KENDANG TUNGGAL:
BALINESE SOLO DRUMMING IMPROVISATION

by

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ABSTRACT

The following thesis is an analytical investigation of Balinese solo drumming (kendang tunggal) in Balinese gamelan music. It is dealing with the solo drumming that is considered improvisational, in particular the styles that are used in the repertory of the gamelan Gong Kebyar. The analysis is culminated in chapter four with analysis of six selected recordings of influential Balinese master drummers, who represent different stages in the development of kebyar style, from its beginning to the present. The focus is on the way these drummers develop their own style or pupuh (drum patterns) within particular Balinese melodies and gong cycles. The term improvisation is carefully used, because the degree of freedom in such meters is often limited. The drummers often describe the way they play in these contexts as bebas (free), but in practice, many drummers usually do not use the opportunity to create spontaneous patterns at all, and instead recycle or reuse the patterns that they have practiced and create a new ordering of well-rehearsed stock phrases. Based on this idea, the basic analysis of solo drumming in two types of Balinese meter is introduced in chapter three that can help outsiders or beginner drummers to understand or at least to clarify how the kendang tunggal works with a certain degree of “limited improvisation” in Balinese gamelan gong kebyar music.
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Chapter I: Introduction

1.1 Introduction

The following thesis is an analytical investigation of Balinese solo drumming (kendang tunggal) in Balinese gamelan music. I will be dealing with the solo drumming that is considered improvisational, in particular the styles that are used in the repertory of the gamelan Gong Kebyar.¹ My analysis will culminate in chapter four with analysis of six selected recordings of influential Balinese master drummers, who represent different stages in the development of kebyar style, from its beginning to the present.² I will focus on the way these drummers develop their own style or pupuh (drum patterns) within particular Balinese melodies and gong cycles. I use the term improvisation carefully, because the degree of freedom in such meters is often limited. The drummers often describe the way they play in these contexts as bebas (free), but in practice, many drummers usually do not use the opportunity to create spontaneous patterns at all and instead recycle or reuse the patterns that they have practiced and create a new ordering of well-rehearsed stock phrases. Based on this idea, and my own experience as a Balinese drummer, I also introduce (in chapter 3) basic analysis of solo drumming in two types of Balinese meter that can help outsiders or beginner drummers to understand or at least to clarify how the kendang tunggal works with a certain degree of “limited improvisation” in Balinese gamelan gong kebyar music.

¹ Gamelan gong kebyar is the most popular and influential genre of twentieth-century music developed in Bali. In the Balinese gamelan classification, gong kebyar is considered a new gamelan that refers to the explosive changes of tempo and dynamics characteristic of the style (Sugiartha 2006, 66; Bandem 2006; Tenzer 2000).
² These recordings were made by Michael Tenzer while he was doing research in Bali from 1982 to 1987 where he recorded fifteen drummers playing kendang tunggal patterns, accompanied only by a single gangsaa (metallophone instrument).
The motivation to explore this topic is based on my own experience and training as a drummer. I started to play gamelan as a drum player when I was nine years old and moved toward a serious learning process over the years, under the direction of several different drum teachers. My experience began with playing for gamelan gong kebyar, a type of gamelan that emerged in North Bali in the beginning of the twentieth century. The type of drum that is used in the kebyar is called kendang gupekan, which is a medium size drum that is only played by bare hands.

There are several purposes for the study of this subject. One is to determine the resources behind and foundations of the oral learning tradition of kendang tunggal. This has been passed down through generations without any formalization. A second purpose is to explore the creative process of improvising and developing solo drumming patterns. A third is to offer pedagogy that can help others learn the logic and beauty of solo drumming more efficiently.

Some readers who are not familiar with the idea of freedom in Balinese solo drumming may find these issues surprising, as Balinese gamelan music is indeed carefully worked out, memorized, well-rehearsed, and almost does not provide space for improvisation. However, the drum, especially in the kebyar style, functions as the most important instrument. It is considered to be the leader of the ensemble, and has a certain degree of freedom to improvise as mentioned. Drummers identify with their instrument more than other gamelan musicians identify with other instruments. The drum is treated distinctively, because special attention is needed to keep the drum in good condition. Drummers often bring drums home from the village rehearsal area and maintain them on their own. Some drummers say that they love their drums like a wife or girlfriend. As the
feature instrument, some gamelan groups name their drum; for example, the famous group in South Bali (Sekaa Gong Belaluan Sadmerta) named their drum I Guntur (the thunder). They believe that every time the drum is played, it can produce a satisfying booming sound like thunder. Unlike other musicians, drummers rehearse and master their patterns individually before joining the group rehearsal. Drummers are skilled musicians and usually teachers, who know all of the parts that are played by other instruments in the ensemble.

The ability to create improvised patterns that are perfectly synchronized with the melody and gong cycle according to accepted Balinese aesthetics is the most important aspect of solo drumming. Even if a drummer plays very well and produces complicated patterns by himself, he would be considered a good player only if these patterns are unified with the melody accompaniment. As my teacher I Dewa Nyoman Sura always said to me, “yen mekendang didian luwung, sing karwan nden yen be misi gamelan nyak luwung, pang nyak nyelah ajak gendinge” (even if you can play drum very well by yourself, that is no guarantee that it will sound good when you play it with the accompaniment of gamelan; it should be perfectly matched with the melody). Although most Balinese musicians are able to play drum, at least a little bit, it is not easy to achieve recognition as a true drum player, or tukang kendang. To be a good drummer requires more than great dexterity and physical skill (Asnawa 1991, 22). The tukang kendang also has to coordinate the accents and dynamics of the gamelan with the movements of the accompanying dance, as well as achieve a balance between his own virtuosity and his role as coordinator of the music and dance; the two roles are inseparable.³

³ Few women play gamelan in Bali. Most drummers are men.
Good drummers should train from a young age. As John Kratus said in his article “Growing with Improvisation,” improvisation is a highly sophisticated, technically demanding behavior and should be taught only after a student has developed their musicianship and performance skills to an advanced level (Kratus 1991, 35). This idea is possibly inapplicable for some other types of music, because students are sometimes taught to develop their skills of improvisation from the beginning of the process of learning. However, Kratus’ idea relates to Balinese music. Students are taught basic composed patterns at the beginning and learn to improvise only after they have mastered those. It is important to stress again that patterns produced spontaneously in the course of performance will be considered “right” if they fit with the meter of the melody. The meter and melody are the most important guidelines for the drummer, giving them boundaries in which to play and develop their own styles. The characteristics of the melody itself are also important in determining what kind of drumming should be created in order to match with it.

In Chapter 2, I discuss the history of the kendang from its early stages and explain its construction. I then discuss the types of kendang, and the drum’s function in the gamelan. The general principles, basic meter, and melodic structures used for kendang tunggal are then introduced. Finally, I discuss the notation and terminology as well as the vocalized drum syllables.

Chapter 3 is an analysis of basic drum patterns in two different meters and melodies. These patterns are based on my own experience of learning this type of drumming from my teacher, I Wayan Suweca, at the Institute of Arts in Bali, and also an

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4 Personal experience; this is the unanimous opinion of many friends and teachers who are drummers in Bali.
interview I conducted with the Balinese master drummer, composer, and scholar, I Ketut Gede Asnawa. Suweca taught me how to play the improvised solo drumming by giving eight short basic patterns that can be chosen spontaneously by the drummer in the course of the performance. Asnawa provides important advice on how to develop more complex patterns from simple models.

Chapter 4 is the analysis of six selected recordings of some of the most influential Balinese master drummers, in order to understand how those drummers develop their patterns spontaneously and to what degree they apply improvisation in their patterns. I transcribe only one cycle of each recording, and by using paradigmatic analysis, I will compare how the pre-composed patterns are used and reordered in different places by these drummers as they play.

I conclude with a brief discussion of the philosophy of drumming in the Balinese gamelan. This is an approach to the understanding of the concepts of leadership of man in the Balinese paternalism, purusa and predana, in relation to the leadership of male drum, during the madya period, and switched to the female drum (in the modern gamelan). This can only be understood after knowing all of those, particularly how does the drumming work with the meter and melody within the music, and the function of the drum and drumming in the ensemble. I hope by providing these philosophical concept, it will give impressions and meanings not only in practical, but also in the broader sense of its connection to the culture and religious believes.

1.2 Discourses on Improvisation

The term “improvisation” is not commonly used for Balinese drumming. In Bali we
usually call it bebas, a word adopted from the Indonesian language (but with a different meaning than improvisation) which literally means free in a broader context. In his article “Improvisation in Wayang Wong Panggung; Creativity within Cultural Constraints,” Hardja Susilo mentions that the term “improvisation” is indeed Western in origin, and, though used by some in its Indonesianized form (improvisasi), is imprecise in its application to what Javanese musicians do (Susilo 1987, 11). He also points out that some of the terms that are applied to Javanese gamelan refer more appropriately to the words and gestures of dancers and actors than to the music performed by gamelan players and singers. In this section, I will discuss the definition of improvisation and investigate if it is in fact applicable to Balinese music.

Generally speaking, musical improvisation is the spontaneous creative process of creating music while it is being performed. This definition is specifically or implicitly accepted in all general discussions. As Philip Alperson said in his article, “it will probably be agreed by all that improvising music, in some sense, is a spontaneous music making” (Alperson 1984, 17). In an article about jazz, Gould cited Alperson’s idea that even though improvisation is widely understood as spontaneous music making, the most important aspect is going beyond the score (Gould and Keaton 2000, 144). This definition is obviously oriented toward written traditions.

Many scholars and cultures have their own definitions of improvisation, which is based on the characteristics of music specific to each culture; likewise, the role and degree of improvisation in each culture is different (Bailey 1980, 3). Therefore, I prefer Neil Sorrell’s cautious statement that “Because the word ‘improvisation’ has no absolute
meaning it must always be used with care and myriad qualifications” (Sorrel in Sutton 1998, 70).

For some scholars in musicology, the concept of improvisation involves the distinction and relationship between composed music and pre-composed music (Nettl 1998, 10). Here, improvisation is an end product based on the concept of the musical work as a foundation on which to build. As defined in *The New Grove Dictionary of Music and Musicians*, improvisation is: “The creation of a musical work, or the final form of a musical work, as it is being performed” (Horsley 1980, vol. 9, 31).

