



Fig. 1: set 6-19 (013478) with added note

Fig. 2: theme from Raaf using notes from Fig. 1



Fig. 3. transpositions of the main cell (a) from Raaf

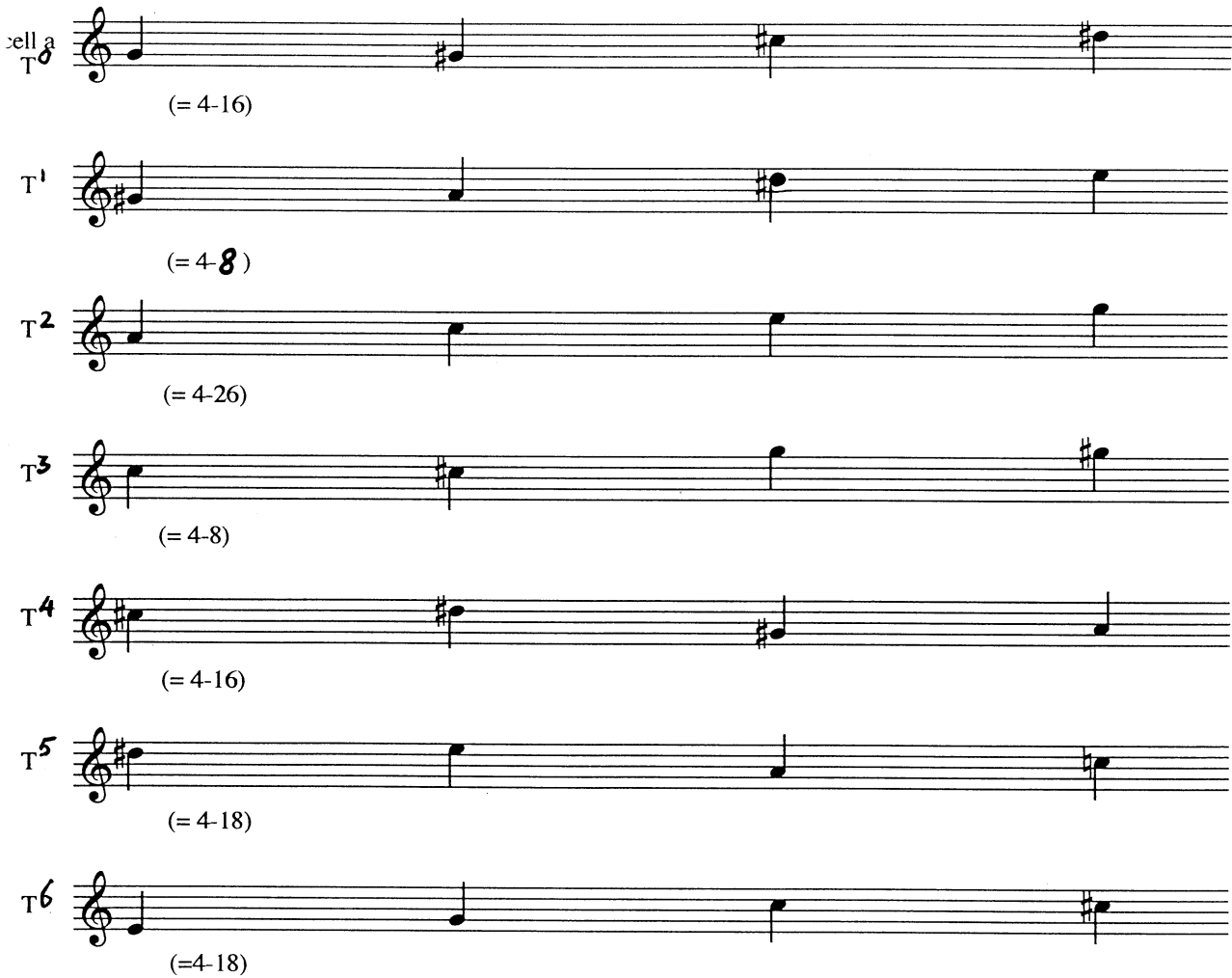


Fig. 4: Raaf- theme in *khanda* and in T10



Fig. 5

34

Gliss.

5/4 tr 5 5 5

36

f 5 5 5

37

v

38

7 7 7 7 7 7 7

39

f *mf* *mp* *f* gliss. 5 5 5

41

mf 5 5 5 5 5 6

Fig. 6: "Tree of gati-bhedam" m. 34 t/m 41

bar number	gati (matra's per beat)	jathi (system. accent)	number of beats	cycle	set type and position Tala Sam	Anga Sam
34-35	khanda (5) (vanaf de 2e tel)	4	8	I	6-5 pp (i) 8 ¹	6-44 pp (i) 4
36	chatusra (4)	geen	6 1/2	II	6-5 pp (i) 0	6-44 pp (i) 8
36-37	ch. 2nd speed	7	3 1/2			
38	misra (7)	geen	5	III	6-5 pp (i) 4	6-44 pp (i) 0
38-39	misra	5	5			
40	kh. kh.	geen 3	3 3	IV	6-5 pp (i) 6	6-44 pp (i) 2
40-41	kh. (2nd speed)	4	4			

1) "pp" stands for *prime position* and gives the position of the first note of the set in relation to C; (i) means that the set unfolds in inversion, for example in this case as (8 7 6 5 2 1); see also the aforementioned article on P-technique

