

## **Cognitive Linguistics in Chinese Teaching and Learning**

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### **1 The Cognitive Linguistics Approach**

Oposing the Chomskyan paradigm that separates language from other cognitive capacities, Cognitive Linguistics (CL) rose in the 1980s and continues to grow in depth and breadth of its research agenda. CL took a holistic and humanistic approach that perceives language as an integrated aspect of human cognition, inseparable from meaning and function, and grounded in embodied experience (Geeraerts & Cuyckens, 2007; Lakoff, 1991; Tyler, 2012). As Lakoff (1991, p. 54) puts, CL is defined by the Cognitive Commitment, which is “the commitment to make one’s account of human language accord with what is generally known about the mind and brain from disciplines other than linguistics.” The CL approach underscores that general cognition, semantics, and communicative function play a crucial role in grammar (Lakoff, 1991). A language user resorts to all cognitive resources such as memory, planning, problem-solving ability, and general knowledge and considers the physical, social, cultural, and linguistic context when comprehending a novel expression (Langacker, 2008). That is, language is usage-based, and language knowledge and learning are derived and informed by actual language use (Evans & Green, 2006; Langacker, 2008). Embracing a wide range of research methods, the CL approach is interdisciplinary in nature and constantly enriching itself based on new empirical results.

### **2 Applying Cognitive Linguistics Insights to L2 Teaching and Learning**

Concepts in CL have been successfully adapted to support L2 teaching and learning in the areas of the semantics of English prepositions (Tyler & Evans, 2004; Tyler, 2012), influence of L1 motion event construal on L2 (Cadierno, 2004, 2008; Wu, 2011, 2016), metaphorical or idiomatic language (e.g., Littlemore, 2001; Littlemore & Low, 2006), etc. CL insights can be incorporated into classroom teaching through explicit instruction and are highly compatible with L2 perspectives such as focus on form (Long, 2000), noticing (Schmidt, 1993), consciousness raising (Eckerth, 2008; Sharwood Smith, 1981), and task-based language teaching (Ellis, 2003). The CL explanations and analyses can be delivered by drawing learners’ attention to the linguistic elements and encouraging them to make conscious comparisons between their production and the target form while engaging in meaning-focused communication. Consistent with the usage-based principle, they can also be incorporated into L2 instruction through a task requiring learners to use the L2 and available resources pragmatically to achieve an outcome.

However, it is worth noting that successful applications of CL concepts and theories for L2 instruction at this point remain limited, and many of the existing CL-based proposals were not empirically tested

(Jacobsen, 2018). The various CL concepts often are too complex and theoretical, making them unreachable to instructors and learners without proper CL training and background knowledge. Tyler (2008) noted that one of the central challenges for applied CL is to provide accessible and precise explanations to non-theoreticians. Therefore, this special issue intends to address these challenges by illustrating how CL insights can help inform L2 teaching and learning and be incorporated into the classroom in understandable and applicable ways.

### 3 The Special Issue

This peer-reviewed special issue focuses on how the critical CL theories can be used to analyze the Chinese language and be adopted to advance L2 Chinese teaching and learning. It is a pioneering initiative aimed to contribute to the broad field of applied CL and the study of L2 acquisition of Chinese. Showcasing a wide range of empirical research methods, the four articles collected in this special issue apply different influential CL theories to investigate four distinct Chinese linguistic areas that pose considerable challenges for L2 Chinese learners. I will introduce each of the four studies collected in this special issue below and highlight the pedagogical implications offered by each author.

#### 3.1 Categorization of polysemous modal words in Chinese

In the first article, Lihong Huang drew from her classroom teaching experience to address non-target-like uses of Chinese modal words commonly seen among L2 users, even among the highly proficient ones. Chinese modal verbs 能 *néng*, 可以 *kěyǐ*, and 可能 *kěnéng* often are all translated as the English modal verb **can**. Relying on English glosses of these Chinese modal words, English-speaking learners are prone to create misuses such as: \*那里可以很危险 *Nàlǐ kěyǐ hěn wēixiǎn* ‘It **can** be dangerous there’ (correct: 那里可能很危险 *Nàlǐ kěnéng hěn wēixiǎn*).

