



Academic Article

Formal Analysis of “*Luk Lor -Luk Khat*” in Thai Classical Music: A Case Study of Phleng Khamen Rajaburi

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Abstract

This paper investigates the overall formal and internal design of *luk lor-luk khat*, a type of composition using imitative and contradictory musical techniques. The author collected documents from both Thai and Western sources, including the three main books on Thai classical music: Thai Classical Music Book 1, Book 2, and Book 3 by Montri Tramōd and others. They contain a large Thai classical repertoire, especially *phleng sam chan* (the composition of the third variation) with *luk lor-luk khat* style, which refers to a composition using imitative and contradictory musical techniques. The author selected *Khamen Rajaburi*, Third Variation, Section 1, for analysis because it contains many *luk lor-luk khat* techniques.

The results showed that *Khamen Rajaburi* was composed according to an overall design similar to the rondo form in Western classical music, whereas its internal form, especially the *luk lor-luk khat* session (*Luk lor-luk khat* is a musical pattern in which two groups of instruments interact while playing a particular musical phrase: *luk lor* referring to the action of the chasing group of instruments which imitate the exact musical phrase played by the fleeing group, whereas *luk khat* means the chasing group contradicts the musical phrase played by the fleeing group.), is akin to fugue. Fugue is an imitative technique using two voices represented by two groups of instruments, of higher and lower pitch, imitating a longer and a shorter passage. Finally, the two groups of instruments catch up with each other, as the full paper will show.

Keywords: formal analysis, *luk lor-luk khat*, Thai classical piece, formal design

Introduction

Luk lor-luk khat is a musical technique that is part of the Thai classical music tradition. Its main feature is its brilliant imitative technique (*luk lor*), similar to the Western fugue, a form developed in the baroque period. *Luk lor-luk khat* describes an imitative and contradictory musical technique which uses a theme, a compact melodic passage, or a melodic figure, in which two groups of instruments, one of higher and one of lower pitch, follow a “flee and chase” melodic pattern. Normally, the higher pitch instruments start with a melodic passage of a certain length, which is then continuously shortened by half until the melodic passage has become a one-half beat musical phrase, allowing the chasing group to catch up with the fleeing group. The two groups finally join together in one melodic pattern, indicating the end of the *luk lor-luk khat* session.

Each music culture has its own way of creating music, and the formal musical designs of each culture are unique. Here is a description of the formal designs of Western music by a Western scholar:



Form is the general principles and schemes which govern the structure-at-large of a composition. In other words, a musical form is the plan of construction comparable to an architect's ground plan, which exists in the mind of the composer. The most important, at least, the most clearly defined forms may be classified as follows:

I. Single Forms Repetition Forms: 1) a a' a" . . . Variation form; 2) a b (simple binary form) or l: a :||: b :|| (rounded 'Binary form; 3) ||: a :||: b a :|| Rounded binary form; 4) B: a: B b a Sonata-form; 5) aba Ternary form; 6) abaca Five-part form (also called *Rondo form); and 7) a b a c a b a *Rondo form (Rondo sonata form).

II. Compound Forms (consisting of various "movements") A. Instrumental: *sonata; *concerto; suite; toccata B. Vocal: *cantata; *mass; *passion; oratorio; classification or which represent borderline cases. For instance, the fugue which is classified above as a continuation form might also be considered in a way a repetition form, owing to the characteristic alternation of expositions and episodes.

Imitation, the restatement in close succession of a melody (subject, motive) in different parts of a contrapuntal texture. This device is most consistently employed in the *canon, in which the full length of a voice-part is imitated in another (canonic imitation). Applied to subjects, it forms an essential feature of the



*fugue (fugal imitation) as well as of the 16th century motet and of the various pre-fugal forms, the *ricercare, *canzone, *fantasia, *capriccio. While in a fugue, the imitation is normally restricted to one subject, there are usually a variety of such subjects in the earlier forms.” (Apel, 1950, P. 367)

A fugue is a musical composition in which the voices come in one after another. The most important element of the fugue is the subject, a short, compact melody announced at the beginning of the piece. It is immediately taken up by the second voice in a certain fixed-pitch relationship to the first, which has itself since taken up a contrasting melody known as the counter-subject. Fugues may have three, four, or five voices, each entering and taking up the subject at a given number of tones higher or lower than the previous entry. This process is known as the “Exposition” characterised by a sense of cumulative growth because each voice completes the subject and then weaves an independent melody of its own. The end of the exposition thus leaves us with three, four, or five voices blended perfectly together (Siegmeister, 1943).

