

A PEDAGOGICAL AND ANALYTICAL STUDY OF DUŠAN BOGDANOVIĆ'S
POLYRHYTHMIC AND POLYMETRIC STUDIES FOR GUITAR

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Polymeter has been a relatively unexplored compositional technique of music of the Common Practice Period. Dušan Bogdanović's *Polyrhythmic and Polymetric Studies for Guitar* is recognized in the guitar world as not only an important theoretical treatise, but also a benchmark for more advanced levels of improvisation. Currently, his treatise remains the best source for learning polymetric improvisation on the guitar. My personal contribution stems from the idea that multiple interpretations of thought processes and technical approaches are possible when learning to play polymeters on the guitar. The first section focuses on providing an alternative technical approach towards learning to play polymeters on the guitar by simplifying selected exercises in Bogdanović's treatise from their original presentation, and demonstrating further possibilities as to how the exercises can be applied in a practical manner to improvisation. The second part reveals through analysis of the Concert Studies 1, 2, and 5 both his innovative improvisatory use of polymeter as a stylistic device, and his ties to traditional ideas of structure.

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CHAPTER 1

INTRODUCTION

Significance and State of Research

Polymer has been a relatively unexplored compositional technique in music of the common practice period. Guitarist, composer, and improviser Dušan Bogdanović writes that his first encounters with African Pygmy music fascinated him with the possibilities of polymer and its integration with Western classical forms.¹ Bogdanović's *Polyrhythmic and Polymetric Studies for Guitar* (1990) is recognized in the guitar world as not only an important theoretical treatise, but also a benchmark for more advanced levels of improvisation. It offers the most thorough pedagogical method for teaching the performance and improvisation of polymeters on the guitar. Fully aware that he could have exhausted the topic with hundreds of examples and their variations, he instead approached his treatise from a different standpoint, using only 25 exercises in the first section and 5 concert studies in the second, thus creating room for students to build their own styles of polymetric improvisation.

Dušan Bogdanović has developed a unique personal synthesis of contemporary classical, jazz, and ethnic music and has received respect throughout the guitar world for his formidable skills as an improviser. Although the accepted norm for jazz improvisation on the guitar in the last century has been melodic improvisation over sets of harmonic changes, Bogdanović has become known for improvising entire multilayered compositions that involve intricate counterpoint, tricky polymeters, and multicultural melodies and modes simultaneously. Bogdanović encourages the student

¹ Dušan Bogdanović, "Playing Polymer on the Guitar," *Soundboard* 22 no.1 (1995): 15.

to use his treatise as a method for developing rhythmic improvising skills, as opposed to just learning the exercises verbatim. His attitude toward improvisation and world music has been well documented throughout his career through his method of notation in many compositions, his two books on improvisation, his recordings, and his teaching. From this, it is clear that Bogdanović considers improvisation to be an integral part of the guitar student's daily practice regimen.

The first part of the treatise currently remains the best source for learning polymetric improvisation on the guitar, and the second contains five excellent concert pieces. My personal contribution stems from the idea that multiple interpretations of thought processes and technical approaches are possible when learning to play polymeters on the guitar. Each instrument presents its own idioms that must be addressed in a pedagogical system so the student can learn new concepts within the contexts of common fingerings and patterns that pertain specifically to the instrument. The first part of this study focuses on providing an alternative technical approach towards learning to play polymeters on the guitar, using specifically selected exercises in Bogdanović's treatise. Since the bulk of the classical guitar repertory stems from a Western musical system, trying to integrate rhythmic possibilities that come from a non-Western tradition can be a daunting task for any student of the classical guitar. This study elucidates Bogdanović's examples by simplifying them from their original presentation, and demonstrates further possibilities as to how the exercises can be applied in a practical manner to improvisation. Although Bogdanović is clear in his introduction as to how to practice these exercises, some examples are more idealistic than practical. In particular, the exercises with long polymetric cycles are too difficult in

their basic form due to synchronization issues between the right and left hands.

The purpose of this dissertation is two-fold: 1) to provide guitarists with an alternative, detailed, step-by-step pedagogical method to polymetric improvisation using selected exercises in Bogdanović's treatise; and 2) to reveal through analysis of the concert studies 1, 2, and 5 both his innovative improvisatory use of polymeter as a stylistic device, and his ties to traditional ideas of structure. Selected exercises are dismantled into simpler layers to create easier exercises, facilitate the mastery of the more complex exercises in Bogdanović's treatise. Understanding the exercises in part I then illuminates the improvisatory nature of the selected polymetric concert studies. The revised examples reveal that improvisation can be practiced within the specific context of polymeters rather than those of melody and harmony. Polymetric fluency can then generate new melodic possibilities in the act of improvisation. Although Bogdanović has used polymeter extensively in his compositions, the guitar repertory has very few pieces in which polymeter is the most memorable aspect of the composition; consequentially, little musical analysis of polymetric guitar music has been carried out. Furthermore, a database search reveals that no written analysis of or commentary has been done on the treatise. The analysis of the selected pieces in the second part of the treatise provides guitarists with insight into how Bogdanović uses polymeter to serve as a primary structural parameter and how his use of polymeter then gives rise to linear melodic possibilities.

Introduction to Bogdanović's Treatise

The first part of the treatise comprises 25 exercises that are designed to build

metric independence of both symmetrical and asymmetrical meters. Bogdanović begins with a set of “phasing exercises,” which, he notes in his introduction to the treatise, “are devised for the sake of developing an active awareness of, and a mobile focus on, metric change within a constant rhythmic framework.”² As the exercises progress, greater technical facility and mental awareness are required to master more advanced polymetric models. Some exercises contain multi-layered cyclic structures that require a high level of mental and technical control from the player. Furthermore, many of them are presented along with their inversions, which build independence in the fingers while they also train the improviser to hear multiple lines. The second part of the treatise contains five studies that employ a wide variety of metric divisions; these have been accepted as concert pieces in the guitar repertory. Bogdanović notes in his introduction that the rhythmic, melodic, and harmonic bases for the studies derive from several musical traditions (African, Balinese, Balkan), and use primarily polypentatonic and polymodal idioms.³ The 3 concert studies chosen for analysis vary widely in style with regard to their harmonic, melodic, and metric language as well as their mood and tempo and the technical facility they require.

Bogdanović provides a systematic order for practicing polymeters in a short paragraph in his introduction titled “Psychology of Polymetric Studies.”⁴ It is crucial for the player first to develop a mental awareness of these polymeters in order to think in more than one meter at a time, rather than just play by memory. Because most of us in the West have not grown up hearing Askak music of the Balkan region or the drum

² Dušan Bogdanović, *Polyrhythmic and Polymetric Studies for Guitar*, (Ancona, Italy: Berben, 1990), 3.

³ Ibid., 3.

⁴ Ibid., 3.

music of the Ewe tribe of Ghana, the sources from which many of these rhythms are derived, a pedagogical approach to these rhythms involves a psychological base. This concept is explored in depth by presenting new exercises for the mind and fingers to achieve fluency in polymetric improvisation. It is important to note that an advanced player should be able to play the exercises by memory, but that achieving an internal understanding and mastery of independence of meter in improvisation can take years of practice.

