



MILTON MERMIKIDES (UNIVERSITY OF SURREY)

PRESENTED BY DANIEL T SHANAHAN

CHANGESOVERTIME

THE ANALYSIS, MODELING, AND

DEVELOPMENT OF MICRO-RHYTHMIC

EXPRESSION THROUGH DIGITAL TECHNOLOGY

v2



2:06-2:32

Acknowledgement

Coltrane



IMPROVISATION AS MUSICAL MUTATION

Parameter 1
Metric Placement
1 - 4

Parameter 2
Rhythmic Separation
0.25 (Semiquaver)
0.33 (Triplet Quaver)
0.5 (Quaver)
0.66 (Triplet Crotchet) etc.

Parameter 3
Chromatic Transposition
0 C5
2 D5
3 Eb5
-1 B4 etc.

2:06-2:32
Acknowledgement,
Coltrane

1 1, .33, 0

2 2.33, .33, 5

3 4, .33, 0

4 1.33, .33, 5

5 2.66, .33, 0

6 3.33, .33, 5

7 .33, .33, 0

8 2.33, .33, 5

9 4, .25, 10

10 1.5, .25, 0

11 2.5, .25, 5

12 3.5, .25, 3

13 2, .25, 3

14 3.33, .33, -2

15 2, .25, 3

16 3, .25, -2

17 4.5, .25, 0

18 1.75, .25/.75, 5

19 4.5, .25, 2

20 3.5, .25/.75, 7

21 1.5, .25, 2

22 2, .25, 7

23 3, .33, 0

24 3.66, .66/.33, 5

25 1.5, .25, 9

26 2.5, .25, 2

27 4.5, .25, 7

28 1.5, .25, 0

29 2, .25, 5

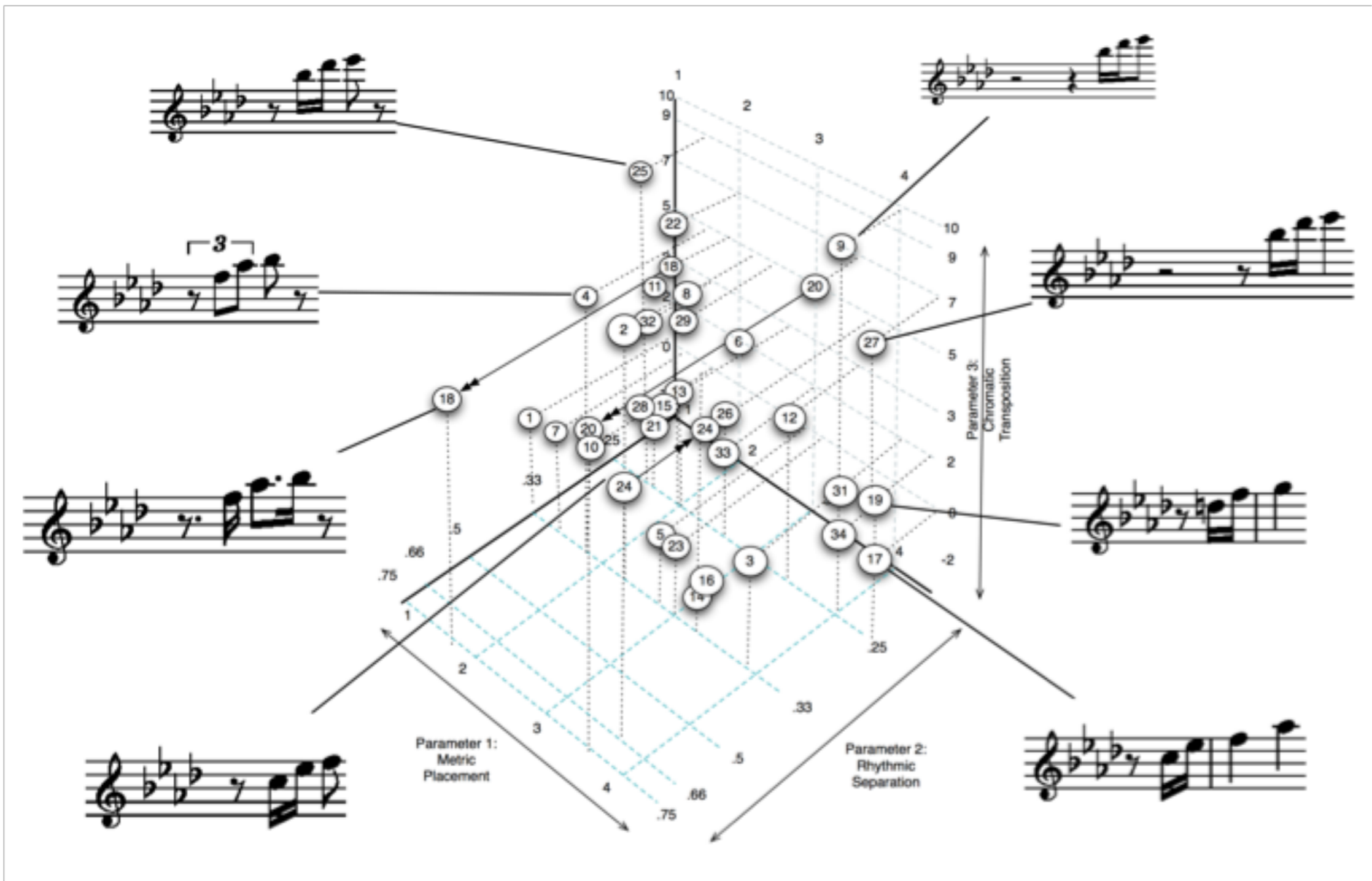
30 2.5, .25/.75, 9

31 4, .25, -2