Mode in Thai Classical Music

Mode Name	Tonic
1) Thang Kruat or Thang Nok Mode	C
2) Thang Klang Haep Mode	D
3) Thang Java Mode	E
4) Thang Phiang O Lang Mode	F
5) Thang Nai Mode	G
6) Thang Klang Mode	A
7) Thang Phiang O Bon Mode	B flat

Figure 1: Mode in Thai Classical Music (Tramōd, 1964, pp. 18-19)

Phleng luk lor-luk khat is a question-and-answer style of the imitative and contradictory musical technique used in the particular composition. According to Morton (1976), “the composer selected one important pitch of the main part of the section using the question-and-answer technique, constantly diminishes the length of a motivic phrase, with each phrase ending with this emphasised pitch. If a fifth polarity is used for contrast, alternate phrases might end with the pitch a fifth above the principal pitch. The initial phrase is usually four measures long: a two-measure phrase played by



the *ranat ek*, which starts the developmental section, and the ensemble's answer using the same phrase. If the repetition is exact, it is called "*luk lor*," meaning "like a wheel" (p. 212).

On the other hand, if the "answer" differs from the proceeding motive, it is called *luk khat*, meaning "to oppose." These are followed by two or four-measure phrases, depending on the format, played first by the *ranat ek* and echoed by the ensemble. The phrases are then diminished, becoming shorter by half until the short closing motivic fragments overlap in a stretto. Finally, two pitches are reiterated in what might be called an elongated trill, ending on the principal exploited pitch itself (Morton, 1976).

Siegmester's description of fugue as a piece of music in which the voices come in one after another reminded the author of the *luk lor-luk khat* phenomenon in Thai music and inspiring this article, "A Formal Analysis of *Luk Lor-Luk Khat* in Thai Classical Music: A Case Study of Phleng Khamen Rajaburi".

Method of Study

The author collected and examined documents on *luk lor-luk khat* composition, transcriptions, video files, and programme notes.

Scope of the Study

The author collected and examined many *luk lor-luk khat* compositions, focusing on the instrumental sections. Some compositions are referred to as *phleng thayoi* such as *Thayoi Nok*, *Thayoi Nai*, *Thayoi Diao*, *Thayoi Khamen*, *Thayoi Lao*, and *Thayoi Yuan*, but others, including *Bai Khlang*, *Phama Ha Thon*, *Ok Tha-le*, *Home Rong Khluen Krathop Fang*, *Khaek Lopburi*, *Thorani Ronghai*, and *Khamen Rajaburi* do not refer to the word *phleng thayoi* in the title, but they still have the *luk lor-luk khat* techniques.

The titles of some compositions may include a place name or location of the composition, such as *Khamen Rajaburi*, meaning a Cambodian in Rajaburi province. Some compositions may have titles that specify a foreign style such as *Thayoi Lao* and *Thayoi Khamen*.

Process of the Study

Transcriptions of eight *luk lor-luk khat* compositions were collected and examined, including *Bai Khlang*, *Khaek Lopburi*, *Khamen Rajaburi*, *Phama Ha Thon*, *Thayoi Khamen*, and *Thayoi Nok*. *Khamen Rajaburi* was chosen for analysis because it has many typical features of the *luk lor-luk khat* technique. The study was limited to the first section of the *sam chan*, the Third Variation of its instrumental section.



Objectives of the Study

The objectives of the article are as follows: 1) to analyse the formal design of the Third Variation of *Khamen Rajaburi*, section 1, and 2) to analyse the internal formal design of the introduction sessions and the *luk lor-luk khat* sessions of *Khamen Rajaburi*, section 1.

Results of the Study

The following is an analysis of the formal design of the first section of the composition. (Note: *Mode*, in this context, means simple pentatonic mode, tonic or keynote of the melodic motives.)