Fig. 7: transformation 6-5 > 6-19 > 6-44

transformation of 2-5
with 6-19 resulting

6-5 (012367) segmentatie 4-14/ 2-5 p1 transition to the complement 6-44

Fig. 8:
Tirmana

44 *tr* *mf*

46 *f* *mf* *f* *5.2* *5.3* *5* *5*

48 *5* *5*

50 *tr* *tr* *tr* *tr* *5*

52 *5* *tr* *5.4* *10.8*

53 *10.8* *10.8* *10.8* *5* *5* *5*

A $\text{♩} = 52$ $\text{♩} = \text{♩} (\text{♩} = 41,6)$

Xylophone

Vibraphone

Percussion
small crash cymbal (short)
f *mf*
f *low tom* *poco meno f*

$\text{♩} = 52$ $\text{♩} = \text{♩} (\text{♩} = 41,6)$

I

Violin¹ II

III

Viola

Violoncello *div.*

Double Bass

Fig. 9

$\text{♩} = 52$
 $\text{♩} = 52$
 (5+4+4)

71

Xyl. *f*

Vibr. *f* *mf* *f*

Perc. *f*

$\text{♩} = 52$
 (5+4+4)

I *ff*

VI. II *ff*

III *ff* *arco*

Vla. *ff*

Vic. *ff*

DB. *ff*

Fig. 10

Fig. 11: *jathi bhedom* sequens bar 71 with note lengths

The image shows a musical score for a *jathi bhedom* sequens bar. It consists of two staves: a treble clef staff on top and a bass clef staff on the bottom. The key signature is one sharp (F#). The notation includes various note values and rests, with some notes beamed together. Below the bass staff, there are numerical values representing note lengths: 3, 4, 6, 4, 5, 2, 5, 6, 3, 7, 5, 2. The notes in the treble staff are mostly chords and some single notes, while the bass staff contains more complex rhythmic patterns with many beamed notes.

Fig. 12: Rondo m. 78-81

(4+5)

I
VI.
II
Vla.
Vlc.
DB.

78 *mf*

pizz.

(4+5)

I
VI.
II
Vla.
Vlc.
DB.

79 *f*

80 *f*

I
VI.
II
Vla.
Vlc.
DB.

80 *f*

81 *f*

Fig. 13: *jathi bhedam* sequence in T2 with *sruti bhedams* and lengths such as used in bar 80

The musical notation for Fig. 13 consists of two staves, Treble and Bass clefs, in a key signature of one sharp (F#). The sequence is a *jathi bhedam* with *sruti bhedams* and lengths. The notes are as follows:

Staff	1	2	3	4	5	6	7	8	9	10	11	12
Treble	F#4	F#4	F#4	F#4	F#4	F#4	F#4	F#4	F#4	F#4	F#4	F#4
Bass	F#2	F#2	F#2	F#2	F#2	F#2	F#2	F#2	F#2	F#2	F#2	F#2

The lengths for each note are: 5, 7, 3, 6, 5, 2, 5, 4, 6, 4, 3. The notes are grouped into pairs (1-2, 3-4, 5-6, 7-8, 9-10, 11-12) with a *sruti bhedam* (b) indicated between the notes of each pair.

Fig. 14: the 6 chords of the tirmana (*krama* form, bar 88 5th beat -bar 94)

The musical notation for Fig. 14 consists of two staves, Treble and Bass clefs, in a key signature of one sharp (F#). The sequence shows six chords of the *tirmana* (*krama* form) over six beats:

Beat	1	2	3	4	5	6
Treble	F#4	F#4	F#4	F#4	F#4	F#4
Bass	F#2	F#2	F#2	F#2	F#2	F#2

The chords are: 1. F#4-F#2, 2. F#4-F#2, 3. F#4-F#2, 4. F#4-F#2, 5. F#4-F#2, 6. F#4-F#2. The notes are grouped into pairs (1-2, 3-4, 5-6) with a *sruti bhedam* (b) indicated between the notes of each pair.

Fig. 15: fragment of the tirmana

89

(5+4)

Xyl.

Vibr.

Mar. *mf* marimba

I

VI. *mf*

II

Vla.

Vlc. *pizz.* *arco*

DB.

Fig. 16: Rondo bar 4 in "Karnatic notation"

A musical staff in 5/4 time signature. The melody consists of several notes with slurs and accents. A bracket above the first four notes is labeled "4:5". Above the first two notes is a bracket labeled "5". Above the next two notes is a bracket labeled "5". Above the last two notes is a bracket labeled "5". There are also slurs under the first two notes and the last two notes.

Fig. 17: bar 71, *jathi bhedom* sequence with "Karnatic beaming"

A musical staff in 13/4 time signature, labeled "vl. 1". The melody is marked with a forte dynamic *ff*. It features a sequence of notes with various beaming patterns, including slurs and accents, characteristic of "Karnatic beaming".

Fig. 18: numbering of pitches in set theory

A musical staff showing the twelve pitches of an octave, numbered from 0 to 11. The notes are: 0 (C), 1 (C#), 2 (D), 3 (D#), 4 (E), 5 (F), 6 (F#), 7 (G), 8 (G#), 9 (A), 10 (A#), 11 (B).