为变量分析语言迁移后，可以看到它的提高不仅会相应的提高学习者汉语迁移的程度，还会限制东乡语迁移的发生。

总结来说，不论是语言迁移发生的客观情况，还是学习者的主观态度，都说明在习得英语的过程中，作为二语的汉语迁移占据着绝对的主导地位，双语者掌握的另一种语言反而是不利条件。如果学习者想要降低负面情感和心理压力，就必须主动抑制东乡语的迁移。而当他们对语言习得拥有更加强烈和明确的目标时，他们甚至会主动提升汉语迁移的程度，以此实现添加式的学习环境，从而获得更加良好的学习效果。因此过去认为少数民族地区英语教学中应注重多语言对比,促进母语正迁移,减少母语的负迁移建的观点显得有些理想化，并不利于实际英语水平的提高。本文认为，加强汉语迁移应该是更好的学习方式。

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An Ergative Marker Revisited in Tangut

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Tangut is SOV language and is used in Western Xia in 11-16 centuries in China. Its logographic writing system in historical literature is the only way allowing us to observe linguistic phenomena. This language has long been considered a nominative-accusative language, while ergative analysis was also raised by Kepping (1979), Guillaume (2014). In this paper, I discuss its case marking system in this language to clarify this question.

The most common way to mark both the subject of intransitive and transitive verbs is to use a zero-marker. The object of transitive verbs is sometimes marked by an accusative marker 'jij¹', or unmarked. The question centers on an optional ergative marker 'džj¹ wji¹', which often appears on the subject in an active transitive sentence. An ergative analysis regards the subject of transitive verbs as marked by 'džj¹ wji¹' and the subject of intransitive verbs and object of transitive verbs as unmarked. In this paper, we argue against the ergative analysis and propose this marker is in fact a causer marker because of following reasons.

(1) We firstly notice that this marker can only mark agents of certain verbs, such as 'to kill', 'to lead', 'to conquer', 'to advise', 'to give'. As Van Valin & LaPolla (1997) suggested, causative verbs can be distinguished from the non-causative ones by the existence of a causative paraphrase such as 'cause... to...', which includes resulting states. The verbs mentioned above can all be paraphrased and entails results. For instance, 'to kill' is 'to cause...to die', and 'to give' is 'to cause...to have', 'to lead' is 'to cause...to be in a place'. (2) In addition, only the causer in a causative sentence and the agent of a theme-fronting sentence (theme-agent-verb) can be marked by 'džj¹ wji¹'. In Tangut, the subject must precede the object so as not to create confusion when both of the subject and the object are with zero-case marking. In this case, if an ergative marker is to be added, it is the subject (a theme) in a theme-fronting sentence that should be marked by 'džj¹ wji¹', which is not true in Tangut. Besides, we also found that the agent in theme fronting sentences are all with causative verbs listed above, which demonstrates that 'džj¹ wji¹' is likely to be a causer marker. (3) Moreover, once the verb includes no obvious causative meaning (e.g. with intransitive verbs, activity verbs), a causative verb 'phji¹' or 'wji¹' always appear and follow the verb; otherwise these verbs cannot cooccur with the marker 'džj¹ wji¹'. (4) Lastly, this marker appears in sentences including resultatives and instrumental relationship, which includes causal relationship. The above facts all support our claim that 'džj¹ wji¹' should be a causer marker, instead of an ergative marker.

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Unaccusative and unergative verbs in Child Mandarin Chinese

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The provocative claim made by the A-Chain Deficit Hypothesis (Borer & Wexler, 1992) is that children should have difficulty with unaccusative verbs, since they involve A-movement of the internal argument to subject position, suggesting unaccusative and unergative verbs are treated the same by children. We test whether Mandarin Chinese children distinguish unaccusative and unergative verbs, using two diagnostics for unaccusativity: subject-placement and aspect. Our results reveal both diagnostics show evidence for children treating these verb classes as distinct.

Babyonyshev et al. (1998; 2001) famously claimed that Russian children struggle with unaccusative (but not unergative) verbs, although the evidence for children exhibiting unaccusativity is increasing (Becker et al. 2013 etc.). In Mandarin Chinese, Liu & Ning (2009) showed that A-movement within the VP layer is acquired earlier than other A-movements, but they did not examine whether children are able to distinguish unaccusative and unergative verbs.

We use two tests for unaccusativity in Mandarin (Huang 1991, Pan, 1996, a.o.):

- (1) Displacement: unaccusative verbs allow subjects to occur postverbally (as well as preverbally), while unergative verbs only allow preverbal subjects.
- (2) Aspect: Both unaccusative and unergative verbs allow the perfective marker, but the former does not allow the durative aspect marker, while the latter does.

Method. We tested 40 children aged 3yrs-7yrs (along with adult native controls) using a forced-choice selection task, where participants saw a series of pictures depicting an action and then heard two sentences from puppets to describe the scene. Their task was to choose the puppet who said it the best. We crossed verb type (unaccusative/unergative) with the position of subject (preverbal/postverbal) and aspect (durative/perfective) such that children heard a pair of sentences with the same verb, but they differed either by position of the subject or aspect.

Results. There exists an overall preference for preverbal subjects for both verb types (Table 1), and a statistically significant difference between verb classes (Chi-square=4.9351, $p=0.026316$). For aspect, with statistically significant difference, (Chi-square=11.3377, $p=0.000759$), unergative verbs allowed both aspect markers freely, while unaccusative verbs strongly patterned with perfective aspect. The result suggests that, like adults, children can distinguish two types of intransitive verbs using these tests.

We further breakdown the result into 3 age groups (3-5, 5-6, 6-7). In all the age groups, children show statistically significant difference for the aspect marker test between, while for the displacement test, the statistically significant difference does not occur until age 6-7 (p -value for the three groups= 0.2607, 1, 0.009522<0.05, respectively), although core unaccusative verbs, following to Sorace (2000)'s subcategorization ('to come' and 'to drop'), reach this difference in as early as in age 3-5. We interpret these results to indicate that the telicity of intransitive verbs is acquired early in child development, but the A-movement of non-core unaccusative verbs is delayed.

| Table 1 | perfective | durative | | pre-verbal | post-verbal |
|----------------|------------|----------|--------------|------------|-------------|
| Unergative | 74 | 67 | Unergative | 113 | 31 |
| Unaccusative | 104 | 38 | Unaccusative | 94 | 47 |

Second language learners' Mandarin syllable-tone word production: effects of task and prior phonological and lexical learning

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This study examined how task and previously learned information affect syllable-tone word productions by adult L2 learners of Mandarin. L2 learners (N=15) enrolled in a second-semester university Mandarin course took part in a three-day word learning experiment. Participants were taught 20 new monosyllabic Mandarin words or 10 tonal minimal pairs (e.g., *shu1* and *shu3*). Half of the words were homophonous with previously learned words (e.g., learners knew *shu1* as 'book' but not *shu3* 'mouse') while the other half were not homophonous with any previously learned word. Half of the words consisted of frequent syllables that learners were exposed to regularly in class (e.g., the syllable *shi* is highly frequent because *shi4* is the copula verb 'to be') while the other half consisted of infrequent syllables (e.g., the syllable *ku* is less frequent because learners were only familiar with it as the word for *ku4* 'pants'). This resulted in four conditions (5 words/condition). Participants followed the same training routine for three consecutive days in a computer lab: self-paced learning in which participants were shown images of each word while simultaneously hearing the syllable-tone word over headphones. Next, participants completed a four-alternative-forced-choice task (with feedback) in which the target was shown along with a tonal competitor that shared the same syllable but differed in tone along with two other visual distractors. On the third and final day, participants were shown images of the newly learned words and asked to produce the syllable-tone word as accurately as possible in a naming task. Finally, participants were shown the *Pinyin* romanization of the 20 words and asked to read each aloud as clearly as possible. Recordings of the word naming and *Pinyin* reading were then played for 10 native Mandarin speakers who were asked to transcribe the syllable and tone. We took these native listeners' judgments as our measure of L2 word production accuracy. Mixed effects regression modeling revealed three findings: 1. learners were overall more accurate at producing the newly learned words when reading Pinyin than when naming images (Fig. 1); 2. learners showed Pinyin reading advantage only in words that were homophonous to previously learned words but not in words without homophones (Fig. 2); 3. this Pinyin reading advantage stemmed from a three-way interaction such that frequent syllables that were not homophonous with previously learned words were read least accurately while infrequent syllables that were not homophonous with previously learned were read most accurately (Fig. 3); Thus, whereas phonological information affected L2 learners in a relatively uniform manner such that words with high frequency syllables were less accurately named and read, lexical information had a more nuanced effect. Previously learned homophones appeared to interfere during lexical retrieval and disrupt accurate naming. In contrast, without a previously learned homophone, learners were less accurate at reading. These results support previous findings on how the task used to assess L2 learning is important to assessment, while also providing novel evidence that even seemingly non-lexical tasks such as reading *Pinyin* can tap into L2 learners' lexical knowledge.

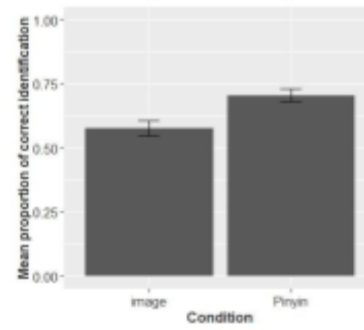


Figure 1.

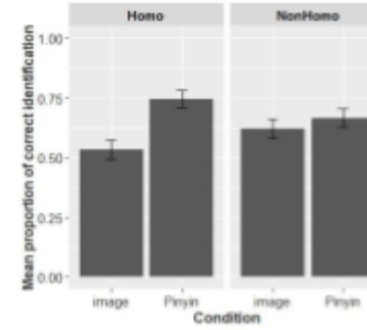


Figure 2.

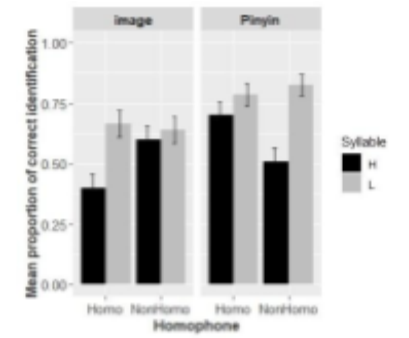


Figure 3.

Are “pants” clothes or long objects: Exploring the L2 acquisition of Chinese classifiers

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Being a new syntactic category for English speaking learners of Chinese, classifiers (CL) have been found to be challenging in Chinese learning (e.g., Polio 1994), but there is limited study focusing on the source of the non-native like L2 performance with regard to CLs. The current study employed two online comprehension measures, an eye-tracking task using visualworld paradigm, and a self-paced reading task, together with an offline CL knowledge test, to explore whether L2 learners of Chinese can acquire CL, a new syntactic category, and whether the difficulty resides on the syntactic or semantic level.

In the eye-tracking experiment which targeted predictive processing, a Tobii TX300 eyetracker was used to record participants' (20 intermediate English-speaking learners of Chinese and 20 native speakers) gaze position on four objects presented on a screen, while they listened to carrier sentences 你能看到那/ CL / 好看的/ Noun / 吗? It was found that compared to trials where all the four objects shared a same CL, when only one of them was consistent with the CL presented in the carrier sentences, native speakers of Chinese showed significantly larger proportion of looks at the target object before they heard the noun ($p=.001$). Learners ($N=10$) who showed high performance on the offline CL knowledge task also showed such facilitative effect, although it was weaker and later ($P=.002$), while low-performance learners did not show such effect. The results suggested that L2 learners of Chinese could use the CL as a cue to predict the upcoming noun, indicating that with sufficient lexical knowledge, learners are able to acquire a new functional category, and the rich lexical information encoded in the CL system might have contributed to the acquisition (Lau & Grüter 2015).

To further investigate what type of lexical information was available to learners in online comprehension, a self-paced reading task targeting backward checking was carried out. Two types of ungrammaticality were included, inconsistent CLs that conflicted with the semantic features of the nouns (e.g., *一张裤子), and inconsistent CLs without semantic conflict with the nouns (e.g., *一件裤子). Thirty-three intermediate learners of Chinese participated in the study. As it was revealed by the results of generalized linear mixed-effect models, learners were sensitive to semantic clash ($t=-3.25, p=.001$), but they had difficulty detecting the ungrammaticality if there was no semantic conflict between the CL and the noun ($t=-1.16, p=.25$). In addition, learners' knowledge on CLs, as shown in the offline task, was a significant predictor of their sensitivity to inconsistent CLs; insufficient knowledge on CLs impeded learners from detecting both types of ungrammaticality. The results provided further information on the challenge learners face in CL acquisition: while semantic information embedded on CLs were available to learners, it was more difficult for learners to access CL-noun co-occurent information.

Taken together, the results of the two experiments provided evidence that building the grammatical structure of CLs is not impossible for learners, and the real challenge lies on the lexical level. The current study lend support to the lexical account of variability in L2 acquisition of new features and functional

categories (Grüter, Lew-Williams, & Fernald, 2012; Hopp, 2013); sufficient lexical knowledge can contribute to native-like performance regarding Chinese classifiers.

Restrictions on Consonant + Glide (CG) Sequences in Chinese Varieties

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Some languages, like Korean, allow any consonant + glide (CG) combinations, while other languages, like Kirundi, avoid all CG sequences. Many languages have restrictions on CG onsets. For example, Italian disallows palatals preceding [j] and [w]; some varieties of American English disallow coronals followed by the glide [j]. In Chinese varieties, consonant + glide (CG) combinations are allowed, but with a relatively complex system of restrictions. We examine restrictions on CG clusters in Mandarin Chinese, Shangfu Chinese, and Putian Chinese, and investigate the features that play a role in restricting CG onsets. We argue that both OCP (in particular, No Lab + Lab) and CG [back] agreement constraints are needed to explain onset grammaticality in Chinese varieties.

In Mandarin, no fricatives or affricates can precede [j, ɥ], except the palatals [t͡ɕ, t͡ɕʰ, ɕ]. In contrast, all fricatives and affricates can precede [w], except the palatals. Furthermore, Mandarin velars are disallowed before [j, ɥ], yet can occur before the velar glide [w], and labials cannot combine with labial glide [ɥ, w] as onsets. [tɥ] and [tʰɥ] are also banned, but all other CG sequences are legal. Overall, two principles are needed to explain Mandarin CG onset restrictions: *LabLab (1)² and various [back] agreement constraints (2-4).

(1) *LabLab—A labial consonant cannot occur with a labial glide [ɥ]/[w]

(2) Agree[back]: C_[-son, +cont]j—A [-son, +cont] consonant (affricate or fricative) and the following glide [j] must have the same backness value: [-back]

(3) Agree[back]: C_[-son]ɥ—An obstruent and the following glide [ɥ] must have the same backness value: [-back]

(4) Agree[back]: DorG—A dorsal consonant (palatal or velar) and any following glide ([j ɥ w]) must have the same backness value

In Shangfu Chinese, all fricatives and affricates must have the same backness value as the following glides [j, ɥ, w], an even stricter restriction on CG backness agreement, requiring the addition of the constraint in (5).

(5) Agree[back]: C_[-son, +cont]G—A [-son, +cont] consonant (affricate or fricative) and the following glide [j, ɥ, w] must have the same backness value

² Duanmu's (2000: 32) Articulator Dissimilation Principle ("Identical articulators cannot occur in succession") can account for some but not all of the restrictions on Mandarin CG onsets.

In contrast, Putian Chinese ranks CG backness agreement relatively low, allowing all CG sequences except Lab + ʋ. Therefore, the only constraint required in Putian is (6).

(6) *Lab + ʋ - A labial consonant cannot occur with [ʋ]

Restrictions on CG onsets involve both OCP and anti-OCP constraints: dissimilation of major articulator features for distinctiveness of phonetic cues (1) and (6), and agreement of dependent features like backness for ease of articulation (2)-(5). In some languages (Mandarin and Shangfu) the feature [back] plays a key role, while Putian ranks CG backness agreement relatively low.

We consider other approaches to account for these data, including an analysis of the glide as a secondary articulation (Chao 1934, Duanmu 2000, Kochetov 2016, etc.), and an analysis which posits the front glides [j, ʋ] as having a coronal articulator feature (Hume 1994, etc.). Both approaches can account for some of the data, but backness agreement constraints are still a necessary component.

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A Corpus-Based Study of L2 Learners' Production of Chinese High-Frequency Verbs

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This paper investigates the effect of construction frequency on the L2 learners' language written production of Chinese verbs. Previous research in SLA shows that the most frequently used verbs in L2 writing usually carry simple meanings, and they are usually acquired at an early stage of SLA, however, those studies disagree upon whether L2 learners use them correctly or problematically in their writing (Altenberg & Granger, 2001; Hässelgren, 1994; Källkvist, 1999; Lee & Chen, 2009). Possibly, three factors may influence the results: the internal structures of these high frequent verbs, the linguistic and discourse contexts, and the influence of L1 transfer (Viberg, 1996).

The question is unclear in terms of what are the most frequently used verbs in the production of L2 Chinese, whether these verbs are used with or without errors as hypothesized, and whether frequency plays an effect. From the constructionist framework, Goldberg (1995) argues that the function of the words reflects the frequency of use as well as human experience in the world. Based on this view, Ellis and Ferreira-Junior (2009) suggest that learning is driven by frequency and form-meaning matching. Inspired by their frameworks, the current study proposes three hypotheses: (1) the most frequently used verbs in learners' written production is salient in the input; (2) the high-frequent verbs are used with high accuracy; and (3) frequency influences how well verbs are produced.

TOCFL learner corpus of Chinese is used for quantitative and qualitative analyses. The occurrences and error rates of the 10 most frequently produced verbs were calculated. Error analysis method is then employed to examine the error types, their linguistic environment, and possible causes. Finally, input frequencies are calculated, compared and analyzed.

Results show that learners are able to use these verbs quite accurately, which contradict previous findings that top-frequency verbs in L2 writing are problematic. The production of YAO tend to be error-free. This is most likely because YAO functioning as an action verb carries one single meaning "to want" with consistent usage, which is easy to acquire. Although the error rates of using these verbs are low, concerning the problems that learners still have, SHUO, KAN, XIHUAN, JUEDE, and ZHIDAO share similar errors which are most likely caused by limited exposure of their diverse meanings, uses, collocations, and synonyms. Three pedagogical implications are proposed, where I advocate an instruction mode where teaching materials, instructions, and feedback should be source-diverse, continuous, and data-driven.

The role of vocabulary knowledge in second language speaking fluency

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The development of speaking fluency in second language speech is the process of automatization. Most studies of automaticity in second language (L2) processing have focused on lexical access. According to Segalowitz (2010), lexical access processing speed and stability are two important components in terms of second language learners' cognitive fluency, which is strongly related to utterance fluency. In this study, we investigate the relationship between L2 Chinese learners' vocabulary knowledge and their speaking fluency. Fifteen L1 English L2 Chinese learners participated in the study. The experiment consisted of two parts. The first part was a vocabulary test. Before the experiment, we invited six Chinese students from the same university to complete the tasks. Based on the vocabulary they used when they completed the tasks, we elicited a list of vocabulary (198 items) that were most commonly used. The list was then translated into English for the vocabulary test. In part 1, participants were instructed to translate the vocabulary list from English to Chinese orally as fast and accurately as possible. They could say "I don't know" if they didn't know the answer. The whole process was timed. The second part was a speaking test consisting of four monologue tasks. Participants completed four speaking tasks, which were the same as the tasks completed by the six Chinese students mentioned above. For each task, participants had 1 minute to prepare and 10 minutes to speak, administered by the researcher. The text types of the tasks included instructive, descriptive, explanatory and argumentative. In terms of the vocabulary knowledge, we measured the correct rate and time of completion of the vocabulary test. As for the speaking fluency, we measured speech rate, mean length of runs, mean length of silent pauses, number of silent pauses, number of filled pauses and number of repairs. Results show that there is a strong correlation between correct rate of the vocabulary test and the fluency measures: speech rate ($r = .375$, $p = .003$), mean length of runs ($r = .354$, $p = .005$), mean length of silent pauses ($r = -.256$, $p = .048$), number of silent pauses ($r = -.35$, $p = .006$), number of repairs ($r = -.285$, $p = .027$). Reaction time is also correlated to speech rate ($r = -.379$, $p = .003$). It is found that vocabulary knowledge plays an important part in second language speaking fluency. As proposed in Levelt's "blueprint" model (1999), mental lexicon controls both grammatical encoding and morpho-phonological encoding. Lexical encoding is therefore the key of L2 language processing. This study proposes that L2 learners' vocabulary knowledge reflects cognitive fluency and can be used as a predictor of L2 speaking fluency.

