**Cognitive Stylometry: A Computational Study of Defamiliarization in Modern Chinese**

Plain Language Summary

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This study applies computational methods to revisit the Formalist theory of defamiliarization, which posits that art renews perception by rearranging familiar forms in unpredictable ways. The research goal was to formalize and measure the stylistic tension between predictability and surprise using a large language model as a stand-in for a historically situated reader. To achieve this, the study employed a multi-stage experimental design. First, a GPT-2 style transformer model (223M parameters) was pre-trained on a large, high-quality corpus of modern Chinese text (*FineWeb Edu V2.1*) to establish a neutral linguistic baseline. This model was then fine-tuned for five epochs exclusively on the *Selected Works of Mao Zedong* to simulate a reader becoming saturated with “Maospeak,” the highly formulaic and militant language of the Mao era. The core metric was perplexity, which quantifies the model's predictive uncertainty, or “surprise,” at each token. The primary finding was a dual process of familiarization and defamiliarization. By tracking the largest decreases in perplexity, the study identified the core phraseology of Maospeak, including canonical lists of class enemies and rigid rhetorical patterns. This “cognitive overfitting” demonstrated how propaganda automates language to create a predictable, low-perplexity environment and legitimatize violence. *N*-gram entropy analysis confirmed that the Mao corpus was measurably more repetitive than a literary corpus at smaller *n*-gram sizes, i.e., in its foundational vocabulary and short collocations. Concurrently, as the model specialized in Maospeak, its average perplexity on a corpus of 100 modern Chinese novels increased, making literary language appear more alien. Microscopic analysis of novels by Zhang Wei, Lilian Lee, and Dung Kai-cheung revealed how literary style creates "non-anomalous surprise" through high-perplexity moments, such as creative metaphors, the use of classical Chinese syntax, and the abrupt insertion of non-standard languages such as Cantonese. Ultimately, the research proposes “cognitive stylometry” as a new mode of inquiry, redefining style as a measurable cognitive signature that orchestrates a reader's predictive processing by balancing familiar grounding with moments of meaningful deviation.