Introduction Section 1, in D mode, measures 1-13 = Part A

Luk lor/luk khat Session 1, in D mode, measures 13-33 = Part B

Introduction Section 2, in D mode, measures 33-53 = Part A

Luk lor/luk khat Session 2, in G mode, measures 53-89 = Part C

Introduction Section 3, in G mode, measures 89-105 = Part A

Luk lor/luk khat Session 3, in G mode, measures 105-125 = Part D

Introduction Section 4, in G mode, measures 125-145 = Part A

Luk lor/luk khat Session 4, in D mode, measures 145-157 = E

Introduction Section 5, in D mode, measures 157-165 = A

Luk lor/luk khat Session 5, in D mode, 165-185 = Part F

Introduction Section 6, in D and G mode, mode, measures 185-209 = Part A

Luk lor/luk khat Session 6, in G mode, measures 209-253 = Part G

Introduction Section 7, in G mode, measures 253-261 = Part A

Luk lor/luk khat Session 7, in G mode, measures 261-281 = Part H

Introduction 8, in G, D, and A mode, measures 281-313 + I

Introduction Sections:

Introduction Session 1 in D mode, in measures 1-12 = Part A

- 1.1) Only eight measures of the main melody are presented, in D mode, in measures 1-8.
- 1.2) The melodic passage establishes the mode of *luk lor/luk khat* session, in D, in measures 5-9.
- 1.3) *Luk Yon* announces passage for the next *luk lor/luk khat* session, in D mode, in measures 9-12:



1



Luk Yon, announces passage for the *luk lor/luk khat* session, in D mode, in measures 9-12:

9



Introduction Session 2, in D mode, measures 33-53 = Part A

2.1) The main melody is presented and repeated, in D mode, in measures 33-53.

2.2) *Luk Yon*, a melodic passage played by the whole ensemble, in D mode, prepares for the new *luk lor/luk khat* session, in measures 33-48.

33



37



41

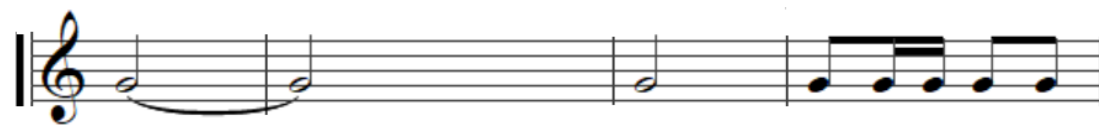


45



Luk Yon announcing the passage to the new *luk lor/luk khat* session, in G mode, in measures 49-53:

49





Introduction Session 3, in G mode, measures 89–105 = Part A

3.1) The main melody is presented in G mode, in measures 89–101.

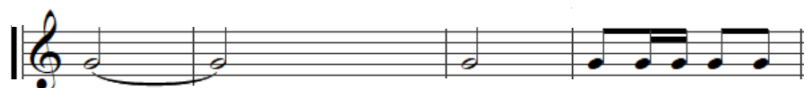
3.2) *Luk Yon*, a melodic passage played by the whole ensemble, sets the mode for the new *luk lor/luk khat* session in G mode, and prepares for the new *luk lor/luk khat* session.

89



Luk Yon, announces passage for new *luk lor/luk khat* session, in G mode, in measures 101–105:

101



Introduction Session 4, in G mode, in measures 121–145 = Part A

4.1) The main melody is presented in G mode in measures 125–145.

4.2) A transitional passage leads to D mode in measures 137–141.

4.2) *Luk Yon*, the melodic pattern for the whole ensemble, establishes the mode of the new *luk lor/luk khat* session, in measures 141–145.

125



The transitional passage leading to D mode, measures 137–141:

137





Luk Yon, announcing passage for a new *luk lor/luk khat* session, in D mode, in measures 141–145:

141



Introduction Session 5, in D mode, measures 157–165 = Part A

5.1) Only the main melody is presented, in D mode, in measures 153–165:

157



161



Introduction Session 6, in D and G mode, measures 181–209 = Part A

6.1) The main melody is presented and repeated, in D and leading to G mode, in measures 181–205.

6.2) The transitional passage moves from D to G mode in measures 101–205.

6.3) *Luk Yon*, the melodic pattern played by the whole ensemble, establishes G mode for a new *luk lor/luk khat* session, in measures 205–209.

181



189



The transitional passage leading to G mode, in measures 197–205:

197



201





Luk Yon, announces passage for the new *luk lor/luk khat* session, in G mode, in measures 205–209:

205



Introduction Session 7, in G mode, measures 253–261 = Part A

7.1) The main melody is presented and repeated, in G mode, in measures, 253–261:

253



257



Introduction Session 8, in G, D, and A, mode respectively, in measures 281–313 = Part A

281



293



Luk Yon, the announcement of the new section, in D mode, in measures 297–301:

297



The introduction passage is presented in A mode, measures 301–313:

301





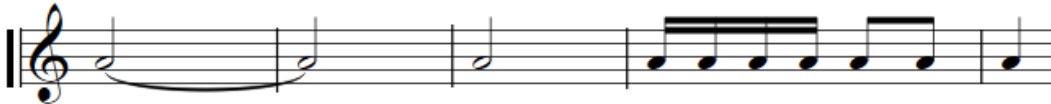
The passage inciting the end of the introduction section:

305



Luk Yon, a melodic pattern establishing the mode for the new section:

309



End of introduction section

Luk lor/luk khat Sections:

Luk lor/luk khat Session 1 in D mode, measures 13–33 = Part B

- 1.1) *Luk lor/luk khat* in one-half beat pattern, in D mode, measures 13–29
- 1.2) The passage indicating the end of *luk lor/luk khat* session, in D mode, 29–33

Luk lor/luk khat Session 2, in G mode, measures 53–101 = Part C

- 2.1) *Luk lor/luk khat* in an eight-beat pattern, in G mode, measures 53–69
- 2.2) *Luk lor/luk khat* in a four-beat pattern, in G mode, measures 69–77
- 2.3) *Luk lor/luk khat* in a two-beat pattern, in G mode, measures 77–81
- 2.4) *Luk lor/luk khat* in a one beat pattern, in G mode, measures 81–85
- 2.5) A passage indicating the end of the above *luk lor/luk khat* session, measures 85–101

Luk lor/luk khat Session 3, in G mode, measures 105–125 = Part D

- 3.1) *Luk lor/luk khat* in a four-beat pattern, in G mode, measures 105–113
- 3.2) *Luk lor/luk khat* in a two-beat pattern, in G mode, measures 113–117
- 3.3) *Luk lor/luk khat* in a one beat pattern, in G mode, measures 117–121
- 3.4) The passage indicating the end of *luk lor/luk khat* session in G mode, 121–125

Luk lor/luk khat Session 4, in D mode, measures 145–152 = Part E

- 4.1) *Luk lor/luk khat* in a two-beat pattern, in D mode, measures 145–149
- 4.2) *Luk lor/luk khat* in a one beat pattern, in D mode, measures 149–153
- 4.3) The passage indicating the end of the *luk lor/luk khat*, in D mode, measures 153–157

Luk lor/luk khat Session 5, in D mode, 165–185 = Part F

- 5.1) *Luk lor/luk khat* in a one-half beat pattern, in D mode, measures 165–177.
- 5.2) *Luk lor/luk khat* in a one-beat pattern, in D mode, measures 177–181.
- 5.3) The passage indicating the end of the *luk lor/luk khat* session, in D mode, measures 181–185

Luk lor/luk khat Session 6, in G mode, measures 209–253 = Part G

- 6.1) *Luk lor/luk khat* in an eight-beat pattern, in G mode, measures 209–225.



- 6.2) *Luk lor/luk khat* in a four-beat pattern, in G mode, measures 225–241.
- 6.3) *Luk lor/luk khat* in a two-beat pattern, in G mode, measures 241–245.
- 6.4) *Luk lor/luk khat* in a one-beat pattern, in G mode, measures 245–249.
- 6.5) The passage indicating the end of the *luk lor/luk khat* session, measures 249–253

***Luk lor/luk khat* Session 7, in G mode, measures 261–281 = Part H**

- 7.1) *Luk lor/luk khat* in a one-half beat pattern, measures 261–277
- 7.2) The passage indicates the end of the *luk lor/luk khat* session, in G mode, in measures 277–281.

Conclusion

The design of the composition begins with an introduction followed by continuous *luk lor-luk khat* sessions in the following pattern: A B A C A D A E A F A G A H and A. This formation is similar to the rondo form. The introductions to each section vary slightly: some are short, and some are repeated, while the last one shifts from one mode to another to signal the singer's entrance.

Introduction Sections:

Introduction Session 1 in D mode, measures 1–13 = Part A

- 1.1) Only eight measures of the main melody are presented, in D mode, in measures 1–9.
- 1.2) The melodic passage establishes the mode of the *luk lor/luk khat* session, in D, in measures 5–9.
- 1.3) *Luk Yon* announces passage to the next *luk lor/luk khat* session, in D mode, in measures 9–12.