Revisit the tone-melody matchings in Chinese singings: A meta-analysis of Shanghai opera and Mandarin pop songs

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Some tonal languages, such as Cantonese and Thai, have a clear systematic correspondence between tone and melody in either traditional operas or pop songs (Ho, 2006; Lau, 2010; Schellenberg, 2009; Yung, 1983; Wee, 2007; Wong & Diehl 2002), while such relationships are not found in Mandarin songs. This presentation is to revisit the issues of tone-melody matching in Chinese singings, such as how to determine the tone-melody matching and what is the criteria of text-setting, what causes the languagespecific differences and to what extent can a particular tonal system predict the degree of differences. This presentation will 1) summarize recent text-setting work on tone-melody matching in tonal languages with focusing on pitch direction across notes, and discuss the issues behind the current research methods, 2) discuss the characterizations of tone-melody match constraints and 3) perform a meta-analysis over a selection of 10 Shanghai opera songs and 10 Mandarin pop songs to investigate how pitch directions change within prosodic domains are aligned with accompanying music melody. The oblique tone-melody matches appeared acceptable in both Shanghai opera (76%) and Mandarin pop songs (64%), and the contrary match appeared far less common than expected in Mandarin songs. The clitic group showed significantly stricter mapping than the disyllabic group straddling a prosodic word boundary in Shanghai opera. The oblique matchings found in both Shanghai Opera and Mandarin pop songs echo McPherson and Ryan (2018)'s finding that mapping conditions are found to be higher within words than across them.

1) Sample data analysis of Shanghai Opera

| | | |
|---------------------------|--|----------------------------------|
| Lyrics | [[[为你] _{cg} [打 开] _{pw}] _{pph} [[一]扇] _{cg} [窗] _{pw}] _{pph}] _{ip} 'open a window for you' | Match Conditions |
| Base tone | LH MH MH HL MH MH HL | |
| Melodic tier ₁ | 6 3 _h 1 _h 6 6 ₅ 1 _h 1 _h 2 _h 3 _h 1 _h | |
| PW | LH # MH # M= H # MH #MH# HL | O / C / C/O / P / P ₂ |
| CG | L = H M=H | P / P |
| PPh | L=H=L=L # M=H=L | O/O |
| IPh | L = L | C |

2) Sample data analysis of Mandarin pop songs

| | | |
|-----------|---|------------------|
| Lyrics | [[在[哪里] _{pw}] _{pph} [[见过] _{pw} 你] _{pph}] _{ip} 'have seen you somewhere' | Match Conditions |
| Base tone | HM MH LL HM HM LL | |

| | | |
|--------------|------------------------------|---------|
| Melodic tier | 1 2 1 2 35 53 | |
| PW | HM# M-L # M=M # L | O/P/O/O |
| PPh | H=L # H=L | O/C |
| IPh | H = L | C |

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¹ The melodic tier adopts number musical notation score *jianpu* 简谱

² Method of Transcription: P=Parallel; O=Oblique; C=Contrary

“昆蜚崑蜚”字组声母演变寻踪 ----从古魂切到克温切

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本文讨论三个问题。一是利用现有的方言调查报告，描述现代汉语方言“昆蜚崑蜚”字组的读音分布情况。二是翻检韵书、字书、地方志等的记载，追踪“昆蜚崑蜚”字读音演变的线索，进而勾勒出该字组声母从不送气塞音变为送气塞音的演变轨迹以及时间序列；三是讨论导致“昆蜚崑蜚”字组由古魂演变到克温切的原因。

Interpersonal Theme in CSL Learners' Writing: How Cross-Linguistic Effects Play a Role

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Purpose

This study analyzed the use of interpersonal Theme in Chinese writing by learners of Chinese as a second language (CSL). Interpersonal Theme serves to “enact social relationships” (Halliday, 1994) in discourses and encompasses modal adjunct (e.g., perhaps), mood-marking device (e.g., WH-words), vocative (e.g., Sir), and interpersonal metaphor (e.g., I think). It was hypothesized that, due to cross-linguistic effects on L2 learning, different L1 groups would perform differently on engaging interpersonal Theme in Chinese writing.

Method

A total of 60 CSL learners' writing samples were collected from the HSK Mobile Corpus (HSK 动态语料库) developed by the Beijing Language and Culture University, and the samples included 30 learners from South Korea and another 30 learners from English-speaking countries. Selected samples were about the same topic and were from three language proficiency levels (i.e., novel, intermediate, and advanced). In addition, 10 L1 Chinese speakers were invited to write an essay of the same topic. Both CSL learners and L1 Chinese speakers' frequencies of interpersonal Themes usage were counted and standardized per 100 t-units (North, 2005).

Results

One-way ANOVA tests showed significant differences in the use of interpersonal Theme between L1 groups ($p = 0.012$). Specifically, the use of interpersonal metaphor showed significant differences ($p = 0.018$) while modal adjunct showed marginally significant differences between groups ($p = 0.071$). English speakers consistently used the greatest number of interpersonal Theme and its subcategories except for modal adjunct. Korean speakers used the least number of interpersonal Theme and its subcategories. A 2 (CSL groups) \times 3 (proficiency levels) ANOVA confirmed no significant main effects of L2 proficiency or interaction effects, but main effects of L1 on the use of interpersonal Theme, especially the use of modal adjunct ($p = 0.017$).

Discussion

Different use of interpersonal Theme by varied L1 groups suggests robust L1 influences on L2 oral narratives in terms of enacting social relationships. Such differences may be due to CSL learners' application of interpersonal relationship skills directly from their L1 to L2, and this practice is not linked with L2 proficiency. Pedagogy of CSL speaking should consider more such L1 differences.

On the so-called gapless relative clauses in Chinese

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1. Introduction: Prenominal clauses in Chinese as in (1) have been traditionally called "gapless relative clauses," and previous literature has debated: *(i)* if they indeed are relative clauses, and *(ii)* whether they are truly gapless. (Reflecting such controversies, we will simply label them "*gapless clauses*.")

(1) [_{NP} [_{GaplessCL} Zhangsan chang ge de] shengyin] (CL = clause)

Zhangsan sing song DE sound

'the sound that arises from Zhangsan singing a song.'

Regarding *(i)*, Huang et al. (2009, *CUP*) and Huang (2016, *Lg&Ling*, 17(4)) argue that gapless clauses are complements of predicative nominal heads. On the other hand, Ning (1993, UC Irvine diss.) analyzes gapless clauses as relative clauses base-generated with a phonetically empty adjunct relative operator.

Regarding *(ii)*, Zhang (2008, *Lg&Ling*, 9(4)), Huang et al. (2009), Huang (2016) and others argue that there is no gap in gapless clauses, while Ning (1993) argues that there is an adjunct gap there created by the movement of a relative operator.

2. Proposal: In this work, we report some new findings on gapless clauses which: *(A)* lead us to reject the complement analysis, and *(B)* support the analysis as relative clauses involving the gap of a moved adjunct relative operator, and *(C)* refine Ning's (1993) analysis, which postulates an empty operator functioning as "resultative VP-adjunct."

For *(A)*, we offer our counterarguments for the complement analysis of gapless clauses which were developed based upon their iteration restriction, order restriction, head nominal restriction, *suo*-restriction, coordination restriction, locality restriction and ellipsis restriction.

For *(B)*, we argue for the syntactic analysis of gapless clauses as illustrated in (2) below, which follows the core ideas (though not the details) of Ning's empty relative operator approach.

(2) [_{DemP/UnitP} [_{GaplessCL} **Adjunct-Op**_{ii} [... *t*_i ... de]] NP_i]

Leaving an adjunct gap behind, an empty adjunct operator moves from within the gapless clause to its periphery in order to be locally associated with the head NP. This association (distinct from regular binding) is indicated by co-superscripts. To motivate this operator movement, we offer syntactic arguments including island effects, reconstruction effects and intervention effects. To the best of our knowledge, these arguments have hitherto not been provided in the literature. Observe, for example, the island effect in

(3).

(3) *ta caidao-le [_{GaplessCL} **Op**_i¹ [wo xiangxiang [_{CNP} [ta chang *t*_k *t*_i de] ge_k]] de] shengyin¹

he guess_{-PAST}

I imagine

he sing DE song DE sound

'He guessed the sound from my imagining a song he sings.'

For (C), we first argue, based upon tense interpretation and island effects, that the empty operator in gapless clauses should not be analyzed as VP-adjunct. We then offer our observation that the head in gapless clauses can denote not only the result but also the cause of the event of the clause or the appositive content of the proposition of the clause (cf. Tsai, H. 2008, *Nanzan Linguistics* 5).

L1 and L2 Processing of Chinese VO Compounds with Dual Identities

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This study investigated the effects of dual identities of Chinese separable VO compounds on the L1 and L2 processing. Although both Huang (1984) and Packard (2000) both agree on the dual status of VO compounds, the former proposes the underlying structure of VO compounds as phrase whereas the latter suggests that they should be identified as words but reanalyzed phrases only when necessary. Given this, the current research explores the following two issues: 1) The underlying structure of VO compounds in L1 mental lexicon, 2) The effect of dual identities on L1 and L2 processing of VO compounds. Multiple pairs of separable VO and inseparable VV compounds sharing the same first constituent (帮忙 / 帮助) were tested using lexical decision task and self-paced reading to examine the effect of VO's dual identities, and each pair of items were controlled in word frequency, constituent frequency, stroke number and lexical neighbor size.

In Experiment 1 using lexical decision task, an effect of word frequency was found from the L1 RT data while there was an interaction of lexical neighbor size and compound types with a more pronounced effect of lexical neighbor size for VV compounds in the L2 RT. This result indicates that L1 processed VO and VV compounds based on the whole-word representations while L2 were more likely to decompose VV compounds based on lexical information of constituent morphemes. Experiment 2 employed a self-paced reading task using VO and VV compounds embedded in sentences. The L1 RT analysis in the self-paced reading revealed an interaction of constituent frequency and compound types with a more pronounced effect of constituent frequency for VO compounds. This suggests that L1 tended to decompose VO compounds based on the frequency of constituent morphemes in self-paced reading. However, there was only an effect of word frequency for the L2 RT meaning that L2 processed both compound types based on whole-word representations during sentence reading.

The results suggest that L1 processed VO compounds as whole-word representations when they were presented without any context but decomposed VO compounds preceded by a subject noun in sentential contexts. This suggests that separable VO compounds may be stored as words in the L1 lexicon but decomposed when the syntactic domain needs to be activated as in sentence reading contexts. The L1 data may serve as supporting evidence for Packard (2000), which proposes that VO compounds are words but reanalyzed as phrases only when required. Yet, L2 demonstrated a different processing pattern from the L1 as they tended to decompose VV compounds more in lexical decision task, but processed both VO and VV compounds as whole-word

representations in self-paced reading. The L2 RT analysis indicates that L2 might not have native-like awareness regarding the dual identities of separable VO compounds.

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Conceptualizing the Volitional 要 *yào* as an Intention Marker

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The acquisition of 要 *yào* as an auxiliary verb, especially the volitional 要 *yào*, proves to be challenging in Chinese as a foreign language (CFL) teaching (Li & Hsieh, 2016). According to Tian's (2018) study, 50.38% of the non-target-like forms of 要 *yào* as an auxiliary verb produced by CFL learners were the volitional 要 *yào* and over half of those non-target-like volitional 要 involved inappropriate substitution of the auxiliary verb 想 *xiǎng* for 要 *yào*.

To conceptualize the conditions to use the volitional 要 *yào* and to effectively distinguish the volitional 要 *yào* from 想 *xiǎng* as an auxiliary verb, this paper adopts Guo's (2005) distinction that 要 *yào* expresses intention and 想 *xiǎng* expresses desire, and relates such a distinction to how intention and desire are distinguished in the philosophical world, i.e., how intention and desire differ in three aspects of content, reasoning, and degree of commitment (Malle and Knobe, 2001).

To validate the effectiveness of this framework, a discourse analytic study of classroom interaction was conducted to examine how eight CFL learners used 要 *yào* in their narration, classroom discussion, and written assignments in a Level Five Chinese class in a large midwestern University in the US. Before taking this class, learners completed at least two years of regular and/or intensive studies of Chinese in the US and participated in some kind of intensive study abroad in China. Their proficiency was equivalent to Intermediate High to Advanced low according to ACTFL proficiency guidelines.

Fifty seven examples of learners' production of the volitional 要 *yào* were analyzed. All the instances of the native-like forms satisfied three conditions, namely, an action that the intender's intentions to be directed at, some amount of reasoning that the intention is based on, and a commitment to perform a certain action. In contrast, the non-native-like forms revealed a failure to satisfy one or more of the above conditions, making the use of 要 *yào* less native-like or logically deficient. Based on these findings, this paper suggests that these three criteria in distinguishing intention and desire can serve as a tool to help learners conceptualize the concrete conditions for using the volitional 要 *yào* and to effectively distinguish it from 想 *xiǎng* as an auxiliary verb. To this end, this paper situates the volitional 要 *yào* in Chinese cultural context by identifying when native speakers prefer to explicitly demonstrate their intentions, how these situations differ from learners' L1 experience, and what affective stance the use of 要 *yào* activates in various contexts. Building on this explanatory framework, this paper also provides suggestions on how to effectively teach the volitional 要 *yào* in culturally-authentic communicative context.

A unified analysis of Mandarin *bei* in long and short *bei*-passives

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In this talk, I propose that *bei* in long and short *bei*-constructions triggers λ -abstraction (Heim and Kratzer 1998), hence both uniformly involve A'-movement, contra Feng (1997/2012), Huang (1999) and Ting (1998). I also provide novel evidence showing that both long and short *bei*-constructions must contain Voice_{Passive} contra Bruening and Tran (2015), for they licence certain verbal compounds that are also found in the *gei* ('give'), *jiao* ('ask') and *rang* ('allow') passives but do not occur in active constructions.

Huang (1999) and Ting (1998) build on Feng's (1997/2012) analysis and argue that long and short *bei*-passives have different structures, such that the former exhibits A'-effects and the latter A-effects. Crucially, A'-effects such as long-distance dependencies (1) and the ability to host resumptive pronouns within islands (2) *are* detected even in short passives: (1) *tongdao dou yijing bei [pai bing [bashou]]* passage all already BEI send troop guard

Lit: 'All passages have been "sent-troops-to-guard".' (Her 2009; 431, with modifications)

(2) *kongzi bei [she-fa [shao-diao [CNPI zanmei *(ta) de shu]]]* Confucius BEI come.up.with-idea burn-away praise 3.SG DE book
Lit: 'Confucius has been come up with the idea to burn all of the books that praised him.' In (1), the grammatical subject *tongdao* is understood to be the logical object of *bashou* despite being base-generated in the embedded clause. The grammaticality of (1) is only expected if *tongdao* undergoes A'-movement, since *bing* is in an A-position and it is impossible for *tongdao* to A-move successive-cyclically while *bing* occupies an A-position that it has to pass through. In (2), the base position of the internal argument of *zanmei* is within a complex noun phrase island (CNPI), as indicated by the resumptive pronoun *ta*. If absent, the sentence is rendered ungrammatical. (1) and (2) show that both long and short passives involve A'-movement, which is expected if *bei* triggers λ abstraction.

Further, I show that the embedded clause includes Voice_{Passive}. Bruening and Tran (2015) propose that *bei*-constructions can either involve Voice_{Active} or Voice_{Passive} but *tui-xue* ('to expel from school') is ungrammatical in the active (3) while it is grammatical in the *bei*-construction (4):

(3) **lisi tui-xue-le zhangsan* (4) *zhangsan bei (lisi) tui-xue-le*
Lisi back.away-school-ASP Zhangsan Zhangsan BEI Lisi back.away-school-ASP

'Intended: Lisi expelled Zhangsan.' 'Zhangsan was expelled (by Lisi).'

Li and Thompson (1981) and Tang (2001) claim *gei*, *jiao* and *rang*-constructions (5) are passive constructions (with some differences), and indeed *tui-xue* is grammatical here:

(5) *zhangsan gei/jiao/rang lisi tui-xue-le*

Zhangsan give/ask/allow Lisi back.away-school-ASP

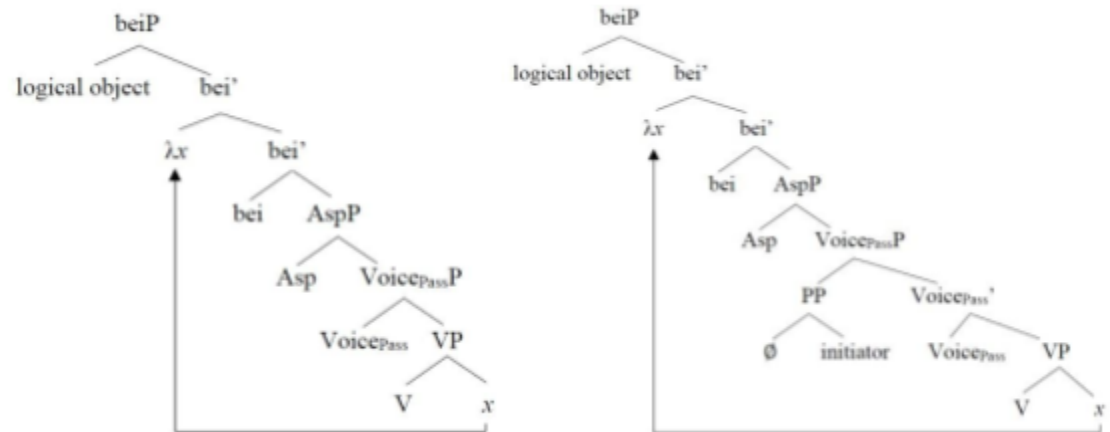
'Zhangsan got Lisi dropped out of school.'

Lisi is understood to be the internal argument of *tui-xue* in (5) in a pre-verbal position. I propose that the object movement is promotion to the subject position of the embedded clause, indicating that the constructions involve $\text{Voice}_{\text{Passive}}$ just as *bei*-passives do. Since $\text{Voice}_{\text{Passive}}$ licences the use of verbal compounds such as *tui-xue*, it explains why they are grammatical in (4) and (5) but not (3).

Examples (6) and (7) summarise my proposal:

(6) short passive

(7) long passive



From the third person pronoun to the particle: 他 la^{33} in the Cenchuan dialect (Sinitic)

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The Cenchuan dialect of Xiang is a Sinitic language spoken in the north-east of Hunan Province. The present paper sets out to analyze a special function of the third person pronoun 他 la' in this dialect and attempt to propose a possible pathway of grammaticalization for this function.

In the Cenchuan dialect, there are two pronouns for the third person: the aboriginal word 渠 ki^{45} and the loanword 他 la^{33} . While 渠 ki^{45} acting as a “normal” pronoun, 他 la^{33} can be used in some special structures:

- i. $V_1 + O + V_2 + \text{Resultative} + O_2$ (他 la^{33})

In this structure, V_1 and V_2 share the same object, 他 la^{33} occupies the place of O_2 as a retention of O_1 .

- ii. $OM + O + V + \text{Resultative} + O_2$ (他 la^{33})

In the disposal structure, 他 la^{33} also occupies the place of O_2 .

- iii. $V_{\text{intransitive}} + \text{Resultative} + \text{他} la^{33}$

After an intransitive verb, 他 la^{33} acts as a particle.

All the sentences above must be imperative and affirmative, and the resultative is obligatory. In fact, the first two structures are not infrequent among the Sinitic languages since they have been attested in the Yue (Mai 2003), Mandarin (Zhu 2005), Wu (Shi, Liu 2008) and Hakka (Xiang 1997) dialects. In addition to this, the pronoun 之 of the Middle Chinese can also be used as a resumptive pronoun: 船者乃将此蟾以油熬之 “The boatman takes the toad and fries it” (Peyraube 1989). Nevertheless, the third structure “ $V_{\text{intransitive}} + \text{Resultative} + \text{他} la^{33}$ ” is quite rare among the Sinitic languages. Besides Cenchuan, we only found this function in the Rucheng dialect of Hunan (personal communication with the native speaker).

We will try to draw the pathway of grammaticalization for these special usages of 他 la^{33} in the second part. We suppose that 他 la^{33} is originally a resumptive pronoun which reflects a preposed object: when the pronominal interpretation is “bleached”, the particle meaning appears. And then, this usage has been conventionalized to the structure with an intransitive verb, 他 la^{33} becomes a real particle.

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Milliseconds and years: two times scales in bidirectional sound change within the non-coronal fricatives of Southwest Mandarin

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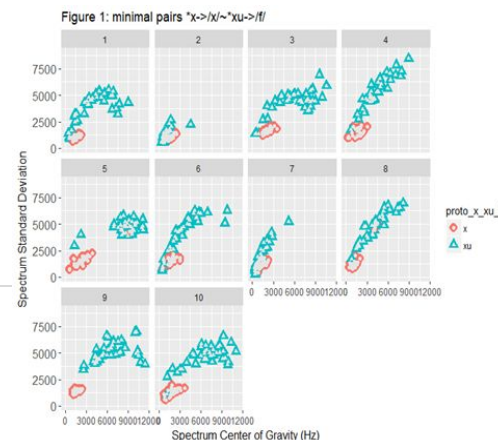
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Time in years (sound change): Of 374 documented dialects of Southwest Mandarin, 212 are differentiated from Standard Mandarin in patterns of phonological variation between a labiodental fricative, /f/, and a velar fricative /x/ [1]. The patterns of variation come in six types, listed in Table 1 relative to the Medieval Chinese (top row, *f represents 非敷奉母, *x represents 晓匣母). Of interest to the study of sound change generally is that these fricative mergers in Southwest Mandarin are bidirectional. The labiodental fricative, *f, became /xu/ in some dialects (e.g., Type 3 and Type 5); in others, *xu became /f/ (Type 2 and Type 4). Type 3 and Type 4 are polar opposites: in Type 3, *f became /xu/; in Table 4, *xu became /f/. The other dialect types show mergers in more restricted environments, e.g., Type 6 shows a merger in just one environment: *foŋ became /xoŋ/ but /f~/xu/ remain distinct otherwise. Of note is that it is always a round back vowel that conditions the merger.