Improvisation consists of simultaneous invention, and excludes fixed writing as well as the realization of an extant work; rather it can result from the practitioner or performer’s characteristics as an individual person in the practice of performance.

The definitions of improvisation found in music dictionaries and encyclopedias show that there are several conflicting views of improvisation (Nettl 1974, 2). Some sources state that in non-Western, and, particularly in tribal music, the musicians learn by rote, or there is an absence of notation, and they thus consider this music improvised. Others have tried to limit the idea of improvisation to notated music, within which the musician may improvise. 5 It is hard to say which one is correct or incorrect; both ideas are dependent on how much latitude we will allow in defining improvisation. And also “improvisation,” like “freedom” or “music,” is a concept or idea that brings us face to face with the formidable problems of translation (Blum 1998, 28).

Many scholars have tried to use language as an analogy to musical improvisation. “Much musical performance is much like a linguistic event” (Gould and Keaton 2000, 145). Both are in some sense utterances. One must learn a language very well in order to

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5 See more about this issue in Bruno Nettl’s 1974
be able to talk spontaneously with others or give speeches without notes; people will “improvise” based on the vocabulary and grammar they know. Similarly in music, musicians learn basic patterns or a vocabulary of musical elements at first in order to be able to start improvisation (Wollner 1963, 16). Those elements of music are combined to form a unity that expresses the improviser’s concept and produces fluent music making.

These ideas mentioned are similar to what gamelan musicians, including *kendang* players, are doing in order to prepare for improvisation. To improvise, *kendang* players should have pre-composed patterns completely naturally and easy in their heads, and when they perform they order the patterns to fit with the melody and colotomic structure of the music. *Kendang* players also have to create spontaneously composed patterns based on cues from the dancers. All of these activities are combined simultaneously to form what I call improvisation in Balinese drumming.
Chapter 2: The Balinese Kendang

2.1 Historical Context and Physical Description

Indonesia has many different types of drums found in many different parts of the country. The *tifa* of Papua, for example, is a one-headed drum of the Asmat people that is usually used to accompany social dances and singing. The *gendang belik* of Lombok is a double-headed drum of the Sasak people that is played for war dances; the drummer has to strap the drum on the shoulder while performing. The *gondrang* of Sumatra is a one-headed drum. Several *gondrang* are hung in a row and strapped in a special case that enables drummers to play many at once. The double-headed drums laced with rawhide strips found throughout Sunda, Java, and Bali are called *kendang*.

Jaap Kunst wrote that

> The oldest literary references to drums known to me (*padahi* and *muraba*) are found in two Old Javanese charters of A.D. 821 and 850 respectively. Even without these there should be no doubt as to the existence of drums in that period. For drums in any form are a very ancient cultural feature. (Kunst 1968:24)

Since the terms *padahi* and *muraba* existed in 821 CE, *kendang* were probably already in use during that era. But there is no explicit evidence found for the use of the drum in the old literature. Colin McPhee mentions in his book that the shape of the *kendang* in Bali is similar to cylindrical drums seen in the Borobudur reliefs, which are also from the ninth century (McPhee 1960:33). Moreover, The Balinese scholar I Gede Arya Sugiartha writes that the term *papadaha* (drum stick) was written in the ninth century Balinese inscription Bebetin (Sugiartha 2008: 4). Therefore, it is likely that even in this early stage in the evolution of Balinese music, *kendang* already existed and might have played an important role in the music.
The cylindrical shape mentioned by McPhee is different from the one used in Bali today. These days the shape of the kendang is conical instead of cylindrical, and carved out internally into an hourglass shape that determines the characteristics of its sound.\(^6\) However, the kendang used in the ancient gamelan Gambuh (old Balinese gamelan that accompanied the gambuh dance theatre) and gamelan Gong Gede (a sacred temple gamelan) were cylindrical, both outside and inside, and very similar to the ones that McPhee observed at Borobudur (Asnawa 1991).

Modern Balinese drums come in pairs. The lower-pitched of each pair is called the wadon (female), and the higher-pitched is designated as lanang (male). The internal hourglass shape of the kendang is called pakelit. Balinese teacher, scholar, and composer I Wayan Beratha said that the pakelit was introduced and applied to the Balinese drum in the 1950s.\(^7\) According to Beratha, the purpose of this change was to produce a deep sound, which is preferred by many musicians. The pakelit of the two drums, lanang and wadon, are designed differently, based on the preferred sound of each. The song pakelit (the narrowest part) of the kendang lanang is usually placed in the centre of the drum and its diameter is bigger (about ten to twelve centimeters), whereas the kendang wadon’s song pakelit is located one quarter of the length of the kendang down from the cang (the smaller head; refer to Figures 2.1 and 2.2). The diameter of its hole is about eight to ten centimeters.

\(^6\) The internal shape of the kendang was formerly like its exterior (Hood, 1982, p. 127)
\(^7\) Long distance interview with I Ketut Gede Asnawa. May 20, 2009.
The body of the *kendang* is usually made of a well-seasoned block of *kayu nangka* (jackfruit wood) because of its hardness, fine grain, resilience, and durability. The two drumheads are made of goatskin or cowhide. Because the drums are conical, the two heads are unequal in diameter; the bigger side is called *muwe* and the smaller side called *cang*. The skins are stretched across the opening on each end of the shell and held down by a hoop called *wangkis*. The two hoops are interconnected by *jangat* or leather.

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8 See Ketut Gede Asnawa, 1991.
lacings stretched back and forth in a “V” pattern. The jangat stretches as the adjacent strings are tightened by the sompe (rings) that slide along to bind the string in a “Y” pattern (see Figure 2.3). By tightening and loosening the strings, the pitch of the kendang can be raised and lowered.

![Figure 2.3 The Kendang](image)

When playing the kendang, the player sits on the ground cross-legged with the kendang placed in a horizontal position on the lap. The muwe is to the right and the cang is to the left, aligned with the musician’s rib cage (see Figure 2.4).\(^9\) In order to yield the proper sounds, it is a good idea to maintain a comfortable and appropriate posture in positioning the kendang while playing. It requires tremendous control and power, especially when playing complex and dense rhythmic patterns. For processional music, the kendang is suspended from the player’s neck by a padded rope.

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\(^9\) This position applies to the right-handed player; it is reversed if the player is left-handed.
Table 2.1 shows the name, size, and typical usage of the six sizes of kendang found in Bali today.

Table 2.1 List of Different Kind of Drums Based on Its Sizes

<table>
<thead>
<tr>
<th>Name of Drums</th>
<th>Size in Length</th>
<th>Diameter</th>
<th>Other Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendang Mebarung</td>
<td>185 to 200 cm</td>
<td>74 to 80 cm</td>
<td>Found in the district of Jembrana (West Bali) and used in the gamelan Angklung</td>
</tr>
<tr>
<td>Kendang Cedugan</td>
<td>70 to 72 cm</td>
<td>28 to 32 cm</td>
<td>Played with a stick and used to accompany gong gede (the largest ensemble in Bali)</td>
</tr>
<tr>
<td>Kendang Gupekan</td>
<td>68 to 70 cm</td>
<td>25 to 30 cm</td>
<td>Played with the hand and used to accompany gamelan gong kebyar</td>
</tr>
<tr>
<td>Kendang Krumpungan</td>
<td>56 to 60 cm</td>
<td>21 to 25 cm</td>
<td>Played with the hand or fingers alone (never with a stick, used to accompany gamelan gambuh</td>
</tr>
</tbody>
</table>
2.2 Function: Drum as Colotomic Marker and Leader

To know the function of the *kendang* requires an understanding of its role in the entire performance practice of the Balinese gamelan. Though drums are ancient, musical roles have gradually developed through a long historical process. In terms of their age and the music’s structural norms, the Balinese gamelan can be classified into three major groups: *gamelan kuno* (ancient gamelan), *gamelan madya* (middle [historical] age gamelan), and *gamelan baru* (recent gamelan). The *gamelan kuno* are considered sacred and are usually small ensembles comprised only of xylophone-type instruments with no *kendang*, except in one, the *gamelan gong luang*, which uses only one drum. It is believed that the *gong luang* was the first to employ the drum, however, its role is not that important. It functions simply to mark or accent the gong stroke.\(^{10}\) It might be even argued that the *kendang* in *gong luang* functioned as a colotomic instrument similar to the gong (Asnawa 1991, 19).

In *gamelan madya*, the role of the *kendang* became more developed and almost all ensembles have the *kendang* in their instrumentation. The *kendang* controls the tempo and dynamics, and also directs and cues the ensemble for all important musical changes in the course of a repeated meter and melodic period. The *kendang lanang* is considered to be the leader of the ensemble.

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\(^{10}\) See Toth, 1975
In the *gamelan baru*, the *kendang* plays the same role as in *gamelan madya*, and is even more important. It is faster, more complicated, and has some degree of improvisation, particularly in solo drumming. Moreover, the *kendang wadon* is considered to be the leader of the ensemble.

In all gamelan after *gamelan kuno*, the lead drummer has the authority to answer signals given by the dancers, underscore their movements, and direct beginnings and endings. It shares leadership of the full gamelan with one melodic instrument and one small gong that keeps the time. According to I Ketut Gede Asnawa, the *kendang* is a leader in much the same way as the conductor of the western orchestra (Asnawa 1991, 20), except that the conductor does not play an instrument like the Balinese drummer does.

### 2.3 The Notation and Drum Sounds

All Balinese music is learned by rote, passed down through the generation orally note by note until it is internalized and memorized. No notation has ever been used in transmitting the music. However, there is a notation that has been used to preserve the old pieces as well as for composing. Unlike western notation, Balinese musical notation includes only the basic melody and the colotomic structure of the piece. This notation is called *titilaras ding dong*, which McPhee described as “a scanty set of symbols, derived from the Balinese script, that can indicate scale tones but cannot express time values” (McPhee 1966, 56).

In this study, I have decided to use a combination of letters and western notation, which can be understood by western readers. The letters, placed under the notes of the
western score, are abbreviations in capital and lower case letters that stand for the sounds of the *kendang*. There are eight syllables used in *kendang tunggal* that divide into two categories: the main or big sounds (*suara pokok* or *gede*), and the small or filler sounds (*suara cenik* or *maya*).

