

A NOTE ON READING THE NOTATION

When the last boxes on the far right are closed, this indicates the pattern should be repeated from the beginning *without pause*.

EXAMPLE 1

1	2	∅	1	2	∅	1	2	∅
X		X	X		X		X	X
X			X			X		
1	2	3	4	5				

When the last boxes on the far right are open with an arrow, this indicates that the pattern should be continued into the next group of boxes below without pause. Continue the pattern to the last closed boxes on the far right. Then repeat the pattern from the beginning *without pause*.

EXAMPLE 2

1	2	3	4	5	∅	1	2	3	4	5	∅
X		X		X		X	X		X		X
X			X			X			X		
1	2	3	4	5	6	7	8				

1	2	3	4	5	∅	
X		X		X		X
	X		X		X	
9	10	11				

Grey boxes do not necessarily imply an accent but serve as structural marks in complex patterns.

For counting and feel purposes meters are often written as half-time counts. For example, a meter in 9 is written as 4 1/2, 7 as 3 1/2, 5 as 2 1/2, and so on.

EXAMPLE 3

1	2	3	4	5
X		X		X

1	2	∅
X	X	X

Triplets are counted "One and ah, two and ah" (notated 1 ∅ a, 2 ∅ a etc.)
Quadruplets are counted "One e and ah, two e and ah" (notated 1 e ∅ a, 2 e ∅ a etc.)

EXAMPLE 4

1	∅	a	2	∅	a	3	∅	a	4	∅	a
X			X			X			X		
X				X				X			
1	e	∅	a	2	e	∅	a	3	e	∅	a

SUGGESTIONS FOR USE: BEGINNING AND INTERMEDIATE INSTRUMENTALISTS

Practice whatever it is you are learning in the context of rhythm. Use a metronome or tap your foot in one rhythm while you play in another. Start slowly.

EXAMPLE 1 | Basic 2 against 3 pattern – CD1, track 2

1	2	3	4	5	6	
X			X			Two triplets
X		X		X		Three duplets
1	2	3	4	5	6	

EXERCISE 1 | 2 against 3 applied to the minor scale

Instrument

Metronome

EXAMPLE 2 | Basic 3 against 2 pattern

1	2	3		
X		X	X	
X			X	
1	2			

EXERCISE 2 | 3 against 2 applied to arpeggios in 4ths moving in diminished intervals

Instrument

Metronome

SUGGESTIONS FOR USE: COMPOSERS AND ADVANCED INSTRUMENTALISTS

Apply the rhythms in this book to whatever melodic and harmonic materials you are practicing or using in your compositions. Experiment with a variety of tempos. Below are a few examples.

EXAMPLE 1 | 15 beat cycle: three sets of 5 (2 1/2) against five triplets – CD2, track 38

1	2	e	1	2	e	1	2	e
X		X		X		X		X
X			X		X		X	
1	2	3	4	5				

EXERCISE 1 | Symmetric hexatonic scale applied to the 15 beat cycle

The next note in the pattern would be E. Continuing the pattern from E is the same hexatonic scale as the one starting on C since the symmetric hexatonic scale can only be transposed four times. Each scale thus has three tonics: C – E – G#, C# – F – A, D – F# – A# and D# – G – B.

EXAMPLE 2 | 18 beat pattern: 7 plus 11 (3 1/2 + 5 1/2) against six triplets – CD2, track 12

1	2	3	e	1	2	3	4	5	e
X		X		X	X		X		X
X			X		X		X		X
1	2	3	4	5	6				

EXERCISE 2 | Double diminished pattern applied to the 18 beat pattern (3 1/2 + 5 1/2 against six triplets)

The double diminished or octatonic scale is made by combining two diminished 7th chords a half step apart. It has an alternating half step, whole step configuration. It is transposable three times. Starting on D \flat as well as on D will yield the two other double diminished scales. Starting on E \flat will yield the same scale as the one starting on C.

EXAMPLE 3 | 21 beat cycle: 7 + 7 + 7 (3 1/2 + 3 1/2 + 3 1/2) against seven triplets – CD2, track 44

1	2	3	e	1	2	3	e	1	2	3	e
X	X	X	X	X	X	X	X	X	X	X	X
X		X	X		X		X		X		X
1	2	3		4	5	6		7			

The following nine tone row is made by combining two hexatonic scales 1/2 step apart from one another. Like the hexatonic scale, it is also only transposable four times. The intervallic pattern is whole step – half step – half step then repeated, whole, half, half, etc.

