The Journal of Chinese Linguistics Vol.46, No.2 (June 2018): 443-453

REPORT

THE 9TH INTERNATIONAL CONFERENCE IN EVOLUTIONARY LINGUISTICS

Reported by
Peng Gang **Feng** Yan

The 9th International Conference in Evolutionary Linguistics (CIEL-9) (Dijiu Jie Yanhua Yuyanxue Guoji Yantaohui 第九届演化語言學國際研討會)[1] took place in Yunnan Minzu University (Yunnan Minzu Daxue), August 25-27, 2017. The conference was organized by School of Ethnic Cultures of Yunnan Minzu University.[2] There were 187 experts and students in total, mainly from 64 universities and institutions in the region of China Mainland, Hong Kong, Taiwan; USA, Canada, Australia, Austria, Japan and Korea, attending the three-day conference. The 11 keynote speeches and 77 oral presentations included five major themes (suggested by the author of the report): 1) the development of language, cognition and the brain, 2) language contact and evolution, 3) the origins of Chinese, 4) diachronic and synchronic study of language, and 5) other language evolution related research (such as speech disorder and second language acquisition). Both Chinese and English were working languages of this conference.

Peng Gang (corresponding author) [gpeng@polyu.edu.hk]; AG509, Department of Chinese and Bilingual Studies, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong. Also affiliated to SIAT (see below). https://orcid.org/0000-0002-1465-1301

Feng Yan Laboratory for Ambient Intelligence and Multimodal Systems, Shenzhen Institutes of Advanced Technology (SIAT), CSA (Zhongguo Kexueyuan Shenzhen Xianjin Jishu Yanjiuyuan); also affiliated to Central China Normal University (Huazhong Shifan Daxue). https://orcid.org/0000-0003-1841-0318

1. The 9th International Conference in Evolutionary Linguistics (2017): General Agenda http://139.129.128.147/mzwhxy/, accessed Dec. 8, 2017. For publications on CIEL-1-8, see "References" section at the end of this report.

2. Yunnan Minzu Daxue, Minzu Wenhua Xueyuan 雲南民族大學, 民族文化學院

1. THE DEVELOPMENT OF LANGUAGE, COGNITION AND THE BRAIN

William S-Y. Wang (Wang Shiyuan 王士元) of the Hong Kong Polytechnic University (PolyU) as the honorary chairman of the conference, gave a keynote speech on "**Language and Cognition across the Health-Span.**" The focus was a consideration of the significant association between the development of the brain and the development of child language, as well as the recession of language and cognition in the sunset of life. He started by reviewing the evolution of the human body: compared to chimpanzees, human infants develop much more complex cognitive processes, such as discriminating phonetic contrasts, likely as a result partly of their significantly larger brain volume. It is noteworthy that language acquisition happens when the infant's brain weight approaches that of adults. In contrast, there is a decline of brain function in the elderly, associated with structural changes such as the shrinkage of hippocampus. It has been hypothesized that older adults might recruit cognitive resources at lower loads to compensate for cognitive decline. It is important to pay more attention to the neuro-degeneration in the elderly and there is an urgent need for us to come up with better diagnoses and treatments for the senior population with neuropsychiatric disorder.

Peng Gang 彭剛 also from PolyU presented the keynote speech "**Brain Plasticity Reflected by Using Linguistic Tones**." He pointed out that the brain has amazing ability to reorganize itself by forming new connections between neurons throughout an individual's life course. It is necessary to note that different languages shape different brains and different brains produce different perceptions. What is more, different perceptions would produce different behaviors and different behaviors then characterize different languages, which form the triangle model discussed by William S-Y. Wang (2009).[3]

With respect to the correlation of brain evolution and conceptual complexity, Thomas Schoenemann of Indiana University shared his views on "**Evolution of Brain and Language**" in the keynote speech. He noted

3. William S-Y. Wang's keynote speech, "Chinese Language, Chinese Brain" presented at the 17th Annual Conference of the International Association of Chinese Linguistics (IACL-17) held on July 2-4, 2009 in Paris, France, http://www.iacling.org/, or, http://crlao.ehess.fr/index.php?755 accessed on March 15, 2018, abstract is not accessible.

