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Reflection: P+7 and P+56 Oulipian Language Modeling

Altering the x value in the P+x technique dramatically alters the poem's clarity and coherence. In my experimentation, I compared P+2, P+7, P+20 P+56, and P+120 transformations of Wallace Stevens' "The Snow Man."

The P+7 version produced moderately unexpected substitutions while maintaining some semantic relationship to the original context. For instance, "winter" became "this" and "snow" became "gold". These still are recognizable nouns, though making it a bit relevant. The poem retained a fraction of its original meaning, with words like "death" (replacing "boughs"), “voice” (replacing “land”), “story” (replacing “wind”) evoking a use of metaphor.

In contrast, P+56 pushed far deeper into GPT-2's probability distribution, yielding increasingly bizarre, witty, and disconnected results. At this rank, the model selects words with significantly lower contextual probability, producing combinations that feel more random and less grammatically stable. The higher rank often generated more abstract or highly irrelevant terms, breaking the poem's semantic cohesion entirely and producing more "Oulipian" words of constraint-driven absurdity.

The sweet spot for humor and wit appeared around P+45 to P+60, where substitutions were unexpected enough to be amusing but not so random as to feel meaningless. Very high values (P+60+) occasionally produced incomplete tokens or overly obscure words, or sometimes misspelled or cut words (i.e., “bas”, “os”, “ly”) or sometimes with just random characters though modifying the code helped resolve this issue.

To implement a P+7 technique replacing all nouns rather than just final words, I would need to: (1) Use a part-of-speech tagger like spaCy API to identify all nouns in the text; (2) For each noun, construct a context string from the surrounding words; (3) Query GPT-2 for predictions at that specific position; (4) Replace the noun with the 7th-highest probability prediction that is also tagged as a noun (to maintain grammatical validity); (5) Update the context iteratively as I move through the text, since earlier replacements affect later predictions.

This approach would be significantly more computationally intensive but would create a more thorough Oulipian transformation, affecting the entire semantic structure rather than just line endings.