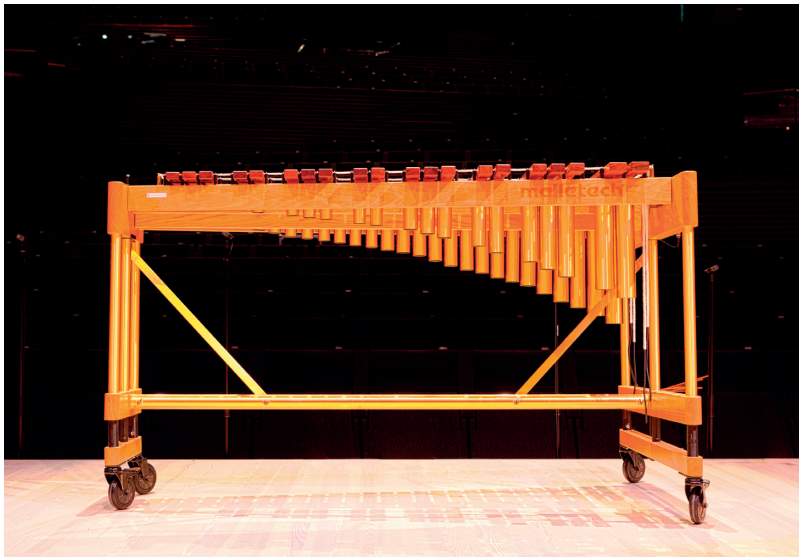
From Petrushka to Les Noces

A musical journey composing original xylophone compositions influenced by Igor Stravinsky, with an examination on practice as a process

ANTTI OHENOJA



EST 63
DocMus Doctoral School

SIBELIUS ACADEMY OF THE UNIVERSITY
OF THE ARTS HELSINKI 2022

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FOREWORD

The journey that I started as an elementary school percussion student in Oulu has given me a treasure of life experiences and set me on a path of musical wonder, that has led to this significant milestone, a doctorate in music. Early on I felt a strong calling from the art of drumming, percussion and music. I did not know exactly what that call was, but I was eager to find out. The musical path that I have travelled has taken me to study and work on three continents. In this thesis, I combine aspects from my experiences as a musician with the academic knowledge that I have gathered and learned during my doctoral studies at the Sibelius Academy of the University of the Arts Helsinki.

I have learned from many teachers and musicians. I have discovered about music and life together with my friends and loved ones. I would like to thank my parents Elisa Kittilä and Osmo Ohenoja for believing in me and supporting me early on and throughout my life. Thank you also to Jackie Kyung A Shin with whom I shared a long path in life and music. Thank you to the faculty at the DocMus doctoral school; my thesis supervisor Marcus Castrén, my studies supervisor Markus Kuikka; Päivi Järviö, Anu Vehviläinen and Peter Peitsalo for your excellent suggestions on my thesis in the seminars. Thank you also to specialist Sirpa Järvelä for all your advice on the study process at the DocMus doctoral school, and to coordinator Henri Wegelius. Thank you very much to Markus Fagerudd for excellent composition lessons. Also, thank you to my concert jury members and to the concert pre-examiner Olli-Pekka Martikainen. Thank you