CHAPTER 2

EVALUATION OF THE FIRST GROUP

Playing Polymeters on the Guitar

“Meter” has not maintained a consistent definition for all styles and genres of music. Some definitions have proven to be more general, depending on the type of music under discussion as well as the background of the historian or theorist who has provided the definition. In his book *Ex Ovo: A Collection of Essays for the Perplexed Composer and Improviser*, Bogdanović defines meter as “the general rhythmic framework, based primarily on consistent structural configurations of chosen units, which in turn may produce correlated accent configurations. It is mainly the general rhythmic profile that defines the meter. Accents only outline the figures and are used either to emphasize the meter or to conflict with it.”⁵ Polymeter and polyrhythm have also had several definitions depending on the style and genre in which they function. One scholar, David Penalosa, analyzes polymeter in the context of philosophy when he discusses West African music and suggests that cross-rhythms, a subgenre of polymeter, consist of a primary beat that represents a “main purpose” and a conflicting rhythm to represent the “challenges of life” since words for “rhythm” and “music” are not found in most Sub-Saharan languages.⁶ Simha Arom clearly distinguishes the difference between polyrhythm and polymeter in his work *African Polyphony and Polyrhythm* by stating that the former may be understood as an interweaving of several differently articulated rhythmic figures, whereas the latter may similarly be defined as

⁵ Dušan Bogdanović, *Ex Ovo: A Guide for Perplexed Composers and Improvisers* (Saint-Nicolas, Québec: Doberman-Yppan, 2006), 84.

⁶ David Penalosa and Peter Greenwood, *The Clave Matrix; Afro-Cuban Rhythm: Its Principles and African Origins* (Redway, CA: Bembe Books, 2009), 21.

superposition of different metric patterns.⁷ Bogdanović, expressing approval of Arom's work, mentions that a polymetric cycle is made up of at least two different patterns; it ends at the point where two patterns coincide, then is periodically repeated.⁸ This is the chosen definition for this study. Table 2.1 shows the problems addressed in selected exercises from Bogdanović's treatise with their corresponding example numbers in this paper.

Table 2.1: Problems and their solutions in selected exercises

Exercise Number in Treatise	Problems Addressed	Solution(s) in Paper
Exercise 20	Hearing multiple meters	Clapping and singing 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9
Exercise 4	Left hand difficulties	Using open strings 2.10
Exercise 5	Left hand difficulties	Using open strings 2.11, 2.12, 2.13, 2.14, 2.15, 2.16, 2.17, 2.18
Exercise 6	Left hand difficulties	Using open strings 2.19
Exercise 20	Metric inversion	Open strings 2.20, 2.21
Exercise 10	Metric inversion	Open strings 2.22, 2.23
Exercises 11, 12	Length of polymetric cycles	Memorization on open strings to reduce multicyclic structures 2.23, 2.25, 2.26, 2.27, 2.28
Exercise 8	Hearing inner lines while playing the correct accents	Memorization of accents 2.29, 2.30
Exercise 7	Hearing inner lines while playing the correct accents	Memorization of accents 2.31, 2.32
Exercises 7, 8, 9	Piecing everything together	Memorization of accents on open strings 2.33, 2.34

⁷ Simha Arom, *African Polyphony and Polyrhythm*, (New York: Cambridge University Press, 1991), 272.

⁸ *Polyrhythmic and Polymetric Studies for Guitar*, 3.

Bogdanović mentions that “when practicing one should focus the attention first towards what one considers to be the basic metric pulse (it might be easier to start with the bass), until the pattern becomes assimilated.”⁹ This is motivated as much by technical as musical reasons. When listening to a polyphonic composition, our Western ears generally associate the beat or pulse with the bass voice and the treble voice with a melody, a dichotomy that may have become embedded in our minds because of functional harmony, which developed from the new emphasis on the bass line ca. 1600. Even though the bass voice can have a melodic function, Western ears usually hear it functioning as the rhythmic foundation to add a sense of drive and pulse to a piece. On the guitar, it is a general rule that the bass strings (E,A,D) are performed using the thumb. This creates a technical consistency that allows the player instinctively to choose the thumb to play the bass strings in most passage work that implements arpeggios, accompaniment, or a melody in the low register. Naturally, the thumb also has a heavier attack than the fingers, which allows the notes in the bass to be performed with a fuller sound. This consistency of right hand fingering on the bass strings eliminates the problem of choice, and thus avoids right-left-hand coordination problems when improvising. If players program the thumb to be used for the bass strings in these exercises, they develop an automatic instinct that serves as a foundation for working out the synchronization patterns of the thumb and fingers.

Bogdanović then mentions that “once the pattern A is completely integrated on a reflexive level, the player should focus on the second pattern B, but in the context of both the first pattern A and the resultant rhythmic combination of the two patterns. When

⁹ Ibid., 3.

the level is mastered, the player should focus exclusively on the new pattern, until it becomes assimilated on the reflexive level”¹⁰ Many of the exercises in the treatise are presented with a symmetrical meter in conflict with an asymmetrical one, and depending on which meter lies in which voice, choosing the correct pattern to start with can increase the difficulty. If the student has been immersed primarily in rhythms of the common practice period, beginning with practice on an asymmetrical meter may be too difficult. For example, if pattern (a) in the thumb lies in an asymmetrical meter, the student may have an easier time beginning with the treble voice, and vice versa, if the symmetrical meter lies in the thumb, the student should begin by practicing the bass voice first. My purpose is not to contradict Bogdanović’s statements, but rather to provide an alternative pedagogical approach that assists the perplexed Western improviser become familiar with these non-Western rhythms.

Practicing and Application of the First Group

As previously mentioned, Exercises 1-3 in the treatise are what Bogdanović calls “phasing exercises” and “are devised for the sake of developing an active awareness of, and mobile focus on, metric change within a constant rhythm framework.”¹¹ Bogdanović does this by keeping one voice as a constant factor in each of the three exercises, while the remaining two voices function as variables that conflict with it, thus building an awareness of metric change. In exercise 1, he notes, the upper voice is the constant, while Exercise 2 uses a constant middle voice, and Exercise 3 uses a constant bass

¹⁰ Ibid., 3.

¹¹ Ibid., 3.

line.¹² The player can begin by playing only the upper voice and then proceed to add the other two voices. These three exercises also aid the player in hearing the multilinear levels that are created with 2- and 3-part counterpoint. Practicing these exercises at different tempos further increases the player's awareness of the metric change. Due to the lack of sustaining power on a guitar, a faster tempo helps the player to hear more easily the conflicting meter against the constant meter.

One of the first preliminary exercises the player can implement to gain a fuller awareness of a polymeter is to clap the basic metric pulse, while singing the second metric pattern as an unpitched percussive syllable. The following three examples and their variations are cross-rhythms. African music scholar C.K. Ladzekpo states that sub-Saharan cross-rhythms are the core of rhythmic traditions within which composers communicate their ideas.¹³ Furthermore, the fundamental cross-rhythm, 3:2, or hemiola, is a rhythm frequently encountered in Bogdanović's music, specifically, in exercises 20-25 of his treatise. These exercises serve as the first pedagogical step in this study due to their relatively short cycles, which allow for easy memorization. Musical Exercise 2.1 shows a basic cross-rhythm with the student's clapping the dotted quarter notes, while he or she sings the dotted eighth notes on the syllable "ta." Musical Exercises 2.2 and 2.3 are two variations with the hands clapping the eighth notes in the 6/8 meter while the student sings the syllable "ta" in the 12/16 meter. Since both are symmetrical meters, a player conversant primarily with Western music should find the same level of difficulty in beginning with either part.

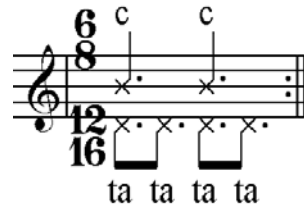
¹² Ibid., 5.