The Journal of Chinese Linguistics Vol.46, No.2 (June 2018): 443-453

that concepts are based upon complex networks connecting different brain regions. Increasing brain size leads to increasing specialization of parts of the brain and the size of brain areas are proportional to the degree of elaboration of functions, which means that larger brain size would lead to richer conceptual understanding. The combination of these suggests an increasing need for grammar to allow efficient communication.

Similarly, combining the linguistic observations and neural-coding observations, Keith Johnson of University of California at Berkeley gave a keynote speech on "**Exemplar Models of Phonology: An Intermediate Representation**." He emphasized that the exemplar-based memory fills in details of formal linguistic theory with distribution and impact of instances and are compatible with principles of neural implementation.

The keynote speech of "**The Evolution from Chimpanzee's Vocal Tract to Human's**" presented by Kong Jiangping 孔江平 of Peking University focused on the evolution of the vocal tract, which is correlated closely with the emergence of speech. The most significant vocal tract difference between humans and chimpanzees lies in the number of the vocal tract chambers: the human vocal tract possesses a configuration featuring two chambers, while the chimpanzee's has only one chamber. The two-chamber configuration enables humans to produce much richer array of sounds. Moreover, the ability to produce /i/ sound might be seen as a milestone in the evolution of the human vocal tract, since almost all modern human languages include the vowel /i/ in addition to /a/ and /u/, and this requires the particular configuration that humans alone possess.

2. LANGUAGE CONTACT AND EVOLUTION

Salikoko S. Mufwene of University of Chicago presented his views concerning "**Language Endangerment and Loss as Evolutionary Processes**" in a keynote speech. In connection with colonization and globalization, population movements spread some languages and language families. At the same time, some new languages have emerged as well, e.g., most recently creoles and pidgins. He emphasized that language contact has often triggered the loss of some (indigenous) languages, including Celtic languages in Europe, displaced by neo-Latin varieties and by English, and that language loss is therefore a key part of the story of language evolution.

The Journal of Chinese Linguistics Vol.46, No.2 (June 2018): 443-453

Shen Zhongwei 沈鍾偉 of University of Massachusetts Amherst gave a keynote speech titled "**Language Transmission is Horizontal: From the Perspective of Language Carriers**." He argued that different Chinese dialects are actually the results of imperfect learning of Chinese by various groups of non-Chinese speakers in different geographical regions, after being in contact with Chinese speakers. This is in contrast to the idea that Chinese dialects occurred solely through internal differentiation of the original proto-Chinese. Language changes can be caused by the individual carriers who speak the same language or different languages. The exploration of the carrier-based horizontal transmission can help us better understand the mechanism of dialect formation of Chinese and provide a missing chapter in the knowledge of historical linguistics. Nicholas Evans of Australian National University gave a keynote speech that talked about co-evolution as a mechanism to explain typological diversity comprehensively. The co-evolutionary approach seeks to integrate various 'external' factors (e.g., cultural and sociolinguistic factors) with language-internal factors (e.g., competing motivations, word-order correlations and differential cutoffs on hierarchies). It is important to relate macro-variability back to micro-variability when we explain linguistic diversity.

Situ Puiyiu 司徒沛嶢 of University of Hong Kong shared his views on "**Typological Variation across Mandarin Dialects: An Areal Perspective**." By analyzing typological features of Mandarin dialects based on computational phylogenetic tools, he found that Mandarin dialects displayed a remarkable degree of typological diversity comparable to that of the Sinitic branch as a whole; Standard Chinese had limited homogenizing power over the vernaculars in the past two or three millennia, but may have recently begun to keep the variations among the vernaculars at bay.