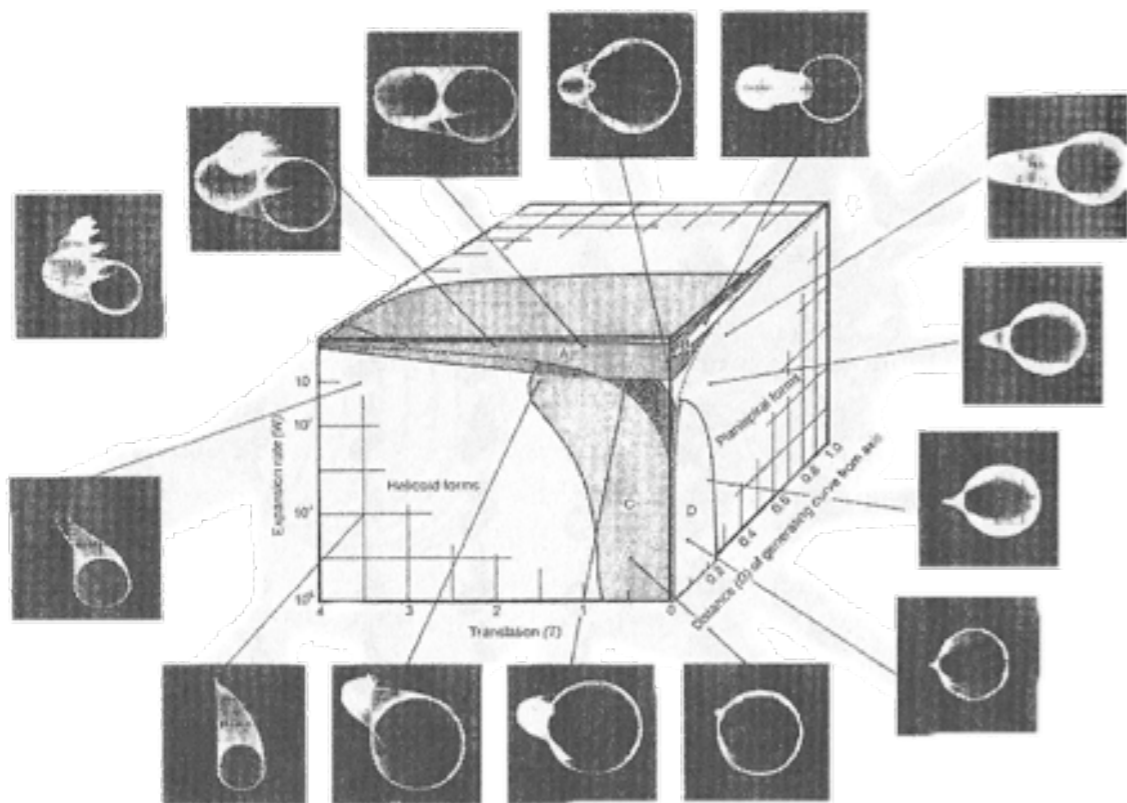
32 1.5, .25, 3

33 3, .25, 2

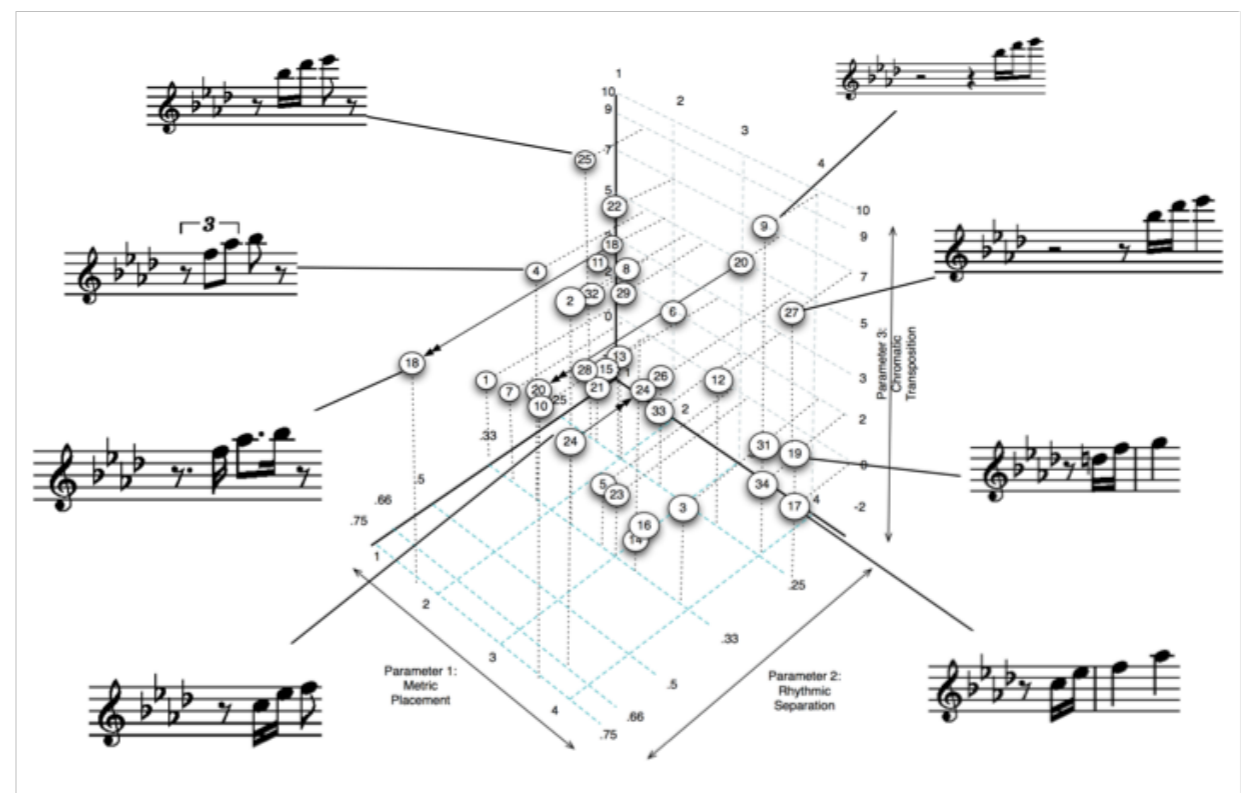
34 4, .25, 0



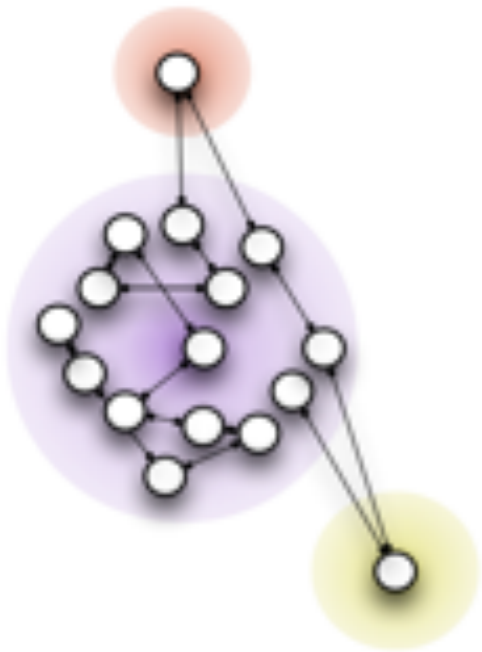
Allows for continuum



Raup's cube

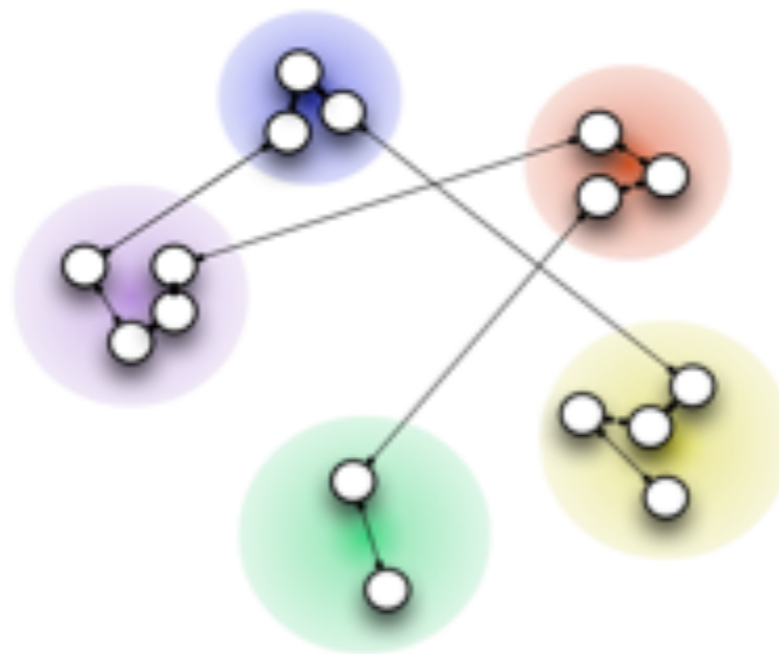


Coltrane's cube



1. Nuclear

e.g. Acknowledgement



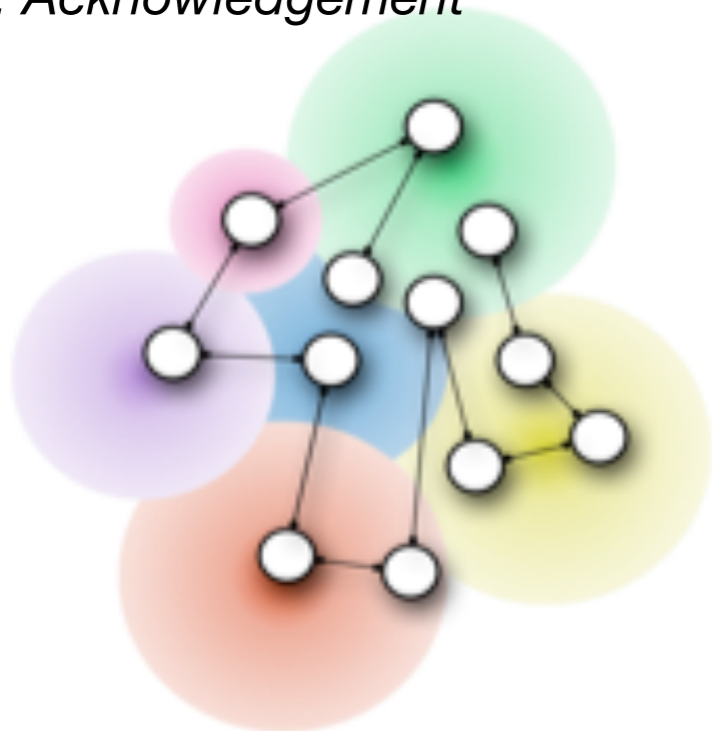
2. Field Series

e.g. The Sermon



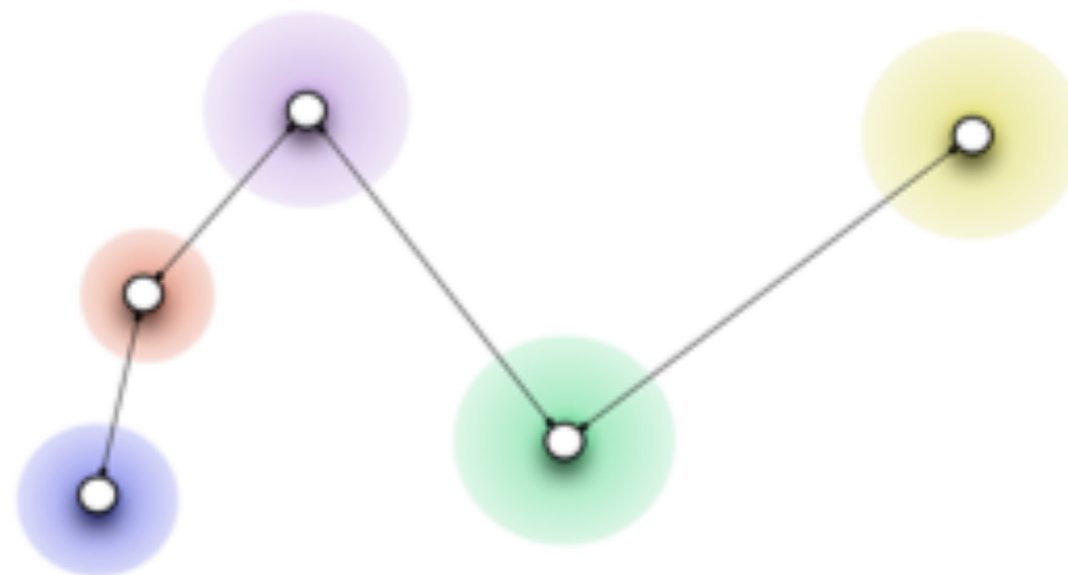
3. Pivot

e.g. No Blues -Wes



4. Merged

e.g. Unquity Road - Metheny



5. Unbounded

(how most people hear jazz)

PERSPECTIVES ON TIME-FEEL – PROCEDURAL VS DECLARATIVE KNOWLEDGE

Rhythmic time-feel is the most basic, fundamental element communicated by the soloist, and appreciated (or criticized) by an audience. The greatest technique, creativity, melodic accuracy, lyricism, sound, style, etc. matters very little if the music doesn't feel good rhythmically, whereas less evolved technique, ideas, melodic choices, sound etc. can actually sound okay when executed with rhythmic accuracy (good time-feel) and conviction.