¹³ C.K. Ladzekpo, "The Myth of Cross Rhythm," Foundation Course in African Music (1995): <http://home.comcast.net/~dzinyaladzekpo/Myth.html>

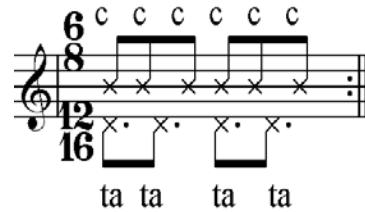
Musical Exercises 2.1, 2.2, 2.3: Clapping and singing on an unpitched syllable

C= clap; Ta= Sing the syllable “ta”

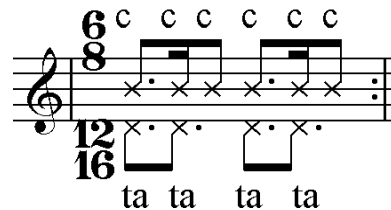
Musical Exercise 2.1



Musical Exercise 2.2



Musical Exercise 2.3



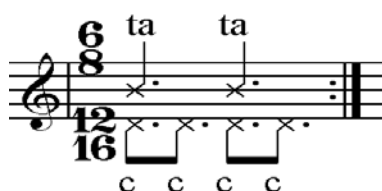
Once the player has mastered the patterns shown in Musical Exercises 2.1, 2.2, 2.3, the next step would be to invert the patterns so the meter that was previously clapped with the hand is now sung on the unpitched syllable while its counterpart is clapped (Musical Exercises 2.4, 2.5, 2.6). This supports Bogdanović’s intentions, as he states that “one can alternate the ‘metric focus’ then, from one pattern to the other, until complete independence and clarity of voices is achieved. The player can also focus on both patterns simultaneously while observing the interplay.”¹⁴ Inverting the meters causes a shift in metric focus, thus a comfortable transition only assists in building polymetric awareness so that the player can choose which meter is to be emphasized.

¹⁴ *Polyrhythmic and Polymetric Studies for Guitar*, 3.

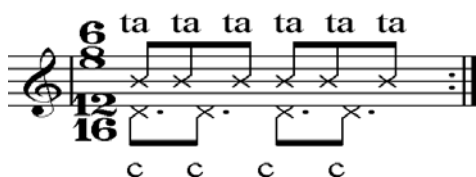
The cross-rhythm patterns are the best examples for oral synchronization practice due to their shorter cycle lengths, and furthermore, the player is free at this stage from solving technical problems that arise from inverting the meters verbatim. The purpose of this exercise is to simply build an awareness of a simple polymeter away from the guitar so that the learning process with the instrument progresses much faster.

Musical Exercises 2.4, 2.5, 2.6: Metric inversions of Musical Exercises 2.1, 2.2, 2.3

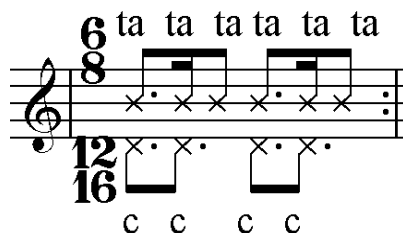
Musical Exercise 2.4



Musical Exercise 2.5



Musical Exercise 2.6



The last step of the preliminary exercises is to play one of the voices in the guitar part and sing the other part on the same unpitched syllable “ta” (Musical Exercise 2.7). This facilitates the understanding and awareness of two conflicting meters due to the absolute control the player must have to remain synchronized, both mentally in rhythmic counting and technically in finger dexterity. In the beginning, the player should choose a pattern that does not require a significant amount of left-hand movement, which helps

with the synchronization of the two meters. As soon as players develop mental awareness of two or more opposing meters using a couple of fretted notes, they can experiment with more movement in the left hand either by switching harmonies (Musical Exercise 2.8), or using scalar type figures (Musical Exercise 2.9) to practice dexterity and coordination. Once the guitarist can play through these musical exercises, then proceeding to the primary exercises in Bogdanović's treatise, which require both voices to be played on the guitar, not seem as difficult.

Musical Exercises 2.7, 2.8, 2.9: Playing and singing basic cross-rhythms

Musical Exercise 2.7



Musical Exercise 2.8



Musical Exercise 2.9



Bogdanović notates Exercise 4 in the treatise with the treble voice in 1/4 while the bass lies in 3/16, and he chooses to eliminate the bar line to demonstrate the cycle at work. Furthermore, he provides accents on the beginning of every note grouping in the treble voice to affirm a primary beat, which aids in hearing the conflicting meter. The open strings in the top voice combined with a simple moving bass line make this exercise an excellent example to begin with. Furthermore, it has a shorter polymetric cycle for the player to memorize as well as an idiomatic guitar arpeggio figuration.

Several steps can be taken to simplify this exercise and then to expand it to more advanced forms once the player has mastered it in its original form.

If it is already too difficult for players to control both meters effectively at a slow tempo, they should first revert back to the preliminary step of singing one voice on unpitched syllables and clapping the other. Unfortunately, the guitarist does not have the luxury of being able to practice multiple parts using the “hands separate” method available to a pianist. With the right hand the only possible one for a guitarist to isolate, all of these exercises can be simplified for practice on open strings by the right hand alone. By doing this, the player can eliminate the coordination problems caused by synchronizing the two hands and remain focused on the coordination in one hand while building an awareness of metric change. Musical Exercise 2.10 shows a variation of Exercise 4 from Bogdanović’s with repeated E notes in the bass voice, which in turn eliminates the left hand temporarily so that the player can focus playing the correct accents with the right hand. Once players can play this example at a comfortable tempo with open strings, they can add the left hand to play the exercise in its original form. To demonstrate how this open-string concept can be applied to other exercises, Musical Exercises 2.11 and 2.12, which correspond to Exercises 5 and 6 in the treatise, have their bass lines reduced to open strings while retaining their treble open string patterns. This reduction approach can be applied to any of the exercises in the treatise that the player is having difficulty playing in their original form.

Musical Exercises 2.10, 2.11, 2.12: Using open strings

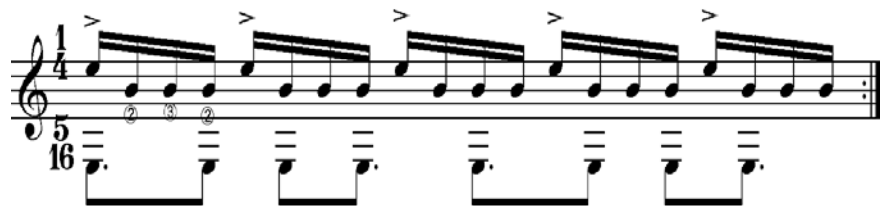
Musical Exercise 2.10



Musical Exercise 2.11



Musical Exercise 2.12



By changing the direction of the arpeggio pattern in the fingers, the player can focus on building coordination in the right hand while maintaining the same position in the left hand. Musical Exercise 2.13 corresponds to Exercise 5 in the treatise, whereas Musical Exercise 2.14 retains the same bass line and accents, but the treble voice has the arpeggio pattern played in reverse utilizing the a, m, i finger combination on open strings. It is important to note that when any new technical idea is introduced, it can be practiced first using the open strings of the guitar to help the player gain the necessary independence before proceeding to using more fretted notes. The guitarist can implement new right hand variations as in Musical Exercises 2.15 and 2.16 to help further eliminate any synchronization problems that arise between the thumb and the fingers. Furthermore, this helps to prevent the player from relying on simply memorizing the original exercise verbatim, which can limit the player in an improvisatory setting. In

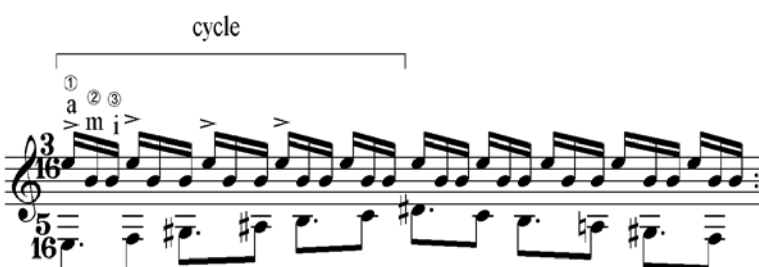
this case, the only constant that requires memorization is the thumb pattern, which is used solely to play the bass strings during any of these exercises.

