

Technical Reference Guide: Poetic Devices & Cognitive Mechanisms

Quick Reference: Core Concepts

Cognitive Load Theory (CLT)

Definition: Framework for understanding how information is processed in working memory.

Three Types of Load:

1. **Intrinsic Load** - The inherent difficulty of the material itself

- Example: Learning calculus has higher intrinsic load than learning addition

2. **Germane Load** - The cognitive effort required to build lasting knowledge structures (schemas)

- This is "good" load - the actual learning work

3. **Extraneous Load** - The cognitive effort wasted on poor presentation or confusing delivery

- This is "bad" load - should be minimized

- Predictable rhythm reduces extraneous load dramatically

Key Insight: Working memory is limited. When you reduce extraneous load through rhythm, more capacity is available for germane load (actual learning).

Predictive Processing

Definition: The brain's constant generation of predictions about incoming sensory information.

Mechanism:

1. Brain predicts what will happen next

2. Reality either confirms or violates prediction

3. Confirmation = small dopamine reward

4. Violation = increased attention/processing

Application to Rhythm:

- Predictable meter = constant confirmation = constant micro-rewards

- Creates pleasurable feedback loop

- Makes content "sticky" through neurochemical reinforcement

Metrical Patterns: A Technical Breakdown

Anapestic Meter

Pattern: U U / (two unstressed + one stressed)

Feel: Da-da-DUM

Example Scansion:

On the FAR-a-way IS-land of SA-la-ma-SOND

U U / U U / U U / U U /

Why It Works:

- Creates forward momentum (feels like acceleration)
- Two light steps into heavy landing = kinesthetic satisfaction
- Easy for body to internalize as physical rhythm

Iambic Meter (Comparison)

Pattern: U / (unstressed + stressed)

Feel: da-DUM

Example:

Shall I com-PARE thee TO a SUM-mer's DAY?

U / U / U / U / U /

Difference from Anapestic:

- More stately, measured
- Less bouncy, more contemplative
- Common in traditional English poetry

Trochaic Meter (Comparison)

Pattern: / U (stressed + unstressed)

Feel: DUM-da

Example:

TY-ger TY-ger BUR-ning BRIGHT

/ U / U / U /

...

****Difference from Anapestic:****

- Starts strong, ends soft
- Can feel assertive or driving
- Used for urgency or emphasis

Rhyme Schemes: Technical Notation

Simple End Rhyme (Couplets)

****Pattern:**** AA BB CC

...

I do not like them HERE or THERE (A)

I do not like them ANYWHERE (A)

I do not like green eggs and HAM (B)

I do not like them, Sam-I-AM (B)

...

Hyperrhyme (Multi-syllable Internal)

****Pattern:**** Multiple rhyme points within and across lines

****Example Structure:****

...

I got LOY-al-ty, got ROY-al-ty inside my DNA

[3-syl] [3-syl]

Co-CAINE QUAR-ter PIECE, got WAR and PEACE inside my DNA

[3-syl] [3-syl]

...

****Function:****

- Creates dense sonic relationships
- Links disparate concepts through sound
- Rewards repeated listening with layered meaning

Internal Rhyme

Pattern: Rhymes within a single line

Example:

The CAT in the HAT SAT on the MAT

(internal rhyme: CAT-HAT-SAT-MAT)

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Phonesthemes: Sound-Meaning Clusters

Common English Phonesthemes

| Sound Cluster | Associated Meaning | Examples |

|-----|-----|-----|

| **[sn-]** | Nose, sneaky, unpleasant | snout, sniff, sneer, snot, snake |

| **[gl-]** | Light, shine, slippery | gleam, glisten, glide, gloss |

| **[sl-]** | Smooth, wet, negative | slime, slick, slither, slouch |

| **[gr-]** | Harsh, rough, angry | growl, grunt, grit, gruff |

| **[fl-]** | Quick movement, light | flash, flicker, flutter, fly |

| **[cr-]** | Breaking, harsh sound | crack, crash, crunch, croak |

| **[sw-]** | Sweeping motion | sweep, swirl, swing, sway |

| **[sp-]** | Expulsion, scattered | spit, spray, splatter, spew |

How Phonesthemes Work

Core vs. Penumbral Usage:

- **Core:** Sound directly predicts literal meaning (Sneedle = creature with nose-weapon)

- **Penumbral:** Sound provides stylistic flavor without literal connection (Snumm = just sounds whimsical)

Creating Neologisms:

1. Choose meaning you want to convey
2. Select phonestheme that matches semantic field
3. Add syllable structure that fits your meter
4. Test: Does it feel intuitively "right"?

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Advanced Poetic Devices

Enjambment

Definition: Continuation of sentence across line break without pause

Technical Effect:

- Increases reading speed
- Creates suspense/tension
- Forces reader to hold incomplete phrase in working memory
- Mimics rushed thinking or physical action

Example Analysis:

...

Then he got up on a ball ← Line ends, thought continues
With a cup and a cake ← Still building the image
On the top of his hat! ← Finally completes

Effect: Reader's eye races forward, mirroring the Cat's precarious balance

...

Caesura

Definition: Intentional pause mid-line (marked by punctuation)

Notation: Usually marked with || in scansion

Example:

...

The fox || stopped. Took a leap || hesitated || then bound

...

Functions:

- Creates emphasis through silence
- Adds weight to surrounding words
- Disrupts rhythm for emotional effect
- Signals thoughtfulness or uncertainty

End-Stopped Line

****Definition:**** Line that ends with natural pause (period, comma, semicolon)

****Contrast with Enjambment:****

End-stopped:

The cat sat on the mat.

His hat was tall and red.

Enjambed:

The cat sat on
the mat, his hat
was tall and red.

****Effect Comparison:****

- End-stopped = steady, measured, clear boundaries
- Enjambed = urgent, flowing, blurred boundaries

Cognitive Science: Key Research Findings

Memory and Verse

****Key Study:**** Hayes & Hennessy (2008)

- Tested preliterate preschoolers vs. adults
- Task: Recall rhyming text vs. prose verbatim
- Finding: Children had significantly better recall for verse
- Implication: Rhythmic structure is superior memory technology even before reading develops

Pattern Recognition and Reward

****Neural Mechanism:****

1. Auditory cortex processes incoming rhythm
2. Brain generates prediction of next beat
3. When prediction confirmed → dopamine release in striatum
4. Creates pleasurable feedback loop
5. Strengthens memory encoding through emotional tagging

Chunking and Memory Capacity

Miller's Law: Working memory holds 7 ± 2 "chunks" of information

How Rhythm Creates Chunks:

- Predictable patterns group syllables into larger units
- "da-da-DUM" becomes one chunk, not three syllables
- More efficient storage = better recall

Suno AI: Technical Parameters

Structure Tags (Complete List)

Tag	Function	Typical Musical Effect
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`[Intro]`	Opening section	Establishes key, tempo, mood; often instrumental
`[Verse]`	Main lyrical content	Lower energy, more complex lyrics, 8-16 bars
`[Pre-Chorus]`	Buildup section	Rising energy, transitional, 2-4 bars
`[Chorus]`	Hook/main message	Highest energy, repetitive, memorable melody
`[Bridge]`	Contrast section	Different melody/harmony, 4-8 bars
`[Outro]`	Closing section	Energy decrease, resolution, fade
`[Interlude]`	Instrumental break	Typically 4-8 bars, no vocals
`[Break]`	Dramatic pause/drop	Sparse arrangement, tension

Style Prompt Syntax

Effective Prompt Structure:

[Genre] + [Tempo descriptor] + [Instrumentation] + [Mood/atmosphere] + [Production style]

Examples:

Minimal:

lofi hip hop, slow tempo, muted piano, melancholic

****Detailed:****

...

90s boom bap hip hop, mid-tempo, SP-1200 drums, dusty vinyl samples,
jazz piano chops, warm bass, introspective mood, lo-fi production

...

****Experimental:****

...

glitch hop, irregular tempo, broken beat, circuit-bent synthesis,
anxious atmosphere, harsh digital artifacts

...

Delivery Cues Through Lyrics

****Fast/Percussive Delivery Triggers:****

- Very short words (1-2 syllables max)
- Heavy use of consonant clusters
- Frequent line breaks
- Lack of articles/conjunctions
- Repetition of single words

****Example:****

...

Cat.

Hat.

Sat.

Fat.

Attack.

...

****Melodic/Legato Delivery Triggers:****

- Longer words (3+ syllables)
- Smooth vowel sounds
- Complete sentences with natural grammar
- End-stopped lines
- Descriptive, flowing language

****Example:****

...

The elaborate feline considered his position carefully,
Weighing the mathematical precision of each decision.

Workshop Solutions & Examples

Module 1 Activity: Rhythmic Analysis

Text: First stanza of *The Cat in the Hat*

Scansion:

The SUN did not SHINE. It was TOO wet to PLAY.

/ U U / U U / U U /

So we SAT in the HOUSE all that COLD, cold, wet DAY.

U U / U U / U U / / U /

Analysis:

- Primarily anapestic (U U /)
- Note variation in line 2: "COLD, cold, wet DAY" breaks pattern for emphasis
- Strategic rhythm fracture mirrors emotional state (boredom, frustration)

Module 2 Activity: Evolution Exercise

Original Simple Couplet:

The cat sat fat on a welcome mat,
And tipped his ridiculous hat.

Version 1 - Internal Rhyme:

The fat cat sat flat on a welcome mat of combat,
And flipped his elaborate hat in diplomatic format.

****Version 2 - Multi-syllable Hyperrhyme:****

...
The feline sat, calculating his STRATEGIC position,
Tipped his headpiece in SYSTEMATIC recognition.
...
...

****Analysis of Shifts:****

- Internal rhyme increases density without changing meaning
 - Hyperrhyme connects abstract concepts (strategic/systematic) through sound
 - Each version carries different emotional weight
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Module 3 Activity: Rhythmic Disruption

****Original:****

...
The fox in the woods took a leap and a bound
To the lake where the rippling waters abound.
...
...

****Version 1 - Enjambment:****

...
The fox in the woods took
a leap and
a bound to
the lake where the rippling
waters abound.
...
...

****Effect:**** Creates urgency, mimics physical action

****Version 2 - Caesura:****

...
The fox—in the woods—took a leap... and a bound,
To the lake, where the rippling... waters... abound.
...
...

****Effect:**** Creates hesitation, uncertainty, careful observation

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Glossary of Terms

****Anapest:**** Metrical foot of two unstressed syllables followed by stressed (U U /)

****Caesura:**** Intentional pause within a line of verse

****Cognitive Load:**** Total mental effort required to process information

****Enjambment:**** Continuation of sentence across line break

****Germane Load:**** Cognitive effort spent building knowledge schemas

****Hyperrhyme:**** Multi-syllable rhyming patterns within and across lines

****Neologism:**** Newly invented word

****Phonestheme:**** Sound cluster associated with semantic meaning

****Polyrhythmic Flow:**** Multiple competing rhythmic patterns layered simultaneously

****Predictive Processing:**** Brain's constant generation of predictions about sensory input

****Prosody:**** The rhythm, stress, and intonation patterns of language

****Scansion:**** The analysis and notation of metrical patterns in verse

****Schema:**** Mental framework for organizing and interpreting information

****Syncopation:**** Rhythm that emphasizes off-beats or unexpected moments

****Working Memory:**** Short-term cognitive system for holding and processing information

Further Reading

Cognitive Science

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Prosody and Poetics

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Hip-Hop Studies

- Bradley, A. (2017). *Book of Rhymes: The Poetics of Hip Hop*
- Edwards, P. (2009). *How to Rap: The Art and Science of the Hip-Hop MC*

Phonesthetics

- Bergen, B.K. (2004). "The Psychological Reality of Phonaesthemes"
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