Time in milliseconds (intergestural coordination): From the pattern of environment-specific mergers, we've formulated a hypothesis about the phonetic process that has given rise to the synchronic variation. Specifically, we hypothesize that there is a temporal basis for the patterns involving reorganization of gestural timing: /xu/ becomes perceptually similar to /f/ when the labial gesture for the vowel /u/ overlaps in time with the gestures for /x/ (i.e., tongue dorsum constriction at the velum and wide glottis). In the opposite direction, /foŋ/ becomes /xoŋ/ when tongue dorsum retraction for /oŋ/ begins earlier in time, overlapping with /f/. Both shifts could plausibly involve an intermediate phonetic form, e.g., f^x , in which velar and labial gestures overlap in time with a wide glottis. Phonetic analysis of field data from the Zhongjian (Type 2) provides evidence for this form.

Phonetic study: We report the first two spectral moments, Center of Gravity (CoG) and Spectrum Standard Deviation (SSD), for a corpus of ~9,000 fricative tokens of /x/ and /f/ produced by 10 speakers (5 female) of the ZJ dialect. Data were elicited in a field setting; each speaker produced 10 repetitions of 90 monosyllables. Figure 1 reports measures from a subset of the items contrasting words that derive from *x, which remain /x/ in modern ZJ with words that derive from *xu, which are /f/ in modern ZJ. The results show that /x/ has low CoG and low SSD, as expected, while /f/ shows variation (for most speakers) spanning from high CoG and high SSD, expected for /f/, to values similar to /x/. Figure 2 shows that items that derive from *f are completely merged with items that derive from *xu. Both sets show a range of variation spanning from /f/ to /x/, including intermediate values consistent with temporal variation in the overlap between velar and labial gestures, i.e., $[f^x]$.

Conclusion: We reach the tentative conclusion that subserved by temporal variation in the coordination of intermediate allophone which may be present in several



bi-directional patterns of /f~/xu/ sound change are lip and velar gestures, giving rise as well to $[f^x]$ as an varieties.

| Table 1 | *xu | *fu | *foŋ | *xoŋ | *xu_ | *f_ | *x_ |
|---------|-----|-----|------|------|------|-----|-----|
| Type 1 | fu | fu | foŋ | xoŋ | xu_ | f_ | x_ |
| Type 2 | fu | fu | foŋ | xoŋ | f_ | f_ | x_ |
| Type 3 | xu | xu | xoŋ | xoŋ | xu_ | xu_ | x_ |
| Type 4 | fu | fu | foŋ | foŋ | f_ | f_ | x_ |
| Type 5 | fu | fu | foŋ | xoŋ | xu_ | xu_ | x_ |
| Type 6 | xu | fu | xoŋ | xoŋ | xu_ | f_ | x_ |

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The Discourse Feature of Aspectual Reference in the Narrative Mode of Mandarin Chinese

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This paper investigates the discourse feature of aspectual reference in Mandarin Chinese, in which aspectual reference is considered to operate at the clause level, and expressions with meaning of “boundedness” serve as mechanisms to facilitate narrative advancement. However, data from narrative discourse show that the influence of unbounded events in the narrative temporal structure has also been observed, and unbounded events can function at discourse level. The analysis is conducted from three perspectives: the function of aspectual reference in giving eventual endpoint, eventual starting point, and discourse endpoint. In the temporal structure of a narrative mode, eventual endpoints provide reference time for the posterior event and thus to advance the narrative time, which is most eminently exemplified in temporal anaphoric chains. Ongoing events also advance the narrative time in addition to connecting events. Inchoative and progressive markers can signify discourse endpoints for the minimalist temporal domain in the narrative discourse and can be realized by ending a discourse temporal domain with a marked situation type, either telic or atelic. The analysis proves that the aspectual reference in Mandarin Chinese displays not only grammatical and lexical feature but also discourse feature so that it could extend its function beyond sentences.

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语义地图视角下的现代汉语介词“跟”的语义功能分析-以韩国学习者为中心

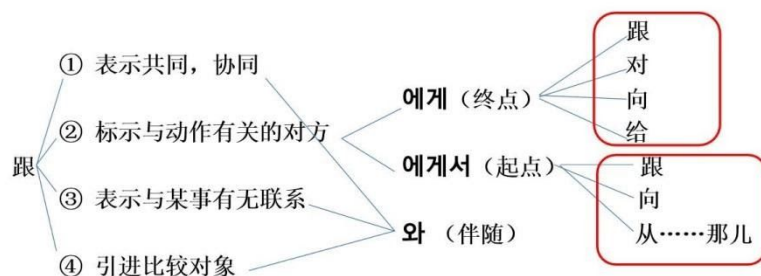
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关于“跟”的本体研究较多，但其研究成果未能准确解决对外汉语教学上的问题；从教学的角度出发的研究，特别是对韩国学习者的角度出发的研究也不占少数，但是大多停留在偏误分析研究。针对此类现象，本文从韩国学习者的视角出发，双向对比分析“跟”与其对应的韩语，探索并解释“跟”的语义范畴特征，并在此基础上构建相关概念空间 (conceptional space)。

吕叔湘 (1999:230) 对“跟”的语义归纳如下：①表示共同，协同；②标示与动作有关的对方；③表示与某事有无联系；④引进比较对象。在韩语中“跟”的①③④对应于表伴随义的格助词“와”，语义②对应于表动作对象的“에게 (表示动作的终点)”与“에게서 (表示动作的起点)”。韩国学习者关于“跟”的偏误大多出现在语义②上，主要原因在于一个韩语格助词能对应多个汉语介词。除了“跟”，“에게”还可与“对”、“向”、“给”对应；“에게서”可与“向”、“从……那儿”对应。



根据以上问题，本文着重研究“跟”的“伴随”、“起点”、“终点”语义范畴，试解决以下问题：

第一，“跟”与同表示“动作终点”的“对”、“向”、“给”，与同表示“动作起点”的“向”、“从……那儿”有何区别以及该区别源于“跟”的哪项核心语义？

第二，为什么“跟”与“向”可同时表示动作的“终点”与“起点”？通过分析“跟”、“向”结合的NP和VP，本文认为“起点”意义是从“终点”义转喻类推 (Analogy) 导致的，本文同时也会解释为什么同样表示动作“终点”的“对”无“终点”到“起点”的类推演变。

第三，通过对比“跟”、“에게”、“에게서”、“with”，构建概念空间及上述语言的语义地图，揭示“伴随”、“终点”、“起点”概念的语义扩张顺序以及其认知机制。

总体来说，本文根据对外汉语教学的需要出发，通过“跟”与“对”、“向”、“给”的对比探究其“动作的终点”义；“动作的起点”义则与“向”、“从……那儿”对比分析，从其句法制约归纳“跟”的核心语义，并从“跟”的词源义解释其句法制约，做到语义研究与句法研究的结合、历时研究与共时研究的结合；其次用转喻类推解释“跟”既表示“动作起点”又表示“动作终点”的现象，揭示其认知机制；最后通过中、英、韩的对比研究构建相应语言的语义地图。

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普通话通音声母 n-m、r-l 的感知实验

时秀娟

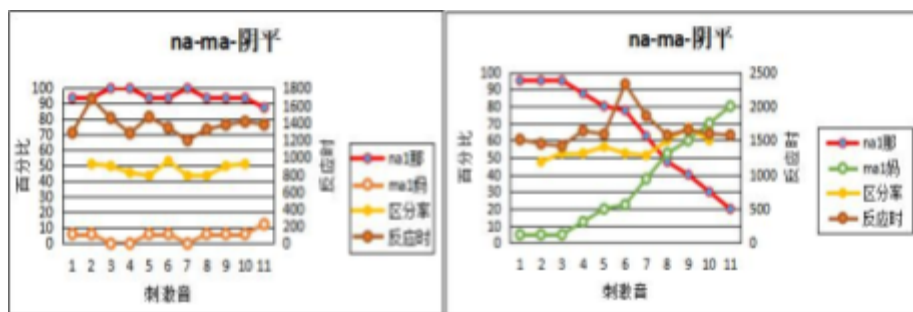
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本文探索普通话/m/-/n/和/l/-/r/两组通音声母的听感边界、相对听感范围、区分峰值等，主要包括 ma-na、mi-ni、me-ne、mu-nu 以及 le-re、lu-ru 六组对比词对。从感知的角度探索 /m/-/n/和/l/-/r/两组声母之间差异的关键声学线索，进一步深入了解这两组声母的特性。实验软件：Cool Edit Pro 2.0、E-Prime 1.0、Excel 软件、SPSS 统计分析软件。

刺激音的合成：通音声母本身的共振峰部分：声母/m/-/n/修改第二、三共振峰，声母/l/-/r/ 修改第三共振峰；后接元音共振峰的过渡段部分：声母/m/-/n/修改第二共振峰，声母/l/-/r/ 修改第二、三共振峰。

实验过程中每组刺激对合成 11 个刺激音：/m/-/n/刺激对共 12 组，共有 12*11=121 个刺激音，如“妈-那”；/l/-/r/刺激对共 4 组，共有 4*11=44 个刺激音，如“炉-儒”，两类通音声母组共有 121+44=165 个刺激音。两种合成方法形成的刺激对共有 165+165=330 个。



实验结果如下：1.对于 n-m 组来说，主要差异在于其与后接元音的共振峰过渡段上，声母本身共振峰所起到的作用很小；对于 r-l 组来说，声母本身的共振峰和后接元音的共振峰过渡段均可以作为主要差异。均与国外的研究结果一致。实验结果也从听感上证明了通音本身同时具有元音和辅音两类音的特性的声学特征。

2、对于 n-m 组来说，它们之间的听感边界在后接不同元音时，有所差异，具体表现在：

(1) 后接 a 元音时，听感边界值为 1169Hz, 位置略靠后，表明 na 的听感范围略大于 ma。(2) 后接 e 元音和 u 元音时，听感边界值分别为 1175Hz 和 632Hz，听感边界位置靠前，表明 ne、nu 的听感范围大于 me、mu。

(3) 后接 i 元音时，四个声调均没有得到听感边界。这与自然语音条件下/m/、/n/后接齐齿呼韵母时被试分辨率较低（mi-ni 区分率仅为 57%）的结果相通。

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Transitivity and Morphological Voice in Japanese and Chinese From the Perspective of Cognitive 'Viewpoints'

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The purpose of the current study is to analyze the gaps in the morphological voice system (see Comrie.1981/1985, Ch. 8) and transitivity in Japanese and Chinese from the perspective of cognitive 'viewpoints' as defined in cognitive science and cognitive grammar. The systematic morphological pairing of transitive and intransitive verbs in Japanese and the resultative verbal compounds (hereafter, RVCs) in Chinese are the main targets of investigation in this study. These are among the most difficult grammatical items for learners of these languages who are the native speakers of the other language. One of the newly found points in this study is that all the previous comparative studies of RVCs in Chinese with the relevant Japanese grammatical items attempted to compare Chinese RVCs to Japanese resultative constructions. We found this was not appropriate enough approach, due to the fact that Chinese RVCs are said to correspond to accomplishment verbs in other languages (Tai. 1984, being the earliest study), and also that transitive-intransitive pair verbs in Japanese are nothing but accomplishment verbs. Our specific research aims in this paper are then: (1) to clarify the proper position of the Chinese RVCs in the verbal aspect type system; (2) to illustrate the relationship between cognitive 'viewpoints' and the voice system both in Chinese and Japanese; (3) to describe the systematic relationship of the Japanese morphological voice system to Chinese RVCs with regard to cognitive 'viewpoints.'

The approach employed in this study included both deductive and inductive methods. The former represented the classical way by coordinating previous studies and deriving a working hypothesis, while the latter involved building up an error-tagged corpus using writing assignments given to about 150-500 students learning either Japanese or Chinese, mainly in universities which are in Japan and China. Our corpus encompassed approximately 49,854 Chinese characters and 6,014,321 Japanese letters. We then extracted errors in RVCs in Chinese and the transitive-intransitive pair verbs in Japanese as well as examples in which learners used these correctly. The most frequent error made by Japanese students in the RVCs was that the verbs of result or cause were lacking. The lack of these elements can be attributed to the differences between the aspect type system of verbs in Japanese and Chinese, as mentioned in previous studies, *id est.*, compared with Chinese activity verbs, Japanese activity verbs tend to include the meaning of result. The most frequent error made by Chinese students was the misuse of transitive-intransitive verbs correlated to the choice of subject as a vantage point in writing essays in Japanese. The data indicates a difference between the two languages in the way of describing change-of-states events, such that Chinese tends to use the cause-result schema analytically from a viewpoint which is outside of the event, while Japanese tends to describe the same kind of events using experiential way of cognition holistically from the viewer's vantage point which is inside of the event. The former way relates to the egocentric viewing arrangement while the latter relates to the optimal viewing arrangement respectively, as proposed in Langacker (1985:121).

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Genderless Ta and Personal-Narratives: The Pragmatics of ta in Chinese Social Media

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Research concerned with the social aspects of language and communication recognizes that humans are inherently inclined to tell stories (Utell, 2016:2). Regardless of the medium, language, or duration, humans preform the social act of story telling to achieve communicative functions in interaction. The users of 21st century Chinese social media are no exception. Through examining digital narratives in which social media users employ the genderless third person pronoun *ta*, the study sheds light on both contemporary language use and manipulation of gender constructions to address the ‘how’ aspect of communicative functions in digital narratives.

Mandarin Chinese originally used the single character 他 (*ta*) to refer to the third person ‘he’, ‘she’, and ‘it’. This later gave way to three separate written “standard” forms: 他 (*ta* ‘he’), 她 (*ta* ‘she’), and 它 (*ta* ‘it’), all with the same pronunciation. As a fourth type of third person pronoun, genderless *ta* is a pragmatic device designed to enhance engagement. Genderless *ta* thrives on the ability to obscure the gender of the intended referent. This research focusses on findings pertaining to two types of narratives from celebrity status verified accounts on Sina Weibo in which *ta* is embedded: 1) Personal-Narratives and 2) Ta-Narratives.

Personal-Narratives are defined as narratives written in the first-person narrative voice. Ta-Narratives are written in the third person narrative voice. Adopting a constructivist approach to narrative analysis (Squire et al., 2014:8), the study regards narratives as stories and *ta* as an interpersonal resource designed to facilitate the co-construction of emergent narratives (see Walsh, 2011) based on character empathy. The study holds the following working definition for “narrative”: A written text that serves the communicative purpose of recounting either fictional or non-fictional events, also referred to as stories, involving characters.

The study also draws on Bamberg’s (1997) adapted narrative analysis methodology based on positioning analysis to further explain how the factors of co-construction and empathy work together to facilitate the reader’s alignment with the character presented in the text.

Results show that celebrity status verified account users insert the gender unspecified *ta* into PersonalNarratives and Ta-Narratives with the function of soliciting empathy or alignment from readers, and that these two types of narratives are designed to create character empathy.

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Attitudes toward L2 Mandarin Speakers of Chinese and non-Chinese Ethnicity

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There are conflicting views among researchers and language teachers as to whether it is possible for adult L2 language learners to achieve nativelike pronunciation and the pronunciation standard to which L2 speakers should be held. Studies of perceived comprehensibility, intelligibility, and accentedness of second language speakers are often done on English in the US, where multilingualism is not the norm and ethnic diversity is relatively common. In many Chinese-speaking communities, however, multilingualism is the norm, yet ethnic diversity is not. Accented L2 English speakers of varying L1s face specific detrimental consequences in American society, including unfavorable treatment in the media, courts, housing, and employment (Lippi-Green 2012). Perceived speaker ethnicity is known to interact with L2 accent and influence processing of speech and opinions about speakers, with listeners judging speakers perceived as ethnic minorities as more accented and less comprehensible (Rubin 1992). It remains to be established whether or not this accent-ethnicity interaction and adverse social treatment experienced by L2 English speakers is also experienced by L2 Mandarin speakers.

The present study tests whether ethnic bias in evaluations of non-native speakers by native Mandarin speakers is congruent with what has been reported for speakers of other languages, such as English. Using an adapted version of the Matched Guise Technique (Lambert et al. 1960), native Mandarin-speaking participants listened to two blocks of twelve recorded utterances from different native speakers, but listeners were told that they were listening to non-native speakers of advanced Mandarin proficiency, all of whom learned Mandarin as adults, did not learn from family, and were not raised in Mandarinspeaking countries. Participants were told that the speakers in each block were ethnically Chinese (华裔) or non-Chinese (非华裔). Four sentences in each block were “matched” with, i.e. identical to, four sentences in the other block. Listeners rated each speaker on nine personality traits predicted to correspond to evaluations along dimensions of the speaker’s *status* (e.g. intelligence, social class), *solidarity* (in/out-group membership), and *dynamism* (liveliness). Speakers were also rated on three measures of language proficiency, namely *standardness*, *fluency*, and *accentedness*. Differences in ratings between the matched utterances would suggest the presence of ethnic bias.

If the language proficiency standard to which a L2 Mandarin speaker is held changes depending on their perceived ethnicity, teachers may better serve their students by not encouraging or expecting students to reach nativelike standards for pronunciation. Additionally, with accurate information on how their

accented speech is perceived, students learning Mandarin will be empowered to make better-informed decisions regarding the amount of time and energy to spend on pronunciation.

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An evaluativity-based analysis of measure phrase constructions: Evidence from Mandarin, German, Dutch and English

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Introducing new data, this paper offers a novel analysis of measure phrase ('MP') constructions. I propose (i) MPs are inherently downward monotonic, and this polarity is sensitive to contextual and lexical information, (ii) MPs denote the maximum value of the set of degrees.

This proposal explains the markedness of negative antonyms ('Neg As') in MP constructions. As proposed, MPs are inherently downward monotonic. In sentences where MPs serve as predicates (1a-

b) in Mandarin, if $d+1$ is in the set of degrees, d is also included (1c-d). Furthermore, since Neg As are upward monotonic (Bartsch and Vennemann 1972), there is a contradiction of polarity, which makes MP-Neg A combination more marked. This markedness is indeed observed cross-linguistically – if a Neg A allows direct MP modification, its positive counterpart will allow direct MP modification, but not vice versa.

(1) a. Yuehan **25 sui** ***da**. b. zhe jian chenshan **100 yuan** ***gui** John 25 years old this CL shirt 100 yuan expensive John (is) 25 years old. This shirt (is) 100 yuan.

c. $\{d: \text{John is } d\text{-years}\} = \{1, 2, \dots, 25\} = (0, 25]$ d. $\{d: \text{shirt is } d\text{-yuan}\} = \{1, 2, \dots, 100\} = (0, 100]$ Given the markedness, following Rett (2015), I assume that Neg As receive evaluativity as a Manner implicature. As data suggest, unlike their positive counterparts (2a), when allowed to license MPs in Mandarin, Neg As are evaluative in MP constructions (2b).

(2) a. zhe zhi **3 mm** **hou**, hen bao. b. zhe zhi **3 mm** **bao**, (*hen hou). this paper 3 mm thick very thin this paper 3 mm thin very thick 'This paper (is) 3 mm thick, (it's) very thin.' 'This paper (is) 3 mm thin, (it's) very thick.' Moreover, I argue that the proposed polarity of MPs (i.e. downward monotonic) can be weakened by contexts (e.g., (3b) is judged to be better than (3a) in Mandarin) or reversed by a Polarity

Schwarzschild, R., 2005. MPs as modifiers of adjectives. *Recherches linguistiques de Vincennes* 34: 207–228.

Where does Mandarin *zhiyou* ‘only’ move? Not to *CaiP*!

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Similar to the obligatory focus movement of arguments modified by *csak* ‘only’ in Hungarian (É.Kiss1998), Mandarin *zhiyou* ‘only’ also exhibits a fronting pattern: a canonically postverbal object DP (1a), when modified by *zhiyou*, must occur in either a clause-initial position or a post-subject position (1b). A pre-verbal particle *cai* optionally occurs.

- (1) a. Yuehan chi-guo NIUROU b. <zhiyou NIUROU> Yuehan <zhiyou NIUROU> (cai) chi-guo <*zhiyou NIUROU>
John eat-EXP beef only beef John only beef CAI eat-EXP only beef
- ‘John has eaten [beef]_F.’ ‘Only [beef]_F has John eaten.’

Proposal. This paper argues (i) *zhiyou*, bearing a strong [FOC] feature, must move (and pied-pipe its DP host) into the specifier of FocP, which situates in the left periphery (Cheung2013). This derives the clause-initial *zhiyou* as in (2a). (ii) The post-subject *zhiyou* can be derived by further topicalizing the subject (2b). (iii) The optional *cai* is an adverbial adjunct to *vP*, which adds an emphatic/ corrective flavor.

- (2) **My proposal:** a. [_{FocP} [_{zhiyou NIUROU}]₁ [_{Foc'} Foc [_{TP} Yuehan₂ [_{T'} T [_{vP} cai t₂ chi-guo t₁]]]]]]
b. [_{TopP} Yuehan₂ [_{Top'} Top [_{FocP} [_{zhiyou NIUROU}]₁ [_{Foc'} Foc [_{TP} t₂ [_{T'} T [_{vP} cai t₂ chi-guo t₁]]]]]]]]

Arguments. My proposal differs from a previous one (Hole2017) which argues a *zhiyou*-phrase must stand in a Spec-Head relationship with a **scalarity** head *cai* (3). While Hole’s proposal captures a nice parallel between ‘only’ and another focus-related construction *lian...dou* ‘even’ as in (4), there are **two arguments** not to analyze *zhiyou...cai* as the Spec-Head relation Shyu(1995) proposes for *lian...dou*.