Crook 1991, p 10

PERSPECTIVES ON TIME-FEEL – PROCEDURAL VS DECLARATIVE KNOWLEDGE

“You’re playing *on* the beat you have to play *in* the beat” (Metheny)

“I don’t think about that stuff” (Horace Silver when asked about rhythmic considerations when he ventured to latin jazz)

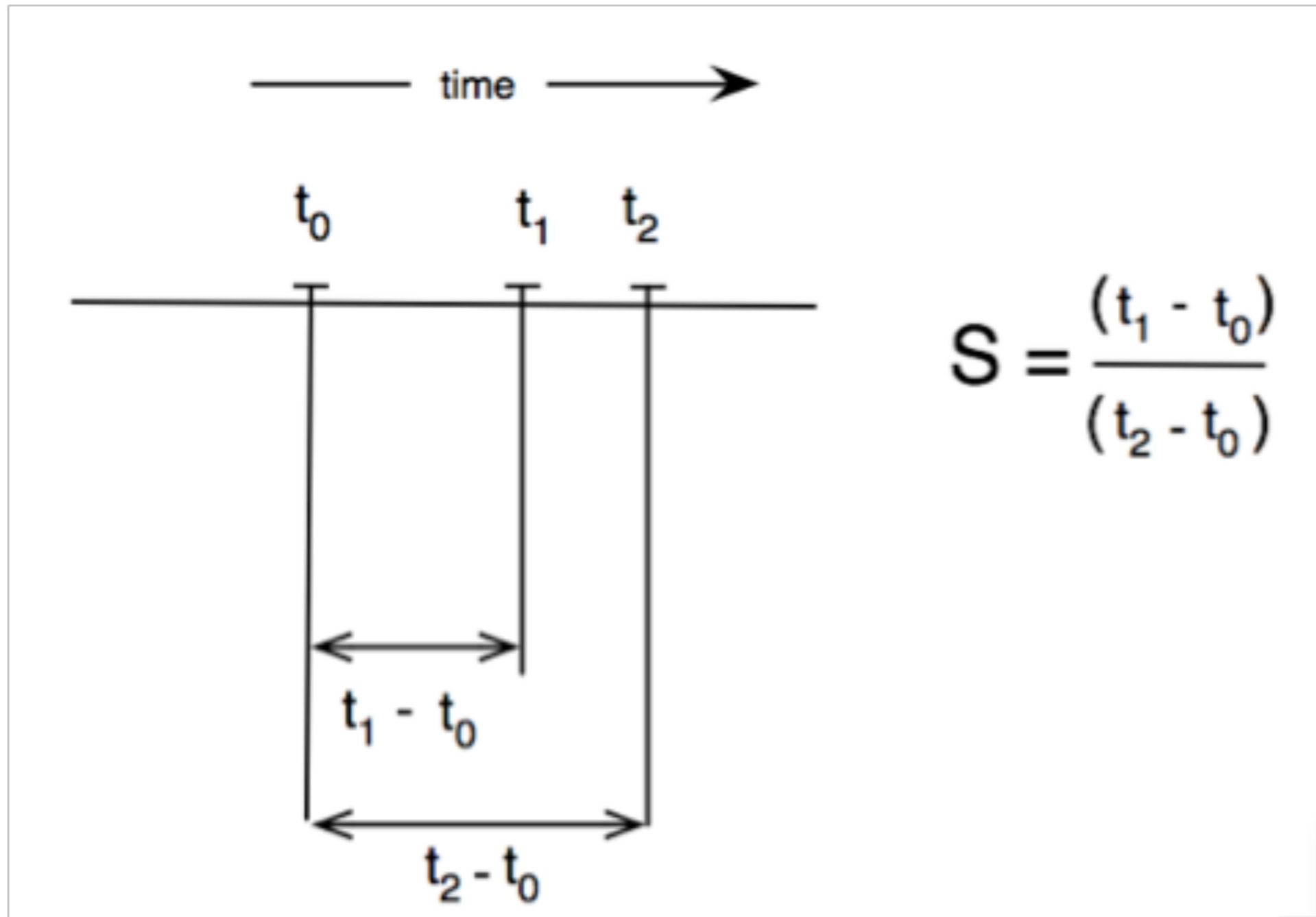
“My left hand is the graduate. My right hand is thoughtless...a dropout.” (Pat Martino)

“Play it tight but loose” (Unnamed unhelpful teacher)

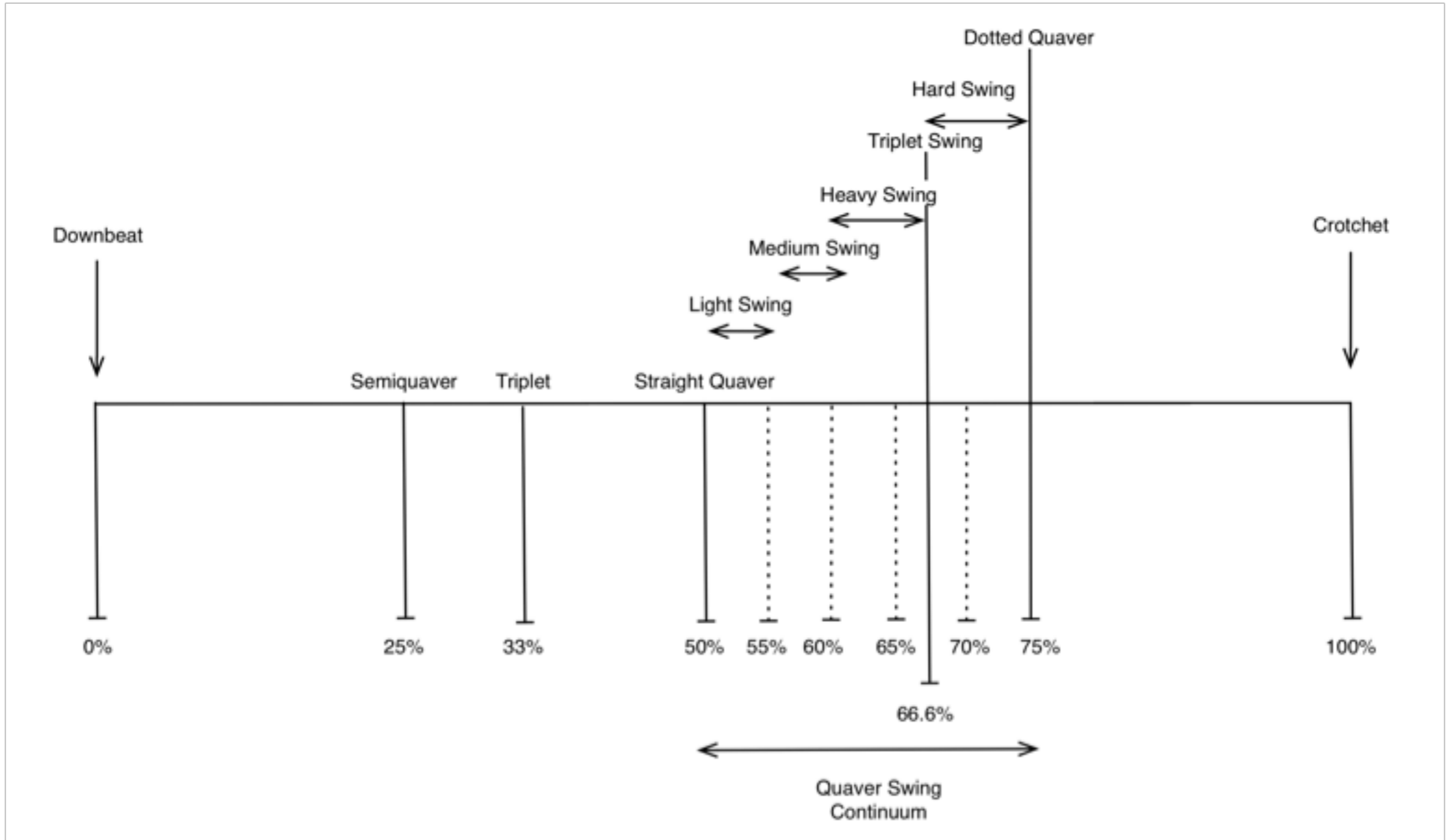
“Always play a blues straight. Never swing.” (Same unnamed unhelpful teacher)

“Always, always swing” (Same unhelpful unnamed teacher)

DEFINING SWING



SWING CONTINUUM

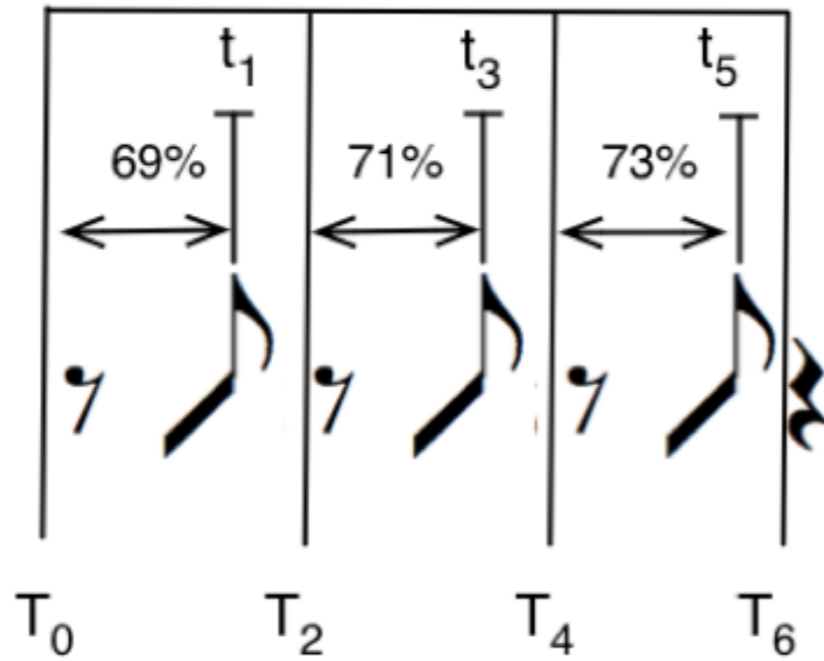


SWING EXAMPLES

Tempo
(bpm)