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Table of Contents

FOREWORD……5

ABSTRACT…… 9

1. INTRODUCTION…….. 11

1.1 Historical aspects of the xylophone…… 12

1.2 Of the composition process…….. 13

1.3 Performing *Les Noces*……14

1.4 Xylophone practice as a process……15

1.5 The doctoral concert series…… 16

2. A CONCISE HISTORY AND THE DEVELOPMENT OF THE XYLOPHONE ……23

2.1. Historical aspects of the xylophone…… 23

2.2 The modern xylophone……26

2.3 Xylophone repertoire and the different aspects of xylophone and marimba…… 30

3. AN INTRODUCTION TO THE ORIGINAL COMPOSITIONS INFLUENCED BY IGOR STRAVINSKY'S XYLOPHONE WRITING……33

4. *ETUDE LES NOCES* AND THE APPROACH TO XYLOPHONE PRACTICE AND PERFORMANCE……. 37

4.1 My experience of performing *Les Noces*…….. 37

4.2 Introduction to the *Etude*…… 39

4.3 Musical form and description of the *Etude*…… 39

4.3.1 A section, measures 1–15, with subsections Aa in mm. 1–11 and Ab in mm. 12–15…….41

4.3.2 B section, measures 16–28, with subsections Ba in mm. 16–20 and Bb in mm. 21–28...40

4.3.3 C section, measures 29–45, scales and arpeggios emerge……44

4.3.4 D section, measures 46–89, with subsections Da in mm. 46–59 and Db in mm. 60–89..44

4.3.5 E section, measures 90–100……..51

4.3.6 F section, measures 101–137, with subsections Fa in mm. 101–117 and Fb in mm. 118–137…… 53

4.3.7 G section, measures 138–150 58
4.3.8 H section, measures 151–187, with subsections Ha in mm. 151–164 and Hb in mm. 165–187 60
4.3.9 I section, measures 188–201 closing 64
5. *REFLECTIONS ON PETRUSHKA* 68
5.1 Introduction to the composition with form analysis 68
5.1.1 A section, measures 1–7 72
5.1.2 B section, measures 8–18 73
5.1.3 C section, measures 19–36, with subsections Ca in mm. 19–31 and Cb in mm. 32–36 72
5.1.4 D section, measures 37–41 79
5.1.5 E section, measures 42–49 80
5.1.6 F section, measures 50–59 81
5.1.7 G section, measures 60–65 83
5.1.8 H section, measures 66–72 85
5.1.9 I section, measures 73–84 87
5.1.10 J section, measures 85–99 89
5.1.11 K section, measures 100–106 closing 91
6. XYLOPHONE PRACTICE AS A PROCESS 94
6.1 Introduction to the chapter 94
6.2 Thoughts on Raynor Carroll's advice on practice 95
6.2.2 Never sacrifice the basics 98
6.2.3 Listen to the sound you are producing 101
6.2.4 Use a mirror to check hand positions, stroke techniques and mallet heights 103
6.2.5 Practice on a regular basis 104
6.2.6 Allocate your time properly 105
6.3 Elaboration on the practice process, based on Carroll's points 108
6.3.1 Practicing an orchestral mallet part on a tight schedule—six steps 108
6.3.2 Performing and musical visualization 112
6.3.3 Choosing the xylophone mallets 114
7. CONCLUSION 116
BIBLIOGRAPHY 118
APPENDIXES 1 AND 2: THE SCORES OF *ETUDE LES NOCES* AND *REFLECTIONS ON PETRUSHKA* 121

ABSTRACT

This thesis is part of the requirements for the Doctor of Music degree in the Arts Study Programme at the Sibelius Academy of the University of the Arts Helsinki. The thesis introduces new aspects of and perspectives on Igor Stravinsky's (1882–1971) xylophone writing through original solo xylophone compositions by the author. The history and background of the xylophone will also be discussed. The final chapter of the thesis focuses on practice as a process, with the author's own viewpoints combined with ideas of some of the leading pedagogues and performers of the percussion field. The musical material presented will largely consist of Stravinsky's xylophone parts and my own original music, which are discussed in the earlier chapters of the text. I will provide another perspective on the music in the context of practice as a process.

The thesis proceeds in three phases. Firstly, the challenges of Stravinsky's xylophone parts have been brought up as a topic of discussion. Secondly, Stravinsky's xylophone parts are used as an inspiration for the original compositions in the thesis. Stravinsky's technical and musical challenges are then explored in my original compositions through practicing and performing them. Thirdly, the whole practice process is put under a microscope and utilized for preparing compositions and orchestral parts. Furthermore, I will study the artistic and technical aspects of the musical material herein, and how it can be prepared optimally in terms of timing and the scope of preparation for performance and/or presentation. In my research I combine aspects of composition, practice process, and the

history of the xylophone. The thesis is aimed primarily at university level students, but also at professional percussionists. The goal of the thesis is to provide effective and practical benefits to percussionists based on the thesis' innovative approach to xylophone performance and the learning process.

1. INTRODUCTION

I have been fascinated by Igor Stravinsky's (1882–1971) xylophone writing since I first heard it on recordings many years ago. Whenever the sound of the xylophone appeared in the music, I felt a sense of excitement and an immediate elevation of interest in the music. I could feel a certain musical magic that the xylophone's performance was expressing. Sometimes the parts only had a few notes in their entrances. Even those little thematic inputs impacted the musical events in the pieces. These impressions make the xylophone parts fascinating, dynamic, and multifaceted. A question might rise about why I chose to write about Stravinsky and the xylophone. To me, the xylophone is the most interesting orchestral mallet instrument, and Stravinsky's xylophone parts especially fascinate me. I have also specialized in ragtime music xylophone playing, so the instrument was a very natural choice for me to focus on in the thesis.

In my thesis I will review and discuss my own xylophone compositions, which I composed based on Stravinsky's xylophone parts of *Les Noces* (1923) and *Petrushka* (1911). Although *Petrushka* is an earlier work than *Les Noces*, I will first review my composition *Etude Les Noces* (2020) and the xylophone part of Stravinsky's *Les Noces* in chapter 3 before I discuss my composition *Reflections on Petrushka* (2020) and the xylophone part of Stravinsky's *Petrushka* in chapter 4. The musical textures in *Etude Les Noces* are based more on Stravinsky's original composition, which has more xylophone writing in it. Because *Petrushka* has less xylophone writing in it, *Reflections on Petrushka* has more of my own compositional material

than *Etude Les Noces*, which also contains much of my own material.

While discussing the pieces, I will also explain ways to interpret and practice Stravinsky's *Les Noces* and *Petrushka* xylophone parts. In my compositions, Stravinsky's xylophone parts appear without alterations, excluding some tremolos being cut from their original length to make them fit better into the compositions. The xylophone parts from *Les Noces and Petrushka* are not included in their entirety in my compositions, but rather the most challenging and well-known passages were used and thematically developed to create a solo piece structure. I embedded the selected excerpts from Stravinsky's xylophone parts in my compositions, as I wanted to create an organic whole where the music would grow and develop around Stravinsky's musical textures and figures. Through that process I aimed to bring out new approaches and ideas for xylophone repertoire and performance. For decades, the marimba has been the most used mallet instrument in solo recitals, and most of the existing solo repertoire is written for it. My two new xylophone compositions are additions to the xylophone repertoire, and it is my hope that they might enhance both the role and presence of the xylophone in the solo recital context. As an orchestral mallet instrument, the xylophone enjoys a leading role among the mallet instrument family.