Musical Exercises 2.13, 2.14, 2.15, 2.16: Using different arpeggio patterns

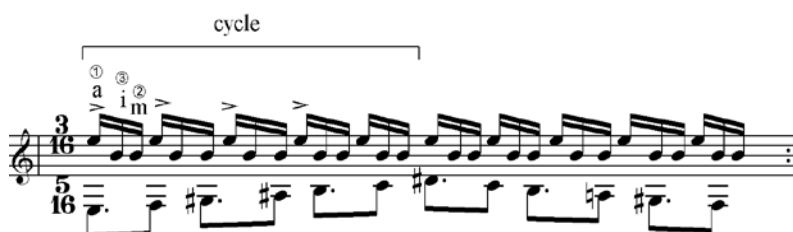
Musical Exercise 2.13



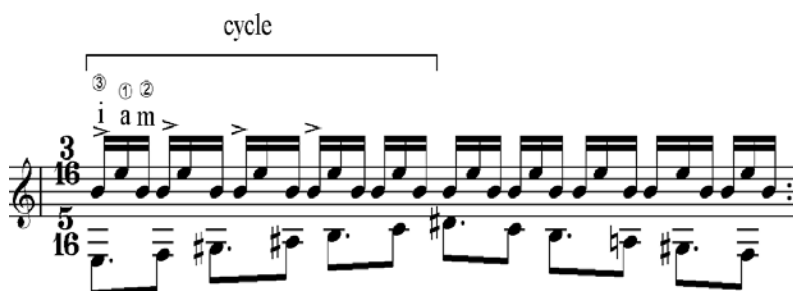
Musical Exercise 2.14



Musical Exercise 2.15



Musical Exercise 2.16



Once the player feels comfortable alternating the fingering patterns of the right hand, more fretted notes can be added to focus on synchronizing the hands. This can be achieved by practicing a scale in one meter with a supporting bass in an opposing

meter. The conventional and innovative combinations of string crossings presented aids in solving many technical problems of synchronization while helping the student to internalize the meter on a “reflexive” level. Musical Exercise 2.17 uses an ascending sequence in the E natural minor scale utilizing only the high E string in the top voice, while the bass voice plays the same 5/16 meter pattern from Musical Exercise 2.10 using only the open E string. The guitarist is encouraged to play through all of the different fingering combinations normally used for practicing scales (im, ami, ia) to cover all of the possibilities between the thumb and the fingers. Although it is normal for the student to have a preferred fingering combination, the goal is to prevent memorization of only one pattern, which usually leads to repetitive and limited improvisatory figurations. Moreover, as in practicing scales in the traditional manner, the guitarist should set a slower tempo to begin, and once the patterns become comfortable should increase to a faster tempo in order to ensure complete control of the polymeter.

As soon as guitarists feel comfortable playing scalar patterns on one string with an open string supporting bass, they should try to incorporate scales that alternate using three notes per string, a typical idiomatic fingering in classical guitar scale passages Musical Exercise 2.18 The guitarist is encouraged to play scalar patterns that focus on 2, 3, and 4 notes per string, then combine different combinations of all three (Musical Exercise 2.19) so no problems surface with the thumb/fingers synchronization. Once the guitarist can control the bass line with different scale patterns lying in conflicting meters, the final step is to revert to the original bass line of the exercise (Musical Exercise 2.20) or create a new one, which ensures that the player is building toward a higher level of polymetric proficiency. This is a start to a four-step process that

uses the same two conflicting meters 3/16 over 5/16 for each of the following examples.

Musical Exercises 2.17, 2.18, 2.19, 2.20: Open strings with scales

Musical Exercise 2.17

cycle

i a i a i a
a m i a m i etc.
i m i m i m

Musical Exercise 2.18

cycle

Musical Exercise 2.19

cycle

Musical Exercise 2.20

cycle

The practice of inverting the meters also increases the difficulty in metric fluency while the player works on the technical independence of the hands. Some of the best examples to do this are the five cross rhythm exercises (20-25) in Bogdanović's treatise since their shorter cycle lengths become easier to control for a player new to polymetrics. Exercise 20 (Musical Exercise 2.21) in the treatise is a cross-rhythm notated in 3/8 in the treble voice and 6/16 in the bass voice, which could easily be understood as playing two notes against three; Musical Exercise 2.22 presents the same exercise in its metric inversion. Alternating the two meters efficiently between the treble and the bass not only allows for a more fluent understanding of polymeters, but also improve the player's ability to improvise imitative textures in a *ricercare*, canon, or fugue, since the voices are also being stated at different pitch levels. The player is encouraged to practice switching back and forth between the original exercise and its inversion, and as soon as that becomes solidified, should incorporate more fretted notes or possibly a (hand) position change.

Musical Exercise 2.21, 2.22: Metric inversions, Part 1

Musical Exercise 2.21



Musical Exercise 2.22

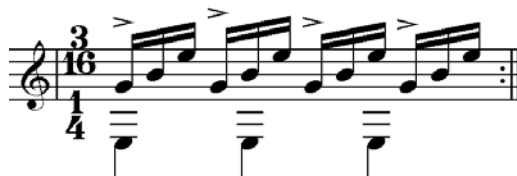


The practice of inverting all of the exercises in the treatise verbatim can be somewhat problematic due to the length of some of the cycles and the nature of some

of the arpeggio configurations. For example, exercise 10 in the treatise, if inverted verbatim, would be too difficult to play at a comfortable tempo, but if we were simply to invert the meters and reduce the note values, we could reach a fair compromise. Example 2.23 shows the polymetric cycle of Exercise 10 on open strings with 3/16 in the treble and 1/4 in the bass. If we invert the meter, we would have to change the rhythmic groupings of the notes to makes the configuration suit the guitar. Musical Exercise 2.24 shows the inversion using open strings with the quarter note in the treble voice subdivided into four sixteenth notes and the three sixteenth notes in the bass voice combined into one dotted eighth note. After players can alternate between the two inversions using the open strings, they can progress to adding more fretted notes with different finger combinations. Simplifying the exercises under these circumstances has to do with the limitations of the guitar, not of the guitarist.

Musical Exercise 2.23, 2.24: Metric inversions, Part 2

Musical Exercise 2.23



Musical Exercise 2.24



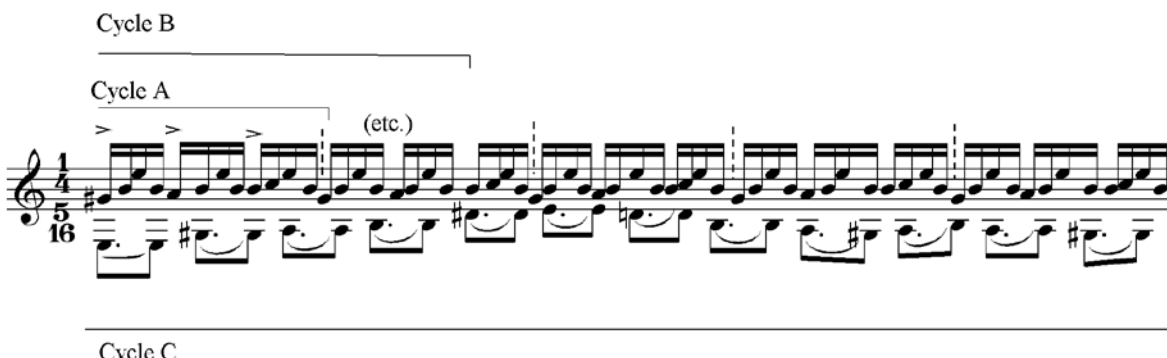
One of the most difficult aspects of polymetric improvisation is the understanding of polymetric cyclic structures. Bogdanović notes that “some of the exercises have multi-layered cyclic structures: in Exercise 11 (Musical Exercise 2.25) the rhythmic cycle B only lasts five quarter note beats, but because the upper voice has a melodic cycle A

of its own lasting three quarter notes, the whole cycle C lasts for fifteen quarter notes.”¹⁵