There are three *suara pokok* sounds: *Keplak* or *Pak* (“P”) is a sharp unpitched sound produced by the palm of the left hand striking the centre of the *cang* (left drum head), while the right hand damps the *muwe* (right drum head). *Cedit* or *De* (“D”) is a deep low sound produced by hitting the edge of the *muwe* with the right hand, while the left hand rests on the shell of the drum. *Kuncung* or *Cung* (“U”) is a higher pitched sound produced by placing the thumb near the upper edge of the *muwe*, striking the skin with the pinky, and bouncing the middle three fingers off the centre of the skin.

The *suara maya* are small and soft sounds played as transition strokes. There are five kinds: *de cenik tengawan* (small right hand *de*; “d”) is played either by the thumb on the lower edge of the *muwe*, or is the same as playing *De* except softer. The first technique will be used if *d* comes before *U*, and the second one will be used if it comes before *D*. *Cung cenik kiwa* (small *cung* on the left hand; “u”) is played at the edge of the *cang* using three fingers, omitting the thumb and index finger, and is used as an echo sound of the *cung gede*. It also forms combination patterns with *pak* and *cung gede* (for example: UPUu/UPUu/U). *De cenik kiwa* (small *de* on the left hand; “L”) is played in the same position as the *cung cenik kiwa* but instead it uses four fingers (minus the thumb) with a strong stroke. It usually combines with the *de gede* and *de cenik tengawan* to make patterns that prolong the pitched sound of *D* (for example: DdDL/DdDL/D).
Pak cenik ("p") is produced by hitting softly in the center of the cang using four fingers (except the thumb). It is usually used in the combination with pak gede, and forms patterns with de cenik tengawan, pak gede, and cung gede to produce combinations (for example: PdUp/ PdUp/P). Ketep or tep ("t") is the same as keplak or pak gede but played by hitting softly on the muwe with the right hand, so it produces a muted sound.

These eight kendang strokes are often called asta suara (asta, eight, and suara, sound). Together they produce the many rhythm possibilities found in kendang tunggal (refer to Figure 2.5).

![Diagram](image-url)

**Figure 2.5 Drawing Showing the Distribution of Sounds on the Two Heads of a Single Kendang.**
On the western score I use two staffs (see Figure 2.6). The top one is for the drum and the bottom one is for the melody. On the top staff, I use only four lines instead of the normal five, erasing the middle line. In this four-line staff, the left hand strokes are placed on the top two lines, and the right hand strokes on the bottom two lines. This makes it easier to see and read, and provides a clear distinction between the two hands. Because there is no standardization of pitch for the gamelan, I use the 5 pitches C, E, F, G, B, that are equivalent to the five-tone gamelan gong kebyar tuning. The colotomic instruments such as gong (the big gong), kempur (the middle size gong), and kemong (the small gong), are placed under the bottom staff by putting the abbreviation letters under the appropriate beat. The names of those instruments are abbreviated respectively as G, P, and T.

![Figure 2.6 Sample Notation](image)

**2.4 Musical Structure: Meter and Melodic Structure**

Balinese colotomic meter refers to the sequence of gongs that punctuate melodies. It has a closer relationship to the drumming than the melody does. New melodies are continually created in the existing meters, but drumming, especially paired fixed
drumming, is usually pre-set according to the meter (gong cycle), and is always synchronized with it. As Michael Tenzer noted, “at least in principle – the drumming is “plugged-in” according to metric convention, and new drum patterns are composed less often than new melodies” (Tenzer 2000, 254). However, this is not exactly true in *kendang tunggal* improvisation. The melodic sequence, punctuated by the gong cycle, is repeated over and over, and the drum improvises on top of it using the meter as a foundation to create spontaneous patterns.

There are several different types of meter in Balinese music. In this study, however, I will only discuss two types: *bapang* and *pengipuk*. *Bapang* meter is an eight beat cycle typically outlined by the gong structure [(G).P.T.P.], or without *kempur* strokes [G . . . T . . .]¹¹. *Bapang* is usually used in solo dances that are derived from the repertory of the *madya* era *gamelan pelegongan*, for example, in the dances *Jauk Keras, Jauk Longgor, Telek*, and *Barong*. In each of these pieces, there is a section in which all of the melodic and colotomic instruments are playing in *bapang* meter, and the drummer and dancer confront each other as if in a contest. The dancer has the authority to create spontaneous cues, called *angsel*, which have to be answered with particular accents by the drummer. These accents are played in fixed places in its relation to the meter, and are transmitted to the rest of the ensemble who answer with *nguncab* (playing loud from the beginning of the next cycle). This leads to *angsel*, a unison accent latter in the cycle. The *bapang* meter is considered strong in character. It is fast and energetic, which is referred to in Bali as *keras* or *gangsaran*.

*Pengipuk* meter is derived from the *gamelan gandrung*, a bamboo gamelan used to accompany the *gandrung* dance (a social dance that has a flirtatious character). It is used

¹¹ The *kempur* is only used in the *kebyar* style, but not in the *pelegongan* style.
in *kebyar* dance pieces such as in *Kebyar Duduk*, *Oleg Tamulilingan*, and *Teruna Jaya*. *Pengipuk* has a longer repeated gong cycle than *bapang*. The most common one is 32 beats long, divided into four lines of eight beats. Every line is punctuated by a gong stroke in the order G P t P: *gong* (G) on beat 1, *kempur* (P) on beat 9, *kemong* (T) on beat 17, and another *kempur* on beat 25 (P; see Figure 2.7).

![Figure 2.7 Serangsang Pengipuk, Melody and Gong Cycle](image)

The *pengipuk* cycle of *Teruna Jaya* is different (see Figure 2.8). It has six lines of eight beats instead of four lines. It is asymmetrical unlike the common *pengipuk*. The lines are punctuated by the gong strokes in the order: G-P-T-P-T-P (see Figure 9). On the last line there are two extra *kempur* (P) strokes on the 46th and 48th beats. These two strokes signal the arrival of the final gong. In chapter three I discuss the basic drum pattern for the common *pengipuk*, and in chapter four I discuss six drummers’ improvisation to the *pengipuk* from *Teruna Jaya*. 
2.5 Kendang Tunggal

The term kendang tunggal literally means single drum, but it is most commonly understood to mean solo drumming improvisation. Non-improvising kendang tunggal can only be found in gong luang, as mentioned above, where the drum functions as a colotomic marker.

There are two kinds of gamelan from the madya period that used kendang tunggal improvisation: gamelan gandrung and bebarongan. Gandrung is a flirtatious village street-dance, and the bebarongan ensemble accompanies the dance of the barong, a mythical dragon. The other madya gamelan (e.g., semara pegulingan, pelegongan, and gambuh) do not use kendang tunggal. All of the drumming of these ensembles uses kendang metimpal (paired-drum) that also has improvisation in some particular places to respond to dance cues. Based on these facts, it is most likely that the kendang tunggal in the gamelan gong kebyar has its origin in gamelan gandrung and bebarongan. Moreover,
in most kebyar pieces there are sections in which the meter is derived from these two older gamelan: bapang meter of bebarongan, and pengipuk meter of gandrung.

Gamelan gandrung and bebarongan are considered folk ensembles that have a close relation to the Balinese traditional animistic belief. The other gamelan (semara pegulingan, pelegongan, and gambuh) are derived from the old Javanese court musical tradition that is still maintained in Bali to this day. All of these madya ensembles have their influence on the use of drum in the gamelan gong kebyar, where kendang tunggal alternates with kendang metimpal.

Why does kendang tunggal alternate with kendang metimpal in gong kebyar? Kendang tunggal is needed in bapang and pengipuk sections when the music and dance require spontaneous interaction. It usually accompanies dance pieces — primarily solo dances — where the dancer has control over the piece continuously using certain movement cues called angsel. But it may also appear in instrumental music. Either way, it gives the drummer an opportunity to show the ability to spontaneously develop patterns in the course of the performance.

Kendang tunggal is the most prestigious drumming style. It is executed by permutating and combining many different kinds of personal well-rehearsed patterns in the course of the performance. There are no explicit rules that determine which pattern should go first, in which order they may be presented, and how they may be altered. Such decisions are left entirely to the improvising performer and his intimate familiarity with his own well-rehearsed improvised patterns.

Two studies have been done on kendang tunggal improvisation. One is written by Michael Tenzer, a foreign scholar who has devoted thirty years to studying Balinese
gamelan. In his impressive book *Gamelan Gong Kebyar: The Art of Twentieth Century Balinese Music*, he focuses on meter and Balinese drumming, including the possibility of improvisation in one chapter. He described and analyzed the *gong kebyar* style comprehensively. He also recorded many master drummers in the 1980s as a part of his research. I was inspired by his approach to examining and analyzing Balinese drumming, particularly in terms of the use of improvisation (Tenzer 2000).

The other study that had been done on improvisation in Balinese drumming is an article called “The Mrdangan of Southern India and The Kendang Gupekan of Bali: A Comparative Study,” by I Wayan Rai, S., a Balinese ethnomusicologist. In this article, Rai only focuses on one style of Balinese drumming, called *gupekan*, and compares it with the *mrdangam* of South India. This comparative study shows the similarities and differences in the way that Balinese *kendang* players and *mrdangam* players improvise in the course of performance (Rai 1994).
Chapter 3: Analysis of Basic Drum Patterns

In this chapter I will analyze drumming in two meters, *bapang* and *pengipuk*, by comparing basic and improvised patterns in each. The basic patterns I learned from my teachers, and the improvised ones I developed myself. For the purpose of this analysis I define a pattern as a sequence of drum strokes lasting one gong cycle. Because the *bapang* meter is short, there are several different basic patterns, but because the *pengipuk* is long there is only one. Many of the basic patterns are commonly known and learned by *kendang* players, although each player develops their own variations and style. These variations are prepared and practiced everyday, and are used as a foundation in improvising *kendang* patterns in performance.

3.1 Analysis of Bapang

Below are six different basic patterns made up of sub-patterns of different lengths and stroke combinations. Patterns seven and eight are two pre-composed patterns designed by my teacher, I Wayan Suweca, when I was studying at the Institute of Arts in Bali:
Figure 3.1 Eight Basic Variations of *Kendang Tunggal*
The first and the fourth patterns are the simplest. The first one consists of a sub-pattern of three strokes, repeated eight times. The P on the third subdivision alternates with the beat and balances the rhythm. This basic way of placing the P stroke is preferred by many drummers because it divides the sub-pattern in half, and avoids the beat. The U is placed in the fourth subdivision to give a stronger feeling of syncopation. The t stroke functions as a pick up that makes the strokes’ combination smoother, and makes it easier for the hands to move between and connect the strokes; Balinese call these connections perigelan tangan (“dance of the hands”).