3. THE ORIGINS OF CHINESE

David Bradley of La Trobe University, in his keynote speech, "**Ancient History of Sino-Tibetan in China**," reported the early linguistic history of China and the phylogeny of Sino-Tibetan based on comparative

The Journal of Chinese Linguistics Vol.46, No.2 (June 2018): 443-453

linguistic and archaeological evidence focusing on the domestication of animals and the origins of agriculture in China, and how this is reflected in the archaeological and historical record and in linguistic evidence. It is generally agreed that the ancestor languages of the Sino-Tibetan languages were spoken in what is now China, and later spread to adjacent areas of Southeast and South Asia. There is more and more evidence supporting the hypothesis that Proto-Sino-Tibetan can be connected with the Yangshao Culture in northwestern China, Proto-Sinitic can be connected with the Longshan Culture in north central China, and Proto-Tibeto-Burman can be connected with the Majiayao Culture in southwestern China.

In his keynote speech in Chinese, **On hypothesis of three branches of Chinese languages and basic word orders of proto Tibetan languages** (Lun Hanyu Yuxi Sanzushuo ji Yuanshi Zangyu de Jiben Yuxu),[4] Chen Baoya 陳保亞 of Peking University focused on two stages of rank analyses about the correspondence analysis between different languages. Burmese, Tibetan and Yi are three of the most representative Tibeto-Burman languages. Based on correlated correspondence and rank distribution, he argued that the most likely hypothesis is that Chinese and Tibeto-Burman have genetic relationship.

Yuan Dan 袁丹 of East China Normal University[5] gave a talk in Chinese on, **The origin of the aspirated fricative s^h-/$ʃ^h$- in Wu dialect of Su-Wan boundary** (Su Wan Jiaojie Didai Wu Yu Songqi Saiyin S^h-/$ʃ^h$- de Laiyuan). [6] She introduced her research about the origin of voiceless aspirated fricative in the Wu dialect. Voiceless aspirated fricatives are only found in Sino-Tibetan and Oto-Manguean languages, and its origin remains unknown. There is some evidence showing that it is possible for s^h- to transform from the corresponding voiced fricative and that the transformation has not completed yet.

4. "論漢語語系三族說及原始藏語的基本語序"
5. Huadong Shifan Daxue 華東師範大學
6. "蘇皖交界地帶吳語送氣塞音 S^h-/$ʃ^h$-的來源"

The Journal of Chinese Linguistics Vol.46, No.2 (June 2018): 443-453

4. DIACHRONIC AND SYNCHRONIC STUDY OF LANGUAGE

4.1. Diachronic Study of Language

Pan Wuyun 潘悟雲 of Fudan University[7] gave a keynote speech by Chinese, on nonlinear phonetic changes according to the presentation title, **Non-linear sound changes** (Fei Xianxing Yinbian).[8] He showed several examples about the models of diachronic phonetic changes in medieval Chinese and Burmese, which supported the theory of lexical diffusion originally put forward decades ago by William S-Y. Wang.

Additionally, there were some researchers who studied the grammaticalization of different dialects. Wang Shuangcheng 王雙成 of Shanghai Normal University[9] gave a keynote speech in Chinese on, **The grammaticalization of *shuo* 說 in Xining dialect (**Xining Fangyan Zhong Dongci *Shuo* de Yufahua).[10] He pointed out that *shuo* 說 went through a period of transition from being a notional verb to becoming a speech label via phonetic weakening and semantic evolution.

Lexical evolution was also highlighted by some scholars. Liu Xueyang 劉雪揚 and Li Bin 李斌 of Nanjing Normal University[11] gave a talk in Chinese on, **A quantitative study on the change of the lexicon in pre-Qin period** (Xianqin Cihui Yanbian de Jiliang Yanjiu).[12] They found that based on a quantitative analysis there were more than forty thousand words before the Qin dynasty. Most of these words disappeared in different periods, although some still exist now. It is noteworthy that the word length was always around 1.8 syllables without any sharp changes in thousands of years.