In order for players to control three cyclic structures in an improvisational setting, they have to practice the cycles individually by removing one or two of them. Using Exercise 11, we can start by eliminating the long cycle labeled as C by substituting a repeated E on the open 6th string, thus eliminating any sense of direction created by the bass line, and remove cycle A by using only the open treble strings, thus eliminating the ascending G#, A, B inner line, which synchronizes with the bass line once after five complete cycles. Musical Example 2.26 shows Exercise 11 in the treatise using only open strings, thus eliminating cycles A and C. Now, the player can focus on the coordination of the right hand by synchronizing the correct finger with the thumb and build an active awareness of cycle B.

Musical Exercise 2.25, 2.26: Simplifying muticyclic structures, Part 1

Musical Exercise 2.25



Musical Exercise 2.26



Practicing this synchronization process on the open strings with the thumb and fingers serves to be the best memory aid when learning polymeters that contain

¹⁵ Ibid., 3.

multicyclic structures. Regarding Musical Exercise 2.26, if players understand that the first time the thumb plays, it is doubled by the index finger, the second time by the middle, the third time with the ring finger, and the fourth time with the middle finger, they need only to memorize this i,m,a,m pattern in succession. The dashed bar line can be used as a guide to when the fingering pattern begins to repeat. This is crucial when playing multi-cyclic structures because the player has too many metrical tasks to control at once. If players can program the synchronization pattern of the right-hand thumb and fingers while maintaining the correct accents, they can focus more on the musical ideas by adding either a melody or a bass line, thus making them more versatile improvisers. Once the right hand pattern becomes comfortable through playing the example using only open strings, the guitarist can add the bass line from the original exercise to focus on metrical awareness of cycle B (Musical Exercise 2.27). The player can also choose to combine only cycles A and B while using repeated E notes on the open 6th string, thus shifting metrical awareness to cycle A, which provides the inner melody of this exercise (Musical Exercise. 2.28). Once the players are comfortable with this variation, they can combine all three cyclic structures, thus performing the original exercise as it appears in the treatise. Exercise 12 in the treatise contains the same treble voice as Exercise 11 and incorporates the same bass line but with a diminution of note values in the bass voice. Exercise 2.29 removes the multi-cyclic nature of Exercise 12 by confining it to the open strings, and reveals the right-hand thumb/finger synchronization pattern. Although this pattern is slightly longer than that in Exercise 11, it can still be committed to memory for a later use in an improvisatory context. So, instead of beginning with memorizing the cycles and interplay of lines, the player would first

understand that every time the thumb plays a note, the right hand fingering pattern for Exercise 12 is i, m, m, i, a, m, m, a. This concept of memorizing the synchronization pattern of the right hand thumb and fingers can be applied to almost all the exercises in the treatise as a preliminary building block towards an active awareness of polymeters. Furthermore, this facilitates the learning of longer cycles, such as those in Exercises 17 and 18 in the treatise by reducing the amount of new information the player needs to memorize.

Musical Exercises 2.27, 2.28, 2.29: Simplifying multicyclic structures, Part 2

Musical Exercise 2.27

Musical Exercise 2.28

Musical Exercise 2.29

When practicing the exercises in the treatise, the player notices that much of the difficulty lies in keeping track of the synchronization patterns in the right hand while also performing the correct accented notes, which at times comprise the melody. The most

efficient way to solve this problem is by first developing physiological awareness of the accent itself. In Exercises 7-9, Bogdanović has notated an accent on the primary melodic line so that the player can also develop an awareness of linear possibilities that arise during polymetric improvisation. It would best benefit the player to begin with the exercises that start with an accent placed on the first note of a rhythmic grouping.

Exercise 8 would be an excellent example due to its brevity and its idiomatic thumb and finger synchronization pattern (i, m, a, m) to memorize in the right hand, which serves as preparation for the exercises with patterns in which the accents falls on an off-beat.

The first step would be to remove both the inner line and the bass line, which can be done by using only open strings so the player can develop an awareness of the melody in the treble voice (Musical Exercise 2.30). Then the player would add back the inner voice to hear the original melodic line while also practicing the synchronization pattern of the thumb and fingers (Musical Exercise 2.31). Once this feels comfortable, the player should implement the original bass line, which places the exercise in its original form as notated by Bogdanović.

Musical Exercises 2.30, 2.31: Fingering patterns for memorization, Part 1

Musical
Exercise
2.30



Musical
Exercise
2.31



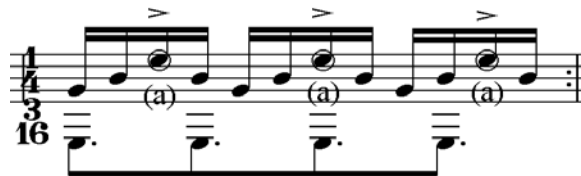
After the players have achieved polymetric fluency in controlling an inner line beginning on the first note of a rhythmic grouping, they can progress to shifting the accent to a different note of the same rhythmic grouping, as Bogdanović demonstrates in Exercises 7 and 9 in his treatise. Although placing the accent on a different note of the rhythmic grouping to emphasize the inner line does not alter the thumb/finger synchronization pattern, the displacement created between the bass note and the accented note forces the player to shift metrical awareness to accommodate an off-beat inner line, thus presenting new possibilities to the improviser. In Exercise 7 of the treatise, the line appears on the third sixteenth note of the rhythmic grouping creating an interplay of the notes E, G, and Ab. Exercise 9, however, contains an inner line of the notes B, C, C#, D that begins on the second sixteenth note of each rhythmic grouping, causing the metrical focus in the treble voice to be displaced to a definitive off-beat, and furthermore, plucked twice in one rhythmic grouping of four sixteenth notes, thus leaving the middle finger solely in command of the inner line.

For the player to control a new line that is displaced onto a different note other than the first note of a rhythmic grouping, a slightly different process of memorization may be needed. In this case, the player can commit to memory both the correct thumb/finger synchronization pattern, as demonstrated in the previous exercise, with the finger that takes the role of creating the new line; thus, in Exercise 7, the player uses an i, m, a, m thumb/finger synchronization pattern combined with a new awareness of the (a) finger that creates the line in the treble voice. This preparatory step helps the guitarist develop the mechanical skill needed to play the synchronization pattern from memory, as shown in the previous exercise, then, as soon as the pattern becomes easy

to retain, the player commits the accented note to memory, assigning the string to be played by the notated finger (Musical Exercise 2.32). Once this feels comfortable, the player, still using only open strings, can combine Exercises 7, 8, and 9, giving due attention to the accents on each given note grouping (Musical Exercises 2.33). The player is encouraged to alternate the accents in as many variations as possible, whether by shifting the order of exercises or changing the accentual patterns within the cycle to develop polymetric proficiency. After the confidence is built from playing the open strings, the player can return to Exercise 7 and proceed to implement the fretted notes of the left hand beginning with the bass line (Musical Exercise 2.34) and moving to the treble voice, which places Exercise 7 in the treatise back into its original form.