EXERCISE 3 | Nine tone row applied to the 21 beat cycle

SUGGESTIONS FOR CLASSROOM USE

Rhythm can be taught to children of any age group. Start slow and use body movements – walking in place or in a circle. Students can clap or sing some of the seemingly complex rhythms in this book if they are walking on the “other” side (often triplets) of the rhythm. They can also pat the patterns on their knees.

Pitches can be assigned to the ‘x’ in the boxes, with vowel sounds such as: *ooh*, *ee*, *aah*, *aay*. Musical instruments can be used to make the sound where there is an ‘x’ in the box.

Start with the fundamental polyrhythm of 3 against 2 (CD1, track 2):

1	2	3	4	5	6
X		X		X	
X			X		
1	2	3	4	5	6

EXERCISE 1 | Divide the class into two groups. Have each group clap the accented pulses. Stop and start, vary tempo and dynamics

1	2	3	4	5	6	
X		X		X		Group 1
X			X			Group 2
1	2	3	4	5	6	

Movement can be added whereby the children can clap or sing in 3 and walk in 2:

1	2	3				
X		X		X		Handclaps
L			R			Walking
1		2				

Vowel sounds can now be added to the movement and handclaps:

Group 1

ooh ee ee

Group 2

aay aay

EXERCISE 2 | Using vowel sounds with a 4 against 3 pattern (aay on G, ee on D) – CD1, track 16

1	e	a	2	e	a	3	e	a	4	e	a
aay			aay			aay			aay		
ee			ee			ee			ee		
1	e	e	a	2	e	e	a	3	e	e	a

EXERCISE 3 | Intermediate Classroom Application

12/8 pattern – CD2, track 16

1	2	3	4	5	6	7	8	9	10	11	12	
X		X		X	X		X		X		X	Ewe bell pattern
X		X		X		X		X		X		6 duplets
X			X			X			X			4 triplets
X				X				X				3 quadruplets
X						X						2 sextuplets

Start by teaching everyone the Ewe (pronounced “eh-vey”) bell pattern. Then divide the class into 2 groups. While one group claps the Ewe bell pattern, have the other group clap the 6 duplets. When they are confident with that, have them switch to the 4 triplets then to 3 quadruplets and then to 2 sextuplets, all while the first group is staying constant on the bell pattern. When the students become more confident split them into more groups until all 5 parts are being played simultaneously. Use percussion instruments. Have them walk in place on the 2 sextuplets while playing percussion on the other parts. Start very slow. Try different tempos. Try stopping and starting on cue.

EXERCISE 4 | Advanced Classroom Application

15 beat cycle: Five triplets against three sets of 5 (2 1/2) – CD2, track 38

1			2			3			4			5		
X			X			X			X			X		
X		X			X		X			X		X		
1		2		e	1		2		e	1		2		e

Divide the class into two groups. Have one group sing and clap the five groups of 3. Have the other group sing the held notes of three groups of 5. Add percussion instruments. Try different tempos. Try stopping and starting on cue.

Pitches applied to the 15 beat cycle:

1	2	3	4	5										
D	G	E	D	G	E	D	G	E	D	G	E	D	G	A
D (held)			G (held)			A (held)								
1			2			3								

1 2 3 4 5

aay ee ah aay ee ah aay ee ah aay ee ah aay ee oh

1 2 3

aay ee oh

Singing and handclaps together (here the "x"-noteheads denote half notes):

Group 1

hand claps 1 2 3 4 5

singing aay ee ah aay ee ah aay ee ah aay ee ah aay ee oh

Group 2

singing aay ee oh

hand claps 1 2 3

Three & Two



Fundamental Cycles

2 PLUS 3

1	2	1	2	3
X		X		
1	2	3	4	5

3 PLUS 2

1	2	3	1	2
X			X	
1	2	3	4	5

Fundamental Polyrhythm

3 AGAINST 2

(3 duplets against 2 triplets)

1	2	3			
X		X		X	
X			X		
1		2			

counted:

1	2	3	4	5	6
X		X		X	
X			X		

1st Variation:

1	2	3	4	5	6
X		X		X	
X	X		X		

2nd Variation:

1	2	3	4	5	6
X		X		X	
X	X		X	X	

3rd Variation:

1	2	3	4	5	6
X		X	X		X
X	X			X	

4th Variation:

H	L		H		
	L	H		L	H

Starting one pulse earlier:

L		H			H
L	H		L	H	

Top row displaced by three pulses:

H			H	L	
	L	H		L	H

Track 2

Tracks
3 & 4

Tracks
5 & 6

Tracks
7 & 8

Five, Ten and Twenty Beat Cycles

Caturhaka Decitala of Sharngadeva (India)

1	2	3	4	5
X		X		X

Counted as 2 1/2:

1	2	ϵ
X	X	X



Pajdushko (Balkan) and also *Caccari* (Decitala)

1	2	3	4	5
X		X		

Another way to count:

1	2	1	2	3
X		X		

Counted backwards (3 + 2):

1	2	3	1	2
X			X	

Kankala Vishama Decitala of Sharngadeva (India)

1	2	3	4	5
X	X		X	

Berber (Morocco)

1	2	3	4	5
Tek	Dum	Tek	Tek	Dum

For two hands:

H		H	H	
	L			L

Variation:

	H		H	H
L		L	L	

Track 21



Twenty Beat Pattern

9 plus 11 (4 1/2 plus 5 1/2)

1	2	3	4	⌘	1	2	3	4	5	⌘
X		X		X	X	X	X	X	X	X

With ten duplets:

1	2	3	4	⌘	1	2	3	4	5	⌘
X		X		X	X	X	X	X	X	X
X		X		X		X		X		X
1	2	3	4	5	6	7	8	9	10	

Track 38

With five quadruplets:

1	2	3	4	⌘	1	2	3	4	5	⌘
X		X		X	X	X	X	X	X	X
X			X		X			X		
1	2	3	4	5	6	7	8	9	10	

Variation:

1	2	3	4	⌘	1	2	3	4	5	⌘
L		H		H	L		H		H	H
L			H		L			L		H
1	2	3	4	5	6	7	8	9	10	

Track 39

Variation with a Samba type feel:

1	2	3	4	⌘	1	2	3	4	5	⌘
L		H		H	H		H		H	H
L			L	L		L	L		L	L
1	2	3	4	5	6	7	8	9	10	

Twenty Beat Pattern

11 plus 9 (5 1/2 + 4 1/2)

Track 40

1	2	3	4	5	⌘	1	2	3	4	⌘
X		X		X	X	X	X	X	X	X



Dawr Hindi or Neam Nokhat (Middle East)

1	2	3	4	5	6	7
Dum	Tek	Ka	Dum		Tek	

Variation:

1	2	3	4	5	6	7
Dum	Tek	Ka	Dum		Dum	

Displaced by six pulses:

1	2	3	4	5	6	7
Tek	Ka	Dum		Tek		Dum

Displaced by two pulses:

1	2	3	4	5	6	7
Tek		Dum	Tek	Ka	Dum	

Five plus Nine

2 1/2 plus 4 1/2 against seven duplets:

1	2	e	1	2	3	4	e
X		X	X	X	X	X	X
X		X		X	X	X	
1	2	3	4	5	6	7	

First Variation:

H		L	L	L	L	L	L
H		L	L	L	L	L	L

Second Variation:

L		H	H	L	H	L	H	H
L		H	H	L	H	L	H	

MODULATION OF PULSE

4 1/2 duplets against 3 triplets:

1		2		3		4	e	a
X		X		X		X		X
X			X			X		
1		2		3				



Track 7

4 1/2 against 3 triplets with the triplets modulating to quadruplets:

X		X		X		X		X	4 1/2 duplets			
X			X			X			3 triplets			
1	e	e	a	2	e	e	a	3	e	e	a	3 quadruplets

4 1/2 against 3 triplets with the triplets modulating to quadruplets and adding Ewe bell pattern (page 43):

X		X		X		X		X	4 1/2 duplets			
X			X			X			3 triplets			
1	e	e	a	2	e	e	a	3	e	e	a	3 quadruplets
X		X		X	X		X		X		X	Ewe bell

4 1/2 against 3 triplets with the triplets modulating to quadruplets and adding Ewe bell pattern moving against 4 triplets:

X		X		X		X		X	4 1/2 duplets			
X			X			X			3 triplets			
1	e	e	a	2	e	e	a	3	e	e	a	3 quadruplets
L		H		H	H		H		H		H	Ewe bell
X		X		X		X		X		X		4 triplets