86.8 89.8 89.7

Swing



51% swing

2% latency

52% swing

-3% latency

67% swing

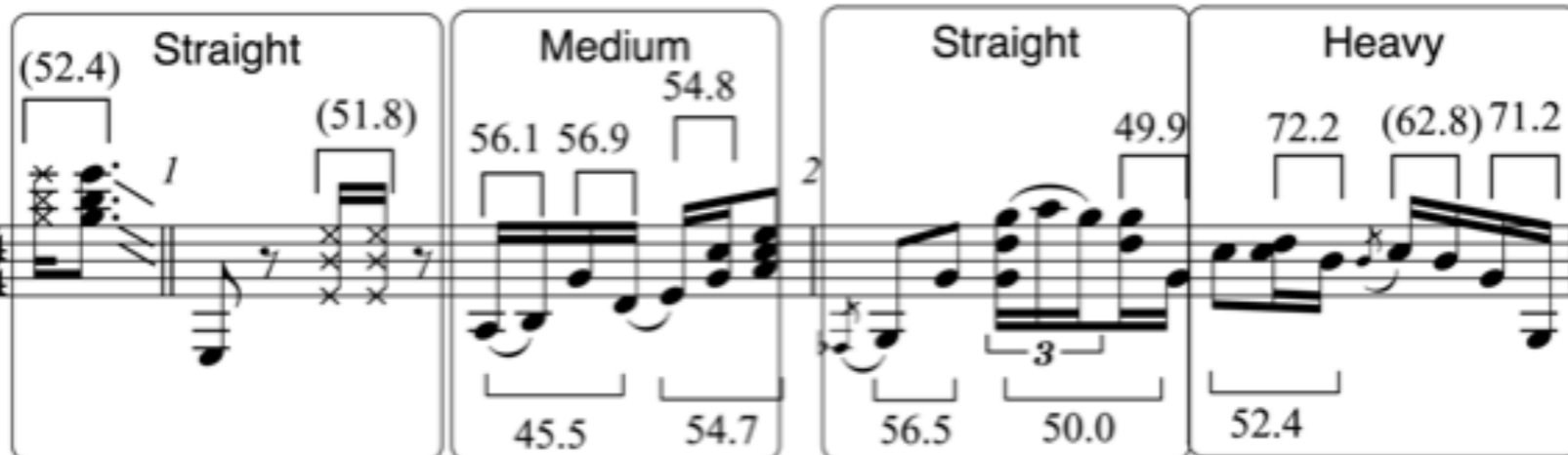
ride

67% swing

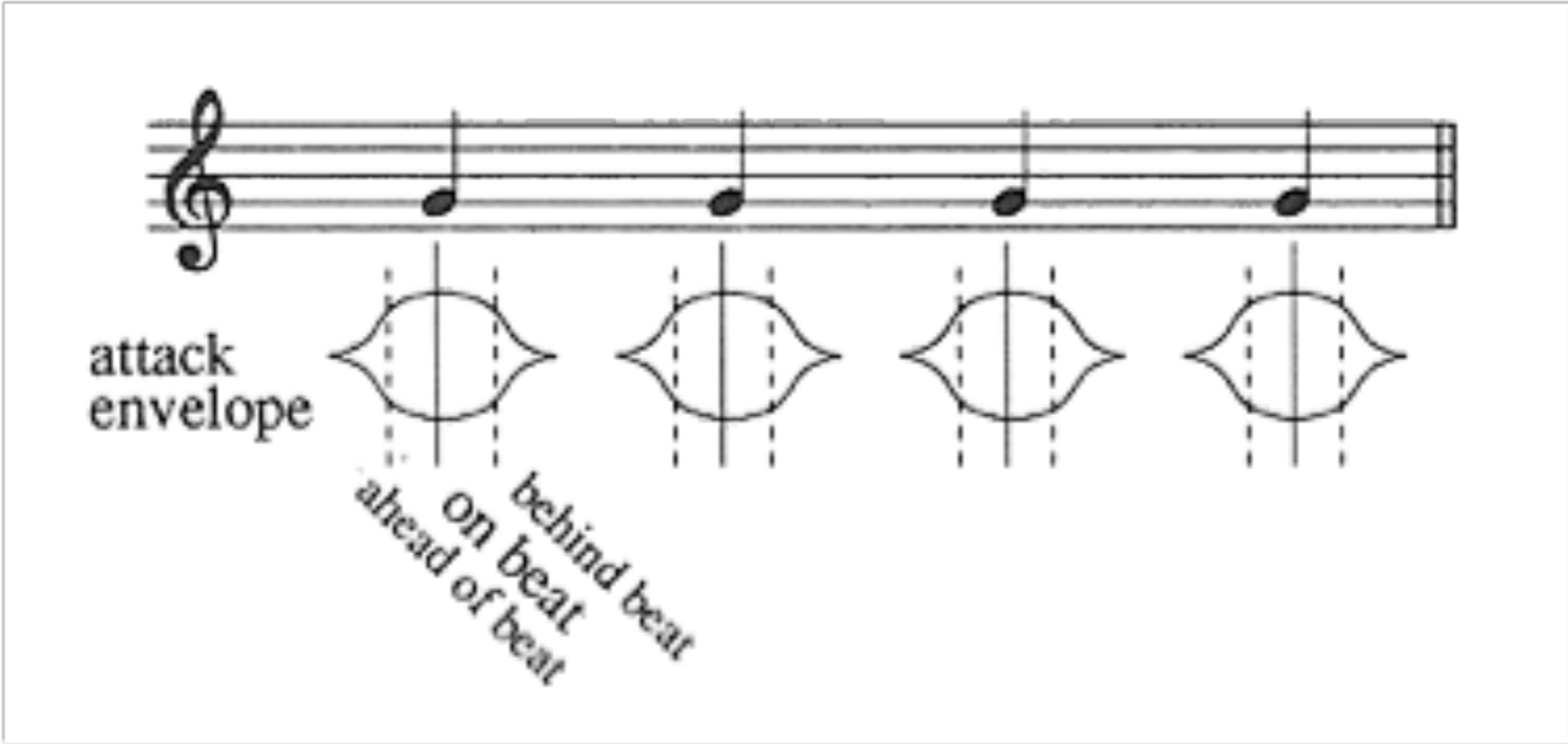
67% swing

♩ ≈ 65-72

♩ swing (%)