Musical Exercises 2.32, 2.33, 2.34: Fingering patterns for memorization, Part 2

Musical
Exercise
2.32



Musical
Exercise
2.33



Musical
Exercise
2.34



In sum, there are certain bits of information that the player can memorize when approaching the practice of these exercises; these ultimately support Bogdanović's goal of helping the player to become a better musician and improviser. Once these

memorization patterns are solidified, the player can experiment by using different string combinations, inverting the meters, adding more fretted notes than open strings, shifting positions, adding or reducing note groupings, reducing or adding length to the cycles, or changing the active voice in order to increase fluency in polymetric improvisation. The point of creating this approach to learning these exercises was not to deviate from Bogdanović's intentions, but rather to elucidate them by providing means to solve some of the technical problems that pertain only to the guitar when practicing polymeters. In contrast to the greater possibilities on the piano, the open strings have limited the guitar to certain fixed keys, which can mean the difference between a fairly simple exercise and an extremely advanced variation of it. Furthermore, some exercises in the beginning have to conform to the natural idioms of the guitar, such as the a, m, i arpeggios in the right hand, the repeated bass with the thumb, or the three-notes per string finger patterns in the left hand to build a basis for polymetric improvisation.

CHAPTER 3

INNOVATION IN STYLE AND TRADITION IN STRUCTURE IN CONCERT STUDIES 1, 2, AND 5

Introduction

Bogdanović's five concert studies, which he labels the "second group,"¹⁶ could very well be considered a summation of his treatise and a benchmark in polymetric composition for the guitar. Each study differs from the others stylistically and presents its own challenges technically and musically for the player to overcome. It is highly recommended that the performer study the exercises in the first part of the treatise before attempting the concert studies. The player must build the metric awareness needed to give a convincing performance of the diverse musical traditions found beneath the surface level of each piece. Although Bogdanović uses many musical elements such as melody, harmony, range, dynamics, and articulation, his choice of polymeter as the primary structural parameter for these pieces is what makes them unique.

A primary portion of Bogdanović's oeuvre reveals his predilection for composing short pieces that feature a single structural element -- a motive, rhythm, melody, or timbre that he then uses to function in every structural context, whether expository, developmental, transitional, or recapitulatory, with other elements as supporting gestures. The melodic material in polymetric studies 2, 4, and 5 appears to be "organic," which in this context is defined as the melodic expansion and contraction of a motive throughout each piece. Bogdanović combines this style of composition with his well documented world music influences, specifically the highly rhythmic and organic

¹⁶ Ibid., 3.

melodic languages of the Balkan region, West Africa, and Bali, to create shorter musical compositions that contain all the pertinent structural materials while providing a fresh representation of non-Western music on the classical guitar. In his recording *Unconscious in Brazil*, which features all original compositions for the guitar, Bogdanović creates a musically dense environment in each piece without exceeding two minutes, except for one piece, *Unconscious in Brazil*, which approaches nearly four minutes in length.

Although the concert studies are through-composed, traces of their improvisational basis can be found in the melodies, rhythms, and notational style. It is important to reiterate that Bogdanović is a master improviser, which has had a profound effect on him as a composer. He remarks on the balance between composition and improvisation by stating:

improvisation and composition reflect two aspects of human creativity: one is a spontaneous act of an impulse in the present; the other, an unfolding of preconceived reality. Bound by the moment, improvisation often sacrifices the intricate carving of constructed form and detail to the fleeting wonder of the present. By 'freezing the process in time,' composition, on the other hand, gives the creator a possibility of infinite refinement and control. In consequence, it risks a life sentence in a prison of perfection and stasis. At their best, however, improvisation and composition are almost indistinguishable; improvisation is composition (in its structural integrity), and composition is improvisation (in its fluidity and freshness).¹⁷

The concert studies by Bogdanović offer a challenge to existing analytical approaches. The pieces contain motivic details that could best be described by Bogdanović's own method in the third section of his book on counterpoint entitled "Study in Motivic Metamorphosis." He begins this section of his book by providing

¹⁷ *Ex Ovo: A Guide for Perplexed Composers and Improvisers*, 55.

definitions for general structural terminology and a chart (Table 3.1)¹⁸ that displays their categorization in a structural hierarchy. Bogdanović then describes the “typological trees” (Figure 3.1) of motivic metamorphosis, which he considers to fall into four categories: interpretation, variation, transformation, and acceleration/deceleration.¹⁹ Analyzing Concert Studies 1, 2, and 5 on a motivic level reveals innovative improvisatory polymeters as the primary structural parameter in each composition while also demonstrating Bogdanović’s ties to world-music traditions.

Table 3.1: Structural hierarchy

PARAMETER	MACROSTRUCTURE	STRUCTURE (AXIS)	MACROSTRUCTURE
RHYTHM	CELL	RHYTHMIC MOTIF	RHYTHMIC PHRASE
MELODY	PITCH / INTERVAL	MELODIC MOTIF	MELODIC PHRASE
HARMONY	CHORD	PROGRESSION	OVERALL HARMONIC SCHEME
COUNTERPOINT	PITCH / INTERVAL	SUPERPOSED MELODIES	CONTRAPUNTAL FORMS
POLYRHYTHM	VERTICAL INDETERMINATE PITCH	SUPERPOSED RHYTHMIC PATTERNS	POLYRHYTHMIC CYCLE
POLYMER		SUPERPOSED METRIC PATTERNS	POLYMETRIC CYCLE

¹⁸ *Counterpoint for Guitar*, 104.

¹⁹ *Ibid.*, 101.