- (3) **Hole (2017):** [_{TP} Yuehan₂ [_{T'} T [_{CAIP} [_{zhiyou NIUROU}]₁ [_{CAI'} cai [_{vP} t₂ chi-guo t₁]]]]]]
(4) <lian NIUROU> Yuehan <lian NIUROU> *(dou) chi-guo <*lian NIUROU>
even beef John even beef DOU eat-EXP even beef

‘Even [beef]_F has John eaten.’

First, it is unclear how to derive the clause-initial *zhiyou*. While Hole does not explicitly address this issue, a natural way to preserve the Spec-Head relation between *zhiyou* and *cai* and derive the clause-initial *zhiyou* is to have *zhiyou* move through Spec-CAIP to the left periphery (5). However, since the displacements of *zhiyou* to Spec,CAIP and to the clause-initial position both exhibit typical \bar{A} properties (6-8), such movement in (5) should be banned by

Criterial Freezing (Rizzi2006). It also cannot be the case that the clauseinitial *zhiyou*-phrase is base-generated and binds a null operator in Spec-CAIP, considering the reconstruction effects (8). Note such fronting is no problem for (4) as Shyu(1995) shows the movement of *lian*-phrase to Spec-DOUP is A-movement.

(5) **Extension of Hole's proposal:** $[_{CP} [zhiyou\ NIUROU]_1 [_{C'} C [_{TP} Yuehan_2 [_{T'} T [_{CAIP} t_1 [_{CAI'} cai [_{VP} t_2\ chi-guo\ t_1]]]]]]]]$ (6) $\langle [zhiyou\ zhe-ben\ shu]_1 \rangle$ Yuehan $\langle [zhiyou\ zhe-ben\ shu]_1 \rangle$ cai renwei $[_5$ Lisi hui xihuan t_1] only this-CL book John only this-CL book CAI think Lisi will like '[Only this book] $_1$ does John think $[_5$ Lisi will like t_1].' **(Long-distance extraction)**

(7) $\langle * [zhiyou\ YUEHAN]_1 \rangle$ Lisi $\langle * [zhiyou\ YUEHAN]_1 \rangle$ cai zhidao $[t_1\ xihuan\ de\ nvsheng]$ only John Lisi only John CAI know like DE girl

Int: 'Only John $_i$ did Lisi know the girl who he $_i$ likes.'

(Island effect)

(8) **Reconstruction effects**

a. $\langle [zhiyou\ zhe-ben\ guanyu\ taziji_i\ de\ shu]_1 \rangle$ wo $\langle [zhiyou\ zhe-ben\ guanyu\ taziji_i\ de\ shu]_1 \rangle$ cai gei-guo Lisi $_i\ t_1$ only this-CL about himself DE book I only this-CL about himself DE book CAI give-EXP Lisi '[Only this book about himself] $_1$ have I given Lisi $_i\ t_1$ ' **(Condition A)** b. $\langle * [zhiyou\ zhe-ben\ guanyu\ Lisi_i\ de\ shu]_1 \rangle$ wo $\langle * [zhiyou\ zhe-ben\ guanyu\ Lisi_i\ de\ shu]_1 \rangle$ cai gei-guo ta $_i\ t_1$ only this-CL about Lisi DE book I only this-CL about Lisi DE book CAI give-EXP he

Int: '[Only this book about Lisi $_i$] have I given him $_i\ t_1$ '

(Condition C)

Second, unlike the obligatory occurrence of *dou* in (4), *cai* is optional except when the string following the *zhiyou*-phrase contains just a bare verb (9). Although the nature of the constraint in (10) is unclear, the important point is that there's no overall ban on *zhiyou* sentences without *cai*; *cai* appears to be necessary in some cases only to avoid violating (10).

(9) a. zhiyou NIUROU Yuehan (cai) { chi / xiang chi / chi-guo }. only beef John CAI eat want eat eat-EXP '[Only [beef] $_F$ {does John eat / does John want to eat / has John eaten}]'

a. Yuehan zhiyou NIUROU { ?*(cai) chi / (cai) xiang chi / (cai) chi-guo }. John only beef CAI eat CAI want eat CAI eat-EXP

'Only [beef] $_F$ {does John eat / does John want to eat / has John eaten}]'

b. zhiyou YUEHAN { ?*(cai) lai / (cai) xiang lai / (cai) chi niurou }. only John CAI come CAI want come CAI eat beef

'Only [John] $_F$ {will come / wants to come / eats beef}.'

(10) A constraint on the length of the string following a *zhiyou*-phrase: *...[*zhiyou*+DP] [_{NP} V]...

Finally, Hole’s scalarity-based analysis of *cai* comes from the observation that *cai* has a clear scalar use (*cai*₁) (11a). Yet he fails to notice that *cai* in *zhiyou*-sentences (*cai*₂) loses this scalar flavor: (11b) does not imply the prejacent ‘entering only Harvard’ counts as little. Instead, *cai*₂ in (11b) adds an emphatic flavor on the exclusive meaning brought by ‘only’. (11b) means, it is only Harvard, **rather than any other schools**, that John got into, which can be uttered most naturally if there’s an incorrect belief in the previous discourse that John also got into schools other than Harvard. In contrast, (11b) without *cai*₂ can be uttered out of the blue.

- (11) a. Yuehan *cai*₁ kaoshang-le HAFO b. <*zhiyou* HAFO> Yuehan <*zhiyou* HAFO> *cai*₂ kaoshang-le John LITTLE enter-PERF
Harvard only Harvard John only Harvard EMP enter-PERF
‘John merely got accepted to [Harvard]_F.’ ‘Only [Harvard]_F did John get accepted to.’

(DOES IMPLY: ‘Entering only Harvard’ is ‘little’) (DOES NOT IMPLY: ‘Entering only Harvard’ is little)




泰国留学生汉语双元音uo、ua习得的偏误分析及教学对策

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基于多年的教学实践，我们发现不同阶段的泰国留学生在习得汉语双元音uo、ua的过程中呈现出不同的特点。初级阶段的泰国留学生由于受母语负迁移和目的语的干扰容易混淆uo和ua，uo位于第二个音节或词尾时容易向ua滑动，ua反过来又可能会影响uo，ua位于第一个音节时容易向uo滑动；中级阶段的泰国留学生通过一定阶段的正常训练可以区分uo和ua，但不太稳定，容易导致“泰腔泰调”的化石化；高级阶段的泰国留学生发音已经比较稳定，也能够正确听辨，但有些已经化石化的词语已经形成，导致“泰腔泰调”难以改变。

饶秉才先生（1991）在分析泰国学生学习普通话的特殊困难时指出，由于泰语没有uo韵母才使得泰国学生易用ua代替uo。但李红印（1995）在《泰国学生汉语学习的语音偏误》一文中指出泰语还是有uo这个发音的，否则就无法解释学生在以ua代替uo的同时，又以uo代替ua这一混读现象了。李红印（1995）调查发现泰语  与声母拼读时，实际发音有两个，即[u:a]和[uo]。这两个实际读音并不起区别意义的作用，在泰国人听来没有什么不同，因此可以看成是  的两个变体。 韵母发音的不稳定性影响到了泰国学生对汉语uo、ua韵母的正确听辨，从而混淆它们的发音。

本文以实验语音学理论、对比分析理论和语言迁移理论为指导，以汉语和泰语的元音格局为基础，对比分析不同阶段的泰国留学生习得汉语双元音uo、ua的具体情况，找出泰国留学生习得汉语双元音uo、ua的偏误所在，并寻求语言学方面的原因和解释，再结合教学实践提出一些具体的行之有效的教学对策。

比如根据汉语的语音特点，对韵母为双元音uo、ua的字词进行分类教学，如把韵母为uo的汉字和韵母为o的汉字放在一起教学，告诉学生它们的韵母实际上是一样的，然后注意区分o和a的发音位置，并附上舌面元音舌位图，就可以发现o是舌面后半高圆唇元音，a是舌面前低展唇元音，根据发音位置常加练习，就可以正常发音了。

On the Mandarin Distributive Marker *gezi*

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Goal. Chinese distributive marker *gezi* most of the time leads to the distributive reading of the sentence, the same as *ge*. When there are indefinites in the post-verbal position, and the amount of the indefinites equal to that of the subject, the sentence maybe able to show both one-on-one branching reading and distributive reading as shown below:

(1) Jiu-wei tiaoyinshi gezi xiuli jiu-bu gangqin.

nine-CL tuners GEZI repair nine-CL pianos

a. Nine tuners repaired a total of nine pianos separately. one-on-one branching reading

b. Nine tuners each repaired nine pianos. distributive reading That may lead to the hypothesis that for getting the two readings, *gezi* may be located in different logic forms. Noticing that *gezi* and its one-on-one meaning are seldom mentioned in the previous study, this paper tries to give a single denotation of *gezi* and built the LF of these two ambiguous readings.

Assumption. In this paper, I am working with Champollion (2016). He assumes that for any subset of the events on which a given thematic role θ is defined, we can compute the θ of their sum by summing up their θ s. He also assumes that thematic roles are introduced into the compositional derivation by θ -role heads, and that distance-distributive items in certain languages including English must be coindexed with a θ -role head in their clause.

Champollion (2016) proposes to redefine the operator as follows:

(2) Definition: Event-based D operator: $\llbracket D\theta \rrbracket = \lambda V \lambda e[e \in \lambda e (V(e) \wedge \text{Atom}(\theta(e)))]$

This operator applies to an event predicate V , such as a verb phrase. It returns another event predicate, one which holds of any event e as long as it consists of one or more events that are in V and which are each mapped by the function θ to an atom. He assumes that θ is a free variable that is resolved to a thematic role — formally, a function that maps events to their agents, themes, and so on. **Proposal.** Following Champollion (2016), I propose that *gezi* has following denotation:

(3) $\llbracket \text{gezi} \rrbracket = \lambda P \langle v, t \rangle. \lambda e v. e \in *[\lambda e'. P(e') \text{ and } \text{Atom}(\text{agent}(e')) \text{ and } \neg \exists e'' [e'' \subseteq e' \text{ and } P(e'')]]$

(4) Zhe jiu-wei tiaoyinshi gezi xiuli jiu-tai gangqin. this 9-CL tuners GEZI repair 9-CL pianos

'These 9 tuners each repair 9 pianos'

(5) LF of distributive reading for (4): $\llbracket [\text{Agent these 9 tuners}] [\text{gezi} [\text{repair} [\text{Theme 9 pianos}]]] \rrbracket$

$\llbracket S \rrbracket = \lambda e. \text{agent}(e) = \text{the unique } x \text{ such that } |x|=9 \text{ and } x \text{ are tuners and } e \in *[\lambda e'. \text{repair}(e') \& |*\text{Theme}$

$(e')|=9 \text{ and } *piano(\text{Theme}(e')) \text{ and } \text{Atom}(\text{agent}(e')) \text{ and } \neg \exists e'' [e'' \subseteq e' \text{ and } \text{repair}(e'') \& |*\text{Theme}$

$(e'')|=9 \text{ and } *piano(*\text{Theme}(e''))]$

(6) LF of branching reading in (4): $\llbracket [\text{Agent these 9 tuners}] [\text{gezi repair}][\text{Theme 9 pianos}] \rrbracket$

$\llbracket S \rrbracket = \lambda e. \text{agent}(e) = \text{the unique } x \text{ such that } |x|=9 \text{ and } x \text{ are tuners and } e \in *[\lambda e'. \text{repair}(e') \text{ and}$

$\text{Atom}(\text{agent}(e')) \text{ and } \neg \exists e'' [e'' \subseteq e' \text{ and } \text{repair}(e'')] \text{ and } |*\text{Theme}(e)|=9 \text{ and } *piano(*\text{Theme}(e))]$

We can see in (7) that when deontic modals like *bixu/yinggai*(must/should) are higher than *gezi*, we can get both distributive and one-on-one readings. On the opposite, when these modals are between *gezi* and *V*, we will only get the distributive reading:

(7) a. Na si-ge ren bixu/yinggai gezi zuo-zai si-ge jiaoluo.
that 4-CL people must/should GEZI sit-at 4-CL corners

'The 4 people must/should sit at 4 corners separately.'

b. #Na si-ge ren gezi bixu/yinggai zuo-zai si-ge jiaoluo. that 4-CL people GEZI must/should sit-at 4-CL corners
'The 4 people must/should each sit at 4 corners.'

When *gezi* occurs before these elements such as modal adverbs, it must act as distributivity operator cause its only structure is (9). That could be the reason why (7b) are problematic. Because one single person can not stand at 4 corners at the same time. However, in other situation without world knowledge clash, the sentence may have both distributive reading for the structure in (8a) and one-on-one reading for the structure in (8b):

(8) a. $\llbracket [\text{Agent these 9 tuners}] [\text{must} [\text{gezi} [\text{repair} [\text{Theme 9 pianos}]]] \rrbracket$ distributive

b. $\llbracket [\text{Agent these 9 tuners}] [\text{must} [\text{gezi repair}][\text{Theme 9 pianos}]] \rrbracket$ one-on-one

(9) $\llbracket [\text{Agent these 9 tuners}] [\text{gezi} [\text{must} [\text{repair} [\text{Theme 9 pianos}]]] \rrbracket$ distributive

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A derived measure function-based analysis of *bǐ* ‘than’-comparatives

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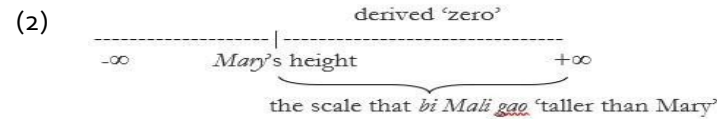
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Given that the comparative form of a gradable adjective (*gāo* for *taller*) cannot be morphologically distinguished from the positive form (*gāo* for *tall*), the encoding of comparative meaning in *bǐ* ‘than’-comparatives, such as (1), has received extensive discussion in Chinese linguistics literature. There are two major proposals on the place of comparative meaning encoding in *bǐ* ‘than’-comparatives. One proposal is that *bǐ* ‘than’, like the overt comparative morpheme *-er* in English, has a meaning of comparison (Erlewine 2007, Lin 2009). In contrast, the other proposal argues that *bǐ* ‘than’ simply marks the standard of comparison, and the meaning of comparison comes from a covert comparative morpheme (Liu 2011). Building on the derived measure function-based analysis of *than*-comparatives in English (Kennedy & McNally 2005, Kennedy & Levin 2008), this paper proposes an analysis of *bǐ* ‘than’-comparatives that synthesizes the two previous proposals. In the proposed analysis, *bǐ* ‘than’ directly marks the standard of comparison and indirectly encodes the comparative meaning. The standard marker *bǐ* ‘than’ converts a direct measure function to a difference function. The comparative meaning is warranted when the standard of comparison is made the derived ‘zero’ on the derived scale.

(1) Yuēhàn bǐ Mǎlì gāo.

John than Mary tall

‘John is taller than Mary.’



This paper argues that the scale that a *bǐ* ‘than’-comparative denotes is a subpart of the scale denoted by the corresponding gradable adjective in its positive form. In the case of (1), the scale that *bǐ* Mǎlì *gāo*

‘taller than Mary’ denotes is a subpart of the scale denoted by the positive form of *gāo* ‘tall’. The subpart is derived by mapping the comparative standard to the original scale of *gāo* ‘tall’. In (1), the comparative standard Mǎlì ‘Mary’ is introduced by the standard marker *bǐ* ‘than’. Assuming that gradable adjectives are direct measure functions from individuals to degrees (Kennedy 2007), mapping the individual *Mary* to the original scale of *gāo* ‘tall’ in its positive form gives Mary’s height. Mary’s height serves as the derived ‘zero’, i.e., the minimum endpoint on the derived scale. See (2) for an illustration. The derived scale that *bǐ* Mǎlì *gāo* ‘taller than Mary’ denotes minimally differs from the original scale of *gāo* ‘tall’ in possessing a derived minimum endpoint.

Following the notation in Kennedy and Levin 2008, the standard marker *bǐ* ‘than’ receives the denotation in (3) in which it takes an individual *y* and a gradable adjective *g* as its arguments and returns a derived measure function of the form $\lambda x. g_g^{\uparrow(y)}(x)$. In the case of (1), the derived measure scale denoted by *bǐ* Mǎlì *gāo* ‘taller than Mary’ is a minimally closed scale with Mary’s height as the derived zero. See (4).

Given that Mary's height is treated as the derived zero, the predication 'John is taller than Mary' is true as long as John's height is mapped to the right of Mary's height. Otherwise, the predication is truth-

conditionally wrong. Given that the derived measure function $tall_{tall}^{\uparrow}(Mary)$ is of type $\langle e, d \rangle$, it needs to combine with the degree operator pos in (5) to be property-denoting. In (5), the $stnd$ function is sensitive to the scale structure of g and returns a standard of comparison for the evaluation of g . Combining pos in

(5) with (4) gives the denotation of (1), represented in (6). (6) means John's height on the derived scale is greater than the standard of comparison on the derived scale. Given that the scale of $tall_{tall}^{\uparrow}(Mary)$ is minimally closed and the $stnd$ function is sensitive to its argument's scale structure, $stnd(tall_{tall}^{\uparrow}(Mary))$ in

(6) returns the minimum endpoint, i.e., Mary's height as the standard of comparison. Thus, (6) denotes an exceeding relationship between John's height and Mary's height, which is the denotation of (1). To sum up, this study synthesizes the two prevailing proposals on $b\check{i}$ 'than'-comparatives by assigning $b\check{i}$ 'than' dual functions. It directly marks the standard of comparison and indirectly warrants a comparative meaning.

$$(3) [[b\check{i}]] = \lambda y \lambda g_{\langle e, d \rangle} \lambda x. g_{g(y)}^{\uparrow}(x)$$

$$(4) [[b\check{i}]](tall)(Mary) = \lambda x. tall_{tall}^{\uparrow}(Mary)(x)$$

$$(5) [[pos]] = \lambda g \lambda y. g(y) \geq stnd(g)$$

$$(6) [[(1)]] = tall_{tall}^{\uparrow}(Mary)(John) > stnd(tall_{tall}^{\uparrow}(Mary))$$

A Prosodic Analysis of Mandarin Classifiers

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Introduction: A classifier in Mandarin usually requires the presence of a numeral (cf. (1)). However, there are some exceptions. As in (2), a classifier sometimes can appear at the initial position of a noun phrase (NP), without any numerals. This paper will present some new observations of Mandarin classifiers and propose that Mandarin classifiers are prosodically deficient in the sense that the classifiers in NP-initial positions have to be parsed within the same intonational phrase (I-phrase) as the verb.

- (1). *(san)-ben shu (2). wo mai-le ben shu. three-Cl book I buy-ASP Cl book
 'three books' 'I bought a/one book.'

Previous analysis and new observations: Yang (2001) proposes that a classifier in Mandarin is either a lexical suffix directly attached to a numeral forming the Num+Cl complex or an enclitic cliticizing onto the preceding host word in the absence of a numeral. Yang (2001) suggests that in the absence of a numeral, demonstratives, quantifiers, and verbs can be the host for a classifier (cf. (2) and (3)).

- (3). a. na-ben shu hen gui. b. mei-ben shu dou yao san-kuai qian. that-Cl book very expensive every-Cl book all cost
 three-dollar money

 'That book is very expensive.' 'Every book costs three dollars.' (Yang 2001) However, clitics usually either are very picky about their hosts (like verbal clitics in Romance languages), or allow anything to be their hosts (like 'second position' clitics in Serbo-Croatian). Verbs, demonstratives, and quantifiers do not form a natural class. Thus it is unclear why Mandarin classifiers, as clitics, can only cliticize onto verbs, demonstratives, and quantifiers.

 Furthermore, a clitic and its host usually cannot be separated by any non-clitic elements. Consider (4), the proper name intervening between the verb and the Cl-N phrase is clearly not a clitic. But the sentence is still acceptable. In addition, the intervening element can be quite long, as in (5).

- (4). Yuehan song-le Zhangsan ben shu
 John give-ASP Zhangsan Cl book
 'John gave Zhangsan a/one book.'

- (5). Yuehan song-le biao-xian zui-hao de xue-sheng ben shu

John give-ASP perform best DE student CI book

'John gave the student who performed the best a/one book.'

More interestingly, if the relative clause in (5) is replaced with an appositive, the sentence becomes ungrammatical (cf. (6)). These facts are not expected under Yang's (2001) analysis.

(6). *Yuehan song-le Zhangsan, biao xian zui hao de xuesheng, ben shu.

John give-ASP Zhangsan perform best DE student CI book

'John gave Zhangsan, the student who performed the best, a/one book.'

New proposal: I propose that Mandarin classifiers are prosodically deficient in the sense that when classifier occur in NP-initial positions, they have to be parsed within the same I-phrase as the verb. I will refer to this constraint as the Verb Proximity Condition (VPC).

According to the VPC, elements that form separate I-phrases cannot be inserted between a NP-initial classifier and the verb, because these elements will prevent the NP-initial classifier from staying within the same I-phrase as the verb. In (6), the appositive, which has to be followed by a pause, forms a separate I-phrase, and thus the VPC is violated. Also, when a pause is inserted after the indirect object in (4) and (5), they become ungrammatical (see (7) and (8)).

