

Traceability and Mutual Learning: A Comparative Analysis of Cognitive Commonalities in the Etymological Evolution of Core English and Chinese Vocabulary

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Abstract: Language is an explicit manifestation of human cognition, and the vocabulary system is a historical product of ethnic thinking developed to a certain stage. Taking core English and Chinese vocabulary as the research object, this paper traces the evolutionary trajectories of basic words in the two languages from an etymological perspective and explores the cognitive mechanisms behind them. The study finds that although English and Chinese belong to different language families, they exhibit cognitive commonalities in many respects, such as word-formation motivation and semantic generalization. These commonalities arise from shared ways of perceiving the objective world and conceptual pathways, providing a new basis for cross-linguistic understanding and cultural mutual learning. While tracing the origins, this paper focuses on comparative analysis, which not only deepens understanding of the cognitive nature of language but also facilitates theoretical dialogue in English and Chinese linguistic research.

Keywords: Etymological evolution; Cognitive commonality; English-Chinese contrast; Core vocabulary; Metaphorical thinking

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1. Introduction

The relationship between language and thought is a central question in philosophy and linguistics. As a discipline that traces the historical origins and evolutionary trajectories of words, etymology not only reveals linguistic forms but also reflects the development of human cognition. English and Chinese belong to different language families with distinct morphological structures, yet their core vocabularies show cognitive commonalities in word-formation motivation, semantic evolution, and other aspects. These commonalities are not the result of accidental language contact but are closely tied to shared human bodily experience and spatial perception. From an etymological perspective, this paper conducts a comparative analysis of the evolution of

core English and Chinese vocabulary to reveal hidden cognitive mechanisms and offer new ideas for linguistic typology research.

2. Cognitive commonalities in word-formation motivation

2.1. Pictography and onomatopoeia: Direct imitation of the world

Both English and Chinese today contain a large number of words based on the imitation of natural sounds and physical forms. As an ideographic language, Chinese followed the principle of “drawing the object as it is, following its contours” at the initial stage of character creation. For example, the characters *ri* (sun) and *shan* (mountain) resemble the shapes of the sun and mountain peaks respectively. As a phonetic language, English also follows the logic of imitation: *bubble* mimics the sound of a bubble bursting, and *zigzag* outlines a winding path. Analysis of such words reveals a shared feature: the relationship between sound and meaning is not arbitrary but based on similarity. From a cognitive perspective, humans perceive the world first through sensory input; vision and hearing serve as primary perceptual channels and become the basis for creating linguistic symbols. The pictographic formation of Chinese characters and the onomatopoeic word-formation of English, seemingly unrelated, both embody the basic human cognitive path: taking bodily experience as the starting point, using sensory imitation as the means, and internalizing the external world into linguistic symbols ^[1].

2.2. Metaphorical projection: The cognitive leap from concrete to abstract

While pictography and onomatopoeia enable direct imitation of the world, metaphor acts as a bridge that elevates language from the concrete to the abstract. Many abstract concepts in core English and Chinese vocabulary are formed by metaphorical projection of bodily experience, reflecting the laws of human cognitive development. Taking spatial locatives as an example: in Chinese, *shang* (up) and *xia* (down) originally denoted spatial position and later extended to abstract domains such as time (*shangwu*, morning; *xiawu*, afternoon) and social status (*shangji*, superior; *xiaji*, subordinate). In English, *up* and *down* underwent similar development, projecting from the spatial domain to time, emotion, and other domains (e.g., *ups and downs* refers to the vicissitudes of life). The same applies to body-part metaphors: the Chinese *tou* (head) originally meant a body part and later extended to leader or beginning (*touling*, leader; *kaitou*, start), and the English *head* carries the same extended meanings. This cognitive correspondence between English and Chinese is not accidental semantic coincidence but stems from shared human bodily structure and spatial experience, forming the mechanism of conceptual metaphor ^[2-4].

