Unveiling Counterfactuality in Mandarin: A Comparative Study with English and its Typological Implications

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Abstract: Traditional approaches to Counterfactuals (CFs) have long been dominated by an Indo-European-centric perspective, which posits a strong association between CFs and past tense morphology. Cross-linguistic comparison has challenged the Indo-European bias by revealing that CF markers extend beyond past tense to include imperfect, as in Karawani & Zeijlstra (2010, 2013) and Karawani (2014). Subsequent typological studies leveraging large-scale databases (e.g., 50+ languages) have identified universal patterns in CF markings. Van Linden & Verstraete (2008) lays the groundwork for analyzing simple CFs across 80 languages. Olguín Martínez (2024) analyzes 51 languages to uncover two primary strategies: standard blocking and non-standard blocking. Yong (2016, 2023) expanded this scope, revealing syntactic and semantic diversity in CF constructions, while Von Prince (2024) synthesizes these findings to argue that CF marking universally correlates with mood systems and grammaticalization gradients.

However, research on CFs has long been dominated by languages with explicit markers, leaving a gap in our understanding of how counterfactuality is constructed in "marker-less" languages. This study addresses this gap by investigating the linguistic mechanisms underpinning CF expressions in Mandarin and situating them within a broader typological framework. Mandarin Chinese, as a language without overt CF markers, relies primarily on contextual cues to convey counterfactuality. This makes the study of languages like Mandarin crucial for understanding the pragmatic mechanisms that underpin the construction and interpretation of CF meanings. Utilizing a corpus-driven approach, we conducted a comparative analysis of Mandarin (TORCH corpus) and English (BROWN corpus). Moving beyond simple frequency counts, we employed phi (ϕ)-coefficient correlation to quantify the strength of association between linguistic features and CF meanings. Our findings reveal a fundamental typological contrast: English relies on a centralized "main trigger" mechanism, where a few grammaticalized markers (e.g., "would") systematically encode counterfactuality. In stark contrast, Mandarin employs a dispersed "gestalt feature" system, where CF meaning emerges from the holistic convergence of multiple, weakly to moderately correlated cues, such as tense references, modal adverbs, factive negation and so on.

A key discovery is the bifurcation of CF strategies in Mandarin. Conditional CFs (e.g., "If he had been there...") operate via premise strengthening, relying on realis elements (e.g., past markers, factive negation) to establish the necessary "closeness" to reality, formalized here as an embedded necessity operator ($\Box P$) in the protasis. Conversely, deontic CFs outside conditionals (e.g., "You should have come earlier") are driven by the inherent closeness properties of modal operators like $y\bar{t}ngg\bar{a}i$ ("should"), a correlation significantly enhanced by comparative expressions. This clear separation of strategies, using realis elements for conditional CFs and irrealis forms for deontic CFs, is a distinctive feature of Mandarin not commonly observed in other languages.

By introducing the "gestalt feature" versus "main trigger" dichotomy, this research provides a novel theoretical framework for understanding cross-linguistic variation in CF marking. It highlights the complex interplay between syntax, pragmatics, and modality in

constructing alternative worlds, advancing theories of language universals and the semantics of non-actuality.

Keywords: Counterfactuality, Mandarin Chinese, Gestalt Features, Modality

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