4.2. Synchronic Study of Language

Focusing on the phonology and phonetic aspects of a synchronic study, Liu Wen 劉文 and Kong Jiangping 孔江平 of Peking University discussed their study, "**The phonation patterns of monosyllabic tones in Xinzhai Miao**," through electroglottography (EGG) and the measurement

7. Fudan Daxue 复旦大学
8. "非綫性音變"
9. Shanghai Shifan Daxue 上海師範大學
10. "西寧方言中動詞"說"的語法化"
11. Nanjing Shifan Daxue 南京師範大學
12. "先秦詞彙演變的計量研究"

The Journal of Chinese Linguistics Vol.46, No.2 (June 2018): 443-453

of sound pressure. Eight tones were found according to phonological patterns, among which five are level tones in this dialect. They also found that non-model phonation (breathy voice) could be used to illustrate the influence of language on physiology.

Gao Tianjun 高天俊 of Huazhong University of Science and Technology[13] talked by Chinese about, **Computer-aided recognition of the sound correspondences and relative terms in Tibeto-Burman** (Jisuanji Fuzhu Zang Mian Yu Yuyin Duiying Guilü he Guanxici Shibie).[14] He designed an automatic identification software focusing on the computer-assisted regular sound correspondences and cognates identification on Tibeto-Berman languages

In the area of semantic and syntactic studies, Zhang Qi 張琪 and Liu Jinrong 劉勁榮 of Yunnan Minzu University introduced the generic and individual-denoting of nouns of Lahu language in their talk by Chinese, **Individual reference and generic reference in Lahuyu**. (Lahuyu Mingci Zhong de Gezhi yu Leizhi).[15] They found that genericness could only be presented by four syllabic words.

Xia Quansheng 夏全勝 et. al [16] gave a talk in Chinese on, **Effects of grammar category in the process of Chinese disyllabic compound words**. (Hanyu Shuangzi Fuheci Jiagong Zhong de Yusu Yufa Leibie Xiaoying).[17] They studied the syntactic categories of morphemes in the processing of compounds. Different from Indo-European Languages, Chinese is a language with a simple system of inflection, in which different word classes are indistinguishable in word form. Such relations between the syntactic categories of morphemes and their host compounds might be stored in the native speakers of Mandarin. The compounds could be decomposed into components or represented as a whole in the processing.

13. Huazhong Keji Daxue 華中科技大學

14. "計算機輔助藏緬語音對應規律和關係詞識別"

15. "拉祜語名詞中的個指與類指"

16. Additional authors include Wang Jin 王金 and Xie Chenwei 謝郴偉 of Nankai University (Nankai Daxue), Lü Yong 呂勇 of Tianjin Normal University (Tianjin Shifan Daxue), and Gong Wenxiao 宮文瀟 of Institute of Psychology, Chinese Academy of Sciences (Zhongguo Kexueyuan Xinli Yanjiusuo)

17. "漢語雙字複合詞加工中的語素語法類別效應"

The Journal of Chinese Linguistics Vol.46, No.2 (June 2018): 443-453

Cheng Shanshan 程珊珊 of Peking University gave a talk on, **Semantic association of celestial bodies: A case study of the concepts of sun and moon in Chinese** (Tianti Gainian de Yuyi Guanlian: Yi Hanyu Fangyan zhong 'Sun', 'Moon' Gainian Weili).[18] She illustrated the semantic association of "moon" and "sun" in different dialects, suggesting that the synchronic semantic network and universal semantic network would have an effect on the direction of semantic evolution.

5. OTHER LANGUAGE EVOLUTION RELATED RESEARCH

5.1. Speech Disorders

Chen Yu 陳彧 of Tianjin University of Technology[19] gave a talk on "**An Study on Prelingual Deaf Adult's Production of HH Tone in Standard Chinese**." He analyzed the performance of Tone 1 in Mandarin produced by prelingually deaf adults with hearing aids (HA) or cochlear implants (CI). He found that the performance of deaf mutes was much worse than normal hearing adults, although Tone 1 was the easiest tone for prelingually deaf adults. Deaf females were significant better than deaf males, but CIs were not better than HAs, indicating that receiving CI after adolescence is not an effective option for prelingually deaf adults.