Introduction Session 2, in D mode, measures 33–53 = Part A

- 2.1) The main melody is presented and repeated, in D mode, in measures 33–53.
- 2.2) *Luk Yon*, a melodic passage played by the whole ensemble, in D mode, prepares for the new *luk lor/luk khat* session, in measures 33–48.

Introduction Session 3, in G mode, measures 89–105 = Part A

- 3.1) The main melody is presented in G mode, in measures 89–101.
- 3.2) *Luk Yon*, a melodic passage played by the whole ensemble, sets the mode for the new *luk lor/luk khat* session, in G mode, and prepares for a new *luk lor/luk khat* session, in measures

Introduction Session 4, in G mode, in measures 121–145 = Part A

- 4.1) The main melody is presented in G mode, in measures 125–145.
- 4.2) A transitional passage leads to D mode, in measures 137–141.
- 4.3) *Luk Yon*, the melodic pattern for the whole ensemble, establishes the mode of the new *luk lor/luk khat* session, in measures 141–145.

Introduction Session 5, in D mode, in measures 157–165 = Part A

- 5.1) Only the main melody is presented, in D mode, in measures 153–165.



Introduction Session 6, in D and G mode, in measures 181–209 = Part A

- 6.1) The main melody is presented and repeated, in D and leading to G mode, in measures 181–205.
- 6.2) The transitional passage moves from D to G mode, in measures 101–205.
- 6.3) *Luk Yon*, the melodic pattern played by the whole ensemble, establishes G mode for the new *luk lor/luk khat* session, in measures 205–209.

Introduction Session 7, in G mode, measures 253–261 = Part A

- 7.1) The main melody is presented and repeated, in G mode, in measures 253–261.

Introduction Session 8, in G, D, and A mode

This introduction stays on A mode, then shifts to D mode, and finally stops at A mode, signalling the singer's entrance.

***Luk lor/luk khat* Sections:**

***Luk lor/luk khat* Session 1 in D mode, measures 13–33 = Part B**

- 1.1) *Luk lor/luk khat* in a one-half beat pattern, in D mode, in measures 13–29.
- 1.2) The passage indicates the end of *luk lor/luk khat* session, in D mode, 29–33.

***Luk lor/luk khat* Session 2, in G mode, measures 53–101 = Part C**

- 2.1) *Luk lor/luk khat* in an eight-beat pattern, in G mode, in measures 53–69
- 2.2) *Luk lor/luk khat* in a four-beat pattern, in G mode, in measures 69–77
- 2.3) *Luk lor/luk khat* in a two-beat pattern, in G mode, in measures 77–81
- 2.4) *Luk lor/luk khat* in a one beat pattern, in G mode, in measures 81–85
- 2.5) A passage indicates the end of the above *luk lor/luk khat* session, in measures 85–101.

***Luk lor/luk khat* Session 3, in G mode, measures 105–125 = Part D**

- 3.1) *Luk lor/luk khat* in a four-beat pattern, in G mode, in measures 105–113
- 3.2) *Luk lor/luk khat* in a two-beat pattern, in G mode, in measures 113–117
- 3.3) *Luk lor/luk khat* in a one-beat pattern, in G mode, in measures 117–121
- 3.4) The passage indicates the end of *luk lor/luk khat* session, in G mode, 121–125.

***Luk lor/luk khat* Session 4, in D mode, measures 145–152 = Part E**

- 4.1) *Luk lor/luk khat* in a two-beat pattern, in D mode, in measures 145–149
- 4.2) *Luk lor/luk khat* in a one-beat pattern, in D mode, in measures 149–153
- 4.3) The passage indicates the end of the *luk lor/luk khat*, in D mode, in measures 153–157.

***Luk lor/luk khat* Session 5, in D mode, 165–185 = Part F**

- 5.1) *Luk lor/luk khat* in a one-half beat pattern, in D mode, in measures 165–177
- 5.2) *Luk lor/luk khat* in a one-beat pattern, in D mode, in measures 177–181
- 5.3) The passage indicates the end of the *luk lor/luk khat* session, in D mode, in measures 181–185.



***Luk lor/luk khat* Session 6, in G mode, measures 209–253 = Part G**

- 6.1) *Luk lor/luk khat* in an eight-beat pattern, in G mode, in measures 209–225
- 6.2) *Luk lor/luk khat* in a four-beat pattern, in G mode, in measures 225–241
- 6.3) *Luk lor/luk khat* in a two-beat pattern, in G mode, in measures 241–245
- 6.4) *Luk lor/luk khat* in a one beat pattern, in G mode, in measures 245–249
- 6.5) The passage indicates the end of the *luk lor/luk khat* session, in measures 249–253.