(7). *Yuehan song-le Zhangsan ## ben shu.

(8). *Yuehan song-le biao xian zui hao de xuesheng ## ben shu.

Conclusion: To sum up, this paper has discussed the distribution of Mandarin classifiers. I proposed the Verb Proximity Condition, which requires NP-initial classifiers in Mandarin to stay within the same intonational phrase as the verb. The VPC can account for the restricted distribution of NP-initial classifiers.

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Processing phonetic radicals of Chinese characters in a sentence: Data from Mandarin native speakers

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The phonetic radical of Chinese phonogram provides the phonological cue for the whole character and can also stand alone. The dual-route access hypothesis suggests two routes, one directly accessing the meaning through orthography and another through both orthography and phonology (Coltheart et al., 1993). It remains controversial how they are processed in different sentence contexts (high/low-constrained context) (Ren et al., 2012, Luo et al., 2018).

Method: 44 Mandarin native speakers participated in the self-paced reading experiment designed with the violation paradigm. For the material, each prime is a single Chinese character, and the targets are compound characters. Five conditions have been manipulated: 1. The target is prime (CG). 2. The target uses the prime as phonetic radical, and shares the same pronunciation with prime (C1); 3. The target uses the prime as phonetic radical, but has different pronunciation with targets (C2); 4. Only the phonetic radicals of targets share the same pronunciation with the primes (C3); 5. Neither the targets nor their phonetic radicals have any relationship with the primes (C4). Following Ren et al. (2012), two types of contexts were constructed. The high-constrained sentence, which refers to the character before the critical region has a closed relation with the prime, but the low-constrained shows a low relation with the prime. The targets in every group replaced the prime in the same sentence context. The reaction time to different conditions were compared for every character in the sentences. The comparison between high-constrained condition and low-constrained condition was also involved.

Table 1: An illustration of the stimuli in Chinese

| Prime | Target | High-constrained | Low-constrained |
|------------------|-----------------------|-------------------------|--------------------------------|
| you2 'reason' | 1. 由 由 you2 'reason' | 请假的理 <u>由</u> 是他太过疲 | 迟到的原 <u>由</u> (<u>因</u>)是他发高 |
| | 2. 油 you2 'oil' choul | 劳。(11 characters) 'The | 烧了。(11 characters) 'The |
| | 3. 抽 'take out' | reason why he asked for | reason why he was late was |
| | 4. 扰 rao3 'disturb' | leaving was that he was | that he had a |
| | 5. 顿 dun4 'pause' | so tired.' | fever.' |

Results: (1) In the high-constrained context, the results support the dual-route hypothesis model when a phonetic radical is processed. The orthographic information is in the early stage (for the 6th character, $C4 > C3$, $p < 0.05$), meanwhile, the orthographic and the phonology information are in the late stage (for the 7th character, $C5 > C3$, $p < 0.01$, $C5 > C2$, $p < 0.001$; for the 8th character, $C5 > C4$, $p < 0.05$; $C5 > C3$, $p < 0.001$); in the low-constrained sentence, the result only shows the significant difference between the four target conditions and the control condition ($ps. < 0.01$), but does not do among these four conditions ($ps. > 0.05$), which means the radical level is not significantly processed. 2) The semantic destruction starts earlier in high-constrained sentences (on the 5th character, the inhibition effect emerges, $C2 > CG$, $C3 > CG$, $C4 > CG$, $C5 > CG$, $ps. < 0.001$) than that in low-constrained context ($ps. < 0.05$), which may be due to the different processing mechanism of the high (top-down) and low (bottom-up) constrained sentences.

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The Acquisition of Mandarin Consonants by English Learners: Perception and Production Mismatches

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Research has shown that phonetic distances between L1 and L2 speech sounds is an important factor that contributes to the degree of success in acquisition of L2 speech sounds (Guion et. al, 2000, Wang & Chen, 2019). Both the Perceptual Assimilation Model (PAM) (Best et. al, 2001) and the Speech Learning Model (SLM) (Flege, 2007) assume that learners' perceptual assimilation patterns of L2 sounds to L1 categories are systematically related to their native phonetic system. There is also a lack of exact alignment between perception and production for perceptually established L2 categories (Flege, 1999).

There is a paucity of research on Chinese as a Foreign Language (CFL) speech learning. Very few studies investigated L2 learners' acquisition of Mandarin consonants (Wang & Chen, 2019). To fill this gap, this study investigates the perception and production problems of Mandarin consonants by beginning level English CFL learners. An additional goal is to explore the relationship between L2 consonant perception and production at initial stage of learning. Twenty-five beginning level English CFL learners identified eight Mandarin consonants (j /tɕ/, q /tɕʰ/, x /ɕ/, zh /tʂ/, ch /tʂʰ/, sh /ʃ/, z /ts/, c /tsʰ/) in C+/a/ syllables in forced-choice identification tasks on a computer. They also provided production data by reading a list of sentences containing the eight target consonants. Native Mandarin listeners assessed the learners' productions of the consonants through forced-choice identification tasks followed by goodnessrating tasks.

Results showed the learners had different degrees of difficulties with all the eight Mandarin consonants under investigation in perception and production. The mean percentage accuracy scores ranged from 29% to 80% for perception and 25% to 88% for production. Overall, the perceived phonetic distances between Mandarin and English consonants predicted the learners' identifications of the L2 consonants and the perception data partially support the PAM and SLM models. Furthermore, the participants performed significantly better on the retroflex sounds ch /tʂʰ/ and sh /ʃ/ *in perception* than *in production* but vice versa on palatal sound x /ɕ/. Palatal sounds j /tɕ/ and q /tɕʰ/ also have the tendency of better production than perception. Significant differences on dental sounds z /ts/, and c /tsʰ/ were also found across the two domains. Mandarin retroflex, palatal, and dental fricatives and affricates, though all lack exact counterparts in English, pose different problems to the English CFL learners in perception and production. Such discrepancies suggest that the relationship between perception and production of L2 consonants is not straightforward. Analyses of individual learners' data are under way to further explore the nature of the observed differences in the two domains.

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Typology of verb-echo answers in Chinese and Formosan languages

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This paper argues that verb-echo answers (VEAs) are similarly derived by verb-raising and deletion in Chinese and five Formosan languages, including Puyuma, Paiwan, Bunun, Amis, and Rukai, but the derivations of VEAs differ in the use of pro-drop, the landing site of verb-raising, and the size of deletion.

Regarding VEAs in Chinese, Simpson argues that the VEA in (1) is ineligible due to the intervention effect caused by the narrowly-focused adverb in the process of V-to-C domain (SpecCP) raising. Yet Simpson (2014, 2015) ignores the fact that the presence of *le2* affects the grammaticality of VEA in (1) and (2). We find that when *le2* is attached, the questions inquire the truth value of whether the situation has changed. The VEA with *le2* becomes legitimate in (2A).

- (1) Q: ni yanlide zebei ta ma? A: *zebei.
you severely scold him Q 'Do you scold him severely?' scold 'Yes.' (2) Q: ni yanlide zebei ta le2 ma?
A: zebei le2.

you severely scold him LE Q 'Have you scolded him severely?' scold LE 'Yes.' Given Holmberg (2001, 2016), Simpson (2014, 2015) argues that affirmative VEA in Chinese is a reduced form of a regular sentence via V-to-C domain movement and deletion. In fact, V-to-C movement encounters difficulty in violating a realization that Chinese merely tolerates V-to-v movement.

We propose that VEAs in Chinese involve (i) V-to-v movement (Huang 1991, 1997; Tang 2001, etc.), (ii) VP deletion, and (iii) *pro* drop. Specifically, the grammatical difference between (1) and (2) lies in the presence/absence of *le2*. Given Erlewine (2016), we argue that *le2* is a low sentential final particle (SFP) locating between TP and vP, heading a SFPP on the right, encoding a change of state. *le2* takes scope over the entire sentence and forces the scope of the adverb *yanlide* 'severely' to be limited within the verbal domain as shown in (3). The V *zebei* 'scold' raises to v, crossing the narrowly-focused adverb. Then VP deletion, licensed by v, is implemented, giving rise to the short form [pro V le2]. The subject of the VEA, not affected by VP deletion, is a null *pro*, which can optionally be pronounced and which respects a diagnostic of *pro* drop: An existential indefinite singular subject pronoun cannot be *pro*-dropped. (Holmberg 2016:80). The ungrammaticality of (4A) reveals that the *pro* subject cannot refer to indefinite subject in (4Q). The test supports the fact that the *pro* subject does exist in Chinese VEA.

- (3) A: [_{CP} [_{IP} pro [_{SFPP} [_{VP} zebei [_{VP} yanlide [_{VP} t_i ta]]] le2]]]o. (= wo zebei le2.)

ta lez ma? scold severely him LE I scold LE 'Yes.' (4) Q: you ren zebei
 A: *pro zebei lez.

EX person scold him LE Q 'Is there anyone scolding him?' scold LE 'Yes.'

The five Formosan languages, belonging to the family of Austronesian languages, spoken in Taiwan, are characterized by their verb-initial structures and agglutination of voice, mood, and tense to the verb stem. In the literature, there is only one language, Puyuma, which has been marked as a language not employing verb-echo answers (Holmberg 2016: 67-71). However, after careful empirical scrutiny, we find that the five languages under study can employ verb-echo answers as illustrated by Puyuma example (5).

(5) Q: m-ekan-lra ti seneyan za maderu? A: m-ekan-lra.
 AV-eat-ASP NOM Seneyan OBL rice 'Has Seneyan eaten rice?' AV-eat-ASP 'Yes.'

We argue that these languages adhere to Holmberg's V-to-C movement and deletion analysis (big deletion analysis). The fact that the answer is marked for agent voice and aspect indicates that it is a sentence with sentential syntactic structure in (5A). The verb *ekan* 'eat' raises from V to C in (6A). Then VoiceP deletion is applied, eliding the subject but stranding the inflected verb, akin to Finnish, Welsh, and Irish.

(6) A: [_{CP} m-ekan-lra [_{VoiceP} t''' [_{AspP} t'' [_{IP} ti seneyan [_{VP} t' [_{VP} t za maderu]]]]]].(Puyuma)
 AV-eat-ASP NOM Seneyan OBL rice

We conclude that the typology of the VEAs in Chinese and Formosan languages is significant in strengthening the fact that different languages use different strategies to derive verb-echo answers. Chinese employs pro-drop, V-to-v raising, and VP deletion, whereas the five Formosan languages employ V-to-C raising and VoiceP deletion.

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On the syntax of complex temporal adverbials in Mandarin Chinese

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Although recent studies like Paul and Pan (2018) and Wei and Li (2018) have provided extensive discussions on complex temporal adverbials (CTD) in Chinese, several constraints need further analysis. For instance, when the main and subordinate clauses have the same subject, the subordinate clause may appear before or after the subject as in (1):

- (1) (Lisi) [Chi-fan de shihou], (Lisi) kan-le yi ben shu.
Lisi. eat-rice DE time Lisi read-Prf one CL book

'Lisi read a book while eating.'

In contrast, when the two clauses have different subjects, the subordinate clause must appear before the subject of the main clause as illustrated in (2a,b):

- (2) a. [Wo chi-fan de shihou], Lisi kan-le yi ben shu.
I eat-rice DE time Lisi read-Prf one CL book.

'Lisi read a book when I was eating.'

- b. *Lisi [wo chi-fan de shihou], kan-le yi ben shu.

Lisi I eat-rice DE time read-Prf one CL book

I follow Demirdache & Uribe-Etxebarria (2004) in assuming that an adverbial clause like *chi-fan de shihou* 'while eating' in (1) is used to modify the Assertion-Time, which is syntactically projected in the specifier of an aspectual phrase. The word order of [subject + CTD] is as a result of the EPP feature on TP. On the other hand, the word order of [CTD + subject] is an example of topicalization where the entire CTD moves to the left periphery. To explain the contrast between (2a) and (2b), I argue that topicalization process must occur due to a "noambiguity" constraint. Given that there are two DPs appearing next to one another in (2b), one of them is forced to move to avoid ambiguities. However, due to adjunct island, the subject *wo* 'I' in the CTD cannot move alone; the CTD, therefore, must be dislocated entirely as illustrated in (2a). Finally, the analysis predicted that the constraint may disappear if an element breaks the adjacency.

The prediction is borne out: if an element like *zai* 'in/at' is placed between the two DPs, the sentence becomes grammatical and the dislocation of the CTD needs not to occur.

The study also extends its discussion to a related construction: the *zai* progressive as illustrated in (3):

- (3) Lisi zai chang-ge.
 Lisi ZAI sing-song 'Lisi is singing.'

In the spirit of Woo (2013), I demonstrate that *zai* in (3) is in fact a preposition taking a covert temporal phrase (a counter part of *shishou* 'time') modified by a relative clause; that is, another type of CTD. The *zai*-phrase itself (i.e., [zai + singing]) is a complement of another prepositional phrase, the pP (Svenonius 2007). I further argue that the pP is a predicate that functions as a complement of an aspectual phrase. The progressive reading comes from the fact that the temporal phrase is modified by a relative clause containing a dynamic predicate.

To conclude, in this study, I demonstrate that a CTD in Chinese can function either as an adjunct or a complement. I also account for some constraints such as the "no-ambiguity" constraint found in a CTD.

Quantifier scope in Mandarin thetic sentences

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As widely noted and experimentally attested to (Huang 1982, Aoun and Li 1993 and subsequent literature), Mandarin simple transitives (1) are unambiguous. However, according to an empirical observation made in Larson and Wu (2018, ex. 30), examples like (2), although a simple transitive, can be read ambiguously wrt to scope. Following Kuroda 1972's thetic-categorical distinction where categorical predications attribute properties to particular individuals while thetic predications assert general regularities or the existence of events, Larson and Wu (2018) argues that, understood thetically, the inverse scope reading of (2) is even pragmatically preferred and this interpretation is enhanced by a parenthetical like *anzhao falü guiding*.

- (1) yi-ge-xuesheng du-le mei-ben-shu.
one-CL-student read-ASP every-CL-book

'A student read every book.' ($\exists > \forall$; $*\forall > \exists$)

- (2) (Anzhao falü guiding) san-ming jingcha kanshou meige chukou.
(As law demand) three-CL police officer guard every exit

'As required by law, three policemen guard every exit.' ($3 > \forall$; $\forall > 3$)

To test the empirical observation on scope ambiguity of Mandarin simple transitives like (2), I conducted an untimed, offline experiment through the online survey platform, Qualtrics.

Methodology and experiment design: The task used in this experiment is a multiple-choice task, a revised version of the "How many" task used in Anderson (2004) to test scope ambiguity. The contexts given for each target sentence did not favor a particular scope reading. Each target sentence was followed by a comprehension question with four possible answers (Answer A corresponds to surface scope reading; Answer B and C: inverse scope reading; Answer D: filler choice), as in (3).

- (3) a. [Context]: 体育馆安保负责人向警长助理询问警长对安保工作的具体安排。下面加粗
b. [Target sentence]: **四名警察看守每个出口。**
c. [Comprehension question and available choices]:
 请问: 假设体育馆一共有5个出口, 那么, 一共需要多少名警察承担体育馆安保任务?
 A. 4名 B. 4名到20名之间 C. $5*4=20$ 名 D. 多于20名

加黑的句子是警长助理的答复。

The verbs used for the stimuli were all disyllabic verbs such as *kanshou* 'guard', and *pingshen* 'review'. For the stimuli, the existential quantificational phrase (subject position) linearly precedes the universal quantificational phrase (object position). The presence of *hui* (modal/future-tense marker) is considered as a factor. 8 sets of 2 sentences (one sentence with *hui* and one sentence without *hui* in each set) were created as the target sentences. 16 target sentences were randomized with 128 fillers and distributed across 8 lists in a Latin Square Design. Each participant was presented with 2 target sentences (one sentence for each condition) intermingled with 16 fillers.

Results: 134 native Mandarin speakers participated in this experiment. 89 out of them completed the survey and only their data were included in the results (Table 1). Although the presence of *hui* seems to cause a significant increase in the number of participants who chose surface scope only, the results in general confirm

Larson and Wu’s (2018) empirical observation: about half of the participants considered an inverse scope reading available for simple transitives. It again poses an empirical challenge for isomorphism as language a parameter, and also for theoretical approaches that treat linearity or overt movement as a decisive factor for scope interpretation.

| Condition | Surface scope only | Inverse scope only | Both surface and inverse scope | Answer_type D only | Sum |
|---------------|--------------------|--------------------|--------------------------------|--------------------|-----------|
| Matrix_no hui | 31 (35%) | 33 (37%) | 21 (24%) | 4 (4%) | 89 (100%) |
| Matrix_hui | 45 (51%) | 21 (24%) | 20 (22%) | 3 (3%) | 89 (100%) |

Table 1. The distribution of answers chosen by participants (N= 89, age range: 17-65, avg. age: 30.78)

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语境条件下，语素层面的名动分离现象研究

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名词和动词在大脑中是否分离 (dissociated), 这个问题引起了广泛关注, 但目前未能取得一致。

多数汉语研究支持名词和动词在大脑中是分离的, 而且发现名动分离既出现在词汇层面, 也出现在语素层面 (或称词汇下层面, sub-lexical level)。但是, 语素层面的名动分离研究还有待深入, 特别是对语境条件下, 是否还存在语素层面的名动分离现象, 尚未研究。因此, 本研究将在严格控制无关变量的基础上, 考察在语境条件下, 名词性语素和动词性语素对偏正式复合名词加工的影响, 探讨语素层面的名动分离原因。

实验一 本实验考察在语境条件下, 是否存在语素层面的名动分离现象。采取单因素两水平 (语素的语法类别: NN、VN) 的被试内设计。实验采用启动范式。选用名词语境 (“一+名量词”, 如: 一个) 为启动词, NN 型和 VN 型复合名词为目标词。复合词和语素的语法类别按照语料库中的使用频率确定。词频、字频、笔画数、家族大小、完形概率 (cloze probability) 等都得到了控制。实验任务为搭配判断, 判断启动词与目标词之间是否可以搭配。实验结果显示, 在语境中, NN 的反应时比 VN 更短, 正确率更高, 说明 NN 比 VN 的加工更为容易。

实验二 本实验进一步考察, 在语境条件下, 名词性语素和动词性语素分离的原因。操控复合词一

语素的语义、语法类别与名词语境的关系, 采取单因素三水平 (语义、语法类别均符合语境的 NN, 如: 一个+洞口; 语义不符合而语法类别符合语境的 NN, 如: 一个+壁炉; 语义、语法类别均不符合语境的 VN, 如: 一个+交点) 的被试内设计。实验一中的无关变量仍得到控制。实验任务同实验一。实验结果显示, 语义、语法类别均符合语境的 NN 的反应时比其他两类复合词更短, 正确率更高, 说明在语境中, 语义、语法类别均符合语境的 NN 比另外两类的加工更容易; 而另外两类复合词的反应时和正确率没有差异。

讨论 实验一的结果表明，不仅在单独呈现条件下，而且在语境条件下，仍存在语素层面的名动分离；实验二的结果表明，在语境条件下，语素层面的名动分离来源于语义，而不是语法类别，这与之前单独呈现条件的结果一致，说明汉语语素层面的名动分离现象不是实验任务带来的。同时，这个结果也表明，汉语名、动语素的语义信息在语言的使用中会被激活和利用，参与词汇、句子等加工和整合过程。

广西土白话送气分调的声学分析与感知研究

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广西桂平南部、贵港港南区、平南县南部、兴业县北部的土白话存在按古调类全清、次清分调的现象。尚、邵（2013）、冉等（2014、2015）、刘（2015）、梁、唐（2017）等讨论了广西粤语次清分调的问题。但送气调是否具有音系学的意义、其语音特征和音系特征如何描述、定义等问题尚未明确。本研究从声学 and 感知两个角度进行实验研究。

声学实验根据刘（2015）记录的广西桂平麻垌土白话14个声调（存在平、上、去、入次清分调）为框架，每个调类选取7个例字共98字，请6位当地人（老中青，男女各三人）朗读并录音。从辅音和声调两方面对次清字及其相关字的读音进行声学分析，寻找次清声调的语音学特征以及可能导致调类分合的特征。

感知实验的目的是确定次清调的音系学特征。朱、徐（2009）在分析吴江次清分调时，采用统计学的方法研究全清调和次清调有无区别，但他们认识到“如果声学数据有显著性差别，并不意味着听感上一定有别”（p.328）。由于全清和次清的声母区别明显，在做感知实验时，很难确定感知上的不同是来自辅音的区别性特征还是声调的特征。本项研究采用合成音进行感知实验，以阴平调为例，假如全清“东”和次清“通”的原调为“东[tun²⁵⁴]”和“通[tʰun¹⁴³]”，通过增删送气特征得到两个合成音[tʰun²⁵⁴]、[tun¹⁴³]，把四个音按对立条件分成五组，即按送气对立分2组 tun²⁵⁴—tʰun²⁵⁴、tun¹⁴³—tʰun¹⁴³，按声调对立分2组 tʰun²⁵⁴—tʰun¹⁴³、tun²⁵⁴—tun¹⁴³，按送气及声调对立分1组 tun²⁵⁴—tʰun¹⁴³，请6位发音人听辨，按平、上、去、入四调类每人共需做20组听辨实验。

最后，我们根据实验结果讨论送气特征与音高变化对该方言送气分调的影响，从而确定其平、上、去、入送气调是否独立成调。若是，确定其调类，并尝试说明其送气分调的演变规律。

Masked phonological contrast maintained in phonetics – vowel feature remnant in Rugao contracted syllables

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Are neutralized contrast really *gone*? Recent production and perception studies have revealed that even if the two words seem neutralized, phonetic cues could still be captured acoustically and perceptually, e.g. incomplete final obstruent neutralization in German (Port & Leary 2005), duration and tone cues in syllable contraction (Kuo 2010) and etc., This study investigates vowels in the contracted syllables in Rugao, a dialect of Jianghuai spoken in Rugao, Jiangsu, China, and shows that a vowel in the contracted words are different from the vowel in corresponding lexical words in height or front/backness.