Chen Fei 陳飛, Feng Yan 馮燕 and Peng Gang 彭剛 of SIAT,[20] gave a talk on "**Mandarin Vowels and Consonants Production among Young Children with Autism Spectrum Disorders**." They investigated the speech sound development of children with autism spectrum disorders (ASD). They found that the children with ASD showed a similar order of speech sound acquisition as healthy children do, although they exhibited different degrees of delayed language development. This ASD population showed typical error patterns and some presented atypical aspiration, voicing, vowel deletion, or epenthesis as well. There was a correlation between the speech production performance and the degree of language delay, but not the chronological age, suggesting that the speech sound problems in ASD children would not automatically be improved with age

18."天體概念的語義關聯-以漢語方言中 sun, moon 概念为例"

19. Tianjin Ligong Daxue 天津理工大學

20. Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences (Zhongguo Kexueyuan Shenzhen Xianjin Jishu Yanjiuyuan)

The Journal of Chinese Linguistics Vol.46, No.2 (June 2018): 443-453

and that interventions should be taken into consideration. As the carrier of audio-visual speech, 3-D talking heads proved to be effective in this population. These 3-D talking heads have been developed in many computer-assisted pronunciation teaching systems, which instruct the learners using virtual pronunciation animations.

5.2. Second Language Acquisition

Qi Ruying 齊汝瑩 and Bruno Di Biase of Western Sydney University gave a talk on "**Environmental Influences on Transfer in Bilingual Children: The Case of *wh*- Question in a Mandarin-English Child**." The research showed that the extra-domestic linguistic environment played a demonstrably facilitating or constraining role on language transfer in bilingual children via observing the wh- questions transfer in Chinese/English bilingual children.

Wang Xiaoli 王曉莉 and Zheng Huibin 鄭慧斌 of Shantou University[21] gave a talk on "**Investigating the Effects of Self-regulated Learning Strategies on EFL learners' Writing Performance: A Case Study of a Chinese University**." They investigated the effect of self-regulated learning (SRL) strategies on English learners' writing performance in Chinese college students via questionnaires and semi-structure interviews.

6. CLOSING REMARK

Highly positive closing remarks of CIEL-9 were delivered by Shen Zhongwei 沈鍾偉 and Thomas Schoenemann. Shen Zhongwei identified the future trend of language development in China: We need to offer new perspectives from three timescales (i.e. macro-history, meso-history and micro-history) based on Chinese via going beyond learning and applying the western linguistic theories. Thomas Schoenemann further concluded the strengths of CIEL-9 as wide diversity of viewpoints, perspectives, foci and techniques. As an international platform with accessible to clear presentations, the conference provided an excellent opportunity for scholars from all over the world to interact with each other. As is well

21. Shantou Daxue 汕頭大學

The Journal of Chinese Linguistics Vol.46, No.2 (June 2018): 443-453

known, macro-history is the result of the processes occurring at the meso-historical level, which in turn is the results of micro-historical processes. This is why multidisciplinary studies of language should be emphasized. In the future, we would arrange even more within-conference interaction (e.g., focused panel discussions) and continue to encourage young scholars to participate as much as possible. At last, on behalf of the next CIEL organizing committee, Yang Wanting 楊婉婷 on behalf of Zhang Yulai 张玉来 of School of Liberal Arts, Nanjing University (Nanjing Daxue Wenxue Yuan),[22] announced that the 10th International Conference in Evolutionary Linguistics (CIEL-10) would be held at Nanjing University in 2018.

REFERENCES

CHEN, Fei, and PENG Gang. 2016. Report of The 7th International Conference in Evolutionary Linguistics, Tianjin, 2015. *Journal of Chinese Linguistics* 44(1):253-264.