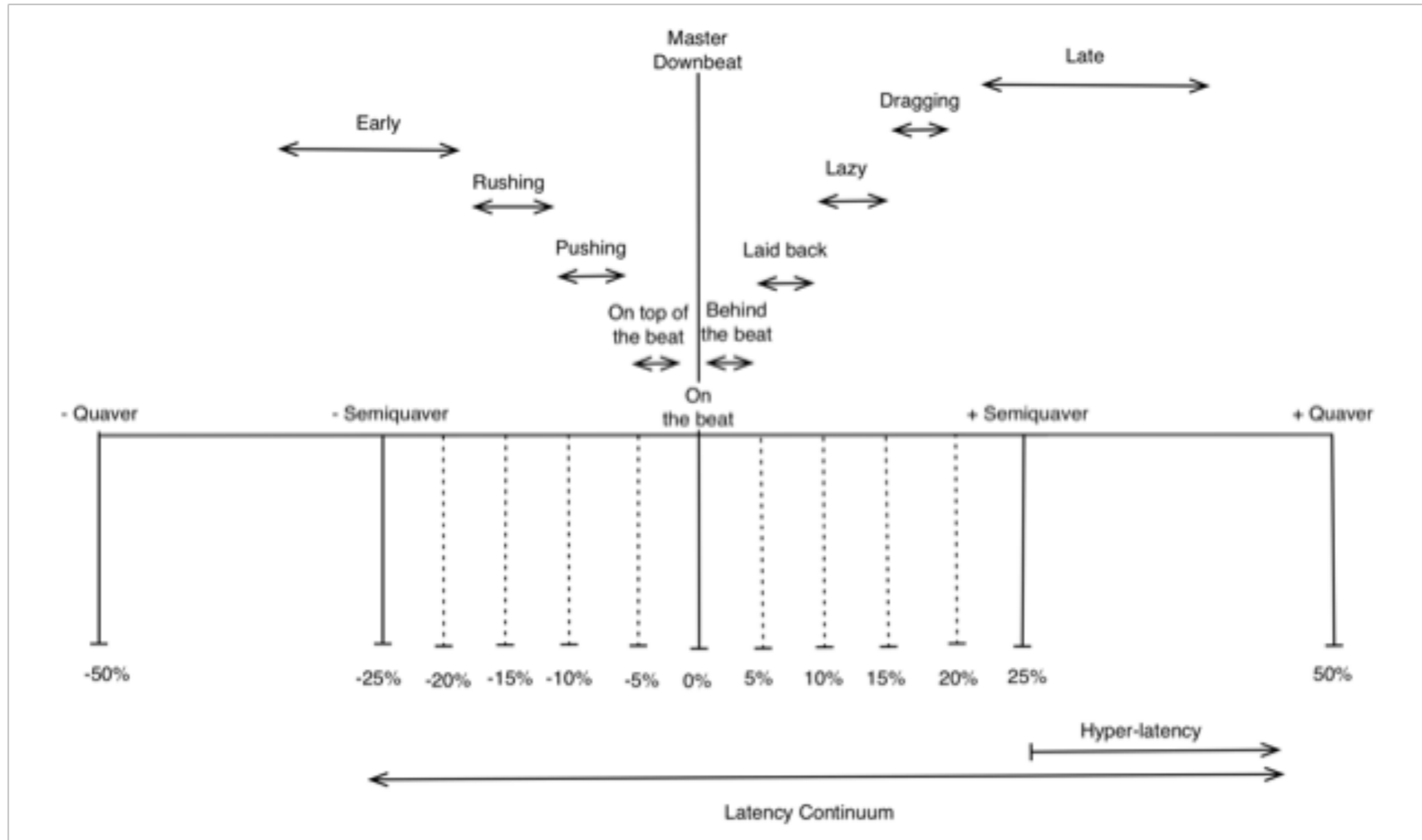


DEFINING LATENCY

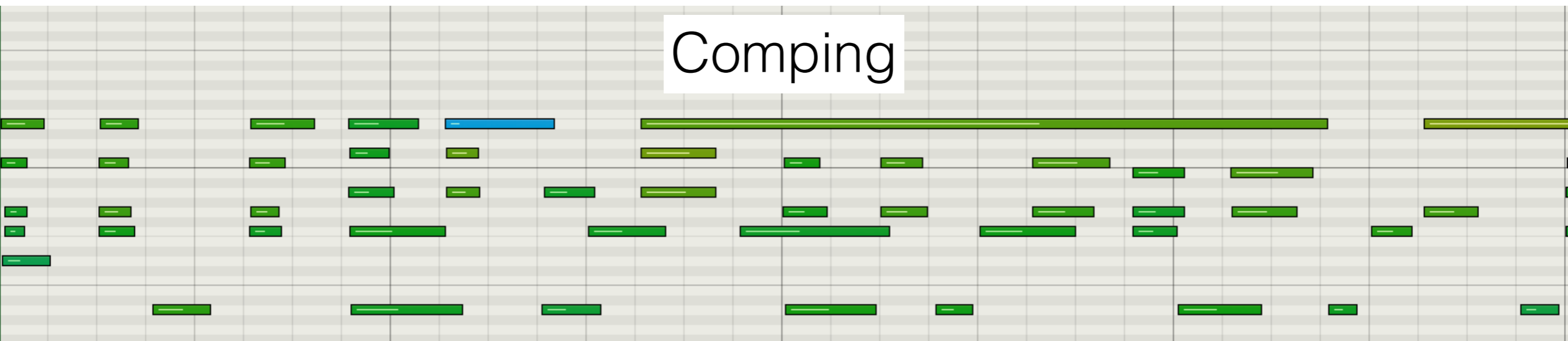
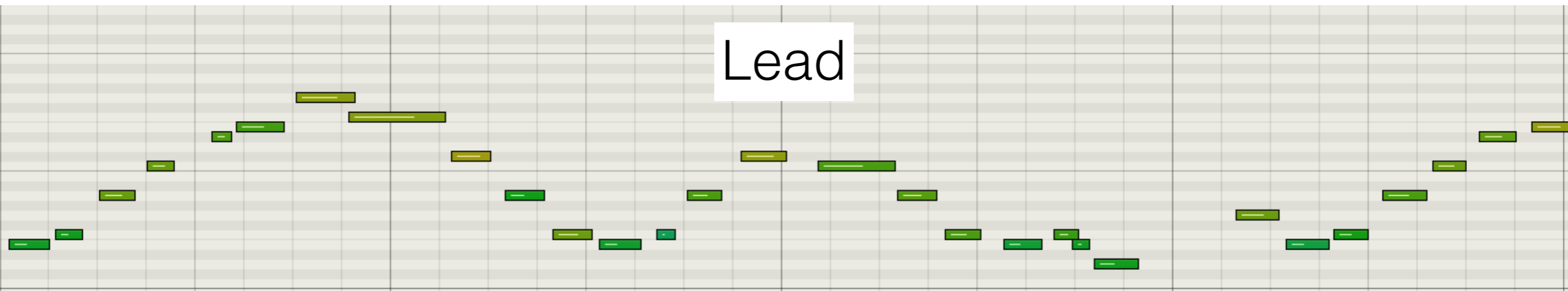


Mingus, cited in Berliner 1994.

LATENCY CONTINUUM

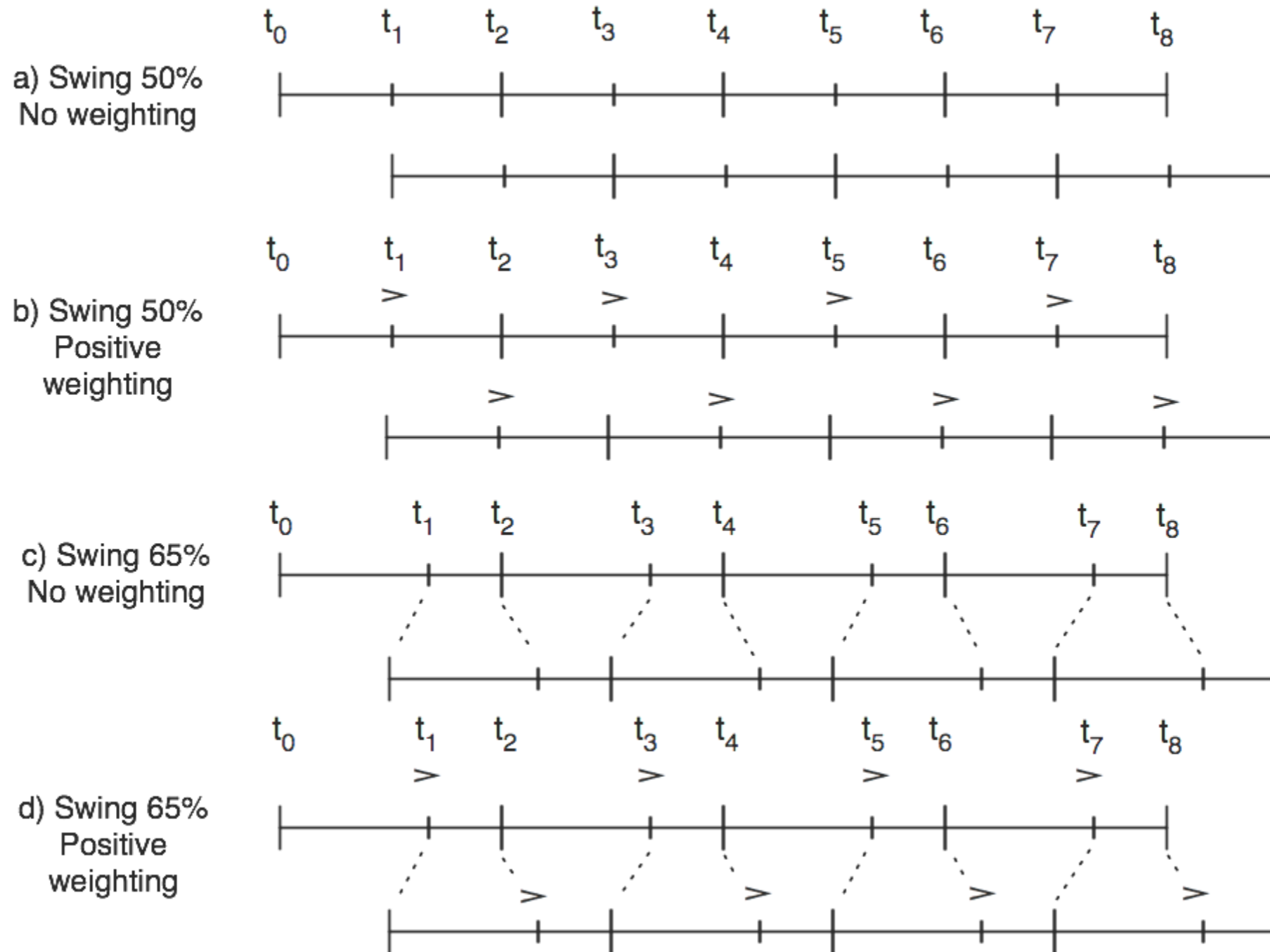


LATENCY BY ENSEMBLE ROLE

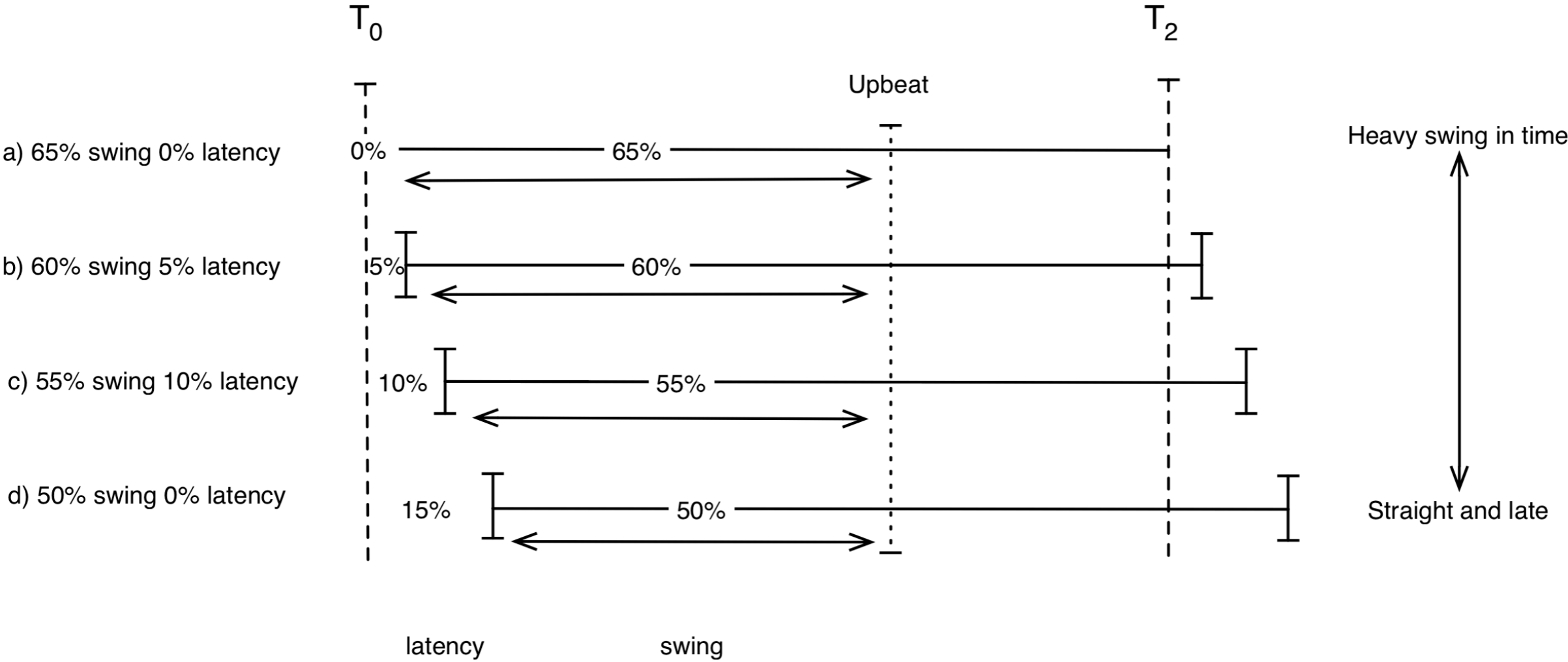


Steve Hamilton on *Seta Para Una* (Mermikides 2014)