Fifteen Beat Cycles

3 against 5

3 against 5 (three quintuplets against five triplets):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
X					X					X				
X			X			X			X			X		

3 against 5 counted as five sets of triplets:

1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
X					X					X				
X			X			X			X			X		

5 against 3 counted as three sets of quintuplets:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
X			X			X			X			X		
X					X					X				

5 against 3

1			2			3			4			5		
X			X			X			X			X		
X					X					X				
1					2					3				

5 against 3 counted in five:

1			2		a	3			4	e		5		
X			X			X			X			X		
X					X					X				



Track 36

Twenty-One Beat Cycles



Track 44

Twenty-one duplets (7 + 7 + 7) against seven triplets:

1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
X		X		X		X	X		X		X		X	X		X		X		X
X			X			X			X			X		X			X			
1		2		3		4		5		6		7		6		7				

7 + 7 + 7 with the count (3 1/2 + 3 1/2 + 3 1/2) against seven triplets:

Track 45

1	2	3	e	1	2	3	e	1	2	3	e	
X		X		X		X		X		X		X
X			X			X			X			X
1		2		3		4		5		6		7

Variation:

X		X		X		X		X		X		X		X		X
H		L	H		L	H		L	H		L	H		L	H	L

Three sets of a Berber seven (page 20) against seven triplets:

Track 46

1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Dum		Tek		Dum		Tek	Dum		Tek		Dum		Tek	Dum		Tek		Dum		Tek
X			X			X			X			X		X			X			
1		2		3		4		5		6		7		6		7				

Variation: 7 + 7 + 7 (3 1/2 + 3 1/2 + 3 1/2) against seven triplets on the 2nd beat:

X		X		X		X		X		X		X		X		X
	X			X			X			X			X			X

Thirty-Three Beat Cycles



Track 60

Three sets of 11 (5 1/2) against eleven triplets:

1	2	3	4	5	e	1	2	3	4	5	e				
X		X		X		X	X		X		X		X		X
X			X			X			X			X			X
1	2	3	4	5		6	7	8							

1	2	3	4	5	e			
X		X		X		X		X
	X		X			X		
	9	10	11					

Track 61

9 plus 11 plus 13 (4 1/2 + 5 1/2 + 6 1/2) against eleven triplets:

1	2	3	4	e	1	2	3	4	5	e	
X		X		X	X		X		X		X
X		X		X	X		X		X		X

1	2	3	4	5	6	e		
X		X		X		X		X
	X		X		X		X	

Track 62

Variation with the downbeats of the elevens accented:

1	2	3	4	e	1	2	3	4	5	e
L		H		H	H	L		H		H
X		X		X	X		X		X	X

1	2	3	4	5	6	e	
H	L		H		H		H
	X		X		X		X

Part III – Red (in 21)

Okonkolo Batajon

R			O			O			O			O			O			O
L	S			S			S			S			S			S		
<i>1st Itotele Batajon</i>																		
	1	2	3	ε	1	2	3	ε	1	2	3	ε	1	2	3	ε		
R	M		O		M		M	O		M		M	M		M		O	M
L		S			S			S			S			S			S	
<i>2nd Itotele Batajon</i>																		
	1	2	3	ε	1	2	3	ε	1	2	3	ε	1	2	3	ε		
R	O	O	M		M		M	O		M		M	O		M		M	M
L	S			S			S			S			S			S		
<i>Iya Batajon</i>																		
	1	2	3	ε	1	2	3	ε	1	2	3	ε	1	2	3	ε		
R	B		O										B		O		O	
L								S		S								S

CONVERSATION (CALLED BY THE IYA)

Okonkolo Batajon

R			O			O			O			O			O			O
L	S			S			S			S			S			S		
<i>1st Itotele Batajon</i>																		
	1	2	3	ε	1	2	3	ε	1	2	3	ε	1	2	3	ε		
R	M		M		M		M	M		M		M	M		M		M	M
L		S			S			S			S			S			S	
<i>2nd Itotele Batajon</i>																		
	1	2	3	ε	1	2	3	ε	1	2	3	ε	1	2	3	ε		
R	M	M	M		M		M	M		M		M	M		M		M	M
L	S			S			S			S			S			S		
<i>Iya Batajon</i>																		
	1	2	3	ε	1	2	3	ε	1	2	3	ε	1	2	3	ε		
R	M								M							M		
L	S								S						S			