The patterns in the next two cycles (patterns 3 and 4, measures 5 through 12) are developments of the first sub-pattern [.tPu]. In the second pattern it changes to [/tPD/] on every other repetition, alternating with the original sub-pattern. This becomes [/D.D/] on the third pattern. The fourth pattern is the shortest sub-pattern. It only consists of two strokes (P and t), lasting a half beat, and repeats sixteen times. It is the basic stroke combination used to teach a beginner to balance their hand movements. The fifth pattern (measures 13 to 21) is a development of the fourth one. It uses the same two strokes but combines them differently [PtPPtt]. The length is one and a half beats (six subdivisions), and consists of three t and three P strokes. The sub-pattern does not start on the beat — it starts on the second subdivision and ends on the third subdivision of the next beat. However, the length of six subdivisions makes the beginning of the sub-pattern fall in two different places according to its relation to the beat: one begins on the second subdivision, the second one on the fourth subdivision. The sub-pattern of the last two beats is different and functions as a cadence [.PtP/.UuU/].
The sixth pattern combines two main strokes ($P$ and $D$) and two secondary strokes ($t$ and $d$). It is two beats long, repeated four times, and has no stroke on the first beat [.$tPd/DPd$/]. The first $P$ is placed in the middle subdivision of the first beat and leads the first $D$ stroke on the second beat. The second $P$ and $D$ are a repetition of the same combination but placed in a different relation to the beat (on the second and the fourth subdivision of the second beat). The secondary strokes function as a pick up and filler in between the main strokes.

The last two patterns (measures 25 until 33) are related to each other, because both use the sixth sub-pattern [.$tPd/DPd$/] as a starting rhythm and share a new sub-pattern on beats 5-6 [./.dDL/D.tP]. Beats 3 and 4 have the same rhythm but a different organization of strokes. Beats 7 and 8 are different and function as a cadence before the arrival of the gong stroke. These patterns are different than the ones that we have already seen. They are through-composed, lasting one gong cycle, with no internal repetition of sub-patterns.

Based on these basic patterns and others like them, drum players will pick patterns spontaneously and arrange them in different orders. A clever drummer will be able to construct a smooth combination of his own short prepared sub-patterns without any substantial break so that it feels like a single unified pattern that matches with the melody as well as underlines the dance movement. Many musicians agree that explicit and clear response to all dance cues is the most important element in a successful performance.

My teachers provided me with a variety of technical tips to help my improvisational technique. Dewa Nyoman Sura introduced me to some Balinese terms
referring to improvisational technique, for example: *ngaren* (to postpone), *nguluan* (to precede), and *nyanden kajar* (playing around the beat). These three terms are analogous to the Western term syncopation. A good drummer is usually able to appropriately apply those techniques by arranging a smooth combination of strokes that do not always fall on the beat. Michael Tenzer wrote that “ideally such decisions are made not only with the beauty of the pattern itself in mind, but also in spontaneous reaction to the dancer, whose movements may suggest a focus on certain strokes” (2000, 304). Below is an example of a *kendang tunggal* improvisation based on the basic variations in figure 3.2:
Figure 3.2 is a transcription of a recording of my own improvising. The improvisation shows its motivic relations to the basic variations in Figure 10. In the third pattern (measures 9 to 12), the sub-patterns [./tP/./tPu/], [./tPD/./tPu/], and [./D.D/./tPu/] are arranged in one eight-beat cycle, and the fifth pattern (measures 17 to 21) uses the same pattern as the fifth cycle of Figure 3.1. The first cycle and a half contain new material and the last half of cycle two is the same as the last half of cycle eight in figure 3.1.

The sub-pattern [.dDL/D.tP/tPtP/PUuU/] is often used at the end of the cycle as a cadence. It is used on the second half of the second, fourth, and seventh patterns. There are other two sub-patterns that are similar to this one. On the second half of sixth pattern, [PdDL/D.tP/tPtP/\text{tD}.P/], there is an extra P stroke at the beginning of the sub-pattern and
different arrangement of strokes on the last beat. On the second half of the eighth pattern [.dDL/D.tP/tpPt/tP../], the only difference is the last two beats.

The basic process of how *kendang* players develop their ability to improvise is by learning basic composed patterns taught by their teacher and developing them spontaneously in performance. However, an experienced and skilled *kendang* player may not even be consciously aware of any basic variations. They can express themselves and use their sensitivity to melody and to all the dancers’ cues, and respond to them using patterns based on accepted Balinese aesthetic ideals that they learned through direct imitation of other drummers. There is much more about this particular drumming style that needs to be discussed, such as the important concept of *angsel* (giving cues that respond to dance movements), but this must be reserved for a separate study.

### 3.2 Analysis of Pengipuk

Unlike the improvisation in *bapang* meter, drum improvisations in a long meter like *pengipuk* require special considerations of how to play them properly to synchronize with the meter and melody. The longer the melody the longer the gong cycle, and these in turn affect the design of the drum structure. It requires a deep understanding of where the particular gongs strokes fall in the melody before drummers are ready to improvise on top of it. In other words, a drummer usually learns and memorizes the melody and the colotomic structure and learns to easily sing it in their head, before thinking of creating improvised drum’s patterns. Of course it is easier for experienced drummers to do this and harder for amateur drummers to improvise in the *pengipuk* meter.
Unlike \textit{bapang} meter, no one thought about the basic pattern of the \textit{pengipuk} until recently, when a way was needed to teach it to beginning drummers at the conservatory. The purpose of this section is to introduce this way, which at least in my opinion as a drummer is an easier way to create improvisational drumming patterns in the \textit{pengipuk} meter. This methodology was invented by the famous composer and drummer I Wayan Beratha. Beratha took an example of a fixed paired-drumming pattern (\textit{kendang metimpal})\textsuperscript{12} in a similar meter called \textit{pengecet} (see figure 3.3)\textsuperscript{13}, and created a simplified pattern based on it.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure3_3}
\caption{Example of \textit{Pengecet} Drumming}
\end{figure}

\textsuperscript{12} The word \textit{metimpal} means “to be a friend” and refers to two \textit{kendang} players who direct the gamelan using composed patterns that interlock (Bandem 1982, 45).

\textsuperscript{13} For the purposes of this notation, I have changed the placements of the drum syllables due to the usage of the two drums, \textit{lanang} (male) and \textit{wadon} (female). The drums interlock, producing a single pattern that is represented in the first two staves.
Beratha simplified the *pengecet* pattern by retaining the strokes *De* (D), *Pak* (P), and *Tut* (T), but he had to change the *tut* (T) into *cung* (U) because the T stroke belongs to the *lanang* drum and cannot be produced by the *wadon* drum used for *kendang tunggal*. Beratha called this pattern *periring*, a term used in Balinese poetry that means basic skeletal structure (see Figure 3.4).

![Figure 3.4 Example of the Periring Pattern Based on Pengecet Drumming](image)

Let’s look closely and compare Figures 12 and 13 by using the first line as an example of how the process of simplification works. In *pengecet* drumming, the stroke on the right drumhead of the *lanang* is *Tut* (T), and on the *wadon* it is *De* (D). These two strokes are transformed into *Cung* (U) and *De* (D) in the *periring* pattern. On the left drumhead, the *Ka* (K) and *Pak* (P) strokes in both drums are transformed into only one
stroke: *Pak* (P). In the process of simplification, the strokes that have more weight, which in this case are the ones that land on each beat and its third subdivision, are chosen. For example, if we look at the first half (four beats) of the first phrase (Figure 3.5) we see that every stroke that lands on the beat and its third subdivision is selected, and the ones that land on the weak subdivisions are skipped. The same process is applied to the entire pattern. However, adjustments have to be made when there is no stroke that falls on the beat of the *pengecet* drumming. For example: the third beat of the *pengecet* drumming is empty, but it is filled in with *Pak* (P) in the *periring*. This is because the arrangement of *Ka* and *Pak* strokes in the *pengecet* is already a variation of something simpler: a continuous alternation of K and P strokes. Therefore, in the *periring* the *Pak* stroke is chosen to fill in the third beat.

Another adjustment has to be made in the second half of the first phrase. On the third subdivision of beat 6, *Tut* in the *pengecet* drumming pattern is changed to *Pak* instead of *Cung* in the *periring* pattern (see Figure 3.6). This change of stroke is applied to make...
smoother stroke alternations between the left and right hands. This is especially important at phrase endings.

The rhythmic structure of the whole *periring* pattern is divided into 2 parts: the first two lines are called *pemalpal* (to strut or walk with big steps), and the last two lines are called *pemalet* (to mark or divide in parts).\(^\text{14}\) In the *pemalpal* the left hand strokes dominate. The function of this is to mark and emphasize the arrival of the *kemong* (the smallest gong that usually marks the middle of the melody). The pattern of *pemalpal* is rhythmically less complicated and in this context has *Pak* on every beat until the cadence near the end. This kind of pattern is usually called *pewiwit*, which means beginning or opening pattern. As in almost every drumming style in Balinese gamelan, the drum pattern has to start with *pak* strokes before it is elaborated toward the ending of the phrase or cycle.

The *pemalet* consists of the pattern called *milpil* on the third line (beats 17 to 24) and *ngaduh* on the fourth line (beats 25 to 32). *Milpil* is rhythmically more elaborated, using a combination of *Cung, Pak*, and *De* on every beat, and functions as the starting point to the cueing of the final gong stroke. It prepares *nganduh*, which begins more elaborately and builds in intensity until the third beat of the *nganduh* pattern and then becomes less intense before the final gong arrives. The last two beats of *nganduh* usually consist of a closing phrase. The most common is [/ U D U/ ()], which strongly leads to the final gong stroke.

Another concept that lies behind the transformation from the *pengecet metimpal* drumming into *periring* is what I call the paradoxical balance of \(2 = 1\). This is based on

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\(^\text{14}\) Many of these terminologies are not commonly known by Balinese musicians. I learned them from I Ketut Gede Asnawa, in a phone interview on May 27, 2009.
the Balinese religious concept of dualism, *Rwabinedha*, where balance and unity are achieved from two opposing yet interdependent elements. In the *pengecet* drumming this concept is reflected in the interlocking of two drum patterns in which each drum has its own different pattern but the two are rhythmically related, and when played together produce a unified composite pattern.