Syllable contraction happens when two syllables merge into one. Fully contracted di-syllabic words, as opposed to partial contracted words, seem to have only one vocalic segment in the nucleus, e.g. [jən. xæn] → [jæn] vs. [bə. ɲɛ] → [bəɛ] (Rugao, Xu et al. 2018). Kuo (2010) concluded that male speakers used a bigger vowel space for contracted syllables while there is no difference for female speakers. A more controlled production experiment was run to probe the formant information of the contracted vowels and their corresponding lexical vowels.

Stimuli. Contractible stimuli were 16 di-syllabic words of Rugao with [ə] in the first syllable and [a, æ, e, ɛ, o, ɔ, i, u] in the second syllable, e.g. [səʔ. aɿ], [tsəʔ. jɔ]. The control group was 16 lexical monosyllabic words with the same consonants and vowel nuclei as the contracted syllables, e.g. [saɿ], [tɕin], and the non-contracted di-syllabic forms of the 16 contractible word, e.g. [jəʔ. jæn], [ɿəŋ. ga].

Participants & procedure. 26 native speakers of Rugao (female, av. age = 31) were recorded using PsychoPy and Audacity. After listening to an introduction of syllable contraction, the participants were asked to contract the di-syllabic word on the screen (i.e., the *contraction task*), presented randomly and one each time. The *wordlist reading task* followed immediately, in which participants were instructed to read the word on the screen clearly. The wordlist was randomized and included two repetitions of each word.

Measurements & results. The fully contracted tokens in the *contraction task* and all the tokens in the *wordlist reading task* were measured for F1 and F2 values at the midpoint using Praat (Boersma 2001). The vowel in the contracted syllable is compared against a) the 'same' vowel in monosyllabic words, and b) the 'same' vowel in the noncontracted disyllabic form. The results suggest that, **1)** contracted low vowels [a, æ] have lower F1 values ($p < 0.01$), indicating raising. **2)** For mid vowels, contracted [e] is backed, with a lower F2 ($p < 0.05$), and [o, ɔ] are fronted, with higher F2 values ($p < 0.05$). The results above suggest that the seemingly deleted [ə] centralizes the surviving vowel, shown by low vowels raised, and front-mid vowels backed, and mid-back vowels fronted. The

contracted vowel and the corresponding lexical vowel are similar enough so that they essentially belong to the same vowel category, but the lexical distinction is not neutralized in the phonetics. Phonetic cues help maintain the underlying lexical contrast that seems to have disappeared in the surface form.

What if what you think is the opposite of what I say? Online processing of two tonal systems: Evidence from Lanzhou-Beijing bidialectal speakers

Yadong Xu & Kevin Russell

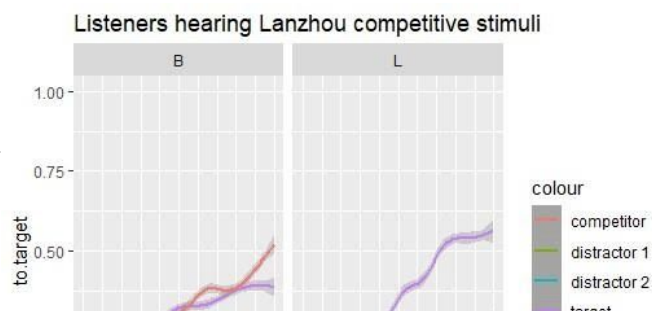
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Context. Despite Mandarin Chinese is comparatively well-studied, a mundane but significant fact is often ignored by researchers. That is, the vast majority of Mandarin speakers are in essence bidialectal as they are subject to another influence from the dialect of their hometown in which they are exposed. As commonly known, word processing in Mandarin is complex, because other than the segmental information, the suprasegmental feature of tone/pitch contour is used. In literature of tone processing, ample research have focused on comparing Mandarin with a non-tonal language (typically with English, cf. Cutler & Chen 1997; Lee 2007; Liu & Samuel 2007; Malins & Joanisse 2010, 2012; Schirmer et al. 2005; Sereno & Lee 2015; Shook & Marian 2016; Taft & Chen 1992; Tong et al. 2008; Wang et al. 2017; Wiener & Turnbull 2016; Zhao et al. 2011). However, these studies have oversimplified the reality neglecting that there is another tonal system in an ordinary Mandarin speaker's brain. Scarce psycholinguistic research contributed to exploring how two tonal systems interact and compete with one another within a Mandarin bidialectal's brain.

Case study. Taking people in Lanzhou (Gansu province) for instance, they grow up speaking Lanzhou Mandarin where the falling tones and rising tones of Beijing Mandarin (upon which the standard Mandarin is based) are systematically reversed. For example, the word 轴 'axis' is pronounced zhou2 (rising-tone) in Beijing and zhou4 (falling-tone) in Lanzhou, while 咒 'curse' is pronounced zhou4 (falling-tone) in Beijing and zhou2 (rising-tone) in Lanzhou. If a Lanzhou speaker hears zhou with the rising tone, which lexical item, 轴 or 咒, does the person think of? To pursue this question within such bidialectal's brain, a finegrained time-sensitive method—visual world paradigm (VWP) is employed in our study. In this task, four Chinese characters appeared on each corners of the computer screen. The participants were asked to choose the character as fast as possible that matches what they heard from the headphone. In the meantime, an eyetracker recorded the eye movement and eye fixations. Two controlled groups of participants were recruited: the monodialectal group (people grow up in Beijing) and the bidialectal Lanzhou group. The auditory stimuli presented were Lanzhou Mandarin in half of the trials and standard Mandarin in the other half. Participants were given written and spoken instruction informing the change.

Results. There is no significant difference in response time by participant groups when listening to Beijing stimuli (2757ms by bidialectal group; 2818 ms by monodialectal group). When listening to Lanzhou stimuli, bidialectals are slightly faster (3026 ms, SD=598.68) than monodialectals (3214 ms, SD=588.06). With regards to the eye-tracking results, significance was revealed. In particular in the competitive trials (where the visual stimuli included tone 2 or tone 4 right, Beijing monodialectals were confused not discerning competitor since they do not have two tonal systems revealed. In particular in the competitive tokens), as seen in the graph on the the target character from the containing reversed tones; on the



contrary, Lanzhou bidialectals showed strong effect in gazing at the competitor during the course of time, since the targetcompetitor pair were reversed tones in the dialects they speak, which results in interfering their word processing.

Conclusion. Our paper uses the eye-tracking paradigm reflecting the complex reality of a Mandarin speaker's spoken language process in a time-sensitive manner. Moreover, by looking into a less-known dialect—Lanzhou Mandarin, this study broadens our understanding to variations of a tonal language.

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The Multidimensional Semantics of *Xinghao* (幸好) in Chinese

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Xinghao (幸好) is an evaluative adverb (EADV) that expresses the speaker's evaluation toward a proposition (Zhang Yisheng, 2000). It is conventionally assumed that *xinghao* describes a situation where a potential negative consequence of an event does not occur due to a certain favorable condition (Lü Shuxiang, 1999). Since *xinghao* as an EADV has a multidimensional semantics (Potts, 2005), this paper will develop a formal semantic analysis for *xinghao* based on alternative semantics and scalar analysis.

Distinctive from other EADVs, *xinghao* is proposed as a subjunctive mood marker considering that it involves a comparison of an actual result with non-veridical contextual alternatives that are mapped onto the scale of fortunateness, as displayed below:

- (1) a. 幸好[我长得壮, 打赢了他]_{veridical result}。 [否则, 我就被他打败了]_{non-veridical alternative}。
b. 幸好[我长得壮 _{condition}, 打赢了他 _{result}]_p。 /幸好[我长得壮 _{condition}]。 /幸好[打赢了他 _{result}]。

In the daily conversation, example (1a) is usually truncated into (1b) for simplicity. As shown in (1b), the proposition *p* introduced by *xinghao* is a <condition, result> pair, i.e., < p_c, p_r >, though either the condition or the result can be further truncated. Superficially, a sentence with *xinghao* expresses two propositions: 1) the at-issue proposition without *xinghao*; and 2) the conventional implicature (CI) proposition with the evaluative content of *xinghao* supplemented. *Xinghao* takes the at-issue proposition *p* as its argument, the truth of which is presupposed by the declaration of the CI proposition. To calculate the truth value of the CI proposition, a set of nonveridical alternatives in the context has to be introduced and the truth of the CI proposition is determined by the comparison of the at-issue proposition with its nonveridical alternatives in the context. To claim *xinghao p* means *p is considered as a preferable option to its alternatives*, i.e., the interpretation of *xinghao* is dependent on the comparison of its argument *p* and its nonveridical contextual alternatives in terms of 'fortunateness'.

Akin to the at-issue proposition, the alternatives induced by *xinghao* are <condition, result>

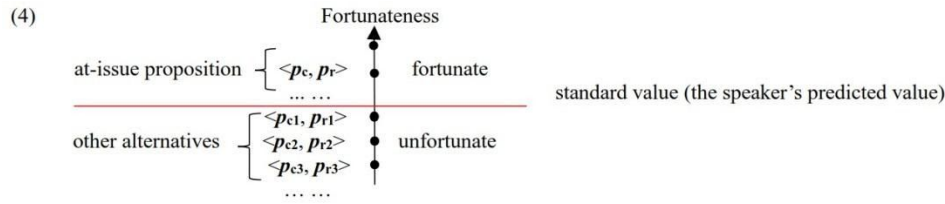
pairs as well, e.g., <我长得壮, 打赢了他>, <我长得不很壮, 跟他打了平手>, <我长得不壮, 被他打败了>... It is then proposed that *xinghao* pragmatically triggers a set of pairs of propositions

{< p_{c1}, p_{r1} >, < p_{c2}, p_{r2} >, ..., < p_{cn}, p_{rn} >}, where $p_{c1}, p_{c2}, \dots, p_{cn}$ represent the conditions and $p_{r1}, p_{r2}, \dots, p_{rn}$ stand for their corresponding results. The at-issue proposition is picked up from this underlying set triggered by *xinghao*.

Note that the alternatives triggered by *xinghao* can be a set of ordered pairs of propositions or a proposition opposite to p_i , namely, $\langle \neg p_i, \neg p_i \rangle$, with which the at-issue $\langle p_i, p_i \rangle$ pair is compared. If there is a scalar lexical item like *zhuang* ‘strong’ in the sentence (2a), *xinghao* generates a scale of ordered infinite alternatives varying from ‘unfortunate’ to ‘fortunate’; but if there is no scalar item in the sentence, it may trigger a scale of two alternatives in contrast with each other (3b).

- (2) a. 幸好<我长得壮 p_{c1} , 打赢了他 p_{r1} >。
 b. {<我长得壮 p_{c1} , 打赢了他 p_{r1} >, <我长得不很壮 p_{c2} , 跟他打了个平手 p_{r2} >, <我长得不壮 p_{c3} , 被他打败了 p_{r3} >...}
 (3) a. 幸好<医生来了 p_{c1} , 救了他一命 p_{r1} >。
 b. {<医生来了 p_{c1} , 救了他一命 p_{r1} >, <医生没来 p_{c2} , 他死了 p_{r2} >}

Though *xinghao* is generally taken as an EADV, its lexical content ‘fortunately’ suggests that it is a gradable adverb as well. The alternatives triggered by *xinghao* are thus ordered in a scalar structure with the dimension of ‘fortunateness’. Given that gradable predicates map individuals onto a scale of ordered degrees (Kennedy & McNally, 2005), we propose that *xinghao* denotes a mapping relation between propositions of <condition, result> pairs and degree values on the scale with regard to ‘fortunateness’.



Whether the <condition, result> pair is determined as ‘fortunate’ or not depends on whether the degree value exceeds the *standard of comparison* (Kennedy et al., 2005), a contextual variable determined by the speaker’s predicted value. The CI proposition is true iff the at-issue proposition is beyond the standard of comparison, otherwise it is considered as unfortunate as illustrated below:

- (5) 幸好<我长得壮 p_{c1} , 打赢了他 p_{r1} >, <否则 $p_{c2}/p_{c3}/\dots$, 只能跟他打平手 p_{r2} /就被他打败了 p_{r3}/\dots >.

Acoustic Variation and *Sajiao* Speech Style: A Case Study

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How women speak differently in Chinese context? While much has been published on cross-gender differences in speaking, not much research has been conducted in Chinese linguistics on how women speak differently under in different situations and settings. Given that one's gender role is not fixed and could be performed very differently depending on such variables as addressee, context, topic changes, and so on, one would expect that gender role of women—and how she would speak—would be realized in different ways as the situations or circumstances change. This study focuses on a case study in the use of the *sajiao* speech style of one Mandarin female speaker. *Sajiao* speech style, associated predominantly with females, involves certain ways of speaking, certain attitudes and behavior, as well facial expressions that serve to gain others' attention or affection. Farris (1995) and Yueh (2017), for example, have clearly shown that *sajiao*, which is closely related to social identity construction of females, is a useful strategy for females in Chinese society. In addition to gestures and facial expressions, *sajiao* speech is characterized by a number of acoustic features. Hardeman (2013) suggests six typical acoustic features of *sajiao* speech style: (1) overall high pitch, (2) vowel lengthening, (3) rising intonation, (4) elongation of sounds, (5) nasal voice, and (6) inarticulate pronunciation of words. Four of these—overall high pitch, vowel lengthening, rising intonation, and elongation of sounds—are explored in this case study of one female subject.

A female broadcaster who speaks Standard Mandarin is selected for this study. Her speech data is collected from videos which are available online (YouTube) ranging from relatively formal shows to casual style talk shows for comparison: (1) C(Calm): a one-on-one interview, (2) CS(Casual): a group interview, (3) L(lively): a casual talk show (male speakers included). Speech samples are collected from first 25 minutes of each talk show. Tokens which display acoustic features of *Sajiao* are chosen from each show and analyzed respectively by using Praat. Pitch value and contour of each token is analyzed to see if it has 'overall high pitch (1)' or 'rising intonation (3)'. To investigate whether it has any 'vowel lengthening (2)' or 'elongation of sounds (4)', spectrogram of each tokens is examined.

Acoustic features of *Sajiao* are observed most frequently in L context, which involves male addressees, then followed by CS, which has a lively atmosphere compared to C. Of the four acoustic features discussed in this study, the most important is 'overall high pitch'. The more the atmosphere becomes informal and lively and the more male addressees are involved, the higher the pitch value becomes. This indicates that as the context changes, different levels of *Sajiao* speech style are adopted by the subject to reflect the change of expected gender role.

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On Domains of Nominalization in Mandarin Chinese

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This paper argues that the three types of derived nominals shown in (1) are different in their sizes. That is, Type A is a nominalized clause; Type B is a nominalized event; Type C is a nominalized VP. (1) a. Zhangsan diaocha Lisi (Type A: the bare form, nominalized clauses) Zhangsan investigate Lisi
'Zhangsan investigates Lisi'

b. Zhangsan de diaocha Lisi (Type B: the *de* form, nominalized events)
Zhangsan DE investigate Lisi 'Zhangsan's investigating Lisi'

c. Zhangsan dui Lisi de diaocha (Type C: the *dui...de* form, nominalized VPs) Zhangsan to Lisi DE investigate
'The investigation of Lisi by Zhangsan'

To start with, Type B and C are derived nominals intuitively, but Type A is not. In (2), it seems a clause

(Type A) occupies a Case position and gets Case marked. Nonetheless, Li and Huang (2009) shows that (2) actually has the structure of (3), a complex NP (DP) that contains a phonetically empty DP.

(2) Zhangsan diaocha Lisi shi bukeneng de.
Zhangsan investigate Lisi SHI impossible DE

'That Zhangsan investigated Lisi is impossible.'

(3) Zhangsan diaocha Lisi (zhejiانشi) shi bukeneng de. Zhangsan investigate Lisi (this.matter) SHI impossible DE
'(The matter) That Zhangsan investigated Lisi is impossible.'

Following Li and Huang, I propose that the clause in fact undergoes nominalization. Thus, the apparent clause in a Case position is actually a derived nominal composed of a DP and a clause.

My proposal is evidenced as follows. First, Type A is a nominalized clause. As shown in (4), only Type A is compatible with predicates that semantically-select a proposition as its subject. Since a proposition must be at least a TP or a CP, (4) suggests only Type A is a nominalized clause.

(4) a. Zhangsan diaocha Lisi shi bukeneng de. (Type A)

Zhangsan investigate Lisi SHI impossible DE

‘(The thing) That Zhangsan investigated Lisi is impossible.’

b. *Zhangsan de diaocha Lisi shi bukeneng de. (Type B)

Zhangsan DE investigate Lisi SHI impossible DE Intended: ‘Zhangsan’s investigating Lisi is impossible.’

c. *Zhangsan dui Lisi de diaocha shi bukeneng de. (Type C)

Zhangsan to Lisi DE investigate SHI impossible DE

Intended: ‘The investigation of Lisi by Zhangsan is impossible.’

Second, Type B is a nominalized event. Following Baker and Vinokurova (2009), nominalized events contain not only a VP but also higher functional projections. Therefore, only a nominalized event (or bigger) can accommodate an adverb within its domain, since adverbs are located above the VP. (5) shows that Type A and Type B are at least a nominalized event, since they can accommodate an event modifier like *turan* (‘suddenly’) within their domain. Consider (4a-4b) and (5a-5b) together, the pattern further indicates Type A is a nominalized clause and Type B is a nominalized event.

(5) a. Zhangsan turan diaocha Lisi rang wo hen shengqi. (Type A) Zhangsan suddenly investigate Lisi let I very angry

‘(The thing) That Zhangsan suddenly investigated Lisi made me very angry.’

b. Zhangsan de turan diaocha Lisi rang wo hen shengqi. (Type B)

Zhangsan DE suddenly investigate Lisi let I very angry

‘Zhangsan’s suddenly investigating Lisi made me very angry.’

c. *Zhangsan dui Lisi de turan diaocha rang wo hen shengqi. (Type C)

Zhangsan to Lisi DE suddenly investigate let I very angry

Intended: ‘The suddenly investigation of Lisi by Zhangsan made me very angry.’

Lastly, Type C is a nominalized VP. (6) shows that when being the object of the light verb *zuo* (‘do’), only Type C makes the sentence grammatical, whereas sentences with Type A and B are both out. This is due to the fact that only a VP itself can be selected as a complement of *zuo*. Therefore, the element being nominalized in Type C is a VP.

(6) a. *Zhangsan diaocha Lisi shi shangsi xialing yao zuo de. (Type A)

Zhangsan investigate Lisi SHI supervisor order have.to do DE

Intended: 'It is the supervisor that ordered to do (the thing) that Zhangsan investigated Lisi.'

b. *Zhangsan de diaocha Lisi shi shangsi xialing yao zuo de. (Type B)

Zhangsan DE investigate Lisi SHI supervisor order have.to do DE

Intended: 'It is the supervisor that ordered to do Zhangsan's investigating Lisi.'

c. Zhangsan dui Lisi de diaocha shi shangsi xialing yao zuo de. (Type C)

Zhangsan to Lisi DE investigate SHI supervisor order have.to do DE 'It is the supervisor that ordered to do the investigation of Lisi by Zhangsan.'

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从程度副词到模态副词——以温州方言后置成分“险”为例

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本文利用制图理论 (Cartographic Approach, Rizzi 1997, Cinque 1999, 蔡维天 2011) 和“行、知、言”三域的理论 (沈家煊, 2006) 探讨温州方言后置成分“险”作为程度副词、知识模态副词 (epistemic adverb) 和评价性模态副词 (evaluative adverb) 的三种不同用法, 分析其句法特性, 并厘清它们之间的层级关系。

Simpson(2001)提出粤语和其它东南亚语 (例如泰语、越南语等) 中一些情态词后置的现象是由于谓语前移(light predicate raising)造成的。邓思颖 (2012) 也认为粤语的谓语前移是造成粤语后置成分比普通话多的原因。因此, 我们认为温州方言程度副词后置的现象也是谓语前移的结果, 移位的动因则是由于谓语或动词组 VP 作为已知的预设(presupposition)信息, 需要从位于句末的焦点位置移出即去焦点化(defocus), 从而可以程度副词“险”留在句末的焦点位置成为全句的焦点(focus)。

Shi (2019) 发现上海话中的主观性副词(subjective adverb)“蛮好”mænhau 和“还好”æjhau 并不像其它副词一样修饰谓语, 而是修饰整个命题, 两者的句法位置在于 Eval(uative)P 的指示语位置。刘丹青 (2008) 参照“行、知、言”三域的框架, 认为粤语的后置成分“先”和“添”具有跨域的后置副词状语和语气词这两种用法。邓思颖 (2012) 也对粤语的“先”进行了言域和行域的分析。我们结合例句将温州方言的“险”的三种跨域用法总结如下:

1. “险₁”位于行域、词汇层 (lexical layer), 作为主语取向 (subject-oriented) 的程度补语:

(1)杭州游嬉个人多险。杭州游玩的人多得狠。

(2)A: 阿呆平时上课会讲话啊否? 阿呆平时上课爱讲话吗? B: a. 会讲险。爱讲得很。

b. 会讲甚。挺爱讲。

2. “险₂”位于知域、标句词层 (complementizer layer), 作为说话者取向 (speaker-oriented) 的知识模态副词 (epistemic adverb):

(3)A: 门前站, 部车休得会停啊弗会停? 下一站, 这辆车不知道会不会停?