3. Cognitive commonalities in semantic evolution

3.1. Semantic generalization and expansion of conceptual categories

The finiteness of vocabulary requires it to carry infinite meanings through semantic generalization, a common trend in both English and Chinese lexical evolution that conforms to the principle of linguistic economy ^[5]. From a cognitive perspective, generalization is essentially the expansion and abstraction of conceptual categories. In Chinese, *wang* (net) originally meant a fishing tool and later extended to networks in various fields (transportation network, interpersonal network). Similarly, the English *network* evolved from a concrete fishing net to an abstract network. The Chinese *liu* (flow) originally referred to water movement and later

generalized to information flow and time passage; the English *flow* also carries multiple meanings of water movement and smoothness. A common feature of such generalization is that the source domain and target domain are identical: the source domain is concrete and perceptible, while the target domain represents abstract concepts or complex systems. When facing new things, humans start from existing experiential categories and map familiar conceptual structures through analogical reasoning to comprehend new things, thus promoting semantic expansion and abstraction ^[6]. This mechanism is highly consistent in both English and Chinese, confirming the cross-linguistic universality of the conceptual categorization process.

3.2. Semantic differentiation and refinement of cognition

Contrary to generalization, semantic differentiation reflects the trend of refined human cognition. With social development and accumulated knowledge, expressive demands diversify beyond the capacity of original vocabulary. Languages therefore distinguish concepts through sense differentiation to achieve higher precision. In Chinese, *shui* (water) originally meant liquid and later derived differentiated words such as *zhi* (juice) and *ye* (fluid). English retains the general term *water* and subdivides meanings through *juice*, *liquid*, *syrup*, etc. Similarly, Chinese *ma* (horse) has specific terms for age, gender, and function (*ju*, foal; *ke*, mare; *shan*, gelding), and English *horse* has corresponding derivatives such as *foal* and *mare*. This differentiation reflects the cognitive trajectory from general and macro to precise and micro. Notably, despite distinct ethnic characteristics in the differentiation paths of English and Chinese vocabulary, the cognitive principles behind them are similar: reclassifying things based on functional, morphological, and other dimensions. This suggests that different languages share universal conceptual classification mechanisms in their cognitive frameworks ^[7].

4. Cultural contexts and mutual learning of cognitive commonalities

4.1. Linguistic traces of agricultural and nomadic civilizations

Chinese is rooted in agricultural civilization, and its vocabulary system abounds in agricultural imagery. The character *ben* (root) consists of the radical for wood (*mu*) with a horizontal stroke indicating the root; it originally meant tree root and later extended to foundation or origin. This semantic evolution reflects the agricultural cognition of fundamentals: just as trees depend on roots, all things rely on their origin. The character *nian* (year) combines the radical for grain (*he*) and the phonetic *qian*; it originally meant a bumper harvest and later became a time unit. The grain cycle marked the agricultural calendar, and the evolution of *nian* embodies the agricultural concept of time. *Gengyun* (tillage) originally meant farming and later extended to diligent effort; *shouhuo* (harvest) originally meant crop yield and later metaphorically referred to achievements. Agricultural metaphors pervade Chinese, forming the cognitive landscape of the Chinese nation.

English vocabulary bears the marks of nomadic and maritime civilizations. The word *salary* derives from Latin *salarium*, originally the allowance for Roman soldiers to buy salt, and later extended to wages. This etymology reflects the historical importance of salt. The word *travel* comes from Old French *travail*, originally meaning hardship and labor, and later denoted journey, revealing the hardship and danger of ancient travel. The word *rival* derives from Latin *rivalis*, originally meaning people sharing the same river, and later meant competitor, reflecting the scarcity and competition for water in ancient society ^[8].

These linguistic differences show that although humans share universal cognitive mechanisms, cognitive content and materials vary greatly due to specific environments. Agriculture and nomadism, inland and

maritime cultures shape different experiential worlds and profoundly influence the semantic networks and metaphorical patterns of vocabulary systems. Yet commonalities persist amid differences: Chinese *ben* and English *root*, *shouhuo* and *harvest*, *gengyun* and *cultivation* all reflect cognitive analogies formed by shared human survival needs. Despite cultural differences in expressing “foundation” and “achievement”, the cognitive frameworks follow universal logic: the shared relationship between cause and effect, foundation and derivation.

4.2. The value of mutual learning in cross-linguistic cognitive commonalities

A comparative study of the etymological evolution of English and Chinese vocabulary is significant both for enriching linguistic theory and for promoting cultural mutual learning and language teaching. Theoretically, analyzing cognitive commonalities helps transcend the extreme position of linguistic relativism. The Sapir-Whorf hypothesis holds that language determines thinking, and speakers of different languages perceive the world differently. This paper argues that while respecting linguistic differences, we should recognize the universal foundation of human thinking. The cognitive commonalities in the lexical evolution of English and Chinese provide strong evidence for this foundation ^[9].

Practically, in-depth analysis of the commonalities and differences in English and Chinese lexical evolution provides a cognitive basis for foreign language teaching. Chinese learners who understand that English *head* and Chinese *tou* both mean “leader”, and *heart* and *xin* both represent the center of emotion, can reduce learning difficulty and achieve cognitive transfer. English learners who grasp the metaphorical correspondence between *bright* and *congming* (intelligent), *muddy* and *hututu* (muddled) can effectively master the semantic networks of abstract vocabulary. In short, etymological comparison helps establish cross-linguistic conceptual correspondences and transform traditional language learning from rote memorization to acquisitive understanding.

Furthermore, etymological comparison benefits translation practice. When dealing with culture-loaded words, translators should not only retain the cultural characteristics of the source language but also maximize meaning transmission through cognitive commonalities. For example, translating *gengyun* as *cultivation* preserves the agricultural imagery while conveying the deeper meaning of “diligent effort” through cognitive analogy. Such translation strategies balance cultural difference and cognitive commonality ^[10].

5. Conclusion

Language has been compared to a mirror of cognition, and vocabulary a living fossil of cognitive evolution. Indeed, core English and Chinese vocabulary, in both word-formation motivation and semantic evolution, reveals a universal law of human cognition: taking bodily experience as the starting point, leaping from concrete to abstract through metaphorical thinking, and enriching conceptual categories through refined cognition. Cultural contexts endow language with ethnic characteristics but cannot obscure the underlying logic of cognitive commonalities. Tracing the evolutionary tracks of English and Chinese vocabulary is not only an inquiry into the nature of language but also an exploration of cross-cultural understanding. In the context of globalization, taking cognitive commonalities as the cornerstone to promote mutual learning between English and Chinese languages and cultures helps build a more inclusive and diverse human spiritual home.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Dong A, 2022, An Analysis of the Etymological Motivation of English Idioms. *Overseas English*, (14): 39–40, 49.
- [2] Liu W, 2021, An Analysis of Cultural Elements in Medical English Terms from the Perspective of Etymological Motivation. *Journal of Changzhou Institute of Technology (Social Science Edition)*, 39(5): 104–107.
- [3] Guichon N, McLennan S, 2008, The Effects of Multimodality on L2 Learners: Implications for CALL Resource Design. *System*, 36: 85–93.
- [4] Schmitt N, 2000, *Vocabulary in Language Teaching*. New York: Cambridge University Press, 78–79.
- [5] Hu Z, 2007, Multimodality in Social Semiotic Studies. *Language Teaching and Research*, (1): 1–10.
- [6] Zhu S, 2007, Theoretical Foundations and Research Methods of Multimodal Discourse Analysis. *Journal of Foreign Languages*, (5): 82–86.
- [7] Yu J, 2020, Constructing an English Lexicology Teaching Model Based on Multimodal Discourse Theory. *Journal of Jining Normal University*, (2): 98–101.
- [8] Lei Y, 2013, *Tracing the Origin of English Lexicology in China*, thesis, Changsha University of Science and Technology.
- [9] Deng Q, Pan L, 2015, Teaching Model of English Lexicology in Multimodal Environment. *Journal of Xingtai University*, (3): 151–154.
- [10] Wu T, 2011, *Comparative Etymological Studies*. Shanghai Foreign Language Education Press, Shanghai.

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