The idea of the paradoxical $2 = 1$ is reflected in the playing technique of solo drumming which is itself based on the playing technique of paired drumming. For example, in *kendang tunggal* there is only one drum with two drumheads, played by two hands, but each drumhead has its own diverse sonic characteristics. All of these help to express the principle of opposing, yet complementary, sources. However, when these sounds are arranged together in various ways in a solo drumming performance they produce a unified pattern.

Using the *periring* as a foundation, a drummer is faced with two dimensions in developing the patterns themselves: musical structure and time. In this context, musical structure is a design that is shaped by aesthetics to form an appropriate rhythmic pattern. And time is a condition related to duration, tempo, rhythm, and intensity. Drummers employ the arrangement of syllables in the *periring* pattern as a medium. They delay, precede, double, play around the beat, and exploit the available strokes of the *periring* pattern. This process of transformation is called *kekembangan*. Below is a *kekembangan* pattern that I composed based on the *periring*. I tried to make a really simple pattern, so it will be easier to understand how its development works.
In the first line of the *periring* pattern there are 16 syllables that can be divided into four smaller phrases: 

[/. P P P/P P P U/P P U P/D P P U/]. In the first half of this
there are only two syllables (P and U), and most of them are P strokes. One possible kekembangan elaboration of this pattern can be made by adding one more stroke in between every stroke of the periring, thus doubling the subdivision (see Table 3.1).

Table 3.1 Example of Periring and Kekembangan Pattern 1

<table>
<thead>
<tr>
<th>Beat</th>
<th>1 . 2 .</th>
<th>3 . 4 .</th>
<th>5 . 6 .</th>
<th>7 . 8 .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kekembangan</td>
<td>t P t P t P t</td>
<td>P t P t P d UU</td>
<td>P t P d UU P d</td>
<td>D P t P u U U</td>
</tr>
</tbody>
</table>

This is a basic way of developing P because t substitutes for P on the right hand, and these strokes are always perfect partners because of the alternation of right and left hands. On the second subdivision of beat 4, the cung (U) stroke is developed by inserting de cenik tengawan (d) before the original cung (U) and adding one more cung stroke after the original one, [dUU]. This is also based on the way our hands work while drumming. All of these strokes [dUU] are only played by the right hand, with a turn of the wrist after the initial d. The d is played with the thumb and the U is played with the thumb touching the drum skin and the other fingers, except the pointer, bouncing on the drumhead. This technique is an ergonomic as well as common combination of strokes in kendang tunggal. The same process is applied on beat 6, except a d stroke is inserted on the last subdivision leading to De (D) stroke on the fourth beat.

An interesting development is applied in beat 7 and 8. The P and U strokes on the second subdivision of beat 7 and 8 of periring are moved and placed on the fourth subdivisions of beat 7 and 8 of kekembangan, while the partner strokes t and u are substituted on the third subdivisions. This produces a syncopated feeling and a smooth
hand alternation between $t - P$ and $U - u$. In beat four \([D \; P \; \downarrow \; P]\; U \; u \; U/\) the ordering of the hands’ movement is: right-left-right-left-rest- right-left-right. This is also a common arrangement of strokes in *kendang tunggal* and considered an ending pattern or a cadence.

The second line of the *periring* is the same as the first, so the *kekembangan* pattern could be the same. However, drummers usually create a different one by making a little change in places they think are important. For this chapter, however, I have decided to use the same *kekembangan* pattern for the second line in order to keep it simple and avoid confusion in understanding its developmental processes (for more complete analysis, see chapter four).

In the *pemalet* section (Figure 3.7), the two lines *milpil* and *ngaduh* have an AB-AC parallel structure. The first two beats of both patterns are basically the same, except that *milpil* starts with $P$ and *nganduh* starts with $U$; on the third subdivision of the second beat the *nganduh* skips the $P$. However, these are still considered equivalent because the overall arrangement of the strokes is the same. The last two beats of each line begin in a similar way, but develop differently toward the end.

The *kekembangan* patterns in group A are the same. The development process is similar to the *pemalpal*. Every stroke of the *periring* is developed by inserting strokes that allow a smooth hand alternation to create the *pemalet* pattern. De (D) on the second subdivision of the *periring* beat 19 is delayed by an eighth note and prefixed by *de cenik tengawan* (d). The $d$ stroke is the “imitation stroke” of the $D$, thus $D$ is moved to the weak subdivision. Therefore the D stroke produces syncopation. The same thing also happens on the next two strokes (the third and fourth subdivisions of the *periring* beat.
The two Pak strokes (P) are delayed by an eighth note in the pemalet by inserting an eighth note rest and a ketep (t) stroke on the strong subdivisions. Replacing the periring strokes or the suara pokok (the important drum strokes) by suara maya (the secondary strokes) is a key point in developing the periring into a kekembangan pattern, because avoiding the suara pokok on a strong subdivision is considered aesthetically beautiful in Balinese drumming. In principle, suara maya are placed on the beat and the strong subdivisions, and the suara pokok are placed on the weak subdivision in order to produce the feeling of syncopation preferred by most drummers, although sometimes this principle needs to be overridden.

In order to understand what kind of developments are happening in B, I will divide it into two small phrases: PUDUD and PUU. Why the unequal division (5 strokes and 3 strokes)? Because the development is based on the grouping of the periring, in which the pattern on beat 21-22 of the kekembangan [/PUPdDPdD/] is developed based on beat 21 to the downbeat of 23 [/P U D U D/], and the kekembangan on beat 23-24 [/PuUPuUPuU/] is based on the second subdivision of beat 23 and beat 24 of the periring [/ P U U /].

Table 3.2 Kekembangan Pattern in Section B

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Periring</td>
<td>P U D U</td>
<td>D P U U</td>
</tr>
<tr>
<td>Kekembangan</td>
<td>P t P d D P d D</td>
<td>. P U u U P U u</td>
</tr>
</tbody>
</table>

In beat 21-23, the kekembangan pattern ignores the periring cung (U) strokes and only uses the strokes that are placed on the beat (PDD). Because of that, there is no U in
the *kekembangan*. Instead, *U* strokes are substituted by *P* and *d* (on the second and fourth subdivision of the *kekembangan*); the *d* anticipates the *D* just before beat 23. The technique of doubling happens during beats 23-24. The *cung* (*U*) strokes are doubled using the alternation of the right hand *cung* (*U*) and the left hand *cung cenik kiwa* (*u*). A little change has been made on beat 23 where the *periring* *P* stroke moves back and is replaced by *U*. The *periring* PUU at beat 23-24 is played twice in diminution (slightly shortened the second time) in the *kekembangan*.

In section C, the development of the *kekembangan* pattern divides into two phrases: 

\[ /PUdD \text{ uu/uu} / \] and 
\[ /UUdUuU/ \]. The first one is based on the *periring* [PUD] and the second one on [UDU]. The first phrase of the *kekembangan* is expanded until the second subdivision of beat 31. The first phrase of the *periring* [PUD] is explicitly developed in beat 29 and the first subdivision of beat 30 in the *kekembangan* [PUPdD], and the rest of the first phrase in the *kekembangan* pattern [UudD] functions to fill in the empty beat by prolonging and developing [UD] of the *periring*. A very straightforward development happens on the second phrase by developing [UDU] in the *periring* into [UuDuU] in the *kekembangan*. The *u* stroke is inserted after the first *U* and before the second *U*, so both *U* are moved to the weak subdivision.

Table 3.3 *Kekembangan* Pattern in Section C

<table>
<thead>
<tr>
<th>Beat</th>
<th>29 . 30 .</th>
<th>31 . 32 .</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Periring</strong></td>
<td><em>P</em> <em>U</em> <em>D</em> .</td>
<td>. <em>U</em> <em>D</em> <em>U</em></td>
</tr>
<tr>
<td><strong>Kekembangan</strong></td>
<td><em>P</em> <em>U</em> <em>P</em> <em>d</em> <em>D</em> . <em>u</em></td>
<td><em>d</em> <em>D</em> . <em>u</em> <em>D</em> <em>u</em> <em>U</em></td>
</tr>
</tbody>
</table>
The most important thing to keep in mind, especially for an amateur drummer, is that the *kekembangan* should reflect the *periring*. The *kekembangan* should explicitly show the arrangement of the strokes of the *periring* in order, especially the ones that fall on the beat. This clarifies the relation of the pattern to the gong cycle. The phrasing of each line emphasizes the sounding of the colotomic instruments (*gong, kempur, and kemong*) at the beginning of every line. As mentioned earlier, the pattern usually begins with a simple elaboration, emphasizing the first *kempur* stroke and the middle of the cycle (*kemong* stroke), and becomes more complex toward the end of the cycle. In the *nganduh* and *milpil*, preliminary patterns emphasize the second *kempur* stroke and then stress the arrival of the *gong*. Once the drummer is thoroughly familiar with these principles he can start to develop more elaborate patterns that possibly disguise the *periring* in the *kekembangan*. This is an advanced stage of solo drumming improvisation in *pengipuk* meter, explored in more detail in the next chapter.
Chapter 4: The Analysis of *Kendang Tunggal* in the *Pengipuk* of *Teruna Jaya*

*Kendang tunggal* improvisation technique is something personal to each drummer. Drummers develop their own personal aesthetic, though some may develop their patterns by copying their favorite drummers. This is common, but few explicitly acknowledge that their patterns were inspired by others (unless it is a really famous and great drummer). Good drummers are judged by their technical ability, creativity, and intellectuality in producing varieties and “tasty” patterns. Having the ability to play idiosyncratic *kendang tunggal* well is prestigious.

In this chapter, I select six recordings of *kendang tunggal* improvisation in the *pengipuk* meter of *Teruna Jaya*, as played by six master drummers. I use paradigmatic analysis to look for similarities and differences between the patterns of these drummers, and to seek out what is both unique and typical to each.

