



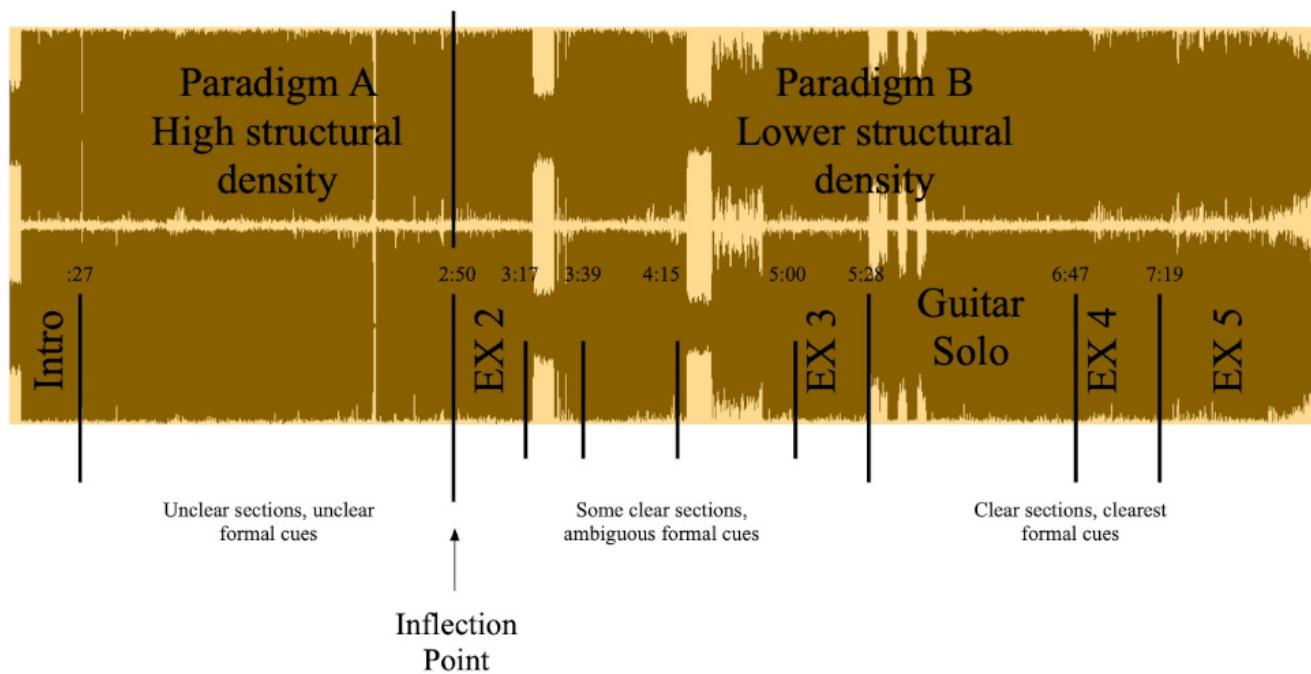
A JOURNAL OF THE SOCIETY FOR MUSIC THEORY

MTO 28.1 Examples: Hannan, Structural Density and Clarity

(Note: audio, video, and other interactive examples are only available online)

<https://mtosmt.org/issues/mto.22.28.1/mto.22.28.1.hannan.html>

Example 1. Overview of “Ohmnivalent,” with inflection point, Paradigm A, and Paradigm B labelled



Example 2. Clear segmentation cues in the first riff after inflection point (2:50–3:11)

117
2:30

Dist. Guit. 1.L
Dist. Guit. 2.R
Drumkit

121
3:04

Dist. Guit. 1.L
Dist. Guit. 2.R
Drumkit

125
3:04

Voc.
Blas - phe - my
ev - ry breath is sin - di - vi - sion line a con - dem - na - tion fire
rain - ing down from the ab - so - lute

Dist. Guit. 1.L
Dist. Guit. 2.R
Drumkit

125
3:04

End/beginning of rhythmic pattern
Break in texture
Break in texture

Change of texture (vocals enter, guitar)

End/beginning of rhythmic pattern
Break in texture
(Change to new pattern)

Example 3. Repetition facilitating segmentation and contributing to structural clarity (5:00–5:16)

5:00

176 Spoken.....

Voc. I taught my - self to part the red clouds and scale the sky climb my gold chains

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

180 (Spoken).....

Voc. but I hit a re - flec - tive gold ceil - ing

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

184 (Spoken)..... nat.

Voc. looked in - to my own eyes and he said "they've

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

Repeated metric pattern for all

Example 4. Repeated metric patterns, ending flourish, and changes of texture all contribute to structural clarity in the song's penultimate section (6:47–7:19)

6:47

Start / end of metric pattern

Ending flourish

Start / end of metric pattern

Ending flourish

Change of guitar pattern, addition of new guitar layer

End of metric pattern, beginning of new pattern

Ending flourish

(Change to new pattern)

Example 5. Repetitive metric pattern and long last notes in the song's last section (7:19–end)

7:19

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

For all:

Beginning / end of metric pattern

Held notes define meter and boundaries

253

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

7:38

Dist. Guit. 1-L

Dist. Guit. 2-R

Dist. Guit. 3-C

Drumkit

261

7:55

8:19

Dist. Guit. 1-L

Dist. Guit. 2-R

Dist. Guit. 3-C

Drumkit

Example 6. Backbeat creates metric structure in the first section after the inflection point (2:50–2:57)

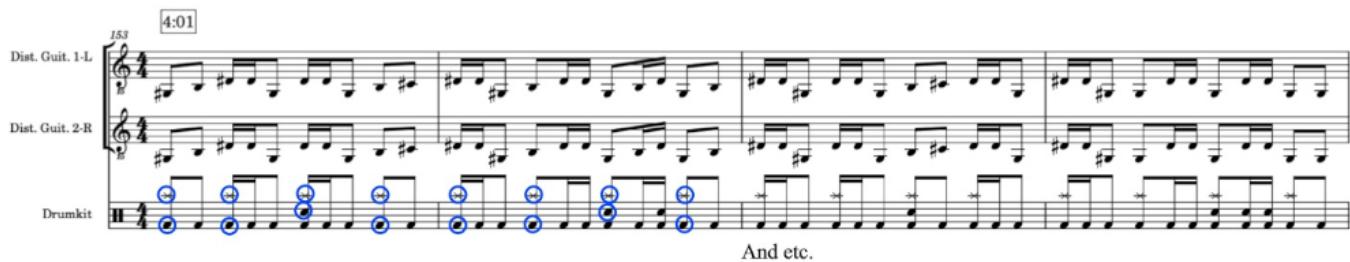


117
2:50

Dist. Guit. 1-L
Dist. Guit. 2-R
Drumkit

And etc.

Example 7. Backbeat creates metric structure when the guitar riff returns later (4:01–4:08)



153
4:01

Dist. Guit. 1-L
Dist. Guit. 2-R
Drumkit

And etc.

Example 8. Nested ABAC phrase structure in the song's last section (7:19–end)

349 7:19

Dist. Guit. 1-L
Dist. Guit. 2-R
Drumkit

A

253 7:38

Dist. Guit. 1-L
Dist. Guit. 2-R
Dist. Guit. 3-C
Drumkit

B

261 7:55 8:19

Dist. Guit. 1-L
Dist. Guit. 2-R
Dist. Guit. 3-C
Drumkit

C

Example 9. 2:02–2:18 with motivic segmentation

2:02

82

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

86

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

b₃

c₃

b₁

a₃

c₄

b₄

c₃

b₅

a₄

b₁

c₃

b₆

c₃

(b₁)

j=161

Example 10. Strong sectional boundary at end of intro section going into Paradigm A (0:22–0:33)

10

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

Voc.

De - feet - ive

from the start

my will bent at the knee for

pro - spect - ive a - ward

15

0:27

Vocal entrance

Intro riff pattern dissolves

Texture break

Tempo modulation $\lambda = J$

Drums switch to blastbeat

Example 11. My attempt at notating a brief passage (at :34) that resists rhythmic quantization

19

Voc.

pan to - mine sing - ing nec - rot - ic hymns of - res - sur - ec - tion I drain the poi - son plas - ma that runs through me -

Dist. Guit. 1-L

Dist. Guit. 2-R

Drunkit

Transcription of guitar rhythm is approximate - it's very fast, and not entirely lined up with drums

Guitars and vocals seem to part ways with drums until...
...everything realigns at this brief tresillo figure

→

Example 12. Ascending tritone section, in which the guitar pattern is difficult to discern directly because of masking and non-coordinating rhythmic layers (0:42–1:03)

0:42

24

Voc. melt a-way Wax mar-i-on-ette

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

26

Voc. un-bound vib-ra-tions

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

32

Voc. the light greets me all my life been wait-ing this shell is no-thing

Dist. Guit. 1-L

Dist. Guit. 2-R

Dist. Guit. 3-C

Drumkit

38

Voc. re-lease-me re-lease-me from this poi-son

Dist. Guit. 1-L

Dist. Guit. 2-R

Dist. Guit. 3-C

Drumkit

43

Voc. of plas-tic flesh

Dist. Guit. 1-L

Dist. Guit. 2-R

Dist. Guit. 3-C

Drumkit

Inferred repeating structure increasingly obscured by masking

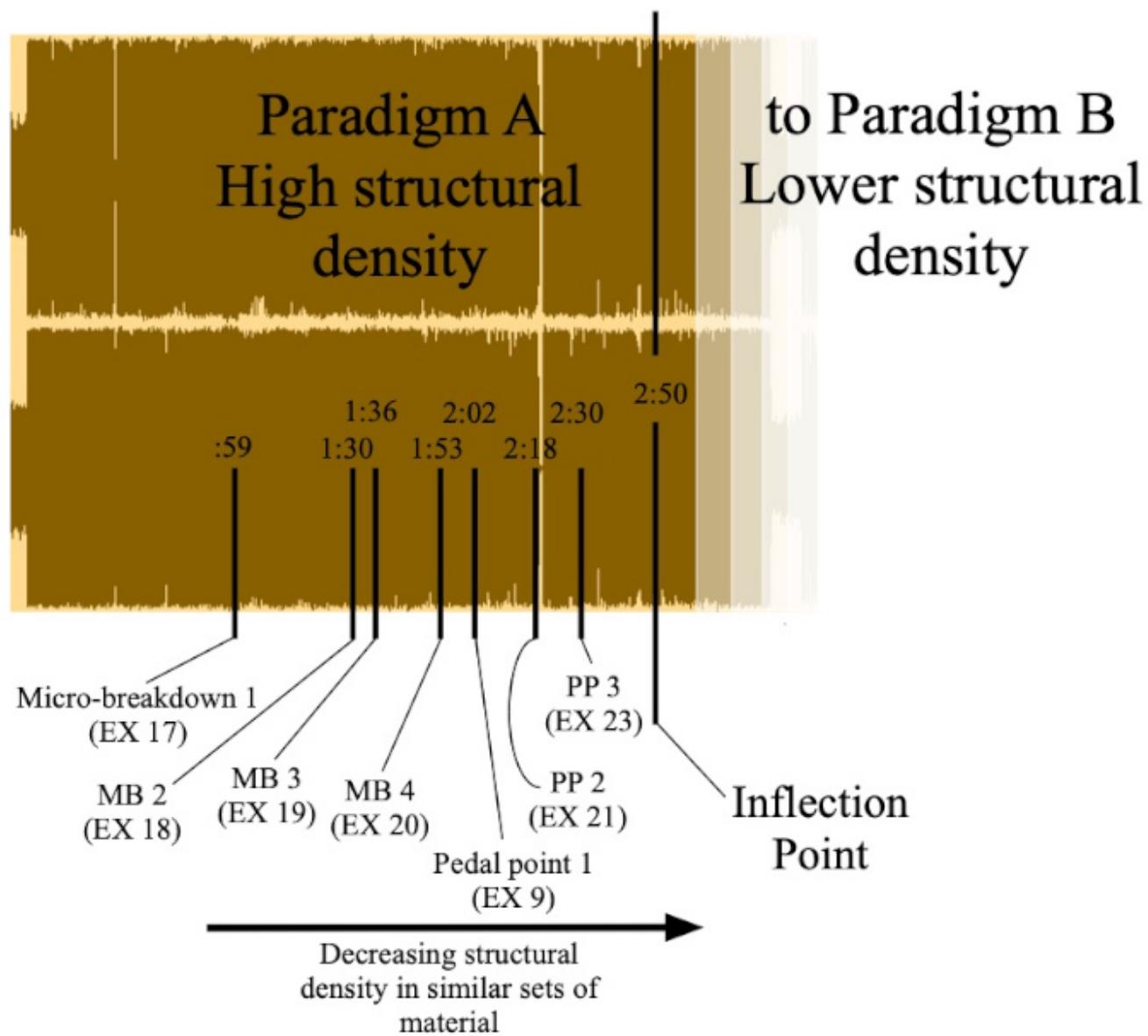
Especially with entrance of low palm-muted guitar accents

Example 13. Re-barring of 2:02–2:18 so that each motive gets its own measure

Example 14. Another re-barring of 2:02–2:18 so that motive c always ends a measure

Example 15. The barring for 2:02–2:18 that I ultimately adopted, balancing manageable measure lengths with my experience of grouping while highlighting parallelisms

Example 16. Overview of material under discussion in Examples 17–23



Example 17. First in a series of “micro-breakdowns” in Paradigm A (0:59–1:03)

d.3 [0:59] **Fleeting repeated guitar pattern helps stabilize**

Voc.

Dist. Guit. 1-L

Dist. Guit. 2-R

Dist. Guit. 3-C

Drumkit

of plas - tie flesh

Dramatic textural simplification from preceding → Obscured 4/4 backbeat phases against 5/4 guitar pattern

Example 18. Second micro-breakdown, clearer than the first (1:30–1:35)

68 1:30

Voc.

Tempt - ing me once was the man whose law is writ in stone

Dist. Guit. 1.L

Dist. Guit. 2.R

Drumkit

2 + 2 + 2 + 1 2 + 2 + 2 + 2 + 1

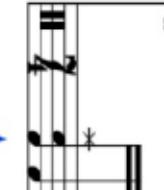
All parts have same accents, relatively high clarity

Guitars repeat pattern, drums phase backbeat against it

Example 19. Third micro-breakdown, still clearer (1:35–1:38)

71

Voc.

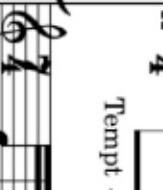
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Tempt - ing me twice was the man_ whose blood I've known

Dist. Guit. 1-L

4 

Dist. Guit. 2-R

4 

Drumkit

4 

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2 

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3 <img alt="A bracket under the first 3/4 section of the drumkit line, ending with a fermata." data-bbox="4540 210 4560

Example 20. Last micro-breakdown, clearest of all (1:53–2:02)

79 1:53

8/4 interpretation secured by texture break

81

Briefly lines up with normative 4/4 backbeat (schema)

Same guitar accent pattern
(2+2+2+1) repeats six full times

8/4 interpretation secured by texture break

81

Briefly lines up with normative 4/4 backbeat (schema)

Same guitar accent pattern
(2+2+2+1) repeats six full times

Example 21. Second pedal point melody section (2:18–2:32)

2:18

93

Voc. No wrath no venge - ful god de - ny - ing your right to af - firm your life and live it

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

97

Voc. now Your heart mind and will are your on - ly laws

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

103 (8)

10 (10)

11 (11)

11 (11)

Drumkit

$\text{♩} = 142$

Example 22. Paradigmatic layout of 2:18–2:32 to show repeating motive structure

2:18

Voc. No wrath no venge . ful god de - ny - ing your right

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

c b c b a b

1967

Voc. to af - firm your life and live it now

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

c b c b a b

1977

Voc. Your heart mind and will are your on -

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

c b c b a b

1987

Voc. -ly laws

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

c b

transitional flourish

Cycle through same sequence of motives contributes to clarity; alterations to rhythmic and pitch profile of motives contribute to density

Example 23. Last and clearest pedal point melody section (2:32–2:43)

2:30

stronger backbeat

105

Voc.

I am the om - ni - anth - ro - lo - gos I'm the ser - pent this is my flesh blood king dom and

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

109

Voc.

mine a - lone

cycle through exact same motives makes it clearer

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

113

C b c b a b c b c b a b

C b transitional flourish to inflection point →

Example 24. First fleeting, texturally buried appearance of pyramid motives (1:17–1:26)

Example 25. More pyramids, now in full octaves, obscured by speed and dense texture. (1:40–1:48)

Voc. 73

Dist. Guit. 1-L 75

Dist. Guit. 2-R

Drumkit

Voc.

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

throne

No one can tell if I'm shack-led or
on a

Example 26. Clearer version of pyramid motive (3:17–3:40)

J = 128
3:17

133

Voc.
 Dist. Guit. 1.L
 Dist. Guit. 1.R
 Dist. Guit. 2.R
 Dist. Guit. 3.C
 Drunkit

138 (6) 8me

8me

etc.

Dist. Guit. 1.L
 Dist. Guit. 2.R
 Dist. Guit. 3.C
 Drunkit

Example 27. More fleeting pyramids in one of the most structurally dense parts of Paradigm B
(3:39–3:46)

142
3:39

Voc.

Dist. Guit. 1-L

Dist. Guit. 2-R

Drumkit

I'm

I'm

so weak

The musical score consists of four staves: Voc., Dist. Guit. 1-L, Dist. Guit. 2-R, and Drumkit. The Dist. Guit. 1-L staff features a blue triangle highlighting a sequence of notes. The Dist. Guit. 2-R staff has a similar pattern. The Drumkit staff shows a continuous pattern of eighth-note pairs. The Voc. staff has a single note. Measure numbers 142 and 3:39 are at the top. The lyrics "I'm" appear twice, and "so weak" is at the end.

Example 28. Pyramids under the clean guitar ostinato in the bridge-like section (4:15–4:45)

4:15

161

Cl. Guit. 1-C
Cl. Guit. 2-L
Cl. Guit. 3-R

164

Cl. Guit. 1-C
Cl. Guit. 2-L
Cl. Guit. 3-R

etc.

166

Cl. Guit. 1-C
Cl. Guit. 2-L
Cl. Guit. 3-R

168

Cl. Guit. 1-C
Cl. Guit. 2-L
Cl. Guit. 3-R

Example 29. Final version of pyramid motives in last section (7:19–end)

249 7:19

Dist. Guit. 1-L
Dist. Guit. 2-R
Drumkit

Etc.

253

Dist. Guit. 1-L
Dist. Guit. 2-R
Drumkit

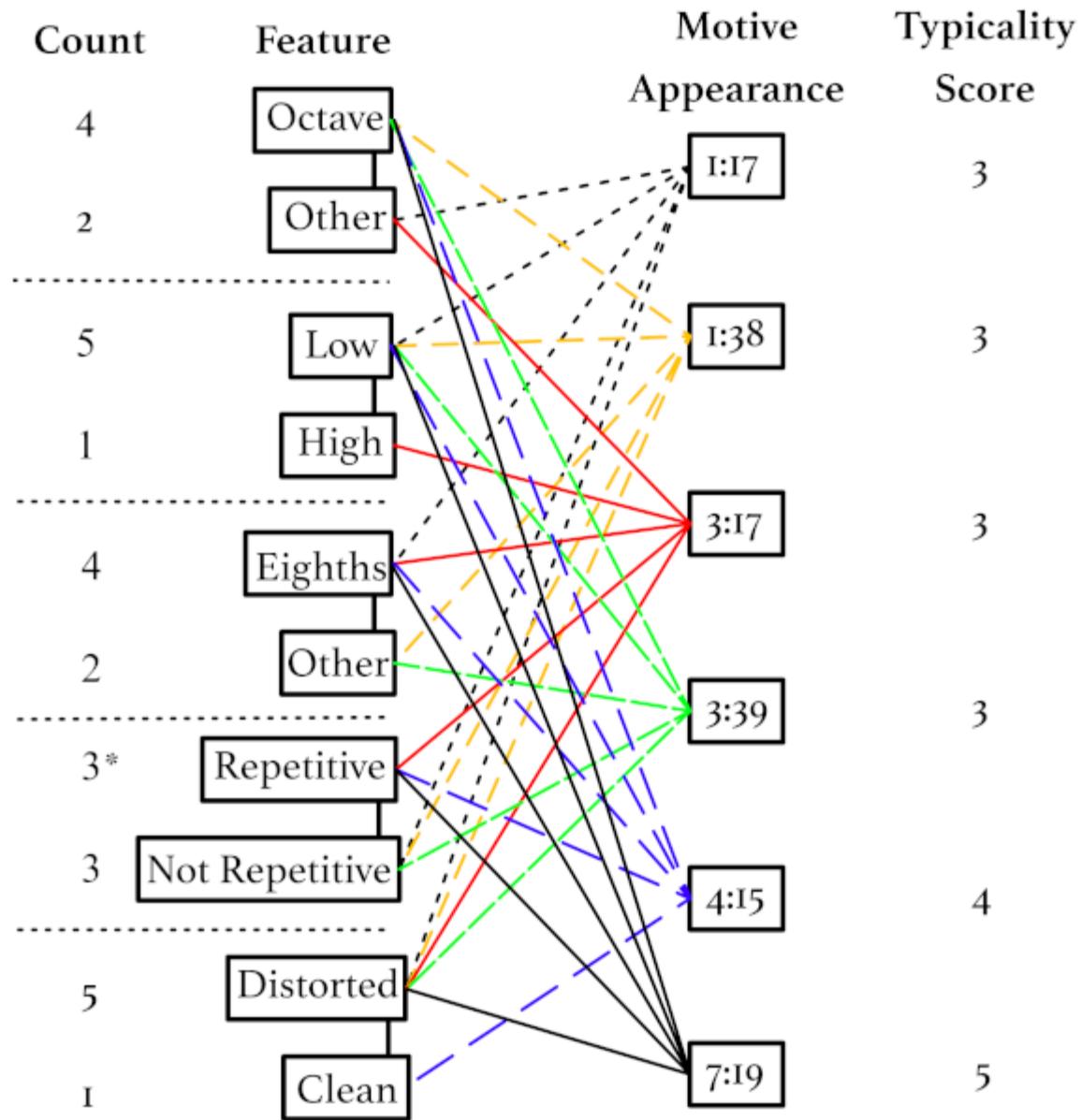
257 7:38

Dist. Guit. 1-L
Dist. Guit. 2-R
Dist. Guit. 3-C
Drumkit

261 7:55 8:19

Dist. Guit. 1-L
Dist. Guit. 2-R
Dist. Guit. 3-C
Drumkit

Example 30. Typicality diagram for pyramid motives, after Zbikowski (2002, 44. Adapted from his figure 1.2)



*Repetitive deemed more typical; tiebreaker based on repetitive structures taking more time and being more familiar

Example 31. Summary of factors contributing to structural density and clarity

Structural Density

Musical Parsing Strategy

Structural Clarity

Lack or scarcity of immediate, riff-creating repetition; repetition of fragments without pattern

Profusion of cues for disjunction; in some cases, blurring of quantization at micro-level

Grouping / Segmentation

- Repetition: Lerdahl and Jackendoff "parallelism," Hanninen "contextual criteria"
- Border reinforcement: Lerdahl and Jackendoff Grouping Preference Rules 2, 3, and 4, Hanninen "sonic criteria"

Repetition of rhythm and (often) pitch resolves musical surface into riffs and riff sections

Textural breaks and changes reinforce sectional groupings

Few clear schemas; brief backbeat appearances provide fleeting moments of clarity

Prediction

- Huron: schemas facilitate perception and prediction

Backbeats, ABAC phrase structure, guitar solo, death metal terminal climax

Motives in fragmented, atypical forms

Categorization

- Zbikowski: Motives and schemas provide footholds for categorization, and categorization improves comprehensibility.

Motives in more typical, recognizable forms