B: a. 会停险。肯定会停。(傅佐之, 1984)

b. *会停甚。挺会停。

3. “险₃”位于言域、标句词层 (complementizer layer), 作为说话者取向 (speaker-oriented) 的评价模态副词 (evaluative adverb), 表示一种虚拟语气 (subjunctive mood):

(4)个细儿打得险 (此处“得”为义务模态词)。这小孩早就应该打了。(傅佐之, 1984) 三个“险”在语义上最大的相关性即在于不管是作为程度副词的“险₁”, 还是作为模态副词的“险₂”或“险₃”, 三者等级结构(scalar structure)上均表示极高的程度。作为副词的“险”主动选择具有等级结构的谓语或命题进行组合并修饰, 从而语义范畴上赋予谓语或整个命题一个极高的程度等级。

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Generalized Scope Economy

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Background: (i) Scope Economy (SE) dictates that scope-shifting operations must have semantic effects, i.e. they are licensed by crossing a *quantificational* element. Little has been said on whether focus can be a licenser. (ii) 'Quantificational elements' are often conflated with focused/focusing elements in the discussion of Intervention Effects (IE, e.g. Rizzi 2004, Beck 2006).

Goal: This paper motivates a generalized version of SE where focused elements are also proper licensors for scope-shifting operations, unifying the range of licensors in SE and interveners in IE.

The data: Mandarin root modals are illicit in sentence-initial positions (= (1), Tsai 2015). Exceptionally, insertion of the focus marker *shi* after the sentence-initial modals (SIMs) improves the acceptability (= (2), Lin & Tang 1995:62, ft7). Crucially, *shi* must be associated with the subject (= (3)):

- (1) **keyi Zhangsan zhunbei wancan* can Zhangsan prepare dinner Int.: 'Zhangsan can prepare the dinner.'
- (2) *Keyi shi Zhangsan_F qu Beijing* (3) **keyi Zhangsan shi [qu Beijing]_F* can FOC Zhangsan go Beijing can Zhangsan FOC go Beijing
'It can be the case that it is Zhangsan Int.: 'It can be the case that Zhangsan go to who goes to Beijing.' Beijing (but not do something else).'

Building on this, we generalize the licensing condition of SIMs as (4):

- (4) SIMs are licensed if the elements immediately following them receive focus interpretation.

(4) receives support from A-not-A questions, which are also reported to license SIMs (Lin & Tang 1995, Huang, Li & Li 2009, Lin 2011), as in (5):

(5) *ke-bu-keyi Zhangsan zhunbei wancan?* can-NEG-can Zhangsan prepare dinner Int.: 'Can Zhangsan prepare the dinner?' A-not-A questions, however, do not *always* license SIMs: while SIM is allowed in (6)a where the subject is focused, (6)b is disallowed where the object is focused.


(6) [Context: Lisi's Mainland Travel Permit have expired, so that he cannot go to Beijing...]

- a. *ke-bu-keyi **Zhangsan**_F qu Beijing?* b. **ke-bu-keyi Lisi qu **Taipei**_F?* can-NEG-can Zhangsan go Beijing can-NEG-can Lisi go Taipei
'May Zhangsan go to Beijing?' Int.: 'May Lisi go to Taipei?'

The incompatibility with object focus in (6)b suggests that the SIM in (5) is not licensed by the A-notA form *per se*, but the subject focus triggered by A-not-A questions, which indeed follows from (4).

Analysis: Assuming root modals base-generate below Spec TP, we propose a movement analysis on SIMs. It is constrained by a generalized version of SE where scope-shifting operations must cross *a quantificational or a focused element* (=7)). This correctly rules *in* SIMs in (2), (5) and (6)a while ruling *out* SIMs in (1), (3) and (6)b.

(7) [Mod_{root} [TP XP_[Quantificational / Focus] [___ [VP ...]]]



For concreteness, (8) and (9) supply the relevant examples where the proposed movement is possible if it crosses quantificational elements, e.g., quantifiers (=8)) and interrogative *wh*-phrases (=9)).

- (8) *Keyi [mei ge ren] dou lai* (9) *Keyi shei mianfei qu Beijing?* can every CL person DOU come can who free.of.charge go Beijing
'It can be the case that everyone comes.' 'Who may go to Beijing for free?'

Implications: Quantificational and focused elements form a natural class that also plays a role both the SE and IE. We suggest that this class is characterized by a [+Q/F] feature.

(10) SE: [... X ... [...Y...[...<X>...]]] , where Y *must* be [+Q/F] for licit X-movement.

(11) IE: [...X_[+Q]...[...Y...[...<X_[+Q]>...]]] , where Y *must not* be [+Q/F] for licit X-movement.

The difference between (10) and (11) can be attributed to the trigger of X-movement: [+Q/F] is an intervener if X-movement is *feature-driven*, but a licenser if X-movement is *non-feature-driven*.

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A Syntactic Analysis of Chinese Adverbial Clauses Bearing Topichood

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This research focuses on extraction of an element from some adverbial clauses and challenges to shed light on the licensing and blocking factors of this kind of extraction. In the framework of the Generative Grammar, it has seemed to be plausible to generalize that adverbial clauses are adjoined to a certain maximal projection so far (Huang (1982), Nakajima (1982), Chomsky (1986) among others). This adjunct structure makes us predict that it is impossible to extract an argument and an adjunct phrase from adverbial clauses despite the fact that they should be subject to the Adjunct Island Constraint (Huang (1982)). Interestingly, as for some types of adverbial clauses, displacement of an argument is possible: Hornstein (2001) and Taylor (2007) for English data, and Mihara (1994) and Yoshida (2006) for Japanese data.

(1) a. *Rich's sports car*_i [if Michelle buys *t_i*, her insurance premium will increase].

(Taylor 2007: 191)

b. *Which play*_i do you say/believe/claim/think that [if the coach sees *t_i* then the Lions

will win the game]?

(Taylor 2007: 190-192 based on Hornstein 2001)

c. Sono keeki-o_i Virginia-wa [mosi Quinn-ga *t_i* tabe-ta-naraba] naki-dasu daroo. that cake-acc V-top if Q-nom eat-did-conditional cry-start would
"Virginia would start crying if Quinn ate that cake." (Yoshida 2006: 51) d. Bungakubu ni_i Taro-wa [Jiro-ga *t_i* nyuugaku-sita-node] odoroi-ta.
literature-department-dat T-top J-nom enter-did-because get-surprised-did

"Taro got surprised because Jiro entered the department of literature (rather than some

other department)."

(Mihara 1994: 55)

The similar syntactic phenomena are observed in Chinese as well. According to Huang, Li, and Li (2009), movement of the subject located within the adverbial *because*-clause is acceptable. In this case, NP Lisi in the topic position is coindexed with an empty category in the embedded adjunct clause.

(2) Lisi_i, [yinwei *t_i* piping-le Zhangsan], (suoyi) meiren yao ta.

Lisi because criticize-LE Zhangsan so nobody want him

"(As for) Lisi_i, because [he_i] criticized Zhangsan, nobody wants him."

(Huang et al., 2009: 209)

One of the common features among those data is that the relevant adverbial clauses that allow argument extraction from their inner domain seem to bear topichood. Combining the cartographic notion devised by Rizzi (1997) and the labeling algorithm by Chomsky (2003, 2015), I suggest that argument displacement from adjunct clauses should be permitted only if those adjuncts are placed in a certain functional projection and share some discourse-related property with the functional head in a main clause (cf. Otsuka (2017) and Bošković (2018)). This analysis is compatible with the traditional argument that Chinese is a topic-prominent language (Li & Thompson (1981) among others) and conditional clauses are topics in a sentence (Haiman (1976), Traugott (1986) among others).

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Matrix *shuo* in Mandarin

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Data. Mandarin *shuo* is standardly assumed to function either as a verb ‘say’ (1a) or a complementizer (1b) introducing embedded clauses (Li & Thompson 1989, Huang 1998, Fang 2006, Shen 2003 a.o.).

(1) a. yuehan shuo mingtian ting shui.

John say tomorrow stop water

‘John said that there will be water suspension tomorrow.’

b. wo zongshi juede shuo [shenghuo li que le dian shenme]. I always feel SHUO life in lack PERF little what

‘I always feel that there is something a little lacking in my life.’ (Fang 2006) What has gone unnoticed is that *shuo* can also occur in matrix clauses, as shown in (2).

(2) shuo Kongyiji yijing si le.

SHUO Kongyiji already die PERF

‘Kongyiji has died (someone said/I heard).’

We argue that **matrix *shuo* in (2) is a hearsay evidential marker**, not a speech verb or simple C. Matrix *shuo* found in (1b) is not a simple C because it encodes information of a speech event, while the pure complementizer *shuo* in (1b) is semantically bleached (Li & Thompson 1989). Matrix *shuo* is not a speech verb as in (1a) because matrix *shuo* resists adverbial modification as in (3), while verbal *shuo* can be modified by adverbs (the intended meaning for (3) is not an imperative, i.e. ‘Say loudly ...!’).

(3) *dasheng-de shuo Kongyiji yijing si le. loudly SHUO Kongyiji already die PERF

Intended: ‘(Someone loudly said) Kongyiji has died.’

Also, the information of a speech event expressed by matrix *shuo* (the “saying part”) is not the at-issue content of the utterance. Thus, in (4) below, the addressee can only challenge its propositional content (‘the prime minister has died’), as in (4B₁). Challenging the “saying part” yields infelicity, as in (4B₂). In fact, this is a cross-linguistically common property of evidential markers, i.e., evidentiality cannot be a part of the at-issue content (see e.g. Speas 2008).

(4) A: shuo shouxian si le.
SHUO prime-minister die PERF

'The prime minister has died (someone said/I heard).' B₁: *That is not true. The prime minister has not died.*

B₂: # *That is not true. The prime minister has died, but nobody should have told you this.*

This contrasts with the verbal *shuo* (1a); (1a) can be challenged by *No, that's not true. (While it's true that there will be water suspension,) John didn't say that*, i.e., the "saying part" can be challenged. Furthermore, matrix *shuo* cannot report the speaker or the addressee's saying. Thus (2) cannot mean 'Kongyiji has died according to me/you'. It can only mean 'Kongyiji has died according to someone different from the speaker and the addressee', which is another common property of (hearsay) evidentials in other languages (see e.g. Demonte and Fernández-Soriano 2014, D&F henthforth). **Analysis.** We argue that the hearsay evidential ***shuo* in (2) is located in a different syntactic position from pure C *shuo* in (1b)**. Assuming a fine-grained split-CP domain (e.g. Cinque 1999, Speas and Tenny 2003), we suggest that matrix *shuo* heads an Evidentiality Phrase (EvidP), as in (5) (see also D & F for Spanish and Saito 2018 for Japanese).

(5) [_{EvidP} *shuo* [...]]

On the other hand, the simple complementizer *shuo* in (1b) is the head of ForceP, as standardly assumed for regular complementizers (e.g. English *that*). This ForceP is selected by matrix predicates (i.e. 'feel'). Note that it is not uncommon cross-linguistically that elements of the same phonological form can function as a pure C as well as an evidential. For example, Japanese *tte* can function as a pure C (6a) and as an evidential (6b); the standard C *que* in Spanish can also function as an evidential (7) (Saito 2018; Spitzer 1942; see also Simpson and Wu 2002 and Hsieh & Sybesma 2007 for Taiwanese *kong*).

(6) a. John-ga [asita kuru tte] i-tta. b. John-ga ki-ta tte

John-Nom tomorrow come TTE(C) said John-Nom come-Past TTE(evidential) 'John said that he would come tomorrow.' 'John came (someone said/I heard).' (7) Que ha dimitido el decano. que has resigned the dean

'The dean has resigned (someone said/I heard)'. (D&F: 229)

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基于语料库的CSL学习者汉语情感隐喻认知研究

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本文以现代汉语语料库（北京大学）、情感隐喻语料库和中文情感词汇本体库（大连理工大学）为依托，通过分类、筛选和标注，整理出了一个包含情感词汇和情感隐喻语料的小规模中文情感隐喻知识库，该知识库按情感类别分类，语义识别难度由简单到复杂排列，语义特征标注完整。在此基础上对汉语作为第二语言（Chinese as a second language，简称CSL）学习者进行问卷调查和深度访谈，旨在探究其对汉语情感词汇、情感隐喻的认知能力以及相关影响因素。问卷调查由情感隐喻句子产出、理解性测试两部分构成，深度访谈针对英语、法语、西班牙语、俄语、日语、韩语、阿拉伯语、葡萄牙语、意大利语、泰语、马来语等十余种语言为母语的CSL学习者，就汉语情感隐喻与其母语在隐喻本体、喻体、喻底、情感强度等问题的异同进行访谈。我们发现，即使是CSL中高水平学习者（HSK5级和HSK6级，学习汉语十年以内），对汉语隐喻辨别能力依然较差，正确率在40%以下。在CSL学习者情感隐喻类句子产出表现上，超过70%的句子被汉语母语者（非语言学专业）评判为感到奇怪或不常用。另外，在对比十余种语言的情感隐喻异同时，我们发现很难找到某一类情感隐喻在本体和喻体上多种语言完全相同。究其原因，语言本身和文化因素是两大重要影响因素。在文化方面，文化背景、宗教信仰、生活环境、风俗习惯的不同影响着隐喻本体与喻体的差异，即使是同一种语言，不同地区之间隐喻的使用也存在差异。总之，情感隐喻源域和目标域都是直接感知的经验，源域概念是感觉和知觉经验，而目标域概念是对感知觉的主观回应。情感隐喻研究需要关注这种映射，更要重视语言本体特点和文化因素。汉语教学中的隐喻理解，要精确匹配到相关文化知识辅助教学。

倚变句的句法语义联动分析

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不同于英语的 *the more(-er)...the more(-er)* 以及日语的 *hodo*, 汉语中表倚变的成分、“越”修饰动词或形容词, 可出现在很多句法位置上, 如 (1); 而且, “越”出现的位置不同, 其表倚变的对象不同, 句子整体的意义也就不同, 如 (2)。

- (1) a. 你_[VP]越表扬他, 他就_[AP]越骄傲。 (谓语动词/形容词前) b. _[NP]越优秀的学生] 来听课, 老师越高兴。 (主语 NP 内)
c. 张三买_[NP]越贵的东西, 老师越生气。 (宾语 NP 内)
d. 我弹得_[越]响, 他吼得_[越]凶。 (补语内)

- (2) a. _[NP]越优秀的学生] 来听课, 老师越高兴。 解释: “学生越优秀, 老师越高兴”
b. _[NP]优秀的学生] 越来听课, 老师越高兴。 解释: “学生来听课的次数越多, 老师越高兴”

Tsao & Hsiao (2002)、Lin (2007)、E (2014) 等前期文献对倚变句做了很多研究, 如 Tsao & Hsiao (2002) 认为倚变句的越₁分句与越₂分句是主题与评述的关系, 并提出其在句法上构成 adjunct 结构; Lin (2007) 运用形式语义学理论分析了倚变句整体的语义, E (2014) 用制图理论探讨了倚变句的句法结构应为 FocusP。但值得注意的是, 这些研究多以“越”位于谓语动词前的句子 ((1a) 那类) 为中心进行分析, 忽略了“越”的句法位置多变且随其位置变化语义关系不同的问题, 如 (1b) - (1d)、(2)。此外, 前期研究对于 (3) 这组句子的不同合法性以及 (4) 这类句子的歧义现象未能给予合理的解释。 (3) a. *张三越. 喜欢越. 年轻的姑娘。 b. ^{ok} 越. 年轻的姑娘, 张三越. 喜欢。

- c. *越. 年轻的姑娘张三喜欢, 妈妈越. 开心。 d. ^{ok} 姑娘, 越. 年轻的, 张三越. 喜欢。

- (4) 老师越选难 (的) 课题, 学生越辛苦。 解释 1: 选的难课题越多, ~。 解释 2: 选的课题越难, ~。

本文在对倚变句语料充分观察的基础上, 以上山 (2015) “句法语义论”为理论工具, 具体采用“句法成分每合并 (Merge) 一步都表示出相应的语义表达式”的方法对倚变句的句法结构与语义解释进行同步分析。该分析自下而上的句法与语义构建方法, 解决了“越”的句法位置多变且随其位置变化而带来的相应的语义构建问题 (1)、(2), 也合理解释了句子间合法性差异 (3) 以及歧义现象中长距离依存关系的构建问题 (4)。

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普通话情感语音听辨研究

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语言信息中的情感感知在人际交流中有着重要作用，国外对于情感语音的感知研究起步较早，国内针对普通话的情感感知研究也在近几年蓬勃发展起来，但很少有关于使用屏蔽方法合成语音进行听辨的研究。

本文包含三种刺激类型，第一种类型为正常原始语音；第二种类型运用了低通滤波的方法对语音进行处理，过滤文字信息和音质特征，保留基频曲拱信息；第三种类型在第二种的基础上进行时长和音强的归一化处理，控制了平均时长和音强。我们通过对17名被试听辨正确率及反应时的统计分析考察情感听辨优劣性、情感混淆模式以及探究不同情感在不同声学线索变化中的感知情况。

结果表明：第一，普通话情感语音感知线索是多方面的，基频并不是其唯一线索。所有情感的原始语音刺激类型的辨认真确率显著高于其他两种刺激类型。除悲伤情感外，所有情感滤波后语音刺激和滤波且归一化后的语音刺激的辨认真确率并无显著差异，且所有情感的反应时也无显著差异。这说明音质信息对六种情感的辨认均有较大用；平均时长和音强信息对悲伤情感的判断提供了有利线索，这是因为在表达悲伤的情感时，发音人发音较弱、时长较长致使被试可利用这两条线索将悲伤与其他情感区分出来。第二，情感的听辨优劣性在三种不同刺激类型中有所不同。中性和悲伤无论在哪种刺激类型下的正确率都是最高的，高兴在没有音质信息情况下的辨认率的排名明显下降，这说明被试对高兴情感的判断在较大程度上依赖于音质信息。第三，情感的听辨混淆模式在三种不同刺激类型中表现各异，但高兴单方面被听为中性的特点在三种模式下均存在，在滤波和滤波且归一化后的语音刺激中这一特点更加明显，其比例甚至超过正确选项，这可能是由于高兴和中性情感有较为相似的感知线索，且被试在模棱两可的情况下更倾向于选择中性情感。除此之外，原始语音刺激和滤波后语音刺激的听辨结果有较大一致性，恐惧与悲伤、愤怒与惊讶两组情感容易相互混淆，这可能因为两组情感的感知线索有较为相似的特点。在滤波且归一化后的语音刺激中，各情感仍能被分辨出来，正确率均在几率水平之上，但部分情感很难归纳出明晰的听辨混淆模式。

实验句：那是我的孩子。/他明天不过来。/他去北京出差。/明天就是周三。/我们现在就走。

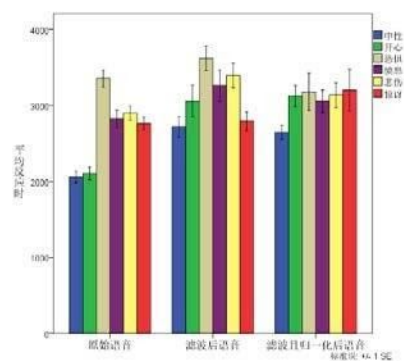


图1 三种实验刺激的情感辨认正确率

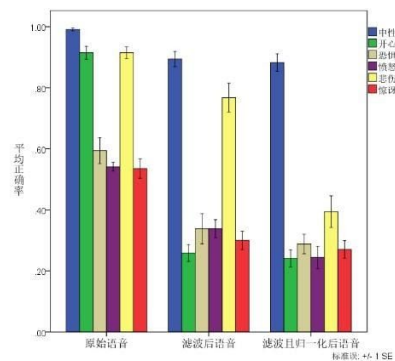


图2 三种实验刺激的情感辨认反应时

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The interpretation of Chinese overt pronoun

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Just as English pronoun may not refer to a potential antecedent that it c-commands (Principle C), Chinese overt pronoun abides by a stricter syntactic constrain-it may not cyclic c-command its antecedent (Huang,1982). Specifically, Chinese overt pronoun can only have a disjoint reading (refer to the extralinguistic referent), but not a coreferential reading (refer to sentential subject) in the backward anaphora. There is no such constrains in forward anaphora. Based on an offline questionnaire study and an online self-paced reading study, the current study investigated the interpretation of Chinese overt pronouns.