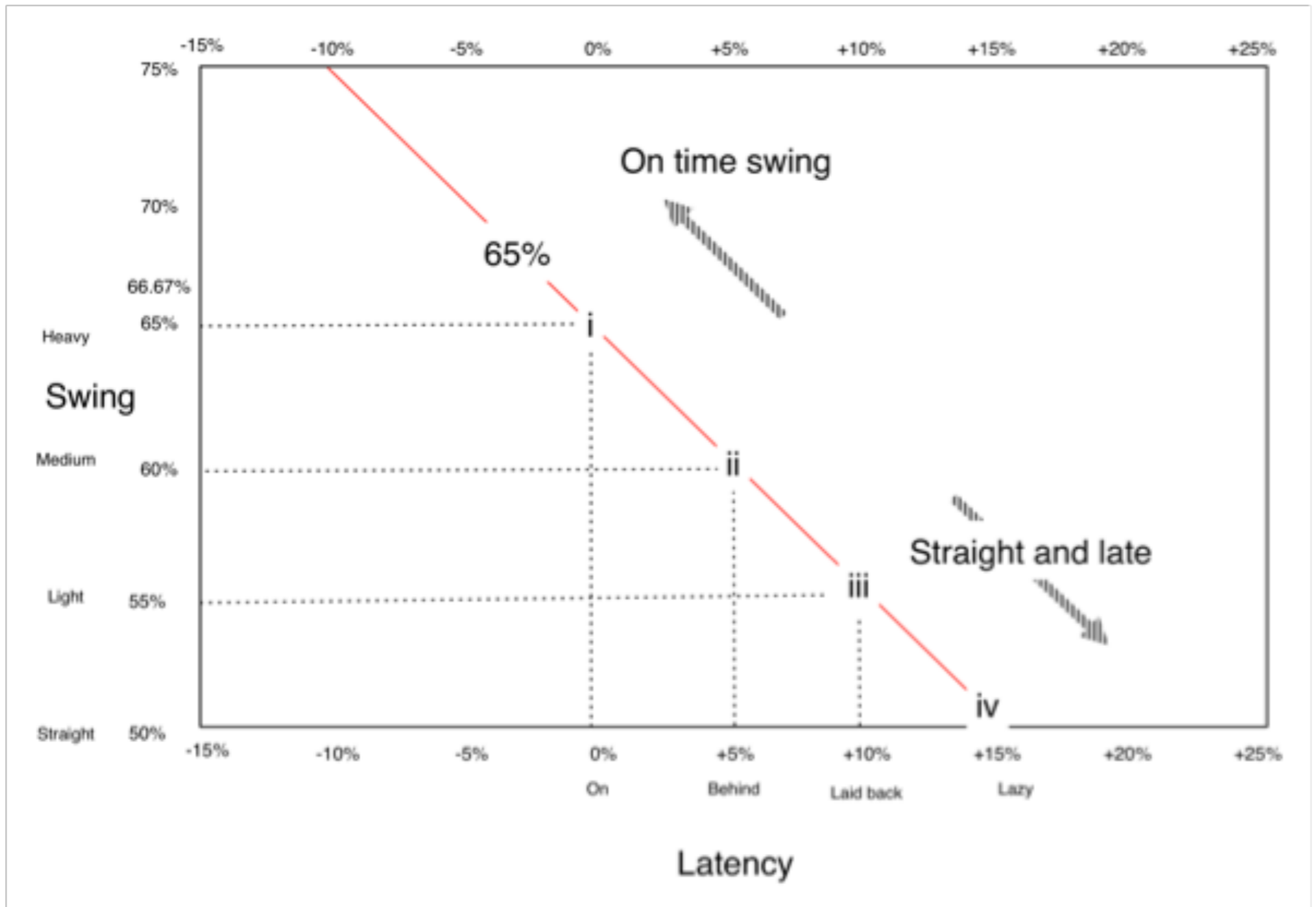
HYPERLATENCY



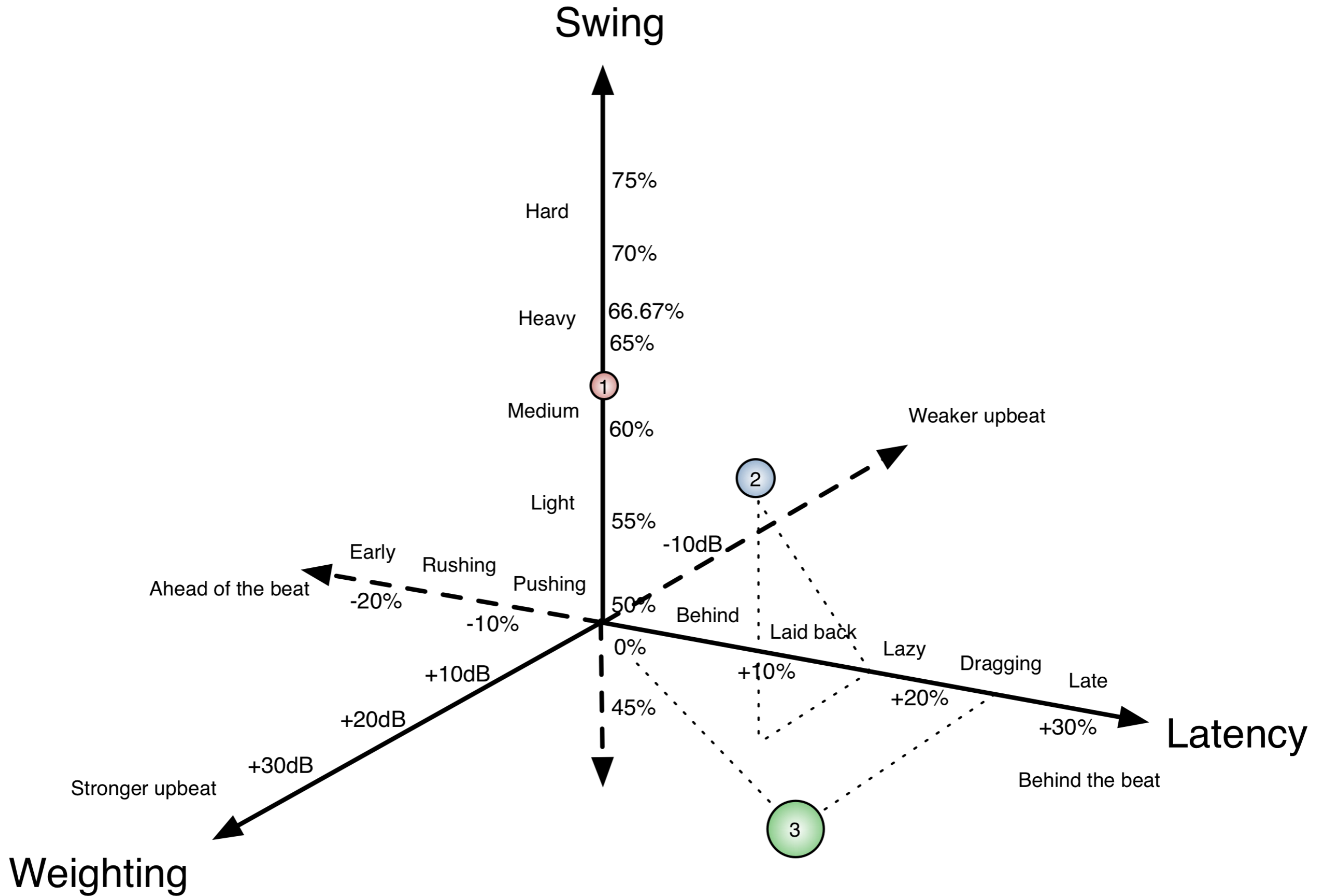
SWING LATENCY INTERACTION



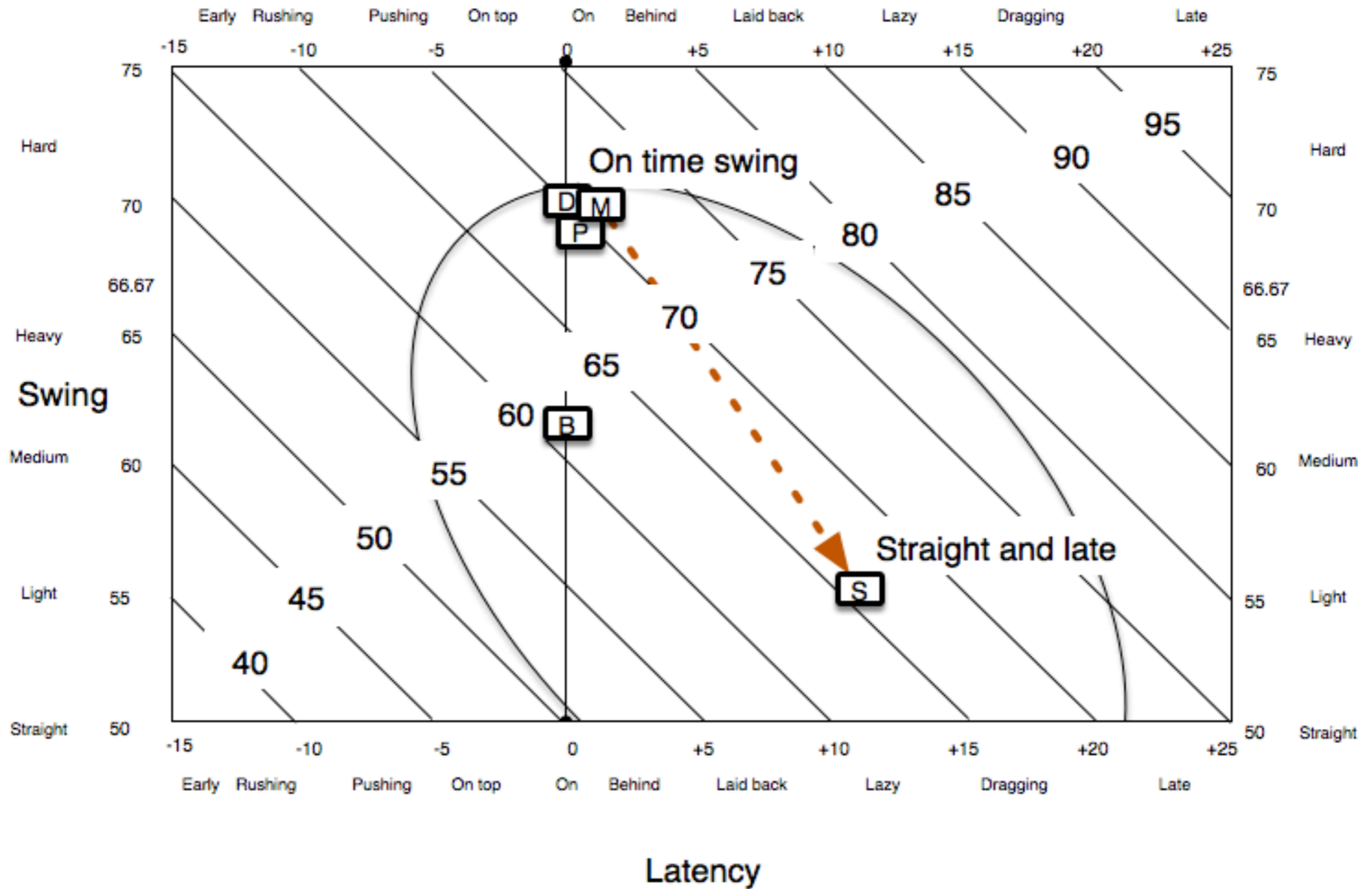
SWING LATENCY INTERACTION



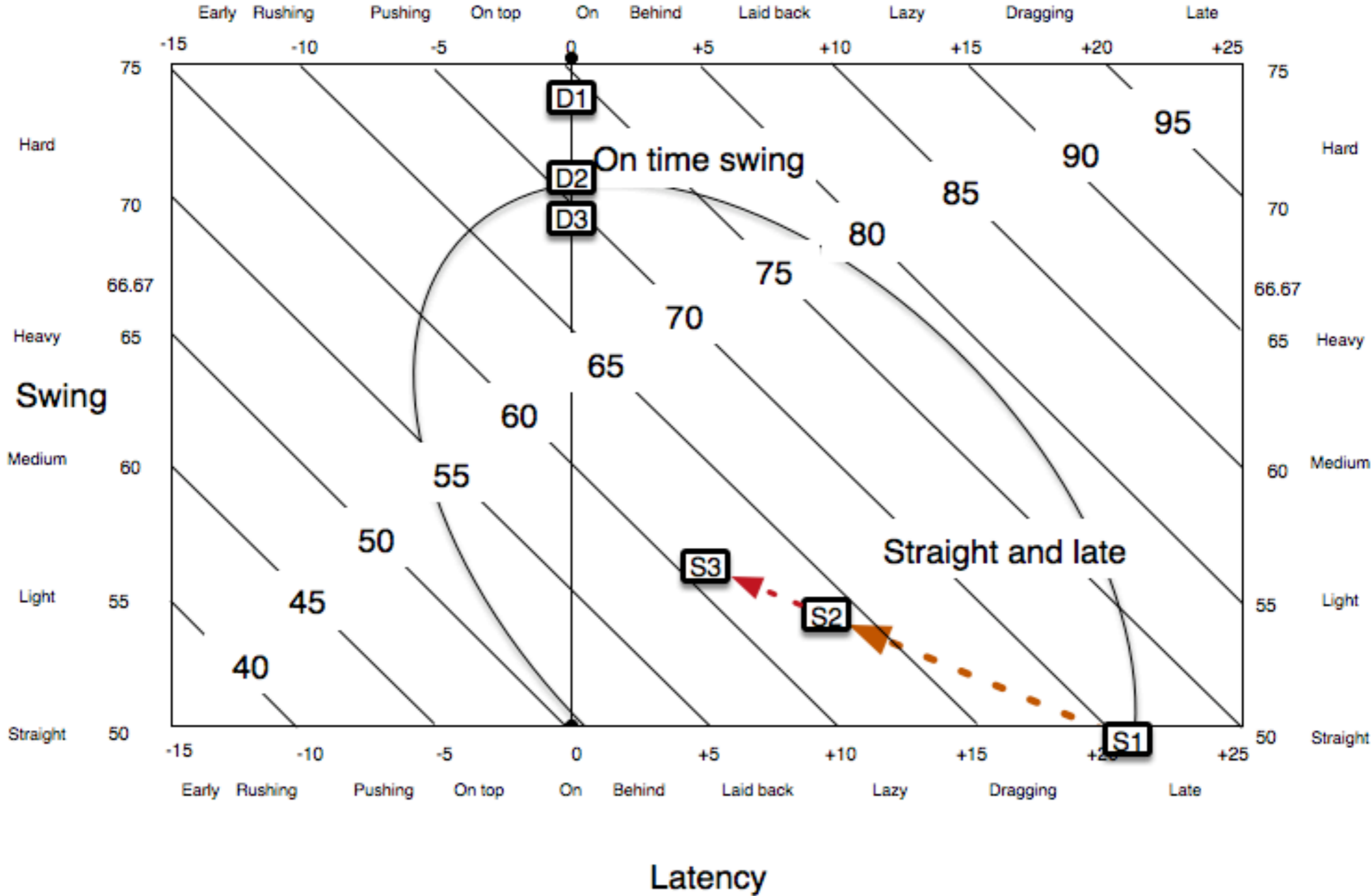
TIME-FEEL CUBE



VILLAGE BLUES (1961)



TRANE'S SLO BLUES (1961)



FROM ANALYSIS TO PRACTICE

I use the term "rotary perception." If you get a mental picture of the beat existing within a circle you're more free to improvise. People used to think the notes had to fall on the centre of the beats in the bar at intervals like a metronome, with three or four men in the rhythm section accenting the same pulse. That's like parade music or dance music. But imagine a circle surrounding each beat- each guy can play his notes anywhere in that circle and it gives him a feeling he has more space. The notes fall anywhere inside the circle but the original feeling for the beat doesn't change.

Mingus (1995), 124-125

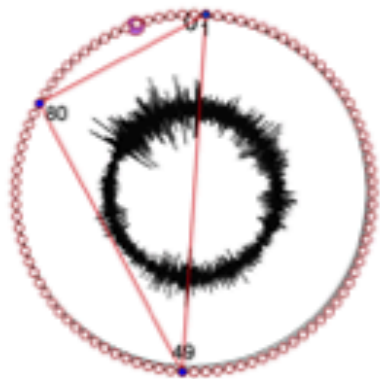
METRONOME IN DISGUISE

Mingus - a feedback metronome

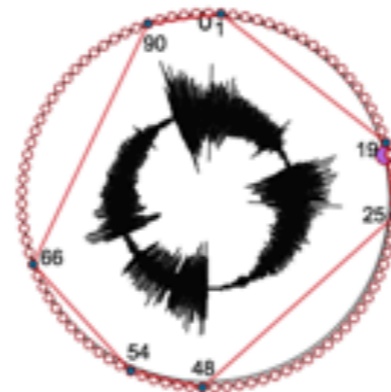
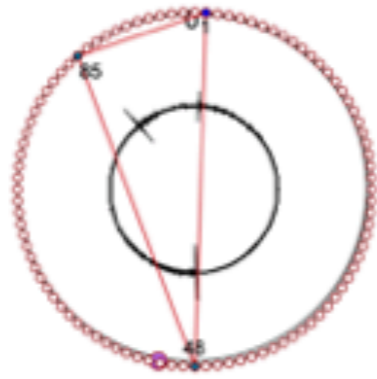
Conception: Milton Mermikides and Carl Faia
Programming: Carl Faia and Milton Mermikides

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cf@carlfaia.com

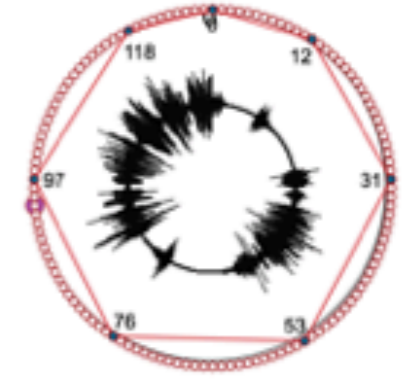
SOME FURTHER OUTCOMES



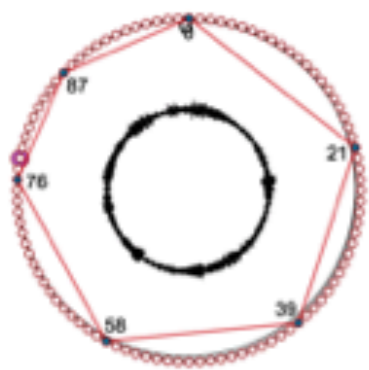
Swing values extracted from ride patterns



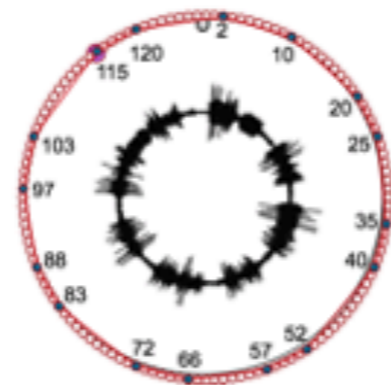
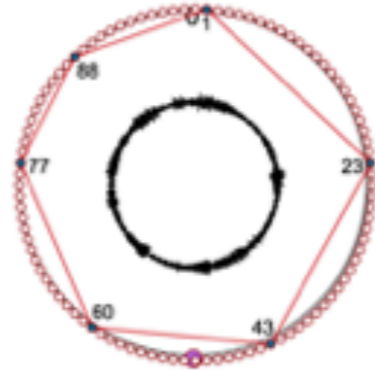
'Loose' rhythmic pattern from *Bitches Brew*.