Drawing from Bybee et al.’s (1994) categorization of modality, Huang investigated the historical development of the root and extended meanings of four Chinese modal words by examining their uses in the *Analects of Confucius* and a large modern Chinese corpus. She concluded that 能 *néng*, 可以 *kěyǐ*, and 可能 *kěnéng* represent three distinct types of modality. 能 *néng* expresses an agent-oriented modality, which focuses on the conditions on the agent to complete an event, as in the case of “I have time tomorrow and **can** come to the meeting.” By contrast, 可以 *kěyǐ* indicates speaker-oriented modality, which focuses on the speaker’s evaluation of the enabling conditions of an event or the speaker’s directives, as in “**Can** I come to your office now?” or “You **can** come in now.” Finally, 可能 *kěnéng* expresses epistemic modality to suggest possibility or probability of an event, as in “Today’s test **can** be harder than the previous one.” Huang’s diachronic corpus analysis also showed that 可 - 能 *kě-néng* appeared as one word in later periods (about Sui and Tang, 581 CE-907 CE) than the other modal words, and its epistemic modality was built on top of the speaker-oriented modality of 可 *kě* and the agent-oriented modality of 能 *néng*.

Huang notes that although the primary modality functions of 能 *néng*, 可能 *kěnéng*, and 可以 are distinct, the boundaries of the three types of modality represented by them may overlap with each other in some rare cases. She stresses that instructors should start from the non-overlapping parts of the three types of modality and help learners understand their prototypical modal functions with concrete examples so as to help learners develop the ability to choose a proper modal word based on the communicative needs and contexts.

#### 3.2 Different ontological metaphors in Chinese and English and the impact on L2 thinking

The following article by Nian Liu studied the differences in ontological metaphors between Chinese and

English and explored the impact on L1 English learners' L2 Chinese writing. According to the seminal work by Lakoff and Johnson (1980), ontological metaphors are a type of conceptual metaphor that use our experiences with physical objects, substances, or containers to understand something abstract. For instance, we conceptualize *mind* and *fear* as objects when saying, "My mind is rusty lately" or "His fear of insects is driving me crazy." Such uses of ontological metaphors turn abstract concepts *mind* and *fear* into something that can be easily referred to, be possessed (i.e., *my mind*, *his fear*), get *rusty* like a machine, or exert influence over someone (i.e., *driving someone crazy*). Link (2013) observed that English is rich in ontological metaphors and has a stronger tendency to nominalize events than Chinese. By contrast, Chinese uses more verbs than nouns and shows a verb bias. Liu illustrated that while English speakers can describe themselves as "I am a dog person," such nominalization of loving dogs would be expressed through verbs in Chinese, "我偏爱狗 *Wǒ piān'ài gǒu* 'I prefer dogs.'

Liu constructed two corpora comprised of news articles on COVID-19 from the US newspaper *New York Times* and the Chinese newspaper *People's Daily* to explore if the two languages show a different verb versus noun bias. The results confirmed Link's claim that English uses significantly more nouns than Chinese. Liu then further explored if such noun bias in English affects English-speaking learners' L2 Chinese writing. She found a lower verb-to-noun ratio in their L2 Chinese compositions than in the Chinese corpus based on *People's Daily*, suggesting L1 crosslinguistic influence on L2. Liu proposes that instructors can use examples and comparisons to help learners become aware of the contrast of noun bias in English thinking and verb bias in Chinese thinking, whereby they can avoid resorting to direct translation from English to Chinese when expressing their thoughts in L2 Chinese.

