

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)

...

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"?

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
[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

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

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

****Phoneme:**** 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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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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