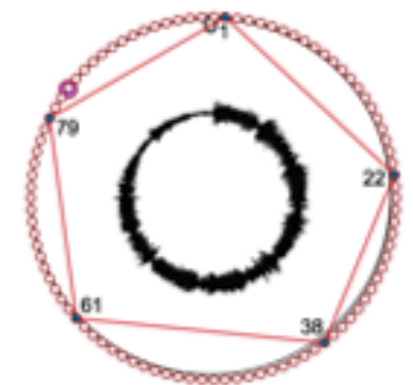
Wynton Kelly's polymeric comping in Miles Davis *Someday my Prince will come*



Elongation of 2nd onset in John Coltrane's *Mr. Knight*

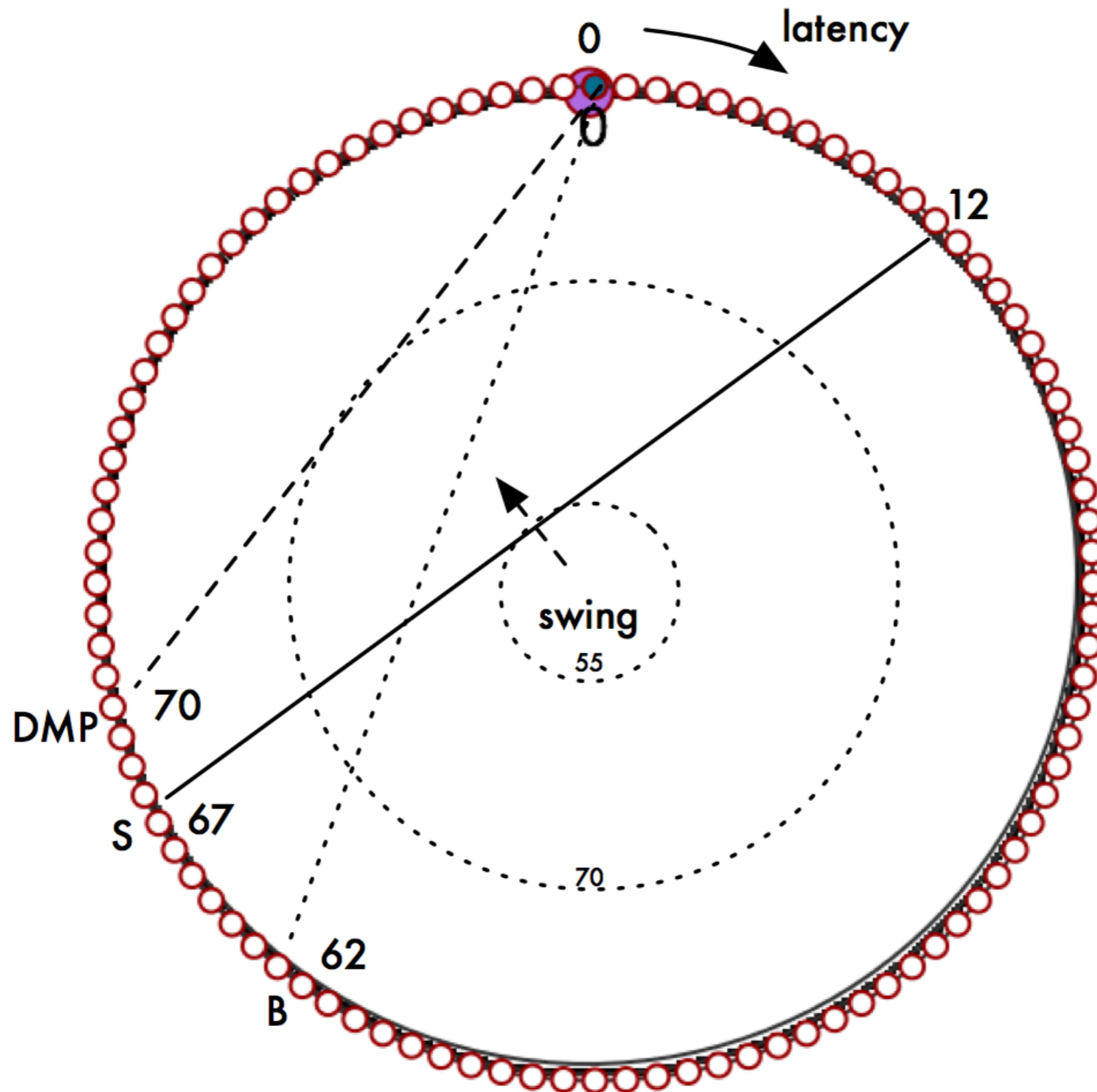


Note length expression in Coltrane's *My Favourite Things*

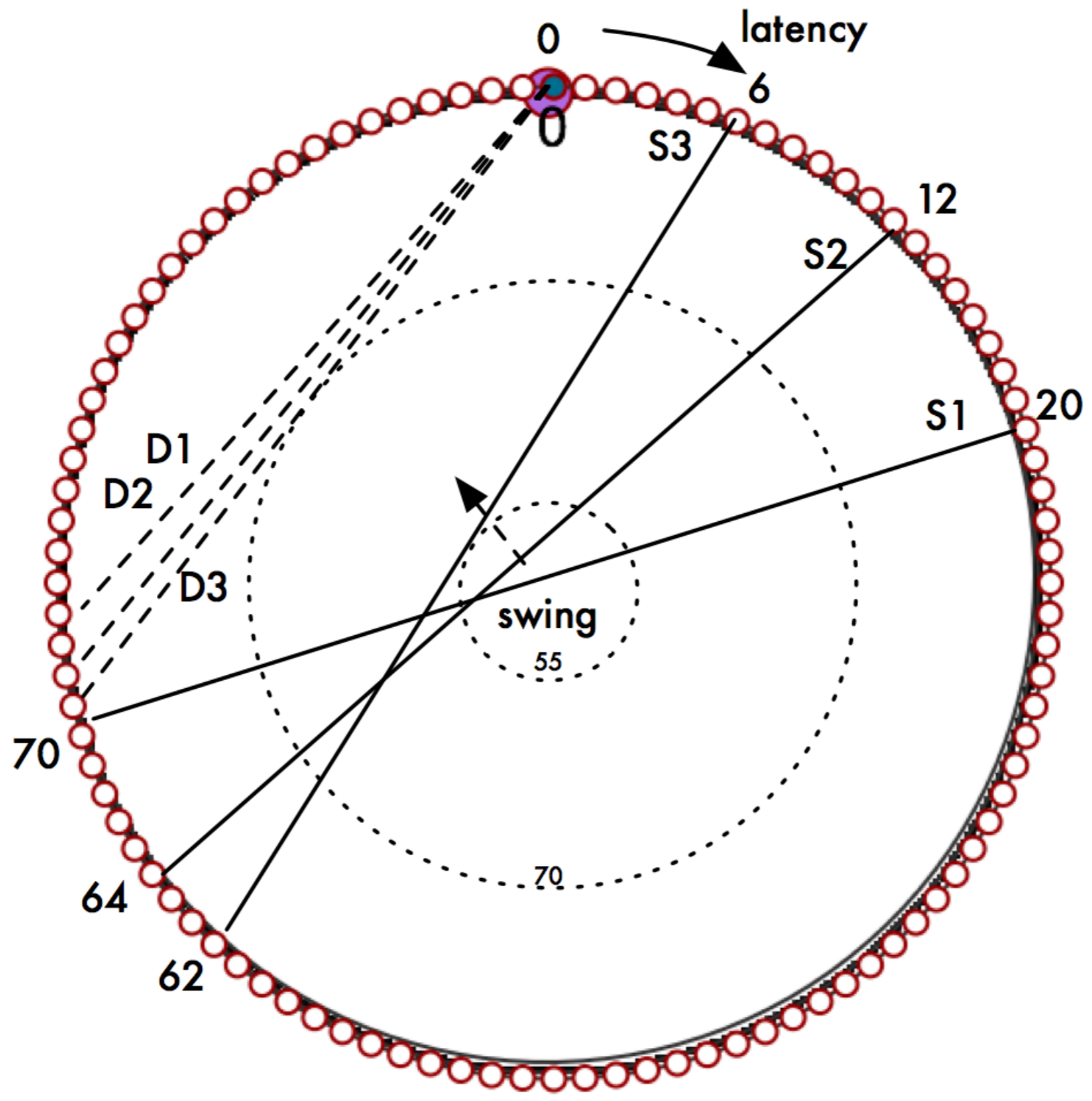


Joao Gilberto's asymmetrical clave

VILLAGE BLUES IN ROTARY PERCEPTION



TRANE'S SLO BLUES IN ROTARY PERCEPTION



SUMMARY

THANKS
(QUESTIONS/COMMENTS)

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