### 3.3 The significance of collaboration and self-awareness in learning Chinese tones

The most daunting aspect of learning Chinese can easily be learning to accurately pronounce the four tones, especially for learners whose L1 is not a tonal language. Tackling the thorniest aspect, Qun Ao's study on L1 English learners' acquisition of Chinese tones analyzed data collected from class visits, questionnaires, and learners' performance on a tonal achievement test. She closely examined learners' tonal errors, instructors' corrective feedback, and their perspectives on error treatments. The results showed that the least effective but most frequently adopted corrective strategy by instructors was to ask learners to model after the instructor's correct tones without any additional guidance. The instructors also often ignored tonal errors and expected learners to overcome the errors by memorizing correct tones. On the other hand, it was found that learners who preferred corrective feedback strategies that prompt self-correction made fewer tonal errors. The corrective feedback achieved the best outcome when learners participated in error corrections and raised their awareness of their tonal issues. Ao concludes that successful tonal error corrections require instructors to work with learners to co-construct the linguistic knowledge and assist them in transitioning from external corrective interaction to self-assistance through proper scaffolded feedback.

Ao's empirical study sheds new light on how Vygotsky's sociogenetic theories are consonant with the CL tenets. Language learning, including the acquisition of tones, is usage-based and taps general human cognitive mechanisms required in any kind of knowledge and skills development. Learners can best induce tonal features and rules when they are provided with meaningful interaction and guidance in their zone of proximal development and when they are in charge of their own learning.

### 3.4 Frequency and typicality effects in learning Chinese classifiers

Categorization is an automatic and unconscious cognitive capacity that helps us sort and summarize information and make sense of the world around us (Lakoff, 1987, 1990; Littlemore, 2009). When children see a novel object, they wonder if it is something they can eat or play with. When we see people,

animals, emotions, symptoms of illness, and so on, we use our existing experiences and knowledge with prototypical cases to evaluate a novel one and make predictions. But what happens when the target L2 uses a linguistic categorization system that does not exist in one's native language? How can we help learners grasp a distinct linguistic categorization system in an L2?

The article by Yee Pin Tio and Usha Lakshmanan used a carefully designed language experiment to compare the effectiveness of implicit versus explicit instruction in helping English speakers to learn Chinese classifiers. In Chinese, a classifier is necessitated in nominal phrases that contain a numeral quantifier (e.g., 一条绳子 *yì-tiáo-shéngzi* 'one-classifier-rope'). The assignment of classifiers to nouns is based on the shape, consistency, dimensionality, and size of the object described in the noun. Chinese native speakers growing up speaking the language have countless opportunities to learn the proper classifier-noun pairings. They are accustomed to categorizing objects and assigning correct classifiers. Tio and Lakshmanan focused on the learning of four common Chinese classifiers (i.e., 支 *zhī* for long-rigid objects, 条 *tiáo* for long-flexible objects, 张 *zhāng* for flat-flexible objects, 颗 *kē* for small-rounded objects). They created an instructional video to explain the rules for the explicit learning condition and adopted a stimulus equivalence (SE) paradigm (Sidman, 1971) to create the implicit learning condition. The SE paradigm systemically exposed learners to different classifier-object pairings through a series of match-to-sample tasks, which allowed the emergence of categorical relationships among objects that were not taught explicitly. The results showed that the effectiveness of the implicit SE paradigm was comparable to that of the explicit condition for objects with high typicality ratings (e.g., rope or fish for classifier 条 *tiáo*). Notably, the implicit (SE) group was significantly more accurate than the explicit group in generalizing the use of classifiers to new objects with lower typicality ratings (e.g., cucumber or water hose for classifier 条 *tiáo*). The result suggests that the SE paradigm works well in facilitating the generalization of nontypical cases and in learning the fuzzy rules associated with classifier-object relationships. Moreover, only the implicit SE group showed a significant improvement in overall classifier retention in the delayed post-classifier assessment. Based on the findings, Tio and Lakshmanan suggest the use of a combination of implicit and explicit instructional methods for the teaching of Chinese classifiers. For typical classifier objects, explicit rule explanations will help learners quickly grasp the classifier-object relationship. For less typical objects that fall on the boundaries of the classifier categorization, it is more beneficial to adopt a bottom-up approach like the SE paradigm that provides learners with ample exposure to classifier-object pairings and allows them to experiment with new pairings.

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