In Experiment 1 (n=24), we investigated the interpretation of overt pronouns and pro (as controls) in both forward anaphora and backward anaphora as in (1), in which the only sentential subject matched the pronoun in gender. The participants were asked i) to identify a referent for overt pronouns and pro and ii) to rate how confident they are to their choice (1= very unsure; 5=absolutely certain). The results showed that there are less coreferential reading of overt pronouns than pro independent of type of anaphora ($p < .001$). Participants were more likely to have a disjoint reading for the overt pronoun in backward anaphora (83%), than in forward anaphora (52%). Rating results showed that participants were more confident with the overt pronoun having a disjoint reading in backward anaphora than in forward anaphora ($p = .01495$) and when overt pronouns have a disjoint reading than a coreferential reading in backward anaphora ($p = .01495$).

In Experiment 2 (n=40), we investigated real-time interpretation of overt pronoun in forward anaphora and backward anaphora using self-paced reading. The gender of the sentential subject was manipulated such that it either matched or mismatched the pronoun as in (2). The extralinguistic referent always matched the pronoun. We predicted that there would be no gender mismatch effect at the subject position in backward anaphora due to the syntactic constrain. The results showed that there was no effect of gender congruency at the sentential subject position and following regions either in forward anaphora ($p = .01495$) or in backward anaphora ($p = .08962$).

Contra Sun (2015), our results are consistent with Zhao (2014) and Lust et al.(1996) that while participants tend to be indeterminate about the overt pronoun in forward anaphora, disjoint reading was strongly preferred over the coreferential reading for the overt pronoun in backward anaphora. The absence of the a mismatch effect in online reading suggests that the syntactic constrains are implemented immediately, which makes the participants never considered the sentential subject as a potential antecedent, thus making the gender-congruency between the subject and the preceding pronoun irrelevant. Nevertheless, the lack of the mismatch effect may suggest that both coreferential and disjoint reading are acceptable for overt pronoun in forward anaphora.

(1)a. Forward anaphora: pro/overt pronoun

When Tom watched TV, Ø/he ate an apple.

b. Backward anaphora: pro/overt pronoun

When Ø/he watched TV, Tom ate an apple.

(2) a. Forward anaphora: congruency/incongruency

When Tom/Mary watched TV, he ate an apple. Mark was not happy.

b. Backward anaphora: congruency/incongruency

When he watched TV, Tom/Mary ate an apple. Mark was not happy.

It has been argued that less explicit anaphoric expressions are used to refer to more salient antecedents (Ariel, 1990; Givón, 1983). When applied to pronominals, this predicts that null pronouns (pro) will be favored over overt pronouns when referring to the subject. Previous studies, however, have suggested that different interpretational constraints are at work across languages. For example, in Italian, overt pronouns were more likely to refer to the object than the subject (Carminati, 2002) while in Korean, subject bias was equal between overt pronouns and null pronouns (Kim et al., 2013; Kwon & Polinsky, 2011). Similarly, in Chinese, Yang et al. (1999) suggested similar processing mechanisms underlie the interpretation of both types of pronouns based on equally fast reading times of pro and overt pronouns when they refer to syntactic subjects or objects in gender ambiguous sentences. However, Yang et al.'s results are based on whole-sentence reading time in inter-sentential context, thus various factors could have obscured difference at the critical pronoun region.

Our results are consistent with Yang et al. that in Chinese, both pro and overt pronouns are subject-biased. In contextually neutral sentences, both pro and overt pronouns were more likely to refer to the subject than the object (Exp1), and in contextually biased sentences, the sentences were rated to be more natural when pro and overt pronouns referred to the subject rather than the object (Exp2). However, contra Yang et al., the current results suggest that the processing mechanisms underlying pro and overt pronouns are not exactly identical. In contextually neutral sentences, pro was more subject-biased than an overt pronoun (Exp1), and in contextually biased sentences, pro was less favored than an overt pronoun when used to refer to the object (Exp2). Overall, these results in Chinese are consistent with the Accessibility theory (Ariel, 1990, Givón, 1983) that less specific anaphoric expressions (e.g., pro) are more favorably used to refer to a more prominent antecedent (e.g., the syntactic subject) than more specific anaphoric expressions (e.g., overt pronouns). This suggests that the interpretation of pro is governed by cross-linguistic principles. On the other hand, for overt pronouns, the results suggest that the interpretation is subjective to more cross-linguistic variations.

This has been confirmed by Zhao (2014). However, While other claimed that overt pronoun could have a correferential reading 71% of the time in backward anaphora. Sun (2015). However, Sun's results are based on a binary decision. It could conceal the actual interpretation.

This has been confirmed by Just et al. (1996) and Zhao (2014). By contrast, Sun (2015) claimed that overt pronoun could have a correferential reading (71%) in backward anaphora. However, Sun's results are based on a binary decision, which could obscure the actual interpretation preference.

NPIs and their attenuation effects: *Zenme* ‘how’ as a case in Mandarin Chinese

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Negative polarity items (NPIs) often encode strengthening effects. However, NPIs having weakening effects are also found cross-linguistically, such as *anmari* ‘(not) very/ much’ in Japanese, *all that* in English. This paper investigates semantics of an attenuating NPI in Mandarin Chinese (MC), namely *zenme* ‘how’ under negation.

When the *wh*-indefinite *zenme* combines with negation, forming expressions *bu-zenme* and *mei-zenme* ‘not very/ much’, it expresses the minimal degree of its modified predicates. However, the interpretations of *bu-zenme*/ *mei-zenme*-sentences vary when different types of predicates involved.

- (1) Zhangsan bu zenme chi fan.
Zhangsan NEG how eat rice
‘Zhangsan does not eat much rice.’ (habitual/ frequency)
- (2) Zhangsan mei zenme chi fan.
Zhangsan NEG how eat rice
a. ‘Zhangsan did not eat much rice.’ (episodic/ quantity)
b. ‘Zhangsan did not eat much rice (but he ate a lot of beef).’

Although negations *bu* ‘not’ and *mei* ‘not’ modify different predicates: *bu* negates state whereas *mei* negates events, the modifyees of *bu*/ *mei-zenme* in (1) and (2) are different. (1) denotes the minimal frequency of eating rice, whereas (2) denotes the minimal quantity of rice. The phenomenon becomes more perplexing as the denotation of minimal degree vanishes in *bu-zenme*-sentences involving predicates of stative and accomplishment. That is, (3) and (4) express pure negation.

- (3) Zhangsan bu zenme xihuan Lisi.
Zhangsan NEG how like Lisi
‘Zhangsan does not like Lisi at all.’
-

(4) Zhangsan bu zenme xie-de-wan zhe-fen kaojuan.

Zhangsan NEG how write-DE-finish this-CL exam.paper

‘Zhangsan is not that able to finish this exam paper.’

Building on the framework of Krifka (1991, 1998) and Matsui (2013), we propose that *zenme* under negation is a strict NPI, licensed by the negator *bu/ mei*. *Bu-/ mei-zenme* is a focus-sensitive operator which is associated with a focused element under its scope, triggering a set of alternatives to the prejacent (i.e. the focused element). The dimension of a predicate being focused depends on what can be measured. For example, a noun *coffee* introduces individuals that can be measured, and a verb like *run* can introduces events that can be measured (Wellwood 2015, Liu 2019). Therefore, the dimension focused by *bu-/ mei-zenme* in (1) and (2) is different. As (1) denotes habituality, the dimension focused is frequency of having rice; whereas (2) denotes events, the dimension focused can be quantity of rice or the event *having rice* itself. Meanwhile, the measurable dimension in (3) and (4) are not the state denoted by the predicates of stative and accomplishment but the force of negation. *Bu-/ mei-zenme* imposes focus on the force of negation and thus producing attenuating effect. This can be accounted by pragmatic reasoning that speakers have less commitment to the utterance and therefore weaken the force of negation.

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從新標記區別理論看復合趨向補語的習得難度

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摘要：本文採納高順全（2005）一文中提到的13個主要的漢語復合趨向補語為研究對象，從新標記理論的角度，按照Eckman（1977）提出的三個“标记差异假设”，將具體的13個復合補語的語言項目進行難度等級的預測。具體研究方法是，基于語料庫語言學的方法，通過靜態描寫HSK語法等級大綱、虛詞例釋、呂叔湘八百詞，和動態語料庫統計，從分佈標準（句法環境）和頻率標準（範疇成員）兩個維度進行考察，對13個復合趨向補語的使用頻度和分布進行統計，構擬出可進入難度等級。由于漢語語法裏的趨向補語問題主要涉及兩個方面問題，一是趨向補語所表示的意義，二是趨向補語在句子結構中所處的位置，所以標記項的選擇主要從這兩個方面考慮。

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Trends in Chinese linguistics from 2000 to 2019: a corpus analysis of one thousand journal articles

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Research on Chinese linguistics is booming, with an increasing number of new articles and a series of handbooks published in recent years. For researchers who want to keep up with the research trends, it will be difficult to do so by reading through the vast literature. Bibliometrics, which employs statistics to analyze publications, is a useful tool to capture major themes and influential works in a discipline.

Bibliometric studies have been done on both general linguistics and subfields of linguistics. A limitation of the previous studies, as pointed out by Lei and Liu (2018), is that many studies placed too much emphasis on citation number and neglected research topics. In addition, statistical analysis other than frequency count has not been widely used.

This current study aims to reveal the development of research themes in Chinese linguistics in English publications between 2000 and 2019. Another goal of the study is to compare how the trends in English publications echo with Chinese linguistics research in China.

The study drew on insights from corpus linguistics as well as computational linguistics to enhance the effect of the bibliometric study. The study sampled eight journals to model the development of Chinese linguistics, following the representativeness and balance principle (Sinclair 2005). All the journals are listed in Social Sciences Citation Index (SSCI) and Emerging Sources Citation Index (ESCI) and can represent studies of high quality. A balance was also maintained by choosing half of the journals on Chinese linguistics and the other half on general linguistics, according to the scope of the journals.

Abstracts of 1051 articles between 2000 – 2019 were collected from Web of Science database or the official sites of the journals. The abstracts were pre-processed and then fed into a Latent Dirichlet Allocation (LDA) model for topic modeling. The model extracted five potential topics with three topics highly interpretable. The first topic is dialect, including keywords such as “Min”, “Wu”, “dialect”, “change”, “old”, and “voice”. The second topic is phonetics or phonology, suggested by “vowel”, “syllable”, and “phonological”. The third topic is syntax, covering terms such as “pron”, “head”, “relative”, “classifier”, “np”, and “phrase”.

The results are consistent with Wu (2012)’s analysis of linguistic research projects sponsored by Chinese National Social Science Foundation, indicating dialects and grammar are important research topics. In addition, topic modeling has the advantages of monitoring the change in the trends over different periods. For example, in the subfield of dialects and non-Chinese languages, “Min” was popular between 2000 – 2005, “Tibetan” was more frequent during 2005 – 2010, and “Austronesian” was from 2010 to 2015. The study also has pedagogical implications for the data and results can serve as useful bibliographical resources for students majoring in Chinese linguistics.

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Encoding motion events in Shanghainese

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Languages differ in how motion events are encoded. While Mandarin has a variety of ways to express motion events, as shown in (1), only the structure $[V_{\text{manner}}\text{-}dao\text{-}G(\text{round})\text{-}deictic\ V]$ in (1c) is natural in Shanghainese, as shown in (2). Moreover, unlike its Mandarin counterpart, the occurrence of the deictic motion verb *le/qi* ‘come/go’ in this structure is obligatory in the sense that leaving it out would result in semantic change. See the contrast between (1c) and (2).

- (1) a. *Zhangsan jin le jiaoshi.* $[V_{\text{path}}]$
 Zhangsan enter Asp classroom
- b. *Zhangsan zou jin le jiaoshi.* $[V_{\text{manner}}\text{-}V_{\text{path}}\ G]$
 Zhangsan walk enter Asp classroom
- c. *Zhangsan zou dao jiaoshi li (lai/qu) le.* $[V_{\text{manner}}\text{-}dao\text{-}G\text{-}deictic\ V]$
 Zhangsan walk arrive classroom inside come/go Asp

‘Zhangsan walked into the classroom.’

- (2) *Zangse zou dao jiaosek lixiang *(le/qi) lek.*
 Zhangsan walk arrive classroom inside come/go Asp

Though there have been many typological and historical studies on motion events with respect to dialectal differences (Lamarre 2003, 2008; Liu 2001; Shi 2014; Shi & Wu 2014; Yiu 2014, 2015; etc.), the underlying structure of motion events are less studied, and thus the parametric variations among Chinese dialects remain unknown. This paper explores the syntax of motion events in Shanghainese, with a comparison with Mandarin, and aims to make sense of the variation in terms of parameters of event structures.

To begin with, I show that Shanghainese is a typical s(atellite)-framed language (Talmy 1985, 2000), based on i) the headedness of V_{manner} and ii) the constituent of $dao\text{-}G\text{-}V_{\text{deictic}}$. First, that V_{manner} is the head of the sequence can be evidenced by the scope of negation: V_{manner} does not attract negation, unlike other adjuncts.

As exemplified in (3a), the most natural reading is negating the occurrence of the *running-to-the classroom* event. This is in contrast to (3b), where the negation is preferably associated with the adjunct.

- (3) a. *Yhi mmak ben dao jiaosek qi, (??yhi zou guqi ghek).* he NEG run arrive classroom go he walk go.there SFP
 'He didn't run to the classroom; instead, he walked there/he went to the playground.'
 b. *Yhi mmak [cen fiji]_{adjunct} dao megok qi, yhi cen shoe qi ghek.* he NEG ride plane arrive US go he ride ferry go SFP
 'He didn't go to the US by plane; instead, he went there by ferry.'

Second, *dao*-G forms a constituent with the deictic verb as shown by the conjunction test for constituency illustrated in (4): V_{manner} (i.e. *fi* 'fly') can be left out in the second conjunct, *qi* 'go' cannot.

- (4) *Fi [dao megok qi] gen [(fi) dao yingok ??(qi)] hhalidak jhin?* fly arrive US go and fly arrive UK go which near

Semantically, V_{deictic} only specifies the resultant location of the figure, suggesting that its scope is within PathP. More surprisingly, though motion events expressed by $V_{\text{manner}}-V_{\text{path}}$ G (e.g., (1b)) are marginally acceptable in Shanghaiese (under the influence of Mandarin), V_{path} is in complementary distribution with V_{deictic} . This indicates that V_{deictic} may occupy the same position with V_{path} and hence should be generated within PathP.

- (5) *Zangse zou jin jiaosek (*le/qi) lek.*
 Zhangsan walk enter classroom (come/go) SPF

In light of the above observations, the structure of motion events in Shanghaiese can be given as [_{VP} V_{manner}

[_{PathP} [_{PlaceP} *dao* [_{LocP} G]] *le/qi*]], representing a S-framed structure. This analysis is consistent with the fact that the distributions of path-of-motion verbs (e.g., *ascend*, *exit*, etc.) are restricted in Shanghaiese: they tend to occur in lexicalized phrases or compounds (e.g., *shang-cuzi* ascend-car 'get in a car' vs ??*shang ghekbhu cuzi* ascend-this car 'get in this car'), which is characteristic of S-framed languages. Further, I will address the typological differences between Shanghaiese and Mandarin in encoding motion events (see Hu 2018; Lamarre 2003; Shi 2000; etc. for Mandarin motion structures) and argue that they may reflect structural differences and parametric variations between the two varieties, which will also shed light on their other differences in terms of event structure, such as resultative formation (Mateu 2002; Synder 1995).

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Form-focused Interventions on Teaching the Chinese Character “le” and Assessment

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Instructed second language acquisition (ISLA) could potentially bridge SLA theories with curriculum designs for a better outcome of second language (L2) teaching and learning. Little attention, however, has been paid to develop form-focused interventions for L2 Chinese. Drawing upon the theories of the Input Processing (VanPatten & Cadierno, 1993), the Output Hypothesis (Swain, 1985), and the Noticing Hypothesis (Schmidt, 1990), the presentation will demonstrate a unit of pedagogical interventions on two basic structures of the Chinese character “le.” To be specific, this character is used to indicate “completion of an action (usually used tightly behind the verb)” and “a change of state (usually put at the end of a sentence).” Difficulties of acquiring this character could be described by “the Primacy of Content Words Principle” and “the Sentence Location Principle” (VanPatten, 2015). To assist the learning process, the pedagogical interventions aim to help students overcome the learning difficulties and develop their mental representations of this linguistic form and promote automaticity through communicative and comprehensible input and output.

Specifically, the teaching materials cover three 50-minute sessions and are designed for English speakers at an intermediate level of Chinese. Explicit instruction and input enhancement (Smith, 1993) activities are integrated throughout the lessons. The first two sessions focus on the aforementioned two structures of “le” respectively and highlight the grammatical form through an adapted story of a cartoon character. The third session includes a referential activity and a story-reading activity that deal with the two structures simultaneously. Importantly, the assignments emphasize real-life communication to promote spontaneity.

In terms of assessment, an important aspect is to test students’ performance based on what tasks they have practiced in the intervention stage. For

example, students are asked to do a referential activity which is a receptive listening task; therefore, one part of the tests could be designed following the similar format. That is, students will hear a native speaker's narration about something and distinguish the different target structures by choosing the correct answers.

As the ultimate goal of the interventions is to help students develop implicit linguistic knowledge and produce the two “了” structures spontaneously, one way to assess that is to create opportunities for students to describe daily life activities using “了.” For instance, they could be given a topic for narration (e.g., What did you/ your friend/ sister do yesterday? What changes can you observe between picture one and picture two?) and the instructor could assess whether they use “了” spontaneously and correctly. Finally, implications from the pedagogical design and forms of assessment will be delineated.

Quantity-sensitive Foot Formation in Suzhou: Evidence from Light-initial Tone Sandhi

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The issue. Based on a first-time acoustic analysis of the checked-tone sandhi patterns in Suzhou (Northern Wu; author's fieldwork), this paper addresses a key debate in prosodic typology, viz. the interaction of tone, syllable quantity, and metrical structure (Kehrein et al. 2018 for overview). This study ties phonetic evidence with a phonological argument; I argue that the tone sandhi patterns in Suzhou can best be accounted for using two types of trochaic feet, syllabic and moraic trochees (based on Kager 1993). My main claims are two-fold:

- (i). So-called 'checked tones', traditionally assumed to be glottalized and bimoraic, are synchronically plain short vowels in monomoraic syllables – they have very short duration, and there is no phonetic evidence of glottalization.
- (ii). Counter to previous descriptions, the second syllable can play a role in sandhi patterns, but *only* following monomoraic/light syllables – I refer to this as 'light-initial sandhi'. I argue that this pattern calls for a revision of the metrical system of Suzhou, where two types of trochaic feet are needed depending on syllable quantity.

Background. Traditional metrical analyses of tone sandhi in Northern Wu languages (Duanmu 1999, Shi & Jiang 2013, among others) assume a left-aligned disyllabic trochaic foot as the relevant tone sandhi domain. In a disyllabic trochaic foot, the head (initial) syllable retains all tonal material and the dependent (second) syllable deletes its tone. Consequently, *only* the initial syllable determines the sandhi output of phonological words.

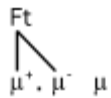
Data. The light-initial sandhi patterns in my data present a counterexample to the generalization that only initial syllables are relevant. An example is given in (1) (subscript 'μ': moras; T: any tone). In (1a), the second syllable is irrelevant in determining the sandhi outcome, as the outcome is always [L_{μμ}.H_{μμ}]. In (1b), the sandhi outcome depends on what tone the *second* syllable has.

$$(1a). \quad /LH/_{\mu\mu} + /T/_{\mu\mu} = [L_{\mu\mu}.H_{\mu\mu}]$$

$$(1b). \quad /H/_{\mu} + /LH/_{\mu\mu} = [H_{\mu}.L_{\mu\mu}] \quad \text{but} \quad /H/_{\mu} + /HL/_{\mu\mu} = [H_{\mu}.H_{\mu}L_{\mu}]$$

Analysis. I argue that left-aligned, binary trochaic feet built on *moras* rather than syllables (based on Kager 1993, Kager & Martínez-Paricio 2018) account for the novel data on light-initial sandhi:

(2). A light-heavy disyllabic word. The [.] dot stands for a syllable boundary. The third mora is unfooted.



The moraic trochee above violates Syllable Integrity (that syllables cannot be divided by feet). I follow Kager & Martínez-Paricio (2018) in assuming that the principle is violable. In doing so it obeys a more important wellformedness constraint, Head-Dependent Asymmetry (Dresher & van der Hulst 1998): Head syllables in metrical feet *cannot be lighter in quantity* than dependent syllables. (3) shows the different output of disyllabic and bimoraic sandhi domains. A few notes on the phonological grammar: (i). Unfooted metrical constituents are always phonologically toneless, and surface with a phonetic *L*; (ii). Each metrical constituent preferably hosts one tone, making the whole foot carrying two tones maximally. In (3a), the dependent syllable(σ^-) loses all of its tones since the head syllable(σ^+) already supplies two tones. In (3b), both H tones are preserved, while the third mora is left toneless and surfaces as a phonetic *L*.

(3a). $/LH/_{\mu\mu} + /HL/_{\mu\mu} = [L_{\mu\mu} \cdot H_{\mu\mu}]$ (disyllabic trochee) (3b). $/H/_{\mu} + /HL/_{\mu\mu} = [H_{\mu} \cdot H_{\mu} L_{\mu}]$ (bimoraic trochee)