4.1 Brief Information About the Selected Drummers

These six drummers are very well known and respected teachers. They are Gde Manik from the village of Jagaraga, North Bali, and I Wayan Beratha, I Wayan Konolan, I Wayan Sinti, I Wayan Suweca, and I Komang Astita from different villages in Denpasar, Southern Bali. They represent two generations: the older one of “natural artists” (Manik, Beratha, and Konolan) who only studied in the villages, and the “formally trained” (Sinti, Suweca, and Astita), who studied at the Conservatory of Arts (KOKAR) founded in Denpasar in 1960. I studied formally with Suweca and Astita when I attended school, and also more informally with Sinti.
Gde Manik (1912-1986) was a musician, composer, dancer, and choreographer considered the best-known drummer of his era. He arranged the *Kebyar Legong* dance of Pan Wandres (his teacher), and transformed it into the *Teruna Jaya* dance that is now widely known. He is legendary for having been able to create continuous improvised patterns in many cycles without any repetition (see also Tenzer 2000, 289).

Wayan Beratha (b. 1924) and Wayan Konolan (1931-2008) were born in the same era as Gde Manik. Wayan Beratha is a gamelan maker, musician, composer, and teacher from the village of Blaluan. He taught at many villages and at KOKAR. He is respected by all as one of the greatest experts about the music, including a tremendous amount of knowledge about music philosophy and historical contexts. During his career, he composed and choreographed pieces that become a trademark of Balinese music and dance, especially in the *kebyar style*, from the 1960s until the current time. In terms of playing *kendang tunggal*, he is considered the best drummer of his era in south Bali.

Wayan Konolan was the father of the famous drum player I Wayan Suweca (b. 1948). They are from the village of Kayumas, Denpasar. Konolan was famous as a multi-instrumentalist musician, and Suweca is known for his unique and elegant style of playing drum. Suweca is the best drummer at the Indonesian Art Institute (ISI, founded in 1967) in Denpasar, and always got chosen to play drum in all concert events. He has gained an international reputation since 1979, where he formed a Balinese gamelan group based in the San Francisco Bay area with Michael Tenzer and the dancer, Rachel Cooper. He studied with many drummers including his father, Manik, and Beratha.

I Wayan Sinti (b. 1942) and Komang Astita (b. 1952) come from the generation after Gde Manik, Beratha, and Konolan. Sinti is a teacher at KOKAR, and Astita is a
teacher at the Indonesian Institute of Arts. They have received MA degrees from San Diego State University. They have also taught gamelan in many Universities in America, Canada, and Europe. Sinti is known for his love and responsibility to the ancient gamelan, and devoted himself in preserving and recovering old repertoires and its existence to the current day. He is also a great composer who always reflects the older style of music in his new compositions. As well as Sinti, Astita is a well-known composer who had composed yearly for the festival of Gong Kebyar. Most of his pieces won a prize at the Bali Art Festival as well.

4.2 The Analysis

Paradigmatic analysis is a method that is based on the concept of equivalence. It was developed by Nicolas Ruwet during the 1960s. Ruwet argued that the central characteristic of musical syntax was the central role of repetition and, by extension, of varied repetition or transformation (Middleton 1990, 183). In the context of kendang tunggal, the analysis is based on the identification of sub-patterns. Sub-patterns that are used often, whether straight or varied, and whether by one drummer or many, are significant, because they are felt to have interesting rhythmic structures, are popular among drummers, and express the basic structure of the cycle.

One cycle of each of the six recordings are transcribed in figure 4.1 and analyzed. The six drummers’ patterns are vertically aligned on each page to make it easier to compare and find the similarities and differences between the sub-patterns of each drummer. The goal is to find out whether these drummers developed their patterns based
on the idea of periring structure mentioned in the previous chapter, and whether they share the same grouping structures.

Tables 4.1 to 4.5 shows which sub-patterns are repeated, in what measure, and by whom. On the score, the grouping structures are marked with a bracket, and numbers representing the length in eight notes are placed on top of the bracket. The last stroke of every sub-pattern is circled in order to show the common or the preferred ending stroke of the sub-patterns of each drummer.

4.2.1 Analysis of Kendang Tunggal in the Pengipuk of Teruna Jaya

The length of the pengipuk of Teruna Jaya is 48 beats. It is divided equally into six units of eight beats based on the placement of the colotomic instruments (gong, kempur, and kemong). In practice, however, drummers often merge the last two units into one longer sub-pattern, joining the ending of the fifth with the beginning of the sixth. In the transcription, the last two sub-patterns of Manik, Beratha, Sinti, and Suweca are merged. They create a continuous flow that avoids the feeling of the new beginning given by the kempur stroke at the beginning of the sixth sub-pattern. On the other hand, Konolan and Astita maintained the normal six sub-patterns based on the division given by the colotomic instruments. On the score of figure 4.1, I marked all of these with rectangles.
Every drummer plays a mixture of unique and repeated sub-patterns. The repeated sub-patterns are buried unpredictably inside the patterns. The unique sub-patterns are easier to recognize, and meant to be explicitly featured. They are often played at important places in relation to the meter, usually in the middle of the cycle or before the arrival of the final gong. However, this idea is not totally rigid and there is no explicit rule. Drummers organize their patterns based on their creativity and intellectual aesthetic, producing them spontaneously while they play. They can have a unique sub-pattern at the beginning of the cycle, or wherever they wish.

Let us look at one drummer’s mixture of unique and repeated sub-patterns in detail. Gde Manik has four sub-patterns that are repeated, straight and varied, in several different places. The sub-pattern [.tP/tPd/UPd/.] at measure 1 to 2 is repeated in two places (mm. 5-6, and mm. 13-14) with a small change (refer to Figures 4.2 and Table 4.1). In 5-6, the original $t$ and $P$ on the fourth subdivision of beat one and the first subdivision of beat two are changed into $U$ and $u$, as well as the $d$ and $U$ on the fourth subdivision of the second beat. The same changes are made for the repeated sub-pattern on measures 13-14, plus there is an added $U$ at the beginning of the sub-pattern.

The sub-pattern [.UuU/PuU/D] at measures 6-7 is repeated with variation in measures 18-19. The $P$ on the first subdivision of beat 13 changes into $u$, and $u$ and $U$ on the third and fourth subdivision of beat 13 change to $P$ and $d$ [.UuU/uUPd/D]. At measure 8, the sub-pattern [UuD./tPPd/] is also repeated with variation at measure 16. The (UuD) on the first half is moved one eighth note later, the $P$ on the second subdivision of beat 16 is taken away, and the $t$ on the first subdivision beat 16 is moved an eighth note later, replacing the $P$. These changes add syncopation to the newly-produced sub-pattern.
At measures 20-21, the sub-pattern [.tPd/DL.] is repeated in the next measures (m.21-22).

The unique sub-patterns of Manik are presented at the middle and toward the end of the cycle (refer to Table 4.1). These are relevant to ideas discussed in chapter 3, where the sub-patterns begin in a simple way, are elaborated near the middle of the cycle (third unit), and get even more complicated before the arrival of the gong (fifth and sixth units). These unique sub-patterns can also be identified by their grouping structures. The first, second, and the fourth one have the same grouping structure (4+2+2), but the third unit (middle of the cycle) and the fifth one are different (2+4+2, and 4+2+2+1+2+4+1).
Table 4.1 Repeated (precise or varied) Sub-Patterns of Gde Manik

<table>
<thead>
<tr>
<th>Sub-patterns</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>[.tPt/PtPd/UPdD/]</td>
<td>m.1-2, m.5-6 (varied), m.13-14 (varied),</td>
</tr>
<tr>
<td>[.UuU/PuUuU/D]</td>
<td>m.6-7, m.18-19 (varied),</td>
</tr>
<tr>
<td>[.UuD/.tPPd/]</td>
<td>m.8, m.16 (varied)</td>
</tr>
<tr>
<td>[.tPd/DPdD/]</td>
<td>m.20-21, m.21-22</td>
</tr>
</tbody>
</table>

In the third unit, the three sub-patterns [UtPd/DPdD/], [.UuU/.UuU/PdDL/D], and [.tP/tPtP/tPUu] are new. The contrast between the first two and the third sub-pattern creates a feeling of movement. The contrast comes from the organization of the strokes, where the main strokes (D and U) are dominant in the first two sub-patterns, and less dominant in the third one. The first two, more elaborated, sub-patterns point to an emphasis on the upcoming middle of the cycle, but the simpler (just t P in alternation) closing rhythm of the third one marks the actual arrival of the kempur stroke.

The merged fifth and sixth units (mm. 17-24) are a development of the third one (see Figure 4.3). I labeled the sub-patterns of the third unit A, B, and C. Only B is divided into two smaller phrases (B1 and B2).

![Figure 4.3 The Development of The Third Unit into the Fifth and Sixth Units](image)

The A of the third unit is developed into A’1 and A’2. The development from A to A’1 is straightforward: Manik just added four strokes at the beginning (UuUu). A’2 is
more like a reduced-repetition of A’1 that is obviously still related to A. B1 happens twice (B1’/1 and B1’/2) but functions differently each time: B1’/1 functions as the opening sub-pattern (the same as B1), and B1’/2 functions as the closing sub-pattern, replacing C. In its development, Manik inserted U and P strokes for B1’/1, and U, P, and d for B1’/2.

Manik exploits and develops B2 three times, labeled B2’/1, B2’/2, and B2’/3. The development from B2 into B2’/1 and 2 is very straightforward. The first two strokes of B2 are taken away, and the third one is changed to t. However, they have a different relation to the beat than B2: P and the second D of B2 are on the beat, but only the first D of B2’/1 and 2 are on the beat. These changes give the sub-patterns a different feeling. I still consider them as similar sub-patterns because of the organization of their strokes. B2’/3 is longer and different: it has the same relation the to beat as B2, but adds several more D at the end.

Four of the other five drummers create patterns similarly to how Manik does, except Suweca. Below are the tables of repeated (precise or varied) sub-patterns of Beratha, Konolan, Sinti and Astita (Table 4.2, 4.3, 4.4, 4.5).