GAO, Tianjun, and JIANG Juan. 2015. Report of the 6th International Conference in Evolutionary Linguistics, Xiamen, 2014. Journal of Chinese Linguistics 43(1A):256-264.

LI, Guo, and Quansheng Xia. 2014. Report of the 5th International Conference in Evolutionary Linguistics, Hong Kong, 2013. *Journal of Chinese Linguistics* 42(1): 237-247.

PENG Gang, and WANG Feng, ed. 2017. *New Horizons in Evolutionary Linguistics*. Hong Kong: Journal of Chinese Linguistics Publishing Office (Project on Linguistic Analysis). [selected papers from CIELs 4-5).

SCHOENEMANN, Thomas P., Gang Peng, and Robert Port. 2017. The 8th International Conference in Evolutionary Linguistics, Bloomington, 2016. *Journal of Chinese Linguistics* 45(1):238-247.

WANG, Feng. 2013. Report of Conference in Evolutionary Linguistics IV, Beijing, 2012. *Journal of Chinese Linguistics* 41(1):246-253.

WONG, Yingwai. 2009. Report: Conference in Evolutionary Linguistics I, Guangzhou, 2009. *Journal of Chinese Linguistics* 37(2):386-396.

22. 南京大學文學院

The Journal of Chinese Linguistics Vol.46, No.2 (June 2018): 443-453

XIA, Quansheng 夏全勝. 2011. Dierjie Yichuan Jinhua Yu Yuyan Jinhua Guoji Huiyi Ji Disanjie Yanhua Yuyanxue Huiyi Zai Shanghai Zhaokai 第二届遺傳進化與語言進化國際會議暨第三届演化語言學會議在上海召開 (Report: Conference in Genetic Evolution and Language Evolution II and Conference in Evolutionary Linguistics III), Shanghai 上海, 2011. *Zhongguo Yuwen* 中國語文 no.6 (2011):564

ZHANG, Caicai, Guangting Mai, and Yingwai Wong. 2010. Report: The Nineth Phonetic Conference of China (2010) and Conference in Evolutionary Linguistics II, Tianjin, 2010. *Journal of Chinese Linguistics* 38(2):418-439 .

第九届演化語言學國際研討會會議報告

彭剛　馮燕

提要

第九届演化語言學國際研討會（CIEL-9）於 2017 年 8 月 25 日至 8 月 27 日在昆明雲南民族大學圓滿舉行。來自中國、美國、加拿大、澳大利亞、奧地利、日本、韓國等地的 64 所大學和研究機構的 187 位專家學者參加了此次會議。本次會議的主題包括：1）語言、認知與大腦發展、2）語言接觸與演化、3）漢語的起源、4）語言的歷時和共時研究、5）與語言演化相關的其他研究（如：言語障礙、二語習得等）。會議共有 11 場主題報告和 77 個口頭演講。主題發言人包括來自香港理工大學的王士元教授（榮譽主席）、北京大學的陳保亞教授、澳大利亞拉籌伯大學的 David Bradley 教授、美國加利福尼亞大學伯克利分校的 Keith Johnson 教授、北京大學的孔江平教授、復旦大學的潘悟雲教授、香港理工大學及中國科學院深圳先進技術研究院的彭剛教授、美國芝加哥大學的 Salikoko Mufwene 教授、美國麻塞諸塞大學安默斯特分校的沈鐘偉教授、美國印第安那大學的 Thomas Schoenemann 教授、上海師範大學的王雙成教授等。演化語言學國際研討會每年召開一次，此前自 2009 年起已在廣州、天津、上海、北京、香港、厦門和美國印第安那舉辦了八届 (见参考资料[REFERENCES])，2018 年將在南京舉辦此盛會。

The Journal of Chinese Linguistics Vol.46, No.2 (June 2018): 443-453
 0091-3723/4602-0009$10: