



WAKE FOREST
UNIVERSITY

Formal Functions of Drum Patterns in Post-Millennial Pop Songs, 2012-2021

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SMT | Denver, CO | November 10, 2023

Four Functions of Drum Patterns in Popular Music

Metric

Rhythmic

Formal

Ensemble

Tamlyn 1998

Butler 2001

Butler 2006

Butterfield 2006

Danielsen 2010

Osborn 2010

Attas 2011

Attas 2014

de Clercq 2016

de Clercq 2017b

Osborn 2017

Hanenberg 2020

Baur 2021

Garza 2021

Hanenberg 2021

Câmara, Sioros, and Danielsen, 2022

Geary 2022

Hudson 2022

*As primary topic and
with an explicit
analytical method*

Fink 2011

Smith 2021

Popular Music Form

Pre-Millennial Pop/Rock: Melody and Harmony

“Many aspects of a rock song—lyrical structure, instrumental texture, melodic design, and the like—ultimately trace back to the relationship between **harmonic trajectory** and formal layout.” (Nobile 2020, xiv)

Others: Covach 2005; Neal 2007; Doll 2011; Osborn 2013; Temperley 2018; Heetderks 2020

Post-Millennial Pop: Texture, Timbre, Voice, Production Techniques

“**Texture, timbre, and voice** increasingly overshadowed harmony as the primary drivers of formal motion.” (Nobile 2022, abstract)

Others: Peres 2016; Peres 2018; Adams 2019; Barna 2020; Osborn 2023

Formal Functions of Drum Patterns in Popular Music

“One of the key elements to becoming a more musical drummer is being able to understand how songs are constructed. There are identifiable parts in every song, and so if you realize what they are and how they function within the song’s form, then you can create parts for each section that will support the song’s structure.” (Riley 2015, 11)

Formal Functions of Drum Patterns in Popular Music

**Slight variations on some repetitions*

"Day Tripper" (The Beatles, 1965) - Modified 12-Bar Blues

A+A*
(bars 1-8)

Musical notation for the A+A* section (bars 1-8). It consists of two staves. The top staff shows a drum pattern with two groups of four eighth notes, each group bracketed together. The bottom staff shows a bass line with eighth notes and quarter notes. A pink arrow points to the first eighth note of the second group in the drum pattern.

B*
(bars 9-16)

Musical notation for the B* section (bars 9-16). It consists of two staves. The top staff shows a drum pattern with two groups of four eighth notes, each group bracketed together. The bottom staff shows a bass line with quarter notes.

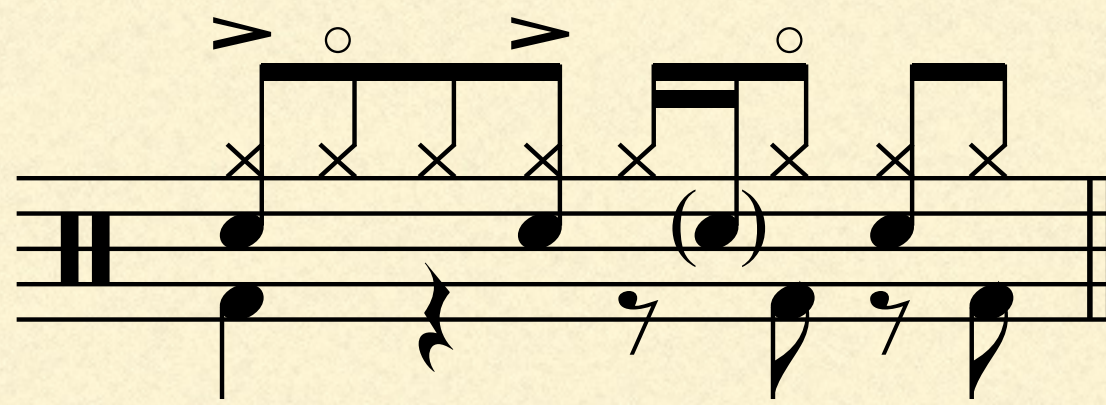
Formal Functions of Drum Patterns in Popular Music

"Day Tripper" (The Beatles, 1965) - Modified 12-Bar Blues

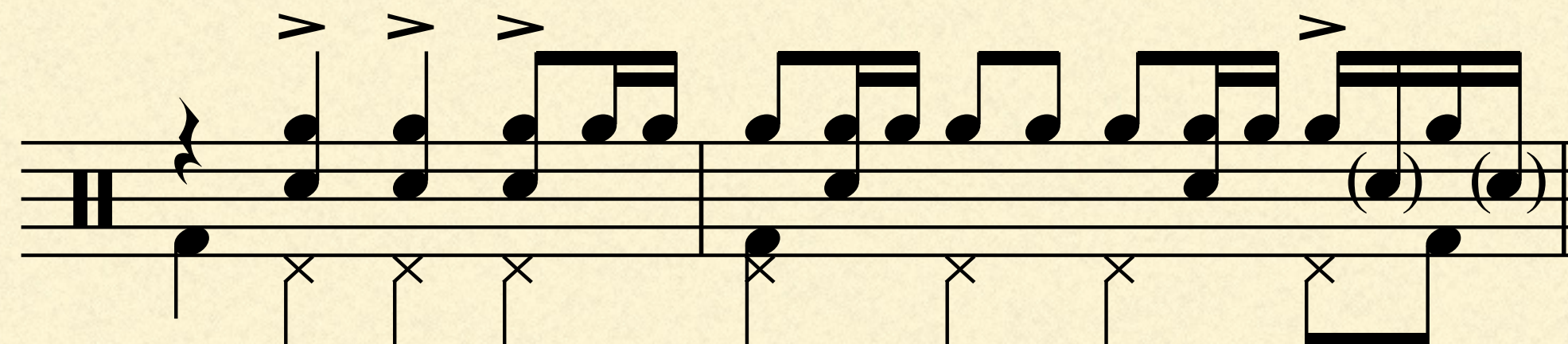
**Slight variations on some repetitions*

"Super Bad" (James Brown, 1971) - Verse to Bridge

Verse*



Bridge*



Formal Functions of Drum Patterns in Popular Music

**Slight variations on some repetitions*

"Day Tripper" (The Beatles, 1965) - Modified 12-Bar Blues

"Super Bad" (James Brown, 1971) - Verse to Bridge

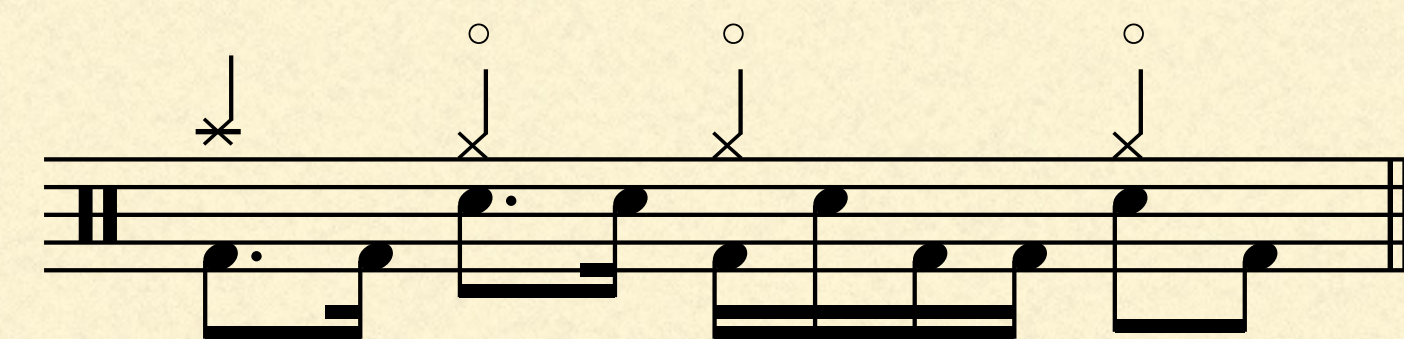
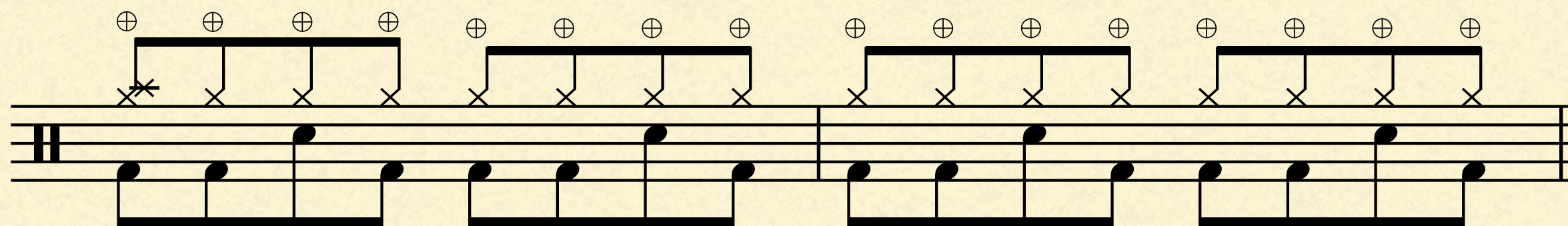
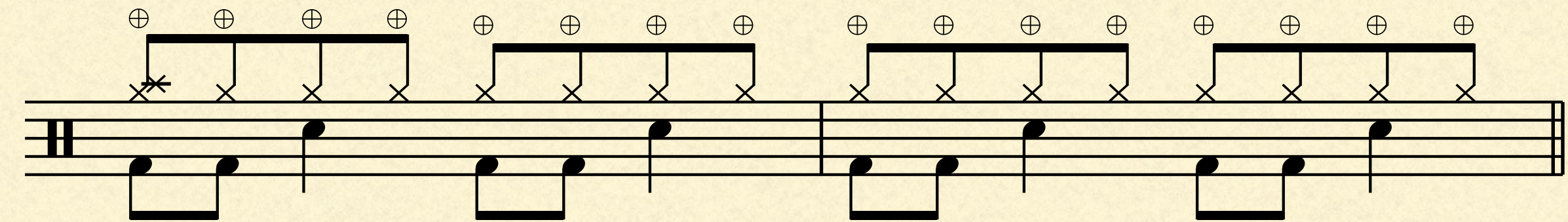
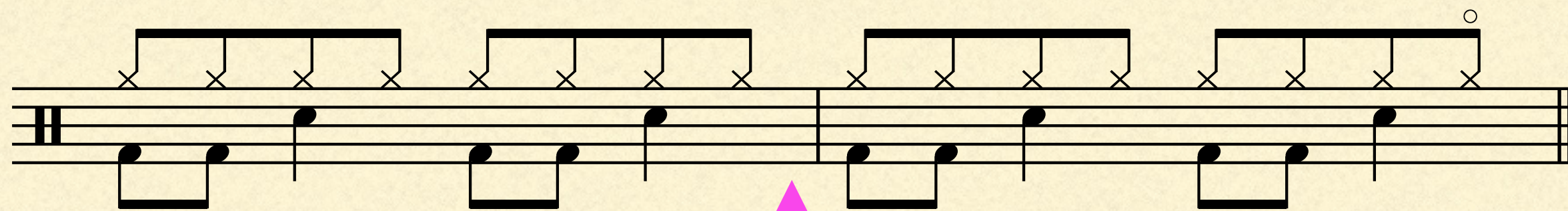
"Smells Like Teen Spirit" (Nirvana, 1991) - Cycle 1

Verse 1

Prechorus 1.1

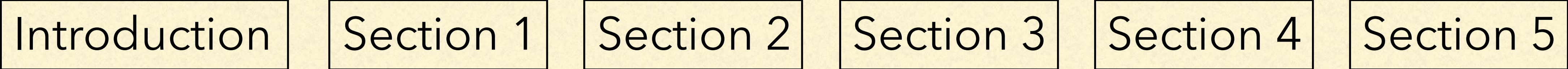
Prechorus 1.2

Chorus 1

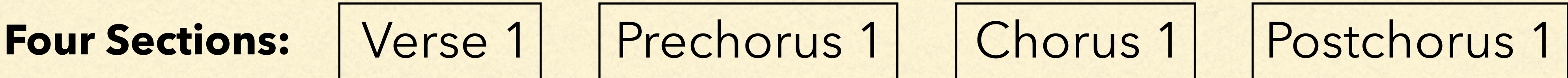
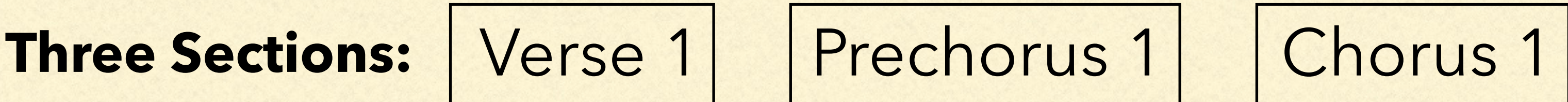


Formal Functions of Drum Patterns in Post-Millennial Pop

“Without Me” (Halsey, 2018) - Introduction and Cycle 1



Common Formal Cycle Designs:



"Without Me" (Halsey, 2018) - Introduction and Cycle 1

♩=68 **Introduction** **Verse 1**

Melody

Found you when your heart was broke

Harmony
(Harmonic Synthesizer I)

Bass

Drums

Drum Pattern 1
[tacet]

Drum Pattern 2
backbeat claps
embellished standard rock bass drum

"Without Me" (Halsey, 2018) - Introduction and Cycle 1

6

I filled your cup un-til it o-ver-flowed took it so far to keep you close I was a-fraid to leave you on your own I said I'd

"Without Me" (Halsey, 2018) - Introduction and Cycle 1

9 **Prechorus 1**

catch you if you fall and if they laugh then fuck 'em all and then I got you off your knees put you right back on your feet just so

(Bass Synthesizer I)

Drum Pattern 3
sixteenth notes hi-hat
backbeat claps
more embellished standard rock bass drum

"Without Me" (Halsey, 2018) - Introduction and Cycle 1

12

???

you could take ad-vant-age of me_ tell me how's it feel_ sitt in' upthere feel-ing so high but too far a way to hold me you know I'm the

(Harmonic Synthesizer II)

Drum Pattern 4
backbeat snaps

"Without Me" (Halsey, 2018) - Introduction and Cycle 1

Chorus 1

15

one who put you up there name in the sky does it e-ver get lon-ely think-ing you could live _____ with-out_ me_ think-ing you could

(Bass Synthesizer II)

Drum Pattern 5
backbeat snare drum

Drum Pattern 6
sixteenth notes hi-hat
backbeat snare drum (different)
more embellished standard rock bass drum

"Without Me" (Halsey, 2018) - Introduction and Cycle 1

18

live with-out me ba-by I'm the one who put you up there I don't know why think-ing you could

The musical score consists of five staves. The top staff is the vocal line in treble clef. The second and third staves are the piano accompaniment, with the right hand in treble clef and the left hand in bass clef. The fourth staff is a bass line in bass clef. The fifth staff is a drum part in bass clef. The key signature is D major (two sharps) and the time signature is 4/4. The lyrics are: 'live with-out me ba-by I'm the one who put you up there I don't know why think-ing you could'.

"Without Me" (Halsey, 2018) - Introduction and Cycle 1

21 **Postchorus 1**

live_____with-out me. live_____with-out me ba-by I'm the one who put you up there I don't know why_

(Bass Synthesizer III)

Drum Pattern 7
backbeat woodblock

The musical score is presented in four systems. The first system contains the vocal line with lyrics and a piano accompaniment. The second system contains the bass synthesizer line and a drum pattern. The key signature is three sharps (F#, C#, G#) and the time signature is 4/4. The lyrics are: "live_____with-out me. live_____with-out me ba-by I'm the one who put you up there I don't know why_". The bass synthesizer line is labeled "(Bass Synthesizer III)". The drum pattern is labeled "Drum Pattern 7" and "backbeat woodblock".

Formal Functions of Drum Patterns in Post-Millennial Pop Songs, 2012-2021

Outline:

Introduction

Analytical Framework and Corpus Study Data

Analysis: Within Sections and Across Cycles

Conclusion

Analytical Framework and Corpus Study Data

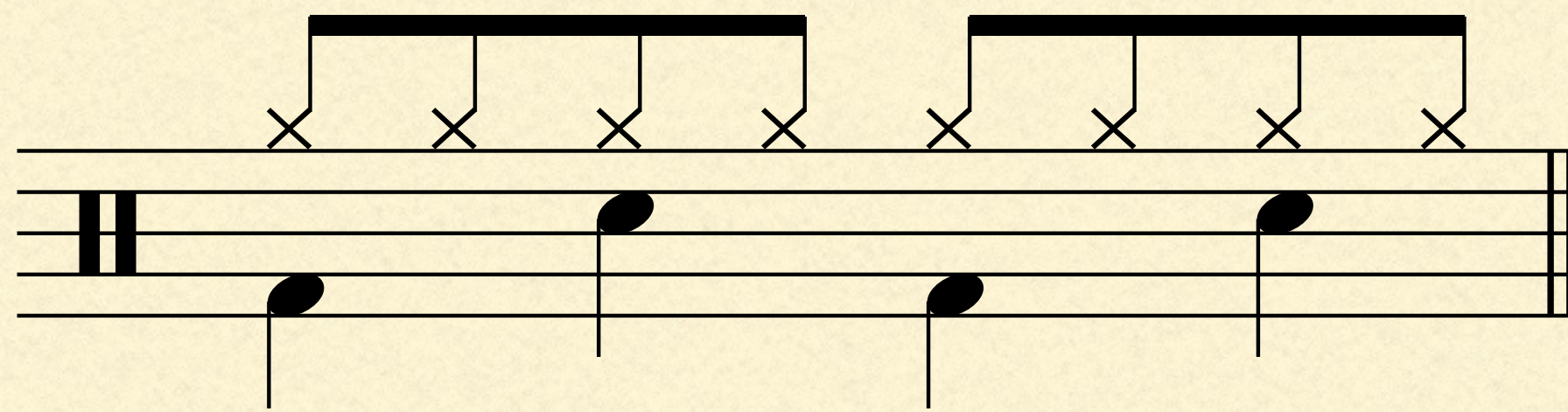
Average Number of Drum Patterns: 5 (range 1-17)

Average Number of Drum Pattern Changes: 9 (range 0-18)

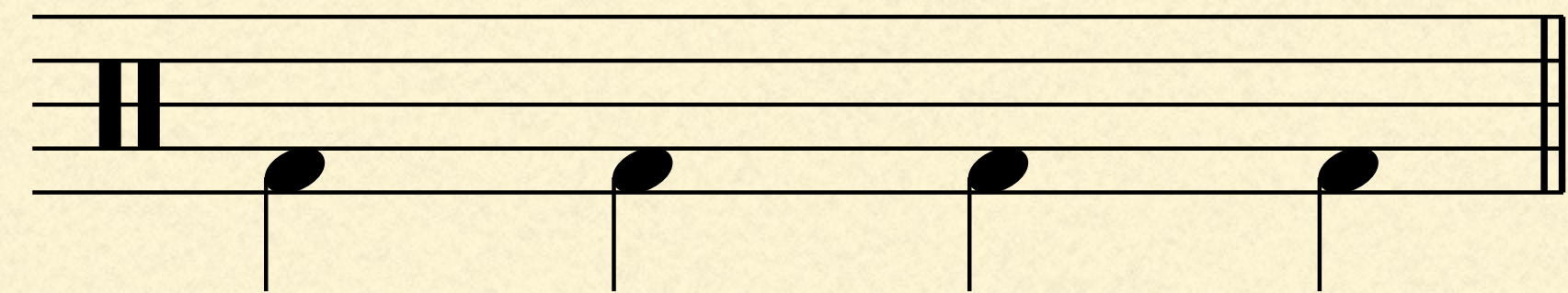
Average Number of Formal Sections: 10 (range 5-15)

Average Number of Unique Chord Progressions: 1 or 2 (range 1-3)

Standard Rock



Four-On-The-Floor



Number of layers

Rhythm

Instrumentation

Analytical Framework and Corpus Study Data

Number of layers

Rhythm

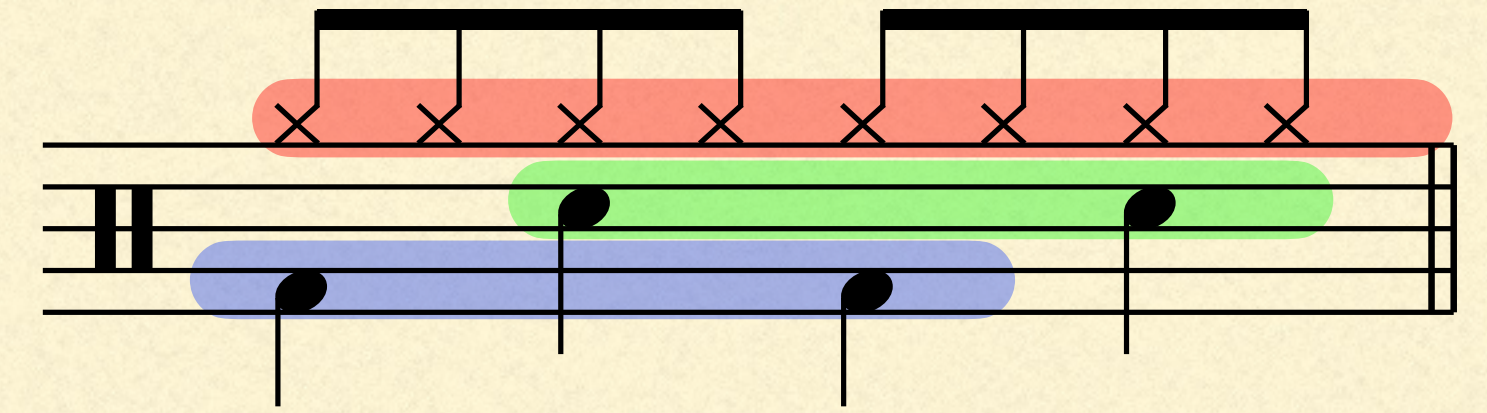
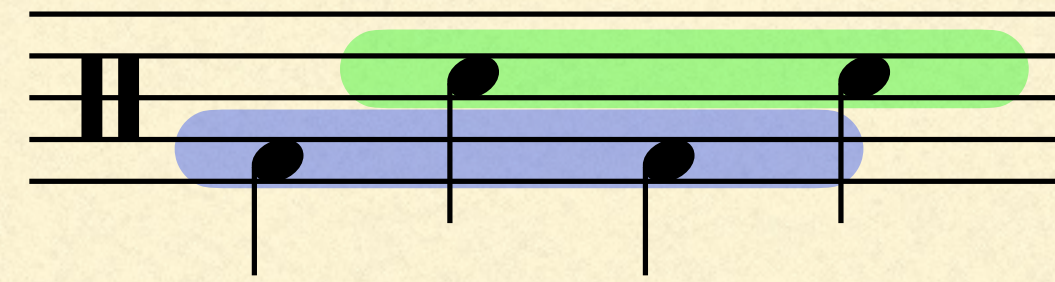
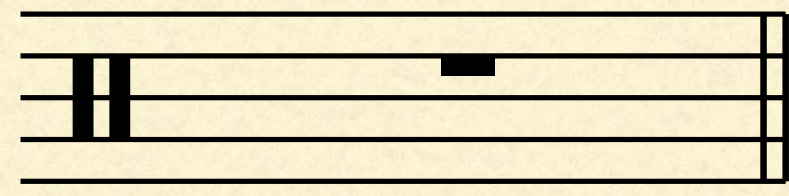
Instrumentation

Zero Layers

One Layer (middle)

Two Layers (low+middle)

Three Layers (low+middle+high)



X - X - X

X - B - X

S - B - X

S - B - 8

Absent

Standard Rock

Backbeat

8th Notes

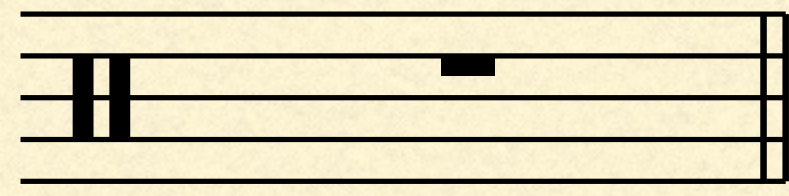
Analytical Framework and Corpus Study Data

Number of layers

Rhythm

Instrumentation

Zero Layers



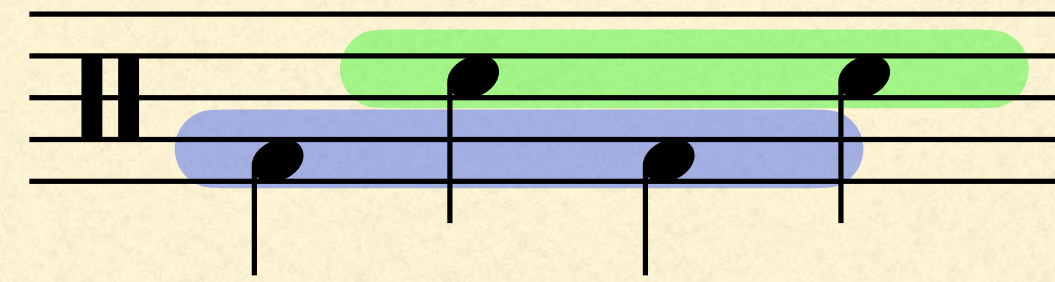
X - X - X

One Layer (middle)



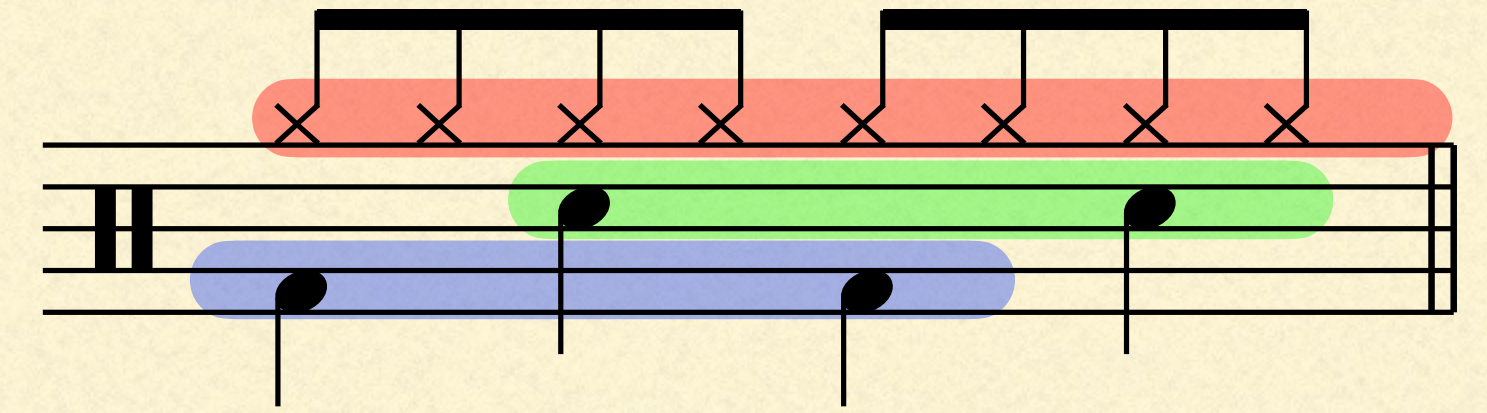
X - B - X

Two Layers (low+middle)



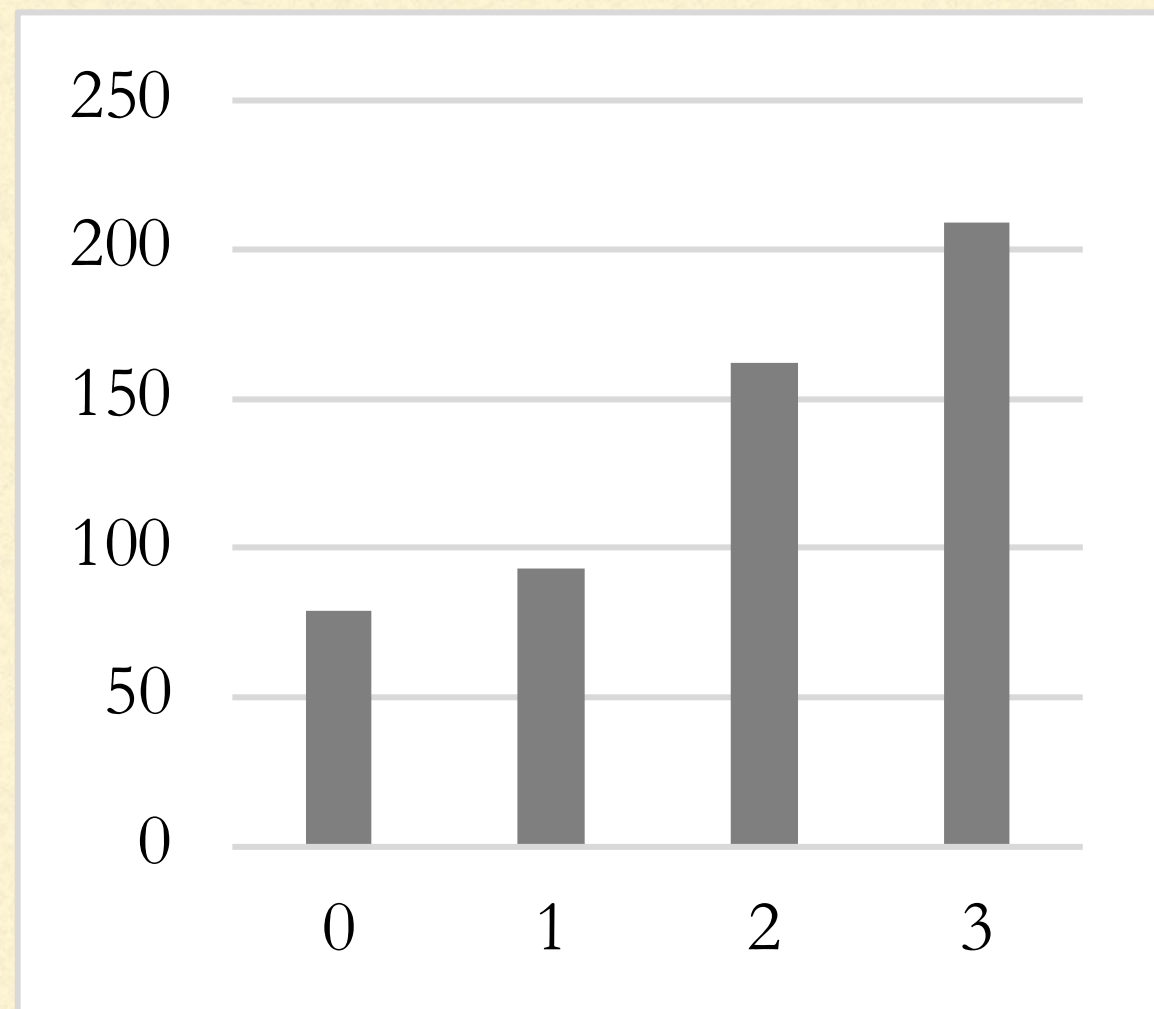
S - B - X

Three Layers (low+middle+high)

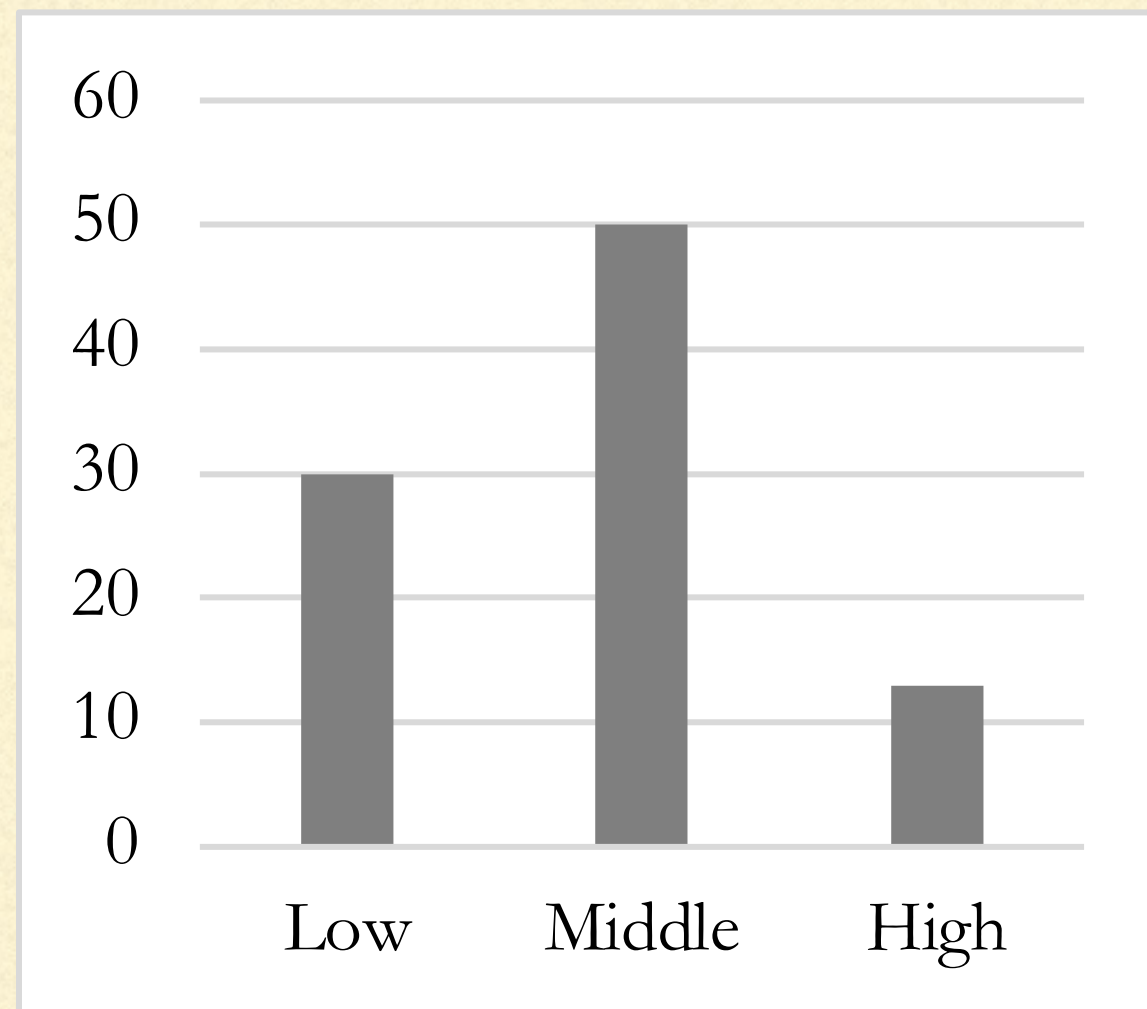


S - B - 8

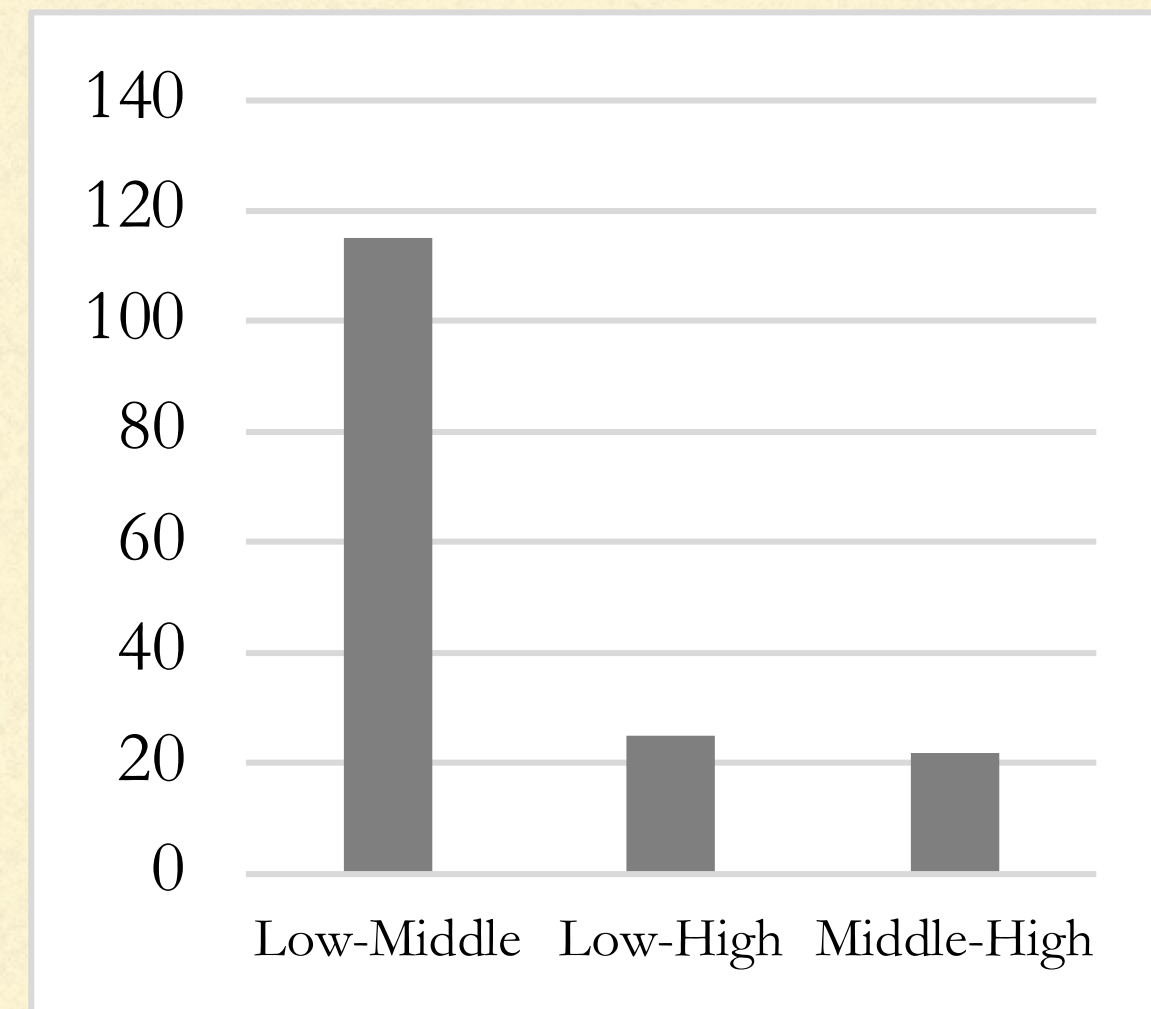
Number of Layers in Corpus



One-Layer Drum Patterns



Two-Layer Drum Patterns



96% of songs change number of layers

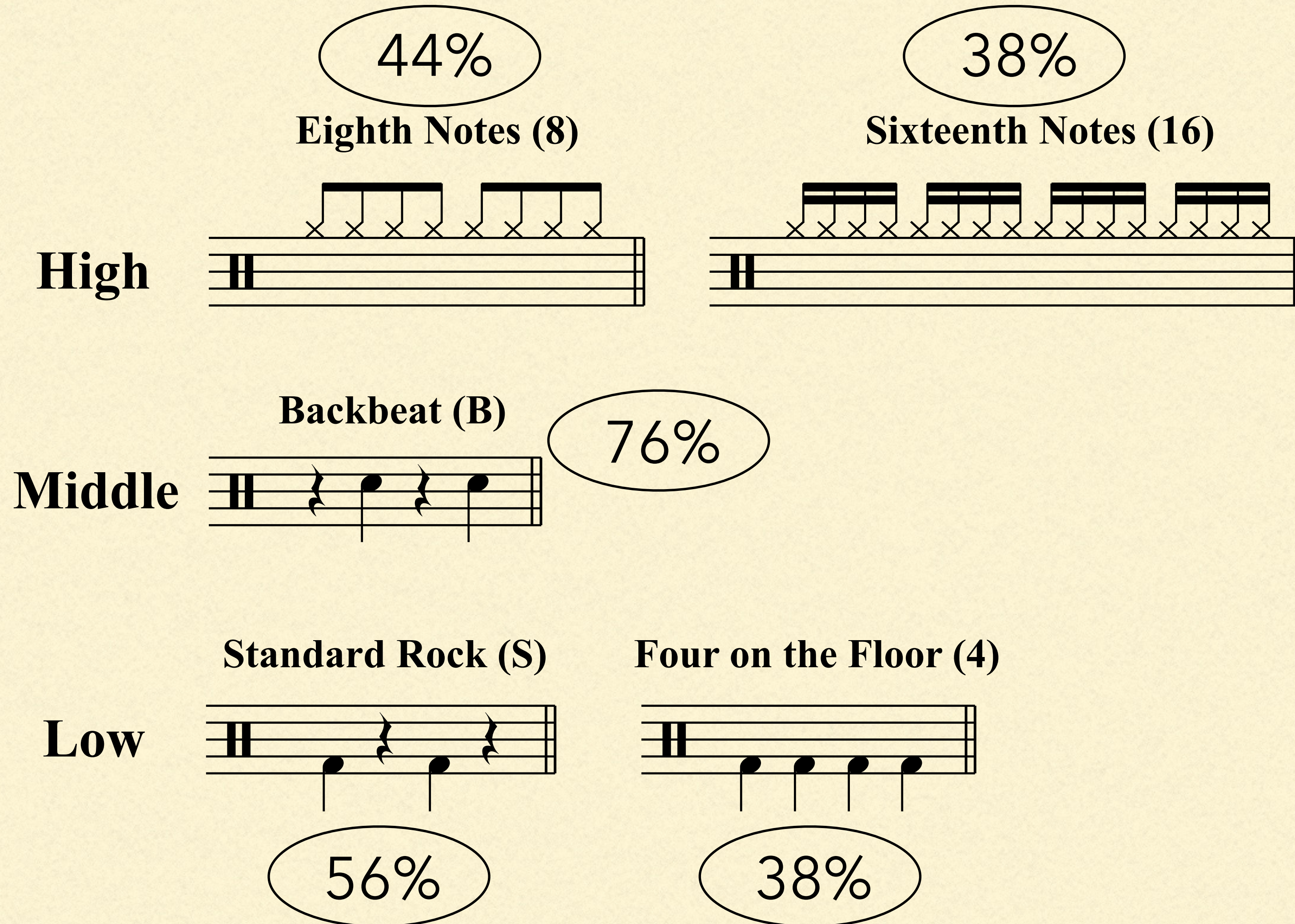
Analytical Framework and Corpus Study Data

Number of layers

Rhythm

Instrumentation

Referential Rhythms



Analytical Framework and Corpus Study Data

Number of layers

Rhythm

Instrumentation

77% of songs have some type of rhythmic variation

Standard Rock Drum Pattern

S - B - 8

Different Surface Rhythms (43%)

S+ - B - X

Different Referential Rhythms (58%)

4 - B - X

Different Drum Feels (5%)

S - B - X (HT)

Analytical Framework and Corpus Study Data

Number of layers

Rhythm

Instrumentation

77% of songs have some type of rhythmic variation

Standard Rock Drum Pattern

S - B - 8

Different Surface Rhythms (43%)

S+ - B - X

Different Referential Rhythms (58%)

4 - B - X

Different Drum Feels (5%)

S - B - X (HT)

Analytical Framework and Corpus Study Data

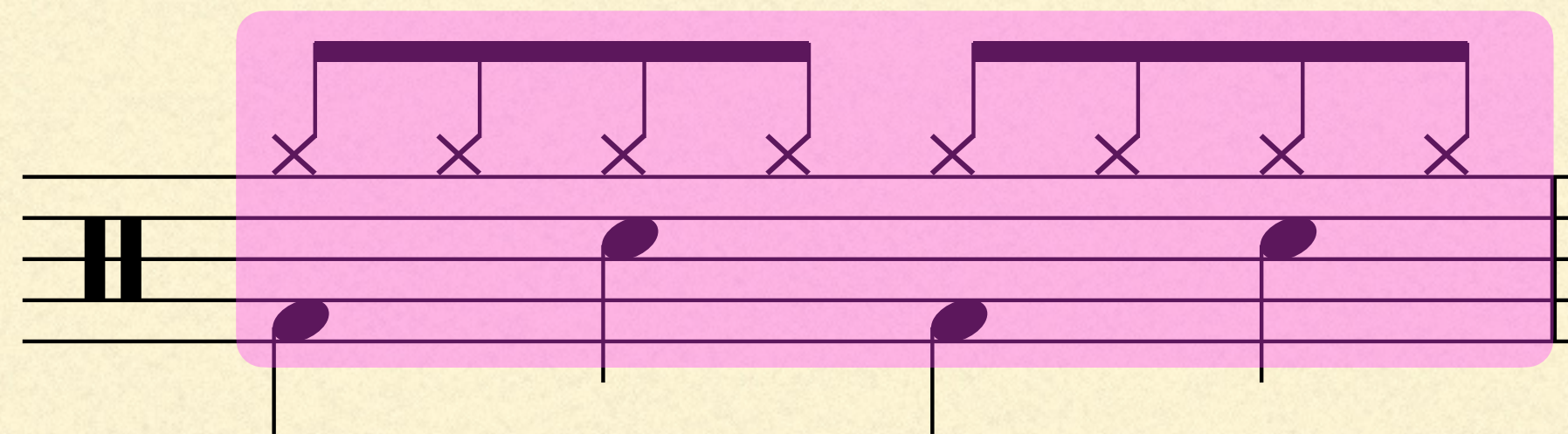
Number of layers

Rhythm

Instrumentation

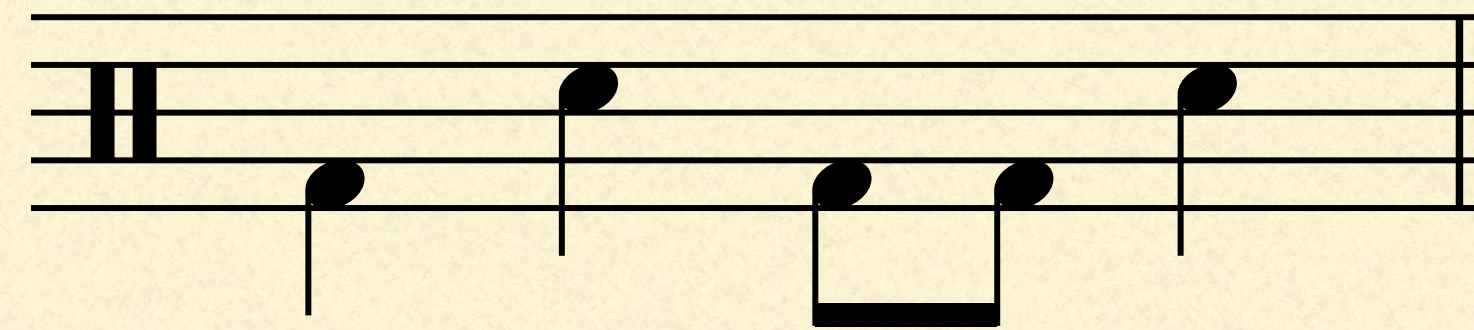
77% of songs have some type of rhythmic variation

Standard Rock Drum Pattern



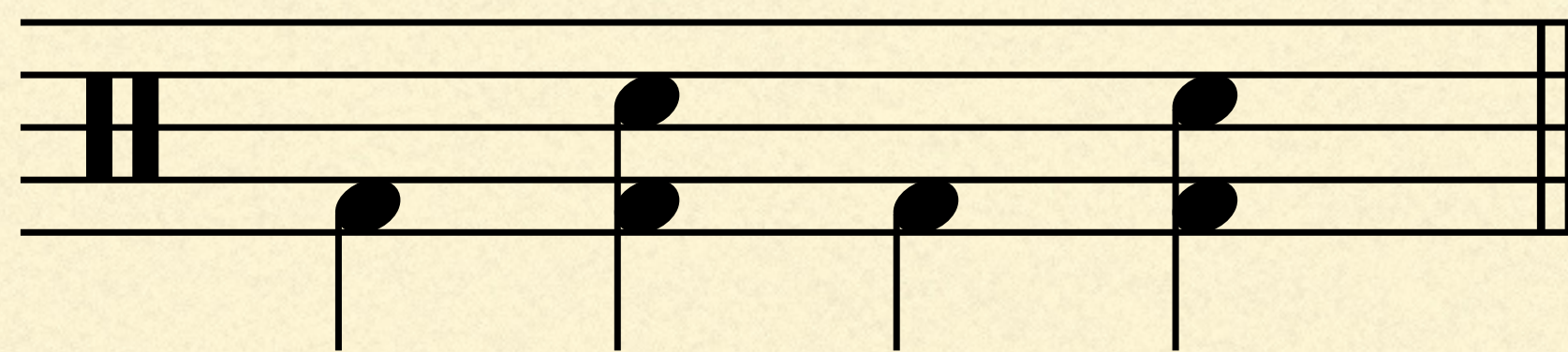
S - B - 8

Different Surface Rhythms (43%)



S+ - B - X

Different Referential Rhythms (58%)



4 - B - X

Different Drum Feels (5%)



S - B - X (HT)

Analytical Framework and Corpus Study Data

Number of layers

Rhythm

Instrumentation

High Layer: closed hi-hat, tambourine, open hi-hat

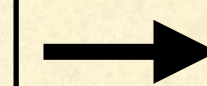
Middle Layer: snare drum, claps, snaps

Low Layer: bass drum

78% of songs change instrumentation

*Superscript = instrumentation other than
bass drum, snare drum, hi-hat*

S - B^{CL} - 8



S - B - 8

Analytical Framework and Corpus Study Data

Drum Patterns:

Number of layers Rhythm Instrumentation

Drum Pattern Changes:

	Number of Layers	Rhythm	Instrumentation
Buildup (B)	Add	Quicken/Enliven	Louden/Expand
Fall (F)	Remove	Slow/Relax	Soften/Contract

Analysis

Verse 1

Prechorus 1

Chorus 1

Postchorus 1

(B)

arrival

(F)

(B) buildup

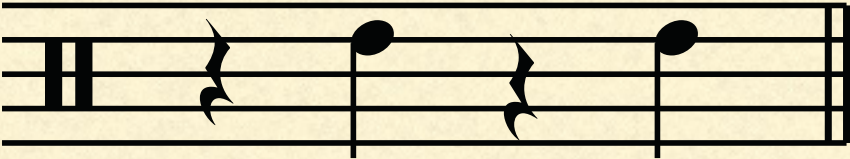
initiation

fall



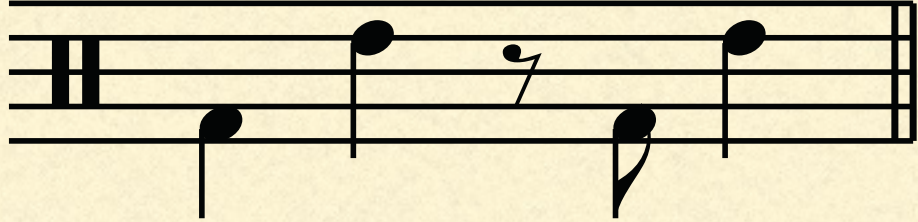
Drum Pattern 1

X – B^{CL} – X



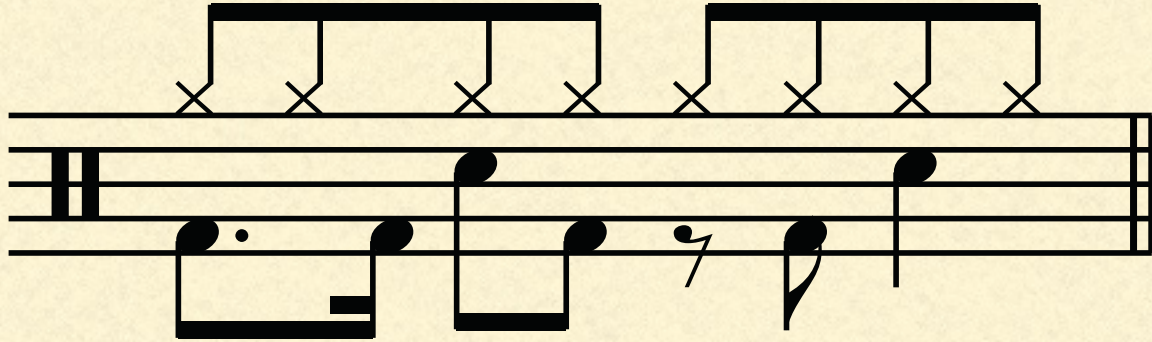
Drum Pattern 2

S – B^{CL} – X



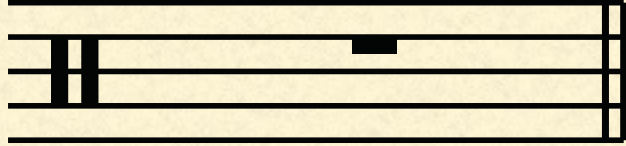
Drum Pattern 3

S+ – B – 8



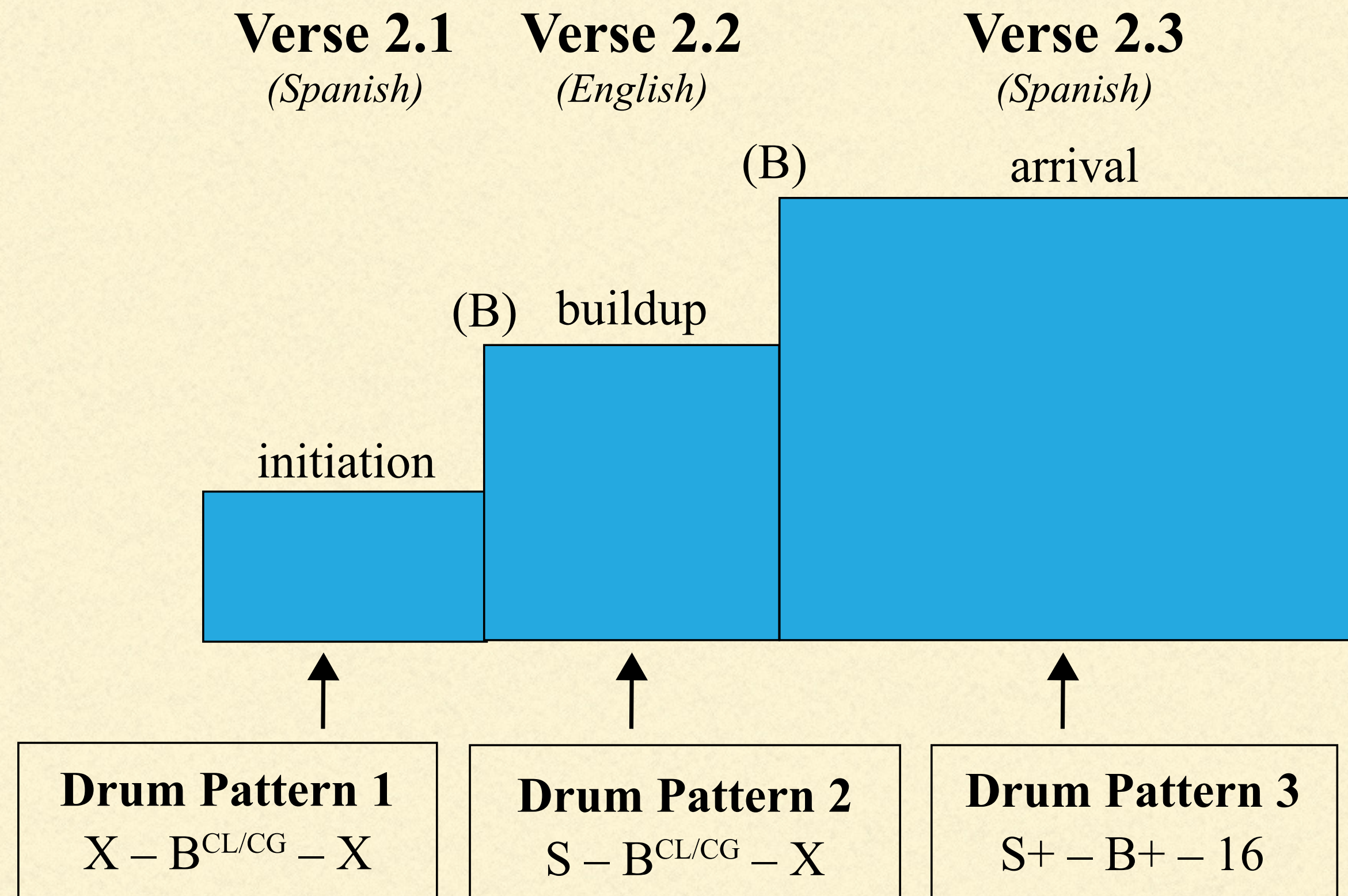
Drum Pattern 4

X – X – X



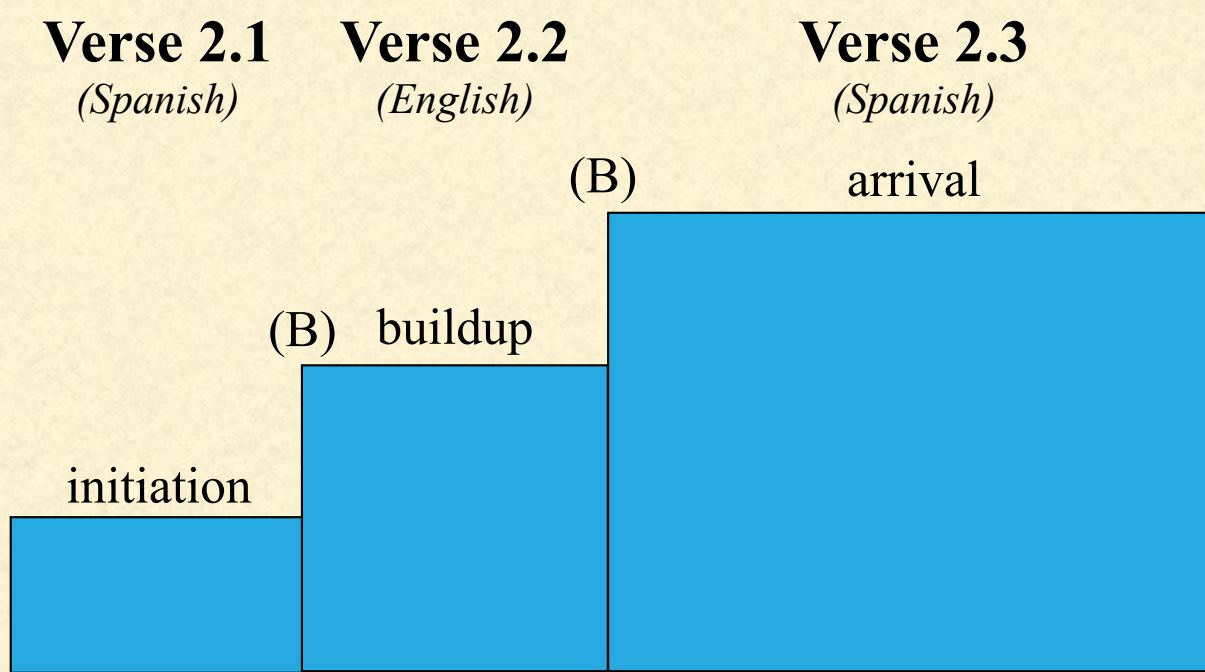
Analysis: Within Sections

"I Like It" (Cardi B, Bad Bunny, and J Balvin, 2018) - Verse 2



Analysis: Within Sections

"I Like It" (Cardi B, Bad Bunny, and J Balvin, 2018) - Verse 2



Drum Pattern 1 X – B ^{CL/CG} – X	Drum Pattern 2 S – B ^{CL/CG} – X	Drum Pattern 3 S+ – B+ – 16
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(Spanish)

Cham - be - an, cham-be - an pe - ro no ja - lan, Tú com-pras to'a las Jor-dan bo' a mi me las re - gal - an,

hi-hat
claps
snare
conga
bass

Drum Pattern 1
X – B^{CL/CG} – X

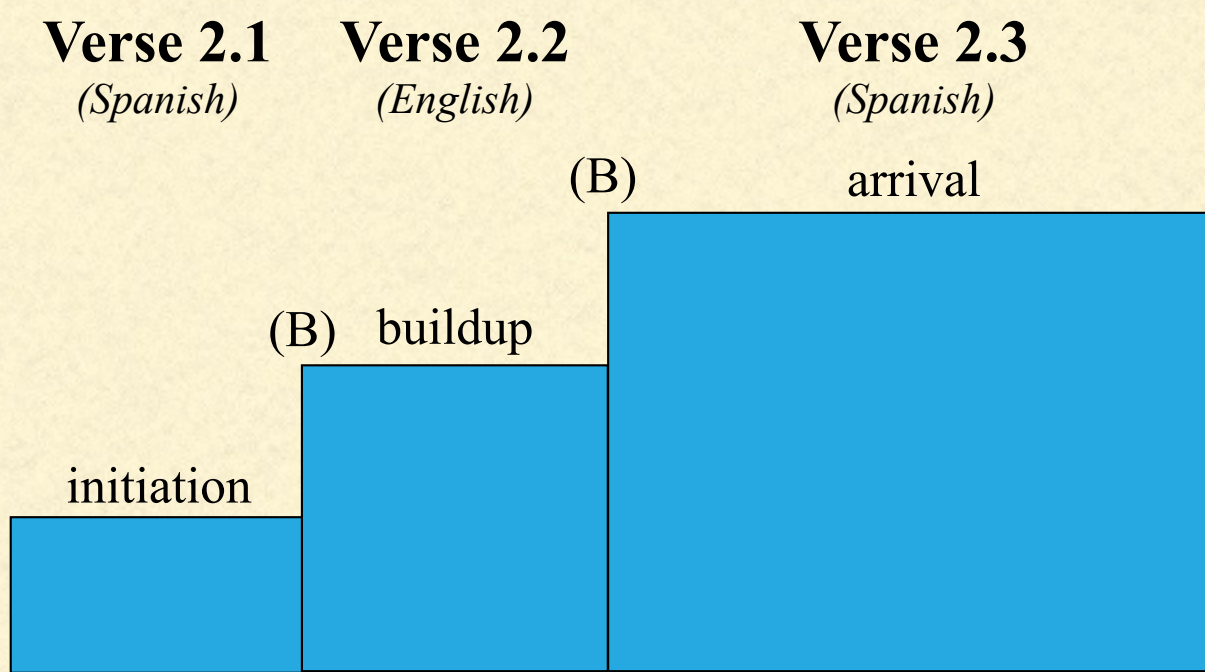
(English)

I spend in the club what you have in the bank, — This is the new re - li - gion, bang, en La - ti - no gang.

Drum Pattern 2
S – B^{CL/CG} – X

Analysis: Within Sections

"I Like It" (Cardi B, Bad Bunny, and J Balvin, 2018) - Verse 2



Drum Pattern 1 X – B ^{CL/CG} – X	Drum Pattern 2 S – B ^{CL/CG} – X	Drum Pattern 3 S+ – B+ – 16
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5 (Spanish)

Tra-to'de ha-cer die-ta Pe-ro'es que'en el clo-set ten-go mu-cha gra-sa Ya mu-dé la' Gu-cci pa' den-tro de ca-sa Ca-brón a'ti no

Drum Pattern 3
S+ – B+ – 16

7

te co-no-cen ni en Pla-za El Dia-blo me lla-ma pe-ro Jesu-chris-to me'a-bra-za Gue-rre-ro co-mo Edd-ie, que vi-va la ra-za

Analysis: Within Sections

"Circles" (Post Malone, 2019) - Choruses

Seasons change and our love went cold
Feed the flame 'cause we can't let it go
Run away, but we're running in circles
Run away, run away
I dare you to do something
I'm waiting on you again
So I don't take the blame
Run away, but we're running in circles
Run away, run away, run away

Chorus 1 and 2

arrival



Drum Pattern 1

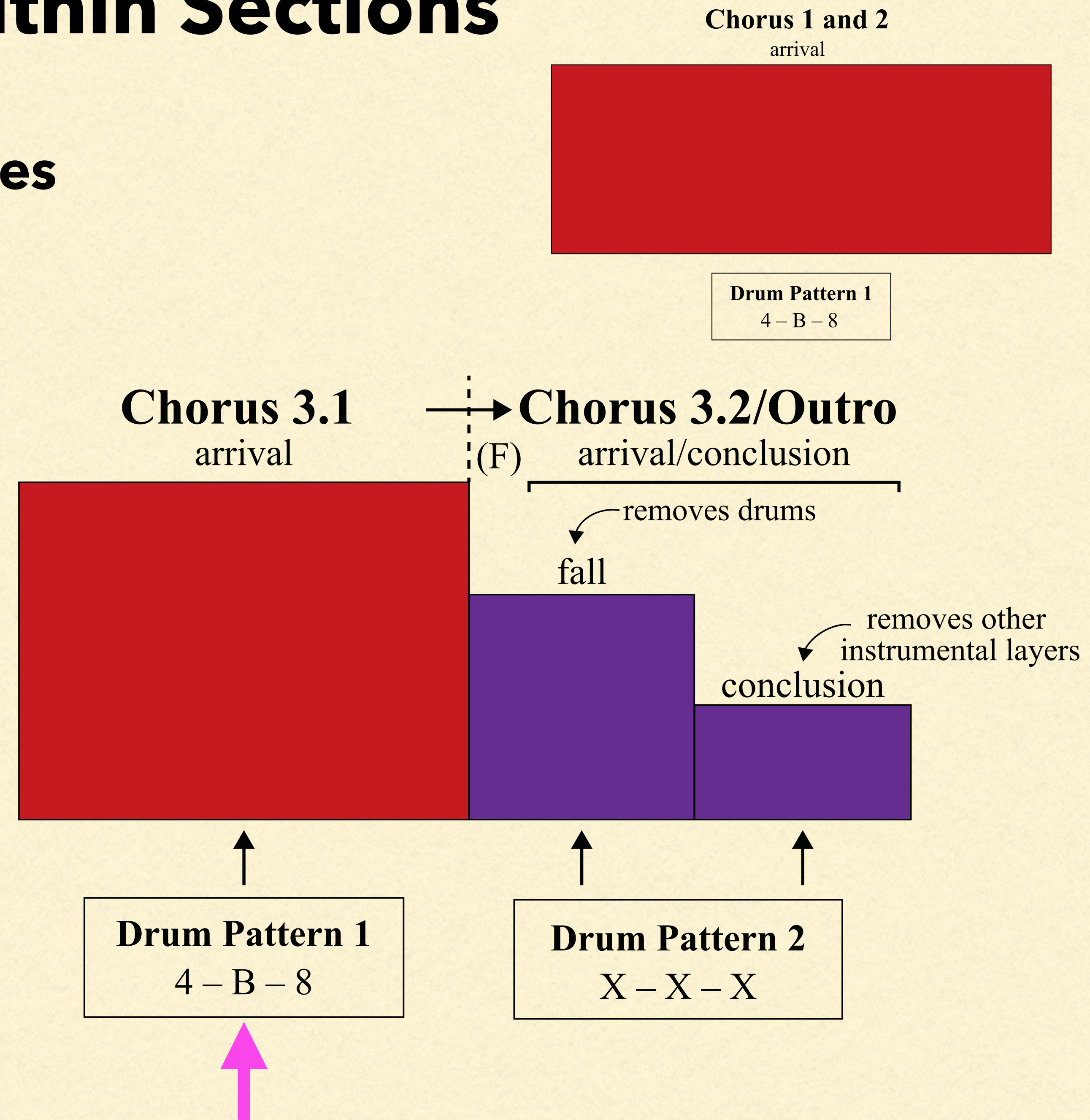
4 – B – 8

Analysis: Within Sections

"Circles" (Post Malone, 2019) - Choruses

Seasons change and our love went cold
Feed the flame 'cause we can't let it go
Run away, but we're running in circles
Run away, run away

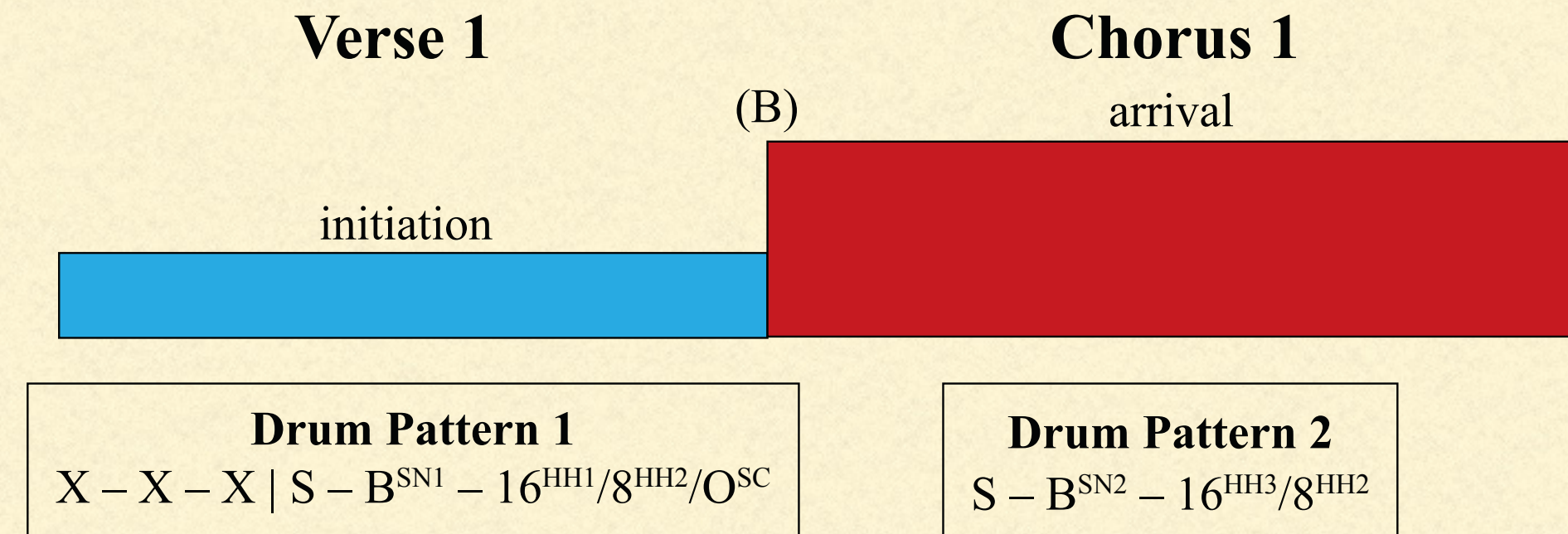
I dare you to do something
I'm waiting on you again
So I don't take the blame
Run away, but we're running in circles
Run away, run away, run away



Analysis: Across Cycles

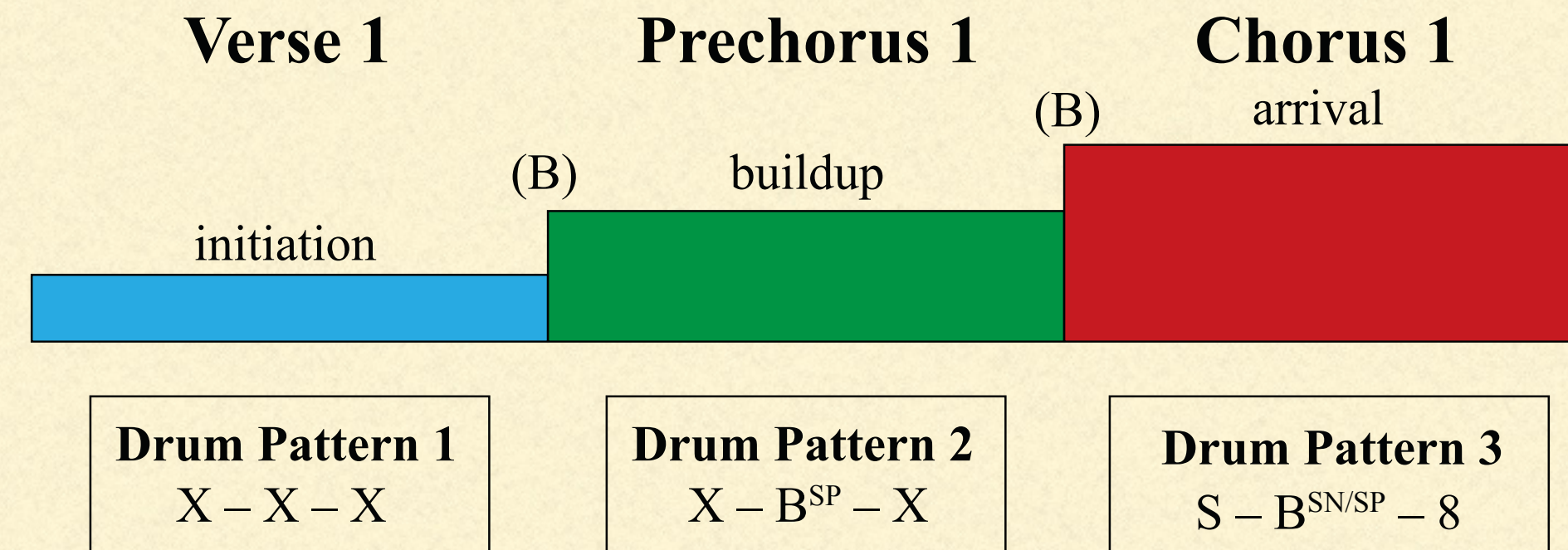
Two-Part Cycles:

"Mine" (Bazzi, 2017) - Cycle 1



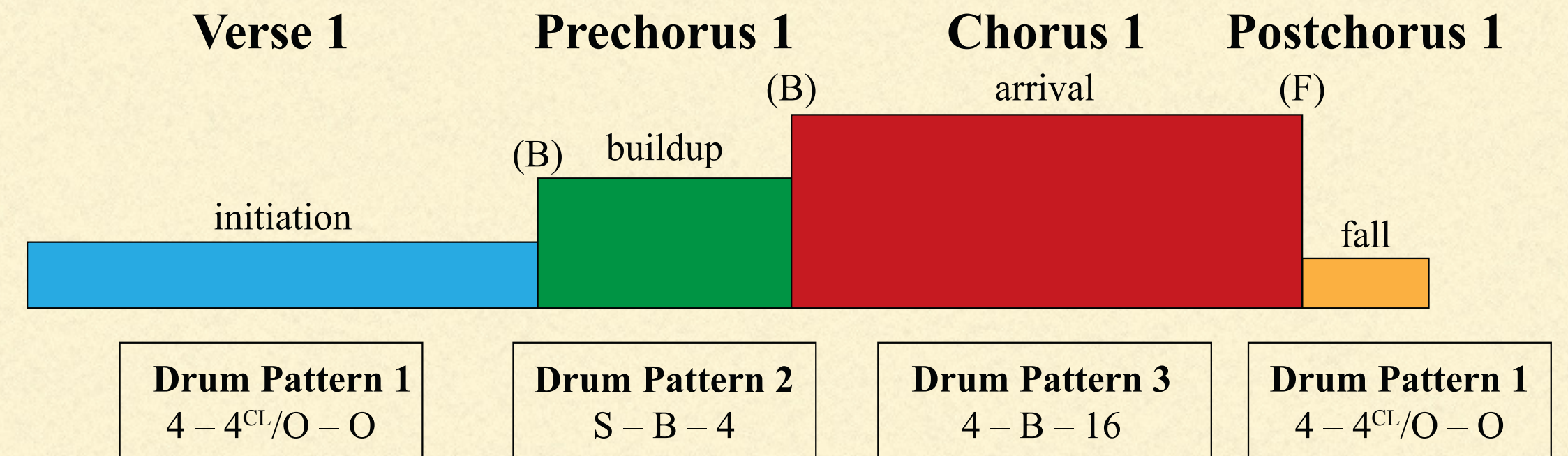
Three-Part Cycles:

"Can't Feel My Face"
(The Weeknd, 2015) - Cycle 1



Four-Part Cycles:

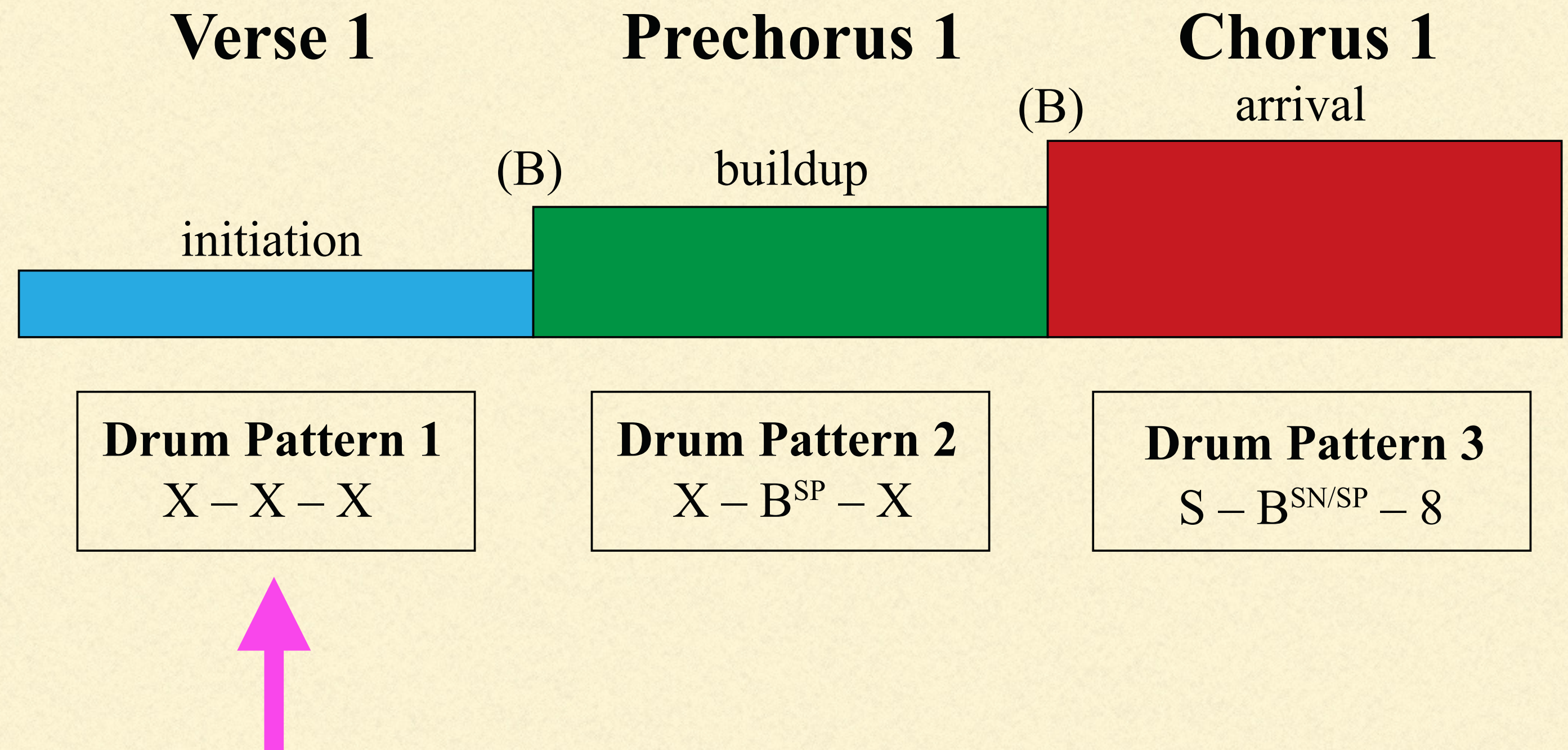
"Shut Up and Dance"
(Walk The Moon, 2014) - Cycle 1



Analysis: Across Cycles

Buildup Prechorus

Three-Part Cycles:
"Can't Feel My Face"
(The Weeknd, 2015) - Cycle 1



Analysis: Across Cycles

Fall Prechorus

"No Brainer" (DJ Khaled featuring Justin Bieber, Chance the Rapper, and Quavo, 2018) - Cycle 1

Drum Pattern 1

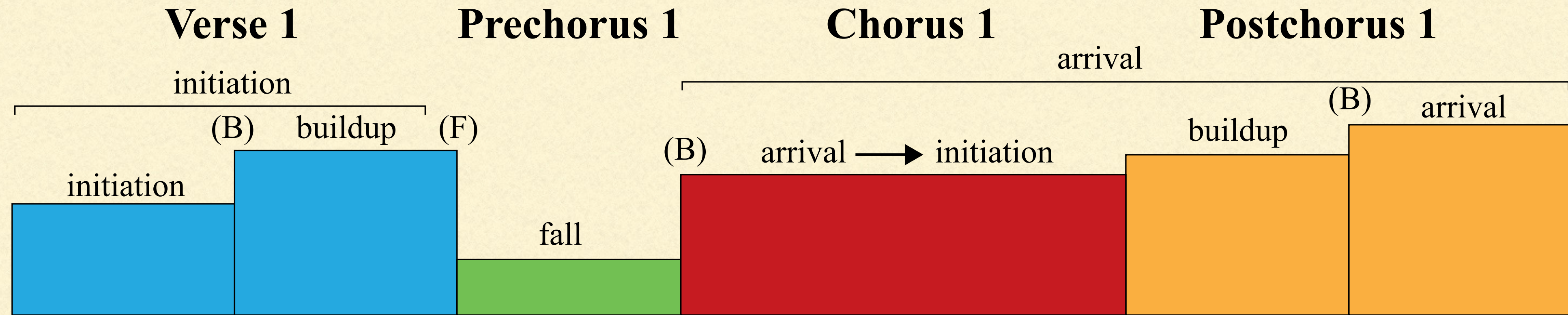
S - B^{CL/SN} - X

Drum Pattern 2

S - B^{CL/SN} - O

Drum Pattern 3

X - X - X



Drum Pattern 1

S - B^{CL/SN} - X

Drum Pattern 2

S - B^{CL/SN} - O

Drum Pattern 3

X - X - X

Drum Pattern 1

S - B^{CL/SN} - X

Drum Pattern 2

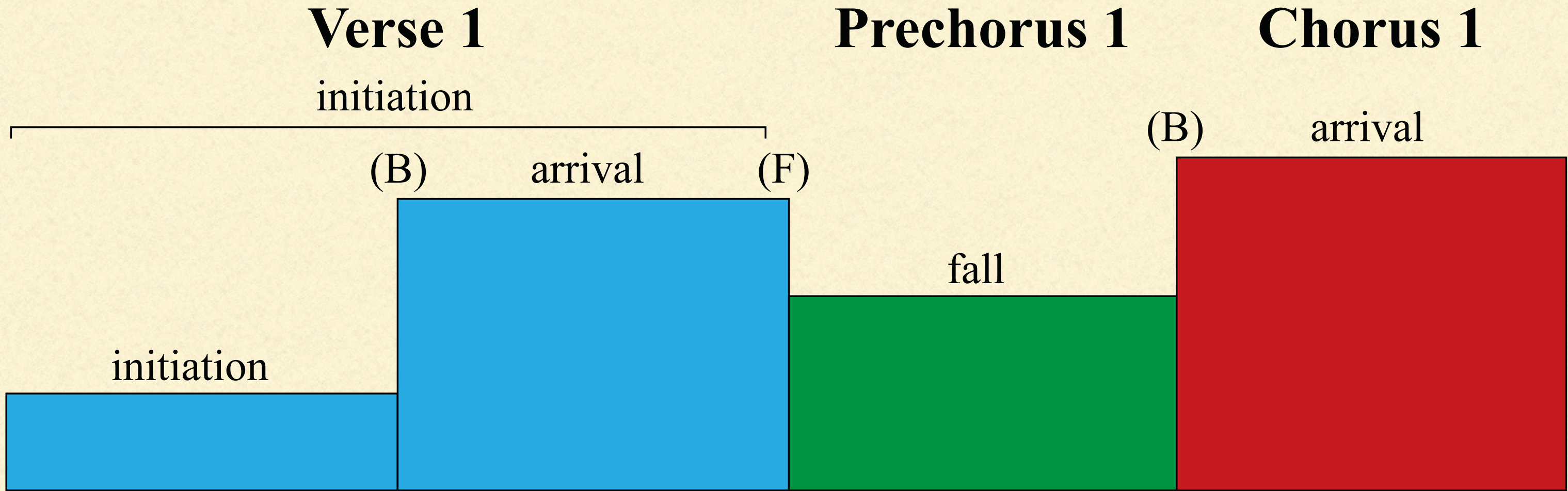
S - B^{CL/SN} - O



Analysis: Across Cycles

Fall Prechorus

"Ride" (Twenty One Pilot, 2015) - Cycle 1



Drum Pattern 1
X - X - X

Drum Pattern 2
S - B^{SN1} - 16

Drum Pattern 3
X - B^{SN2} - X

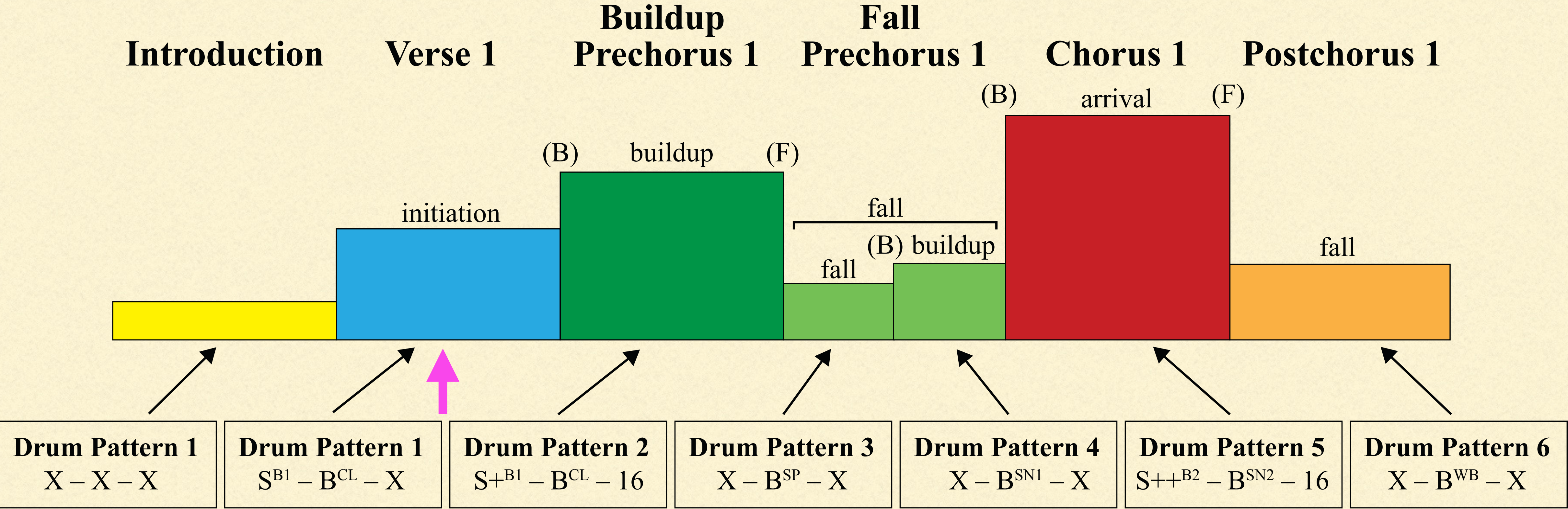
Drum Pattern 2
S - B^{SN1} - 16



Analysis: Across Cycles

Double Prechorus

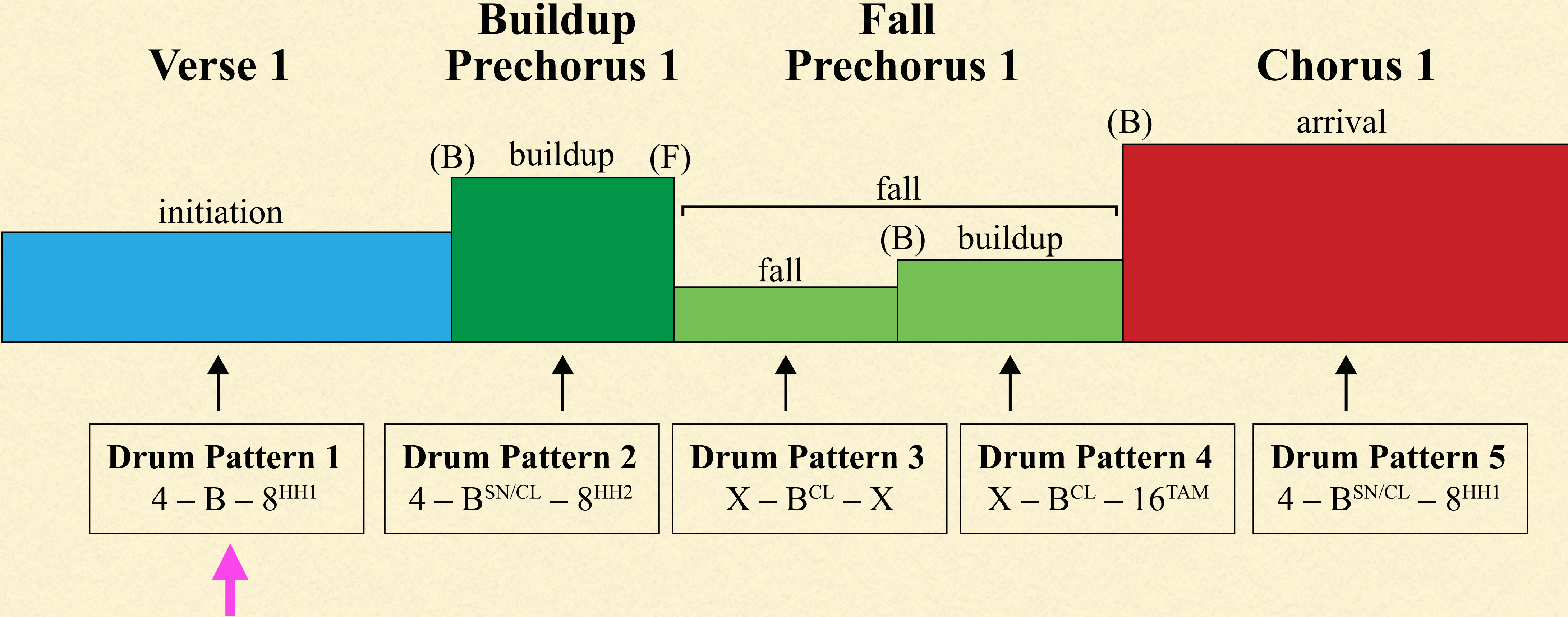
"Without Me" (Halsey, 2018) - Introduction and Cycle 1



Analysis: Across Cycles

Double Prechorus

"Don't Start Now" (Dua Lipa, 2020) - Cycle 1





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Formal Functions of Drum Patterns in Post-Millennial Pop Songs, 2012-2021

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SMT | Denver, CO | November 10, 2023

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SMT | Denver, CO | November 10, 2023