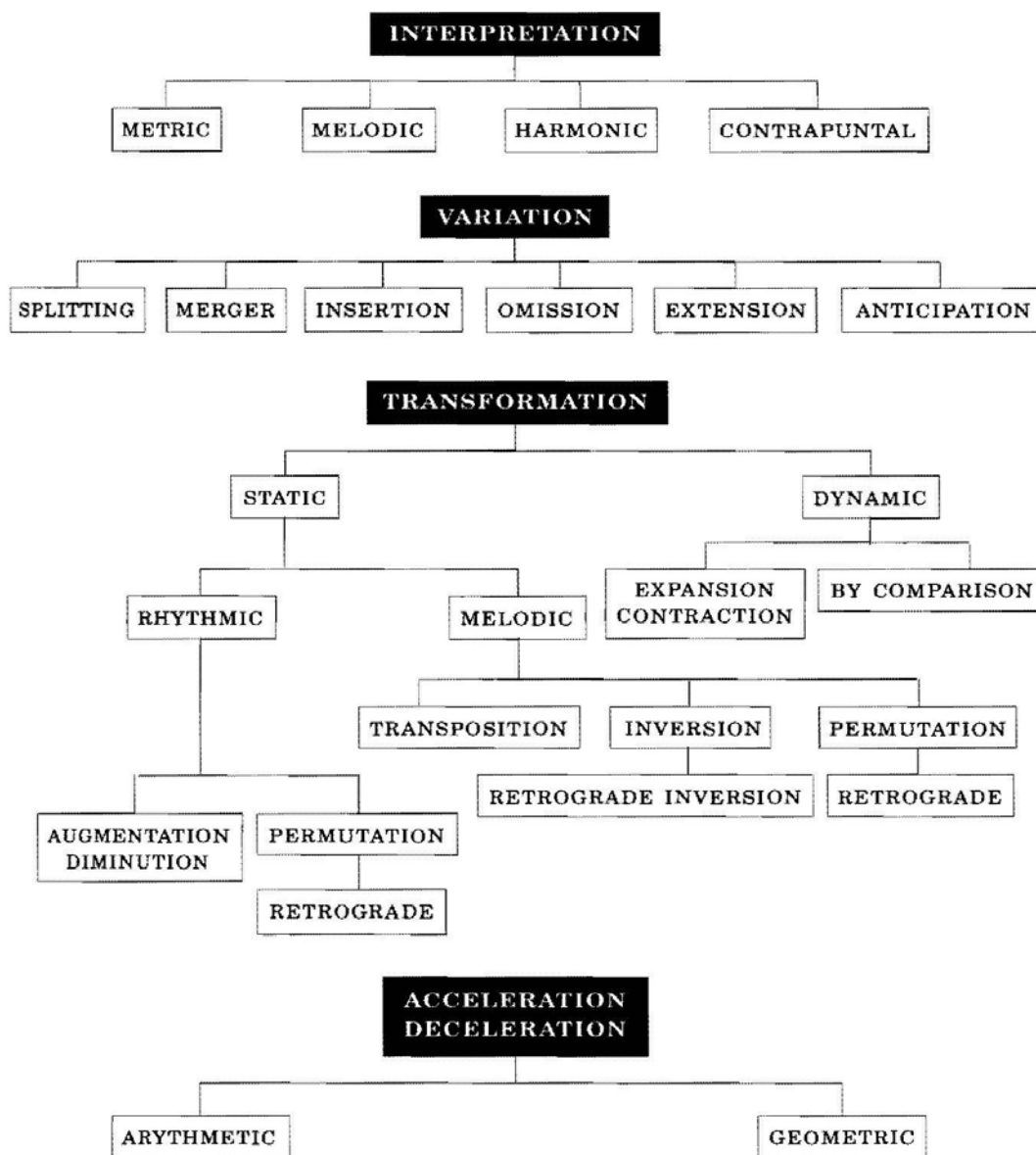


Figure 3.1: Major divisions and subdivisions of motivic metamorphosis

Concert Study 1

Formal and notational features in the first concert study demonstrate Bogdanović's ties to tradition while also revealing his innovative polymetric improvisatory style. He mentions that the characteristic complex rhythm in this piece is a

typical pattern of music of the Ewe tribe in Ghana.²⁰ Bogdanović's inventiveness lies in his decision to incorporate this Ewe drumming rhythm into his compositional style, which transpired into one of the earliest concert etudes for the guitar that fully represents an African rhythmic profile. The piece is in a traditional ABA ternary form with clear entrances of the main theme, a developmental B section, and a return of the main theme. It is the only study of the five that retains bar lines, which is due to its clear-cut rhythmic drive and motivic construction. The A section begins in two-part counterpoint with the primary motive in a 3/4 meter conflicting against an active bass in 12/16, which also corresponds to Exercise 25 in the first section of the treatise. Although the rhythmic force favors the first motive, the player has the option of shifting attention from one metric interpretation to the other.²¹

Throughout the piece, the primary technique for the development of both motives is melodic permutation, which Bogdanović classifies as a branch under his typological tree of static transformation.²² Motive 1 (Musical Example 3.1) exemplifies in the introduction of the first concert study Bogdanović's approach to melodic permutations and shows him using higher register to heighten the dramatic nature of the piece. In the opening bars, the first motive progresses by step with an added descending leap of a 5th to an A note to affirm a stable tonal center. Measures 5-8 move towards a higher pitch register while using frequent intervallic leaps of 4ths, 5ths and 6ths, increasing the tension only to unwind in bars 9-11 to melodic intervals of seconds and thirds with the frequent skip from E down to A to reaffirm the tonal center.

²⁰ Dušan Bogdanović, "Split Brain Polymeters," *Guitar Player* vol. 29 no. 7 (July 1995): 140.

²¹ *Polyrhythmic and Polymetric Studies for Guitar*, 3.

²² *Ex Ovo: A Guide for Perplexed Composers and Improvisers*, 81.

Musical Example 3.1: Intervallic expansion and contraction in Concert Study 1



Due to the completion of the polymetric cycle 3/4 against 12/16 every four beats, a downbeat is audible throughout, which helps increase the sense of tonal stability. Although most of the dissonances in the bass voice of the exposition might allude to an ambiguous tonality of A major/minor, the treble voice uses only notes characteristic of the A minor scale. With a polymetric cycle that coincides in every bar, any sense of change in harmonic motion is easier for a Western ear to detect, and furthermore, adds emphasis to the frequent wide descending leaps that Bogdanović uses to arrive on most of the downbeats throughout the introduction. The audible synchronization of this polymetric cycle also facilitates the ease of hearing transitional material that leads the piece to any kind of cadence or climax in the melodic material. For example, Bogdanović implements a crescendo as the pitch range increases in mm. 7-8, giving the primary motive a melodic apex just before it returns to its middle register in bar 9.

After Bogdanović brings in three unstable bars (12-14) of transition that ascend in register and increase in dynamics, measure 15 begins the developmental section with both of the meters inverted. As in a traditional ternary form, the B section contrasts greatly with the A section by moving to a new key area, which Bogdanović marks *molto espressivo*. It is interesting to note that the highest note in the piece is the arrival of the F natural on the down beat of measure 15, which adds to the contrast with the lower range heard in the exposition and marks the beginning of a long descent to the next

development section in measure 21. One of the most innovative features in the development is the polymetric inversion of 3/4 and 12/16. Because of this, the player can choose to give more emphasis to the secondary motive that in the A section was placed in 12/16.

After measures 15-21 create a nice descent in both pitch and dynamics, Bogdanović makes measure 21 another key arrival point with an ambiguous tonality like that heard in the exposition with a *sul ponticello* expressive marking to contrast with the six previous bars marked *molto espressivo*. Only nine measures are needed to create a second developmental section that encapsulates the multilayered vocal “yodel” polyphonic style by alternating the primary motive throughout different vocal tessituras. Measures 29-30 begin a retransition with a decrease in dynamics and range of the motivic permutations. Bogdanović prepares the arrival in measure 31 with the b2 scale degree in Bb to offer a mysterious yet final sounding cadence to set up the return to the A section measure 31. Bogdanović calls back the original polymeter of 3/4 over 12/16 with an exact repeat of the first section and closes out the piece with a cadence made by the half-step resolution to A in the bass and the D moving to C in the treble voice, together implying an A minor triad.

Concert Study 2

It is evident that Bogdanović’s notational style in the concert pieces, as well as in much of the rest of his output, derives in large part from his exposure to the vocal yodel polyphonic music of the Bibayak Pygmies in Gabon.²³ Most of the notational

²³ *Counterpoint for Guitar*, 112.

characteristics common to the Western world such as key, bar lines, and articulations are not easily applied to other musics, which has made the transcription process of world music difficult for ethnomusicologists and other scholars and musicians. Bruno Nettle and Gerhard Kubik have indeed noted that the transcription of African polyphony is almost impossible.²⁴ The main problem is how to separate the parts of the polyphonic whole. Well aware of this, Bogdanović chooses to remove bar lines in the second concert study, so that the music is not bound by a symmetrical pulse that would destroy the vocal yodel polyphony so pervasive in this piece. Removing the bar line in this context also suggests Bogdanović's predilection for the free-form improvisation style of contemporary jazz.

Although the music is carefully notated rhythmically and metrically, the free-flowing melody in the treble voice can be heard as improvisatory due to its expansion and contraction throughout. After the opening sonority of interlocking perfect and augmented fourths, the A section (Musical Example 3.2) begins with the primary B-major motive stated in the treble voice in 5/8, while the bass voice is written in 3/8. Bogdanović's predilection for nuance is demonstrated with the different plucking combinations of open strings and fretted notes, which when played at a slow tempo, create a unique contrast of timbre. The improvisatory nature of the motive is evident, its first entrance creating a symmetrical rise and fall effect, and the next one expanding the same motive into four consecutive note groupings (the first two ascend and the next two descend) that cover a larger pitch range. Bogdanović would classify this form of motivic expansion and contraction as dynamic transformation (Figure 3.1), which he defines as

²⁴ Simha Arom, *African Polyphony and Polyrhythm*, 95.

a motive being “lengthened or shortened by additive and subtractive processes in such a way that the overall pulse as well as its metric profile change in accordance with the transformation process.”²⁵

Musical Example 3.2: Excerpt from Concert Study 1

The 3/8 meter in the bass also helps to suggest the improvisatory nature of the piece because the bass is never consistently synchronized with the treble voice. Furthermore, the harmonics that indicate the B-minor tonality in the lower voice create startling counterpoint with the incomplete B-major scale stated in eighth notes in the treble voice. Through the usage of harmonics in the bass against the eighth-note motion in the treble voice Bogdanović is able to create a feeling of ambience, thus giving the piece a style that hints at free-form improvisation. Bogdanović’s usage of two different harmonic languages simultaneously in two separate voices, combined with the added harmonics in the bass for a contrasting timbre while also sustaining the note, can induce a meditative state in the listener.

²⁵ *Counterpoint for Guitar*, 108.

In the fourth system, marked “misterioso,” Bogdanović implements a seamless transition through voice exchange by having the 5/8 note grouping descend downward to the lower register while the harmonics switch to the higher register. A new ambience begins to manifest itself with the small note values of the harmonics to give even this slow piece a sense of drive. This climaxes in the eighth system (Musical Example 3.3) with the repeated harmonics exploiting the high register of the treble voice, giving a new timbral contrast with the longer note durations of the harmonics in the previous section. The high pitch range is a traditional means used by composers in the past to express a musical climax before some sort of return to previous thematic material. In this passage Bogdanović’s inventiveness lies in combining the high pitch range with a timbral difference through repeated harmonics, thus providing the piece with sufficient contrast in a different structural element to prepare the return.

Musical Example 3.3: Excerpt from Concert Study 2



Concert Study 5

Although the last concert study of the group may seem easier to perform due to its lesser technical demands in comparison with the others, Bogdanović’s predilection for nuance in this piece through his use of dynamic range demands a level of control possible only for an advanced player. This study stems from Exercise 10 in the first section of the treatise with its 3/16 meter in the treble voice and 1/4 meter in the bass, the only exception being that the concert study contains an inner or “middle” voice,

which in this case takes precedence over the bass voice in terms of pulse.²⁶ To perform this piece with a perfect legato requires the player to have complete control of both the linear expansion of the melody and the vertical sonorities created by the conflicting meter. The expressiveness and brevity of this piece makes it a fitting end to the set of five concert studies.

Bogdanović's ties to tradition in this piece are demonstrated through the harmonic stability of the introduction. The piece begins by evoking a stable environment through the B major tonality within the lower register of the guitar at a dynamic marked piano. Also suggesting tradition is the gradual crescendo that is combined with an increase in register through the first five systems until the fermata, similar to the natural effect of the voice, along with a gradual decrescendo that is used with a decrease in register, which begins after the fermata and continues until the piano dynamic marked at the end of the study. It is difficult not to sense the improvisatory basis of the piece, since the gradual increase in register and dynamics never seem to imply any type of cadence until both structural elements reach their apex in the middle of the fifth system. This gradual increase in dynamics hints towards this expansive and improvisatory feeling created by the melodies of Gregorian chant.

Although Bogdanović mentions that the player should accent the middle voice,²⁷ which would suggest that the more dominant meter is 3/16, the consistent quarter notes in the 1/4 meter of the bass displace the metric feel by adding harmonic support to different beats of the 3/16 note grouping. The slow performance tempo allows the

²⁶ *Polyrhythmic and Polymetric Studies for Guitar*, 20. Bogdanović notes beneath the first system that the player should "bring out the middle voice."

²⁷ *Ibid.*, 20.

quarter notes in the bass to create the sufficient space to remind the listener of the improvisatory feeling often created by polymeters. Although Bogdanović could have implemented bar lines in this particular study, due to the shorter synchronization of both meters, he omits them because a notated downbeat would not have allowed his music to be heard as the intertwining of improvisation and composition. Furthermore the bass voice provides some startling counterpoint not contained in a B major scale, such as the A natural at the end of the first system and the D natural at the beginning of the third system. Both of these accidentals have a harmonic function in context that pushes the piece into a new direction, which gives a greater emphasis to their particular beats, leaving the middle voice as a subordinate constant.

Particularly innovative in the study is Bogdanović's use of intervallic content for motivic variation, which Bogdanović defines as a process closer to improvisation, unlike transformation, which presupposes a process of gradual change.²⁸ In the first three systems, the range of the three-note ascending motive never exceeds an octave, and preserves the stability of the A section through primarily step-wise motion. Furthermore, the counterpoint created by the polymeter between the bass and treble voice in the first three systems rarely exceeds the interval of a tenth. At the end of the fourth system, Bogdanović expands the intervallic content of the motive through large consecutive skips of fourths, fifths, and sixths to anticipate the climax. Musical Example 3.4 shows the climax of the piece with the range of each note grouping expanding in intervallic content. Moreover, the climax is heightened by the range between the bass and treble voice, which spans over two octaves in the last note grouping, the largest interval

²⁸ *Counterpoint for Guitar*, 105.

created between the voices in the entire piece. Following the fermata, the study gradually returns to persistent use of the interval of a second with the counterpoint rarely exceeding an octave. The last system is a prolongation of a V-I cadence in B major (Musical Example 3.5), which Bogdanović creates by descending step-wise motion in the middle voice beginning with A#, and the F# in the bass voice resolving up to B in the last measure. In sum, Bogdanović uses expansion and contraction of intervallic content in the three-note motive, along with the counterpoint between the bass and treble voices, to create sections of stability, climax, and resolution.

Musical Example 3.4: Excerpt from Concert Study 5



Musical Example 3.5: Excerpt from Concert Study 5



CHAPTER 4

CONCLUSION

Dušan Bogdanović has demonstrated through this treatise that polypmeter can serve as a primary structural element of music that can influence structural progression, create new melodies, and evoke many different feelings in the listener. Furthermore, he has provided the guitarist with a pedagogical system for the use of this structural device in an improvisatory setting. The treatise provides ample proof of his interest in world music, predilection for improvisation, and interest in new age guitar pedagogy.

Traditional didactic methods by various guitarists that express different schools of thought on technique, musicianship, and performance preparation are in libraries and stores around the world, yet only one treatise for the guitar remains that presents the possibilities of playing and improvising polypmeters. Perhaps once our Western ears become accustomed to these sounds, and more guitar music is composed that implements polypmeters, Bogdanović's treatise becomes a standard in the guitar pedagogy world for both performing polypmeter and honing improvisation skills.

To conclude, the purpose of this study was to illuminate the accessibility of the polypmeters in Bogdanović's treatise by providing an approach to practicing the exercises in the first part of the work and an analysis of three of the five concert studies that focuses on their innovative use of the polypmeter and their ties to traditional structure. Bogdanović's introduction, thorough but also terse, does not explain many of the technical problems that arise when a Western guitarist begins to practice polypmeters. This is not say that this paper is a "shortcut" to the learning of polypmeters, or worse, a method that ignores Bogdanović's intentions as to how to practice the

exercises, but rather a supplementary approach that accommodates the natural deficiencies of a Western music player in performing polymeter, and in the end produces strong results. The second portion of this study affirms Bogdanović's mastery of polymeter as he demonstrates it in a musical context, using various world music traditions. Even as he manages to perform every note as notated in *Unconscious in Brazil*, the pieces still suggest improvisatory traditions that Bogdanović has created for his style of performing and composing. In a sense, hopefully this study, like Bogdanović's, can help rekindle the art of improvisation in the general guitar pedagogical system that was once so prominent in previous centuries.

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