Table 4.2 Repeated (precise or varied) Sub-Patterns of I Wayan Beratha

<table>
<thead>
<tr>
<th>Sub-patterns</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>[.tPt/PtPd/UPdD/.]</td>
<td>m.1-2, m.15-16</td>
</tr>
<tr>
<td>[.UuU/.tPd/DpdD/.]</td>
<td>m.2-3, m.6-7 (reduced), m.19-20 (varied)</td>
</tr>
<tr>
<td>[.UtPu/UtPu/uPdD/]</td>
<td>m.9-10, m.17-18</td>
</tr>
<tr>
<td>[.tPd/DLD./]</td>
<td>m.20-21, m.21-22</td>
</tr>
</tbody>
</table>

Table 4.3 Repeated (precise or varied) Sub-Patterns of I Wayan Konolan

<table>
<thead>
<tr>
<th>Sub-patterns</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>[.tP/tPt/PtPd]</td>
<td>m.3-4, m.8, 12, and 24 (reduced)</td>
</tr>
<tr>
<td>[U.U./PdPd/UpdD]</td>
<td>m.5-6, m.9-10 and m.13-14 (varied)</td>
</tr>
<tr>
<td>[...U/PdDL/D]</td>
<td>m.18-19, m. 23</td>
</tr>
</tbody>
</table>
Table 4.4 Repeated (precise or varied) Sub-Patterns of I Wayan Sinti

<table>
<thead>
<tr>
<th>Sub-patterns</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>[.tP/tP/tP/tD]</td>
<td>m. 1-2, m. 5-6, m. 9-10, m. 17-18 (varied)</td>
</tr>
<tr>
<td>[.UuU/uU/pD/d]</td>
<td>m. 2-3, m. 6-7,</td>
</tr>
<tr>
<td>[.tP/tP/PD/tP]</td>
<td>m. 3-4, m. 7-8</td>
</tr>
<tr>
<td>[.UuU/uU/PD/UPD/]</td>
<td>m. 10-11, m. 18-19</td>
</tr>
</tbody>
</table>

Table 4.5 Repeated (precise or varied) Sub-Patterns of I Komang Astita

<table>
<thead>
<tr>
<th>Sub-patterns</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>[.UPU/p/PdU/u/UPdD/]</td>
<td>m. 5-6, m. 9-10 (varied), m. 17-18 (varied), m. 21-22 (varied)</td>
</tr>
<tr>
<td>[.Pup/PDPd/D]</td>
<td>m. 6-7, m. 10-11, m. 18-19</td>
</tr>
<tr>
<td>[.tP/tPtP/tPd/]</td>
<td>m. 7-8, m. 19-20</td>
</tr>
</tbody>
</table>

There is no precise repetition in Suweca’s sub-patterns. There is only one varied repeated sub-pattern. The sub-pattern [.P/P/D/.TPU/] is reduced from three beats to two beats. He takes away the first three strokes, as well as the P on the first and the third subdivision of beat 41. It becomes this new reduced sub-pattern [.D.D/.TPU.] (refer to Table 4.6).

Table 4.6 Repeated Varied Sub-Patterns of I Wayan Suweca

<table>
<thead>
<tr>
<th>Sub-patterns</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>[.PUP/PDPD/.TPU/]</td>
<td>m. 20-21, m. 22 (reduced)</td>
</tr>
</tbody>
</table>

Though Suweca’s sub-patterns are continuously varied from the beginning to the end of the cycle, if we break down the sub-patterns into smaller phrases based on the principle discussed in the analysis of bapang of chapter 3, we find some repeating smaller phrases. Below are precise repeated smaller phrases of Suweca (Table 4.7).
Table 4.7 Precise Repetition of Smaller Phrases of I Wayan Suweca

<table>
<thead>
<tr>
<th>Smaller Phrases</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>[.Pd/PD]</td>
<td>m.8, m.20-21</td>
</tr>
<tr>
<td>[.Pd/PdD]</td>
<td>m.9, m.23</td>
</tr>
<tr>
<td>[.P/u]</td>
<td>m.13, m.13-14</td>
</tr>
<tr>
<td>[.P]</td>
<td>m.14, m.21, m.22</td>
</tr>
</tbody>
</table>

Suweca smartly exploits the smaller phrases and arranges them unpredictably in the sub-patterns. He buried the repeated smaller phrases inside the sub-patterns to create a continuous progression without any precise repetition. Suweca, who learned *kendang tunggal* from many different teachers including those three drummers analyzed above (Gde Manik, Beratha, and Konolan), says that he combines the typical phrases of his teachers in many different ways to form new sub-patterns which become his own.\(^{15}\)

Every drummer has a special background and knowledge used in developing their typical sub-patterns. Beratha has a philosophical approach, and said that the uses of the main strokes (D, P, and U) have to be balanced or relatively equal in number (Tenzer 2000, 298). This means while creating the sub-patterns, drummers have to think of the proportion of the main strokes within the cycle. Konolan, according to his son (Suweca), taught Suweca starting from the simplest way of developing *kendang tunggal* building gradually to more complicated ones, but still maintaining the basic principle of emphasizing the colotomic instruments and avoiding the downbeat. Konolan sub-patterns were also a combination of sub-patterns that he learned from other drummers.\(^{16}\)

I have observed that Sinti developed his solo drumming improvisation based on the style of paired-drumming in *pelegongan*. It features combinations of *t-p-P* strokes

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\(^{15}\) Personal interview December 2008

\(^{16}\) Personal interview with I Wayan Suweca September 2008
representing both left hand strokes.\textsuperscript{17} He also loves to place the P on the second and the fourth subdivision of the beat to keep the music buoyant (Tenzer 2000, 298).

Like Sinti, Astita developed his solo drumming improvisation based on the older types of drumming in the Balinese gamelan, gambuh and pelegongan drumming, including the paired-drumming in kebyar style. He said that “we cannot just freely develop the drumming patterns in kendang tunggal without any aesthetic and musical considerations. Everything has to be structured in the relation to the meter, especially playing in the longer meter like pengipuk.”\textsuperscript{18} Furthermore, he preferred to increase the number D stroke toward the end of the cycle (Tenzer 2000, 298).

4.2.2 Comparison Between Drummers

4.2.2.1 Shared Sub-patterns

In this section, I am focusing on drummers’ shared sub-patterns, precise and varied, and putting them in one table. Surprisingly, I found two groups of drummers who shared the same sub-patterns (see Table 4.8): one is Manik, Beratha, and Sinti (marked yellow), and the second one is Konolan, Suweca, and Asita (marked green).
Table 4.8 Sub-Patterns Shared Between Drummers

<table>
<thead>
<tr>
<th>Sub-patterns</th>
<th>Gde Manik</th>
<th>Beratha</th>
<th>Konolan</th>
<th>Sinti</th>
<th>Suweca</th>
<th>Astita</th>
</tr>
</thead>
<tbody>
<tr>
<td>[.tP/tPd/UPdD]</td>
<td>m.1-2</td>
<td>m.1-2</td>
<td>-</td>
<td>m.1-2, 5-6 (varied)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>[...P/tPtP/tPd]</td>
<td>-</td>
<td>-</td>
<td>m.3-4</td>
<td>-</td>
<td>m.3-4</td>
<td>m.7-8</td>
</tr>
<tr>
<td>[.UuU/.UPd/D]</td>
<td>-</td>
<td>m.6-7</td>
<td>-</td>
<td>m.6-7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>[.PUp/PDPd/D]</td>
<td>-</td>
<td>-</td>
<td>m.14-15</td>
<td>-</td>
<td>m.6-7</td>
<td>m.6-7</td>
</tr>
<tr>
<td>[UtPU/utPU/uPdD]</td>
<td>m.5-6</td>
<td>m.9-10, m.17-18</td>
<td>-</td>
<td>-</td>
<td>m.5-6 (varied)</td>
<td>m.9-10, m.10-11, m.18-19</td>
</tr>
<tr>
<td>[UuPU/PdUu/UPdD]</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>m.5-6 (varied)</td>
<td>m.9-10, m.10-11, m.18-19</td>
</tr>
<tr>
<td>[.tP/tPtP/tPUu]</td>
<td>m.11-12, m.3-4 (varied), m.11-12</td>
<td>m.7-8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>[.tPd/DLD.]</td>
<td>m.20-21</td>
<td>m.20-21</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>[.tPPd/DLD.]</td>
<td>m.21-22</td>
<td>m.21-22</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>[.D.D/.tPU]</td>
<td>-</td>
<td>-</td>
<td>m.22</td>
<td>-</td>
<td>m.22</td>
<td>-</td>
</tr>
</tbody>
</table>

The most interesting correspondence is between Manik and Beratha, who come from different villages some distance apart (North Bali and South Bali) and are considered the best drummers and composers from the same era. How could they share many sub-patterns? This question brings us back to the common idea whether many drummers covertly take sub-patterns of others and use them, or if there is a kind of hidden competition between them to play such interesting and complicated sub-patterns. It is interesting to see how both, with their fame and intellectuality, smartly utilize the same sub-patterns.

Of the five sub-patterns that are shared between Manik and Beratha, only two of them are varied. Both drummers use [UtPU/utPU/uPdD] and [.tP/tPtP/tPUu]. Manik varies them in measures 5-6 and 3-4 ([.tP/utPU/uPdD] and [.tP/UtP/tPUu]). In the first sub-pattern, he takes away the $U$ on the first beat and does the same for the rest. In
the second one, he changes \(t\) and \(P\) on the first and second subdivision of the second beat to \(U\) and \(u\). Both sub-patterns remain the same in principle.

On the other hand, Sinti shared only two sub-patterns with Manik and Beratha. One of them is precisely repeated \([.UuU/.UPd/D]\) and the other one is varied \([.tPt/PtPd/UPdD]\) becomes \([.tPt/tPd/tPdD]\). For the one that is varied, Sinti changes \(d\) and \(U\) on the last subdivision of the second beat and the first subdivision of the third beat to \(t\) and \(t\). It is reasonable that Sinti’s sub-patterns were influenced by Manik and Beratha because both of them come from the generation before Sinti.

The other three drummers, Konolan, Suweca, and Astita, also share sub-patterns. It is obvious that Konolan and Suweca shared the same sub-patterns since they were both father and son and teacher and student. On the other hand, Astita, who is Suweca’s colleague at the Institute of Arts (ISI), had been Suweca’s drum partner and often played together in the same ensemble. Between these three drummers, Suweca varied one sub-pattern: the original \([.PUp/PDPd/D]\) becomes \([.PUP/PDPd/D]\) in measures 6-7. He changes \(p\) on the fourth sub-division of the first beat to \(P\).

Astita’s sub-pattern \([UuPU/PdUu/UPdD]\) is varied by Suweca in measures 5-6 \([UuPU/PdUP/UPUP/dD]\). Suweca changes \(u\) on the last subdivision of the second beat to \(P\), and inserts \(U\) and \(P\) after that (on the first and second subdivision of the third beat). As well as Suweca, Astita also varied that sub-pattern in three different places: in measures 5-6 \([UPUp/PdUu/UPdD]\), measures 17-18 \([tPtp/PdUu/UPdD]\), and measures 21-22 \([UpPt/PdUu/UPdD]\). He changes the first beat of the sub-pattern in three different ways: the (UuPU) changes to (UPUp) in measures 5-6, (tPtp) in measures 17-18, and (UpPt) in measures 21-22.
Based on my observation as a drummer, those shared sub-patterns are commonly known among drummers, as they are often used and taught by these six influential master drummers. However, they also have their unique sub-patterns that become their identity. As mentioned previously, these unique sub-patterns are often played at the end of the cycle as concluding sub-patterns.

4.2.2.2 Grouping Structures

Within the eight-beat units, the sub-patterns are almost always grouped based on the rests used to separate them and the accented $D$ and $U$ strokes just before the rests. However, having the same grouping structure does not mean having the same sub-patterns. The grouping only shows the length of the sub-patterns, not whether they are simple or more elaborated. But it is helpful to analyze how these drummers divide their units in many different lengths of sub-patterns.

For example, Gde Manik’s first unit is grouped (using eighth notes) as $[12+9+11]$. Between the first to the fifth units, the $[12+9+11]$ grouping is played at some point by each of the drummers, except Suweca. It is most frequently used in the second one (used by four drummers except Konolan and Suweca). The other shared grouping structures are $[21+11]$ as played by Konolan in the first and fourth unit, and Suweca in the first unit; and $[12+12+8]$ played by Beratha in the first unit, Sinti in the third unit, and Manik in the fourth unit. The grouping structures get more varied toward the end of the cycle, especially from the fifth unit to the sixth one, where no drummers shared the same grouping (see Figure 4.9).
Table 4.9 Grouping Structure

<table>
<thead>
<tr>
<th>Name</th>
<th>1st Unit (beats 1-8)</th>
<th>2nd Unit (beats 9-16)</th>
<th>3rd Unit (beats 17-24)</th>
<th>4th Unit (beats 25-32)</th>
<th>5th Unit (beats 33-40)</th>
<th>6th Unit (beats 41-48)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manik</td>
<td>12+9+11</td>
<td>12+9+11</td>
<td>8+13+11</td>
<td>12+12+8</td>
<td>12+10+6+7+8+14+7</td>
<td>-</td>
</tr>
<tr>
<td>Beratha</td>
<td>12+12+8</td>
<td>12+9+11</td>
<td>12+9+11</td>
<td>16+12+4</td>
<td>12+12+4+7+8+10+11</td>
<td>-</td>
</tr>
<tr>
<td>Konolan</td>
<td>21+11</td>
<td>12+11+9</td>
<td>12+11+9</td>
<td>12+9+11</td>
<td>8+6+7+11</td>
<td>8+8+7+9</td>
</tr>
<tr>
<td>Sinti</td>
<td>12+9+11</td>
<td>12+9+11</td>
<td>12+12+8</td>
<td>21+11</td>
<td>12+12+10+8+8+8+6</td>
<td>-</td>
</tr>
<tr>
<td>Suweca</td>
<td>21+11</td>
<td>14+9+9</td>
<td>8+15+9</td>
<td>16+9+6</td>
<td>12+9+7+12+8+8+8</td>
<td>-</td>
</tr>
<tr>
<td>Astita</td>
<td>17+15</td>
<td>12+9+11</td>
<td>12+9+11</td>
<td>10+12+10</td>
<td>12+9+11</td>
<td>12+12+8</td>
</tr>
</tbody>
</table>

The third unit leads to the middle of the cycle. Based on the principle discussed in chapter 3, it is supposed to have more elaborated sub-patterns that possibly have a different grouping structure than the previous ones. But here only two drummers have created a different grouping structure (Manik and Sinti). They begin by using the same grouping in the first two units and a different one in the third unit. The other drummers built their grouping differently.

All of the drummers’ grouping structures in the last two units are varied in length. Manik, Beratha, Sinti, and Suweca combine the last two units into one longer unit to create longer continuous sub-patterns that ignore the *kempur* stroke on the fifth unit and continue to emphasize the arrival of the final gong. This is usually accomplished by playing elaborated sub-patterns that frequently use the *D* stroke, followed by two or three of the same sub-patterns in repetition, and ending a new sub-pattern accenting the gong stroke. This is a special arrangement only created in the last two units, for which drummers usually prepare a well-rehearsed and pre-composed sub-pattern for this particular place. Konolan and Astita still maintain the last two units separately. This shows that they have developed their typical final sub-patterns in two different ways: a preliminary set of sub-patterns in the fifth one and the final set of sub-patterns to end the cycle.
Considering Figure 4.9 as a whole suggests the idea of preferred grouping structures within units. Most drummers prefer to divide the eight beats (32 eighth notes) of each unit unequally. The most common arrangement is \([12+9+11]\). Evidently there is a basic aesthetic principle at work to arrange the sub-patterns to conflict with the equal groupings \([8+8+8+8]\) given by the melody and colotomic structure.

Another interesting idea that is related to the unequal division found in all of these sub-patterns is that the ending strokes of the first and the second sub-pattern of all units are mostly \(D\) and sometimes \(U\) or \(u\). Most drummers prefer to end their sub-patterns with \(D\). The \(D\), with a deeper sound, is considered the most important stroke of all, and is placed at the end as an accented stroke going against the given on-the-beat feeling of the melody. \(D\) is not often used as a filler stroke or in combination with the other strokes in the middle of the sub-patterns. However, an exception is usually found at the end of the entire cycle where \(D\) is played more frequently to signal the arrival of the final gong.

In the third sub-pattern of each unit, the secondary strokes (\(u\), \(d\), and \(t\)) are dominant to end the sub-patterns, even though in some sub-patterns, we can still find \(U\) and \(P\) as an ending stroke. All of those secondary strokes, the \(U\) and \(P\), will produce a feeling of incompleteness. The resolution comes only with the next \(D\) stroke, and especially with the \(D\)s at the very end of the cycle. The combination of all these techniques and stroke combinations produces a continuous feeling that connects each sub-pattern to the next one.

The drummers’ patterns are thoughtfully organized. They are created based on the principle of solo drumming in the *pengipuk* meter, discussed in chapter 3, for which every unit has a structure that emphasizes the colotomic instruments and main melody.
tones marking the cycle. But the beauty of *kendang tunggal* is in how drummers create rhythmic conflict that goes *against* these structures. It is important that drummers master the melody and the colotomic punctuation in the cycle in order to create sub-patterns that play around the beat (*nyanden kajar*) and permute them smartly.
Conclusion

*Kendang tunggal* incorporates the idea of improvisation, though in Bali we do not have a special term for improvisation. We do, however, have a sense for the meaning of improvisation in the way some drumming is played spontaneously in the course of performance, and in the way drummers use their abilities to arrange their sub-patterns or create new ones. There are some important aspects that need to be underlined in creating those patterns, such as: meter and the melody accompaniment, dancers’ cues, and the ability to lead the ensemble.

In this thesis I began my exploration with the historical context of *kendang*, its physical description, the meters commonly used, and a definition of *kendang tunggal* (chapter 2). I focused my analysis on how drummers construct their sub-patterns in relation to *bapang* and *pengipuk* by giving an analysis of simple drumming patterns in those meters (chapter 3), continuing with the analysis of patterns in the *pengipuk* of *Teruna Jaya* played by six drummers (chapter 4).

It is interesting to see how these drummers shared some of the same sub-patterns. The analysis shows that there is a basic improvising technique for each meter. In *bapang* meter, because of a short repeated gong cycle (8 beats), drummers have more freedom to express their sub-patterns spontaneously, with less concern for the melodic accompaniment and colotomic punctuation. This is because the meter is only divided into two four-beat units: the first leads to the middle of the cycle (punctuated by *kemong*), and the second emphasizes the arrival of the *gong*.

On the other hand, in the *pengipuk* meter (the 48-beat gong cycle), drummers have to thoughtfully organize their pre-composed sub-patterns to emphasize the melody
and colotomic instruments in each unit. They have less freedom in developing new sub-patterns in this longer meter. However, it can still be considered improvisation because they are arranging their pre-composed sub-patterns spontaneously in the course of performance. Drummers have to base their creations or arrangements on the basic principles, discussed in chapter 3, of kendang tunggal in a longer meter like pengipuk.

There is a traditional philosophical concept of paternalism in Balinese culture that can help us understand how the male drum (purusa) came to be the leader of the ensemble. The high-pitched sound of kendang lanang is believed to go up to bapa akasa (father sky), while the deeper sound of kendang wadon (female drum) goes down to ibu pertiwi (mother earth). The kendang lanang functions as the pengenter (giving the cue to begin something) or penandan gending (controller), and the kendang wadon with its lower deeper sound functions as a basic foundation (dasar), giving accentuations to end the piece (negesan gending). According to this line of thinking, the kendang lanang controls and leads the ensemble. In fact, before the gamelan gong kebyar emerged in North Bali in the early twentieth century, the male drum (kendang lanang) was the leader.

In contrast, since the emergence of the gong kebyar—considered the icon of performing arts in Bali in the twentieth century—Balinese musicians have changed their thinking about the aesthetic, logic, and ethic of their musical conceptions. The role of the kendang lanang as a leader was replaced by kendang wadon. This is because of the demand of the larger ensemble that requires a deeper drum’s sound as a leader. In this era, the kendang wadon was emancipated and its leadership legitimated. Drummers have
developed more complex playing techniques and invented new patterns to enhance the complex rhythm and melody of the kebyar pieces.

Solo drumming improvisation remains something that has to be studied more comprehensively in the future. It is still an abstract concept for many musicians as well as Balinese gamelan lovers. How does one develop patterns that are perfectly synchronized with melody according to an accepted Balinese aesthetic? How can one construct patterns that clearly underline the dance movements? What is the philosophy behind the drumming? Hopefully, I will have a chance to write about Balinese drumming improvisation, and all of these issues, more deeply on a different occasion.
Appendices

Appendix A
*Kendang Tunggal* in the First Cycle of *Pengipuk of Teruna Jaya*
Appendix B
Kendang Tunggal in the Second Cycle of Pengipuk of Teruna Jaya
Appendix C
Kendang Tunggal in the Third Cycle of Pengipuk of Teruna Jaya
Bibliography