***Luk lor/luk khat* Session 7, in G mode, measures 261–281 = Part H**

- 7.1) *Luk lor/luk khat* in a one-half beat pattern, in measures 261–277
- 7.2) The passage indicates the end of the *luk lor/luk khat* session, in G mode, in measures 277–281.

Discussion

Luk lor-luk khat technique was popular among Thai composers, musicians, and audiences for the past hundred years, it is nowadays rare to find a group of new compositions using *luk lor-luk khat* technique. Thai classical music is not as popular as it was but techniques of composition like *luk lor-luk khat*, are worth preserving and revitalising. Its techniques should be taught and practised in composition technique classes, in both Thai and Western music cultures.

References

- Apel, W. (1950). *Harvard Dictionary of Music*. Harvard University Press.
- Chonpairot, J. (1970). *Lives and Works of Thai Musicians*. Mahasarakham Teacher College and Mahasarakham College of Education.
- Morton, D. (1976). *The Traditional Music of Thailand*. University of California Press.
- Siegmeister, E. (1943). *The Music Lover's Handbook*. William Morrow and Company.
- Tramōd, M. (1964). *Musical Terms*. Fine Arts Department.
- Tramōd, M. and et.al. (1996). *Thai Classical Music Book 1*. Fine Arts Department.

Appendix

Notation Score of *Phleng Khamen Rajaburi*, Third Variation, Section I, Instrumental Part.
The composer is Phraya Prasan Duriyasapt (Plaek Prasansapt), assisted by Luang Praditphairoh (Sorn Silapabanleng).

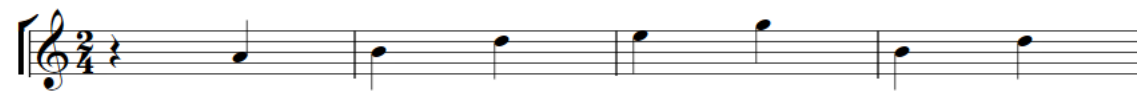


Khamen Rajaburi, Third Variation

Instrumental Version, Section I

By Phraya Prasan Duriyasapt (Plaek Prasansapt)

1



5



9



13



17



21



25





29



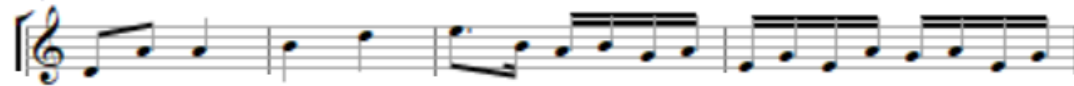
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77



81



85



89





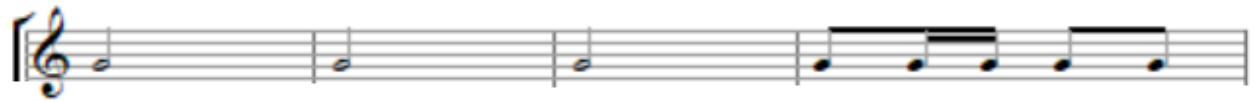
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97



101



105



109



113



117



121





125



129



133



137



141



145



149



153



157





161



165



169



173



177



181



185



189





193



197



201



205



209



213



217



221





225



229



233



237



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245



249





253



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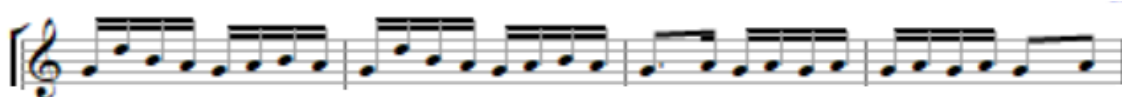
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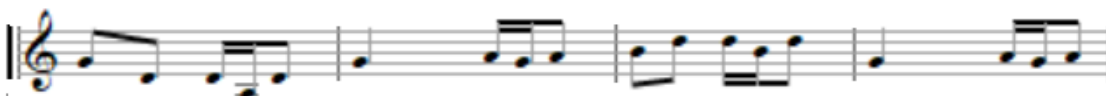
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277



281





285



289



293



297



301



305



309



End of the section

Tramōd, M. and et.al. (1996). *Thai Classical Music Book 1*. Bangkok. Fine Arts Department.