1.1 Historical aspects of the xylophone

In the second chapter, I continue with an overview of the xylophone's history and development. In this chapter I bring out the challenges of historical instrument research, in particular as it applies to the history and development of the xylophone. Because the xylophone is an instrument with ancient roots, it is difficult to outline the origin and the developmental stages of the instrument. However, I will review different viewpoints that percussion musicologists have debated over the years. It should be noted that the literature on the xylophone is limited. Regarding Stravinsky's compositions that I study in my thesis, much has already been written about them, but not specifically about the xylophone in relation to the compositions.

1.2 Of the composition process

Composing has been an important part of my musical life for nearly two decades. I often think about new pieces that I learn through the eyes of a percussionist and also as a compositional process. I talk about Stravinsky's xylophone parts as a percussionist, composer, and also as an admirer of Stravinsky's music. The thoughts are based on my experience as a performing musician.

The compositions are also aimed at supporting students as they prepare the xylophone parts for orchestral projects and auditions. The original xylophone parts will naturally also become familiar to students when they work on my Stravinsky-based compositions. The etudes will hopefully help to broaden the perspective from which percussion students see Stravinsky's xylophone parts, and possibly also give them new musical ideas about xylophone performance. Composing these original pieces was very interesting for me, because I wanted to discover new ways to perform, think and rehearse the selected xylophone parts in the thesis. It is very useful to think about the challenge at hand from outside the box, as well as from different angles. In a nutshell, I want to share the results of my research; results that will provide viewpoints and ideas from an experienced percussionist for younger percussionists' exploration and development. I have conducted my research on Stravinsky's xylophone parts by composing and playing my own new music, which has been influenced by Stravinsky's xylophone parts.

To create a dual perspective in my approach, I have studied and also frequently performed ragtime xylophone music for over twenty years. Ragtime improvisation, and improvisation in general, are also very close to my heart. In my compositions I combine a theoretical approach with improvisation. Through that process I am able to create fresh dialogues within the music, with new ideas and material coming from these contrasting sources. I find it fascinating to compose music from different viewpoints that can actively create cohesion together. In my etudes, I have combined Stravinsky's xylophone parts with a ragtime music influence, and also with a myriad of musical ideas that I have derived from my

own performances and studies. All of these aspects add to my own compositional style, in which is reflected my process and development as a professional musician. In my thesis compositions I aim to demonstrate new kinds of technical and musical challenges. In addition, my thesis will include a pedagogical approach to my original compositions, which include, in addition to my own compositional elements, several technical challenges from *Les Noces* (1923) and *Petrushka* (1911) xylophone parts. I analyze the original parts from interpretational, technical, and emotional perspectives that will be further expounded upon. Researching Stravinsky's xylophone parts by composing has been an effective way for me to go deeper into the building blocks and fundamental elements of the xylophone parts. I will also examine the ways in which a xylophone player could prepare the compositions. Through that process, Stravinsky's xylophone parts will become familiarized and embraced from different viewpoints. The emphasis is placed on the approach that the xylophone player could take while in the process of preparing the compositions.

1.3 Performing *Les Noces*

Les Noces is a groundbreaking composition. I had the privilege of performing *Les Noces* with the renowned percussion ensemble Nexus while I was pursuing my undergraduate studies at the University of Toronto in Canada. My xylophone teacher Bob Becker played the xylophone part. Before going to study in Toronto, I had listened intensively to Becker's ragtime xylophone recordings with Nexus. It was an eye-opening experience to perform *Les Noces* together with him and the other master percussionists in the group, and to listen to them playing live. I was struck by the intensity of their playing and their amazing accuracy, and by the sound quality and sound projection that they generated in their performance. I had never played in such a percussion section before, where all of the players were of the highest caliber and knew completely what they were doing at all times, and what their parts' roles were in relation to the music. Becker's xylophone performance sounded convincing all of the time. His ability to choose the right balance in the music through his phrasing, accentuation, dynamics, and mallet choices sounded like absolute perfection. Also, he never forced any passages, but was rather able to project different musical characters with ease. This experience with Nexus

was one of the early catalysts that influenced the topic of this thesis and encouraged my curiosity towards Stravinsky and the xylophone.

1.4 Xylophone practice as a process

In the sixth chapter of the thesis, I reflect on the topic of systematic and effective practice. The second to last chapter of the thesis is titled Practice as a process, and in it a multitude of practice rules and ideas will be covered in detail. Systematic practice is extremely important, and one has to invest much time, effort, and thinking to it. To know how to practice effectively is vital in today's highly competitive professional percussion field. My aim is to give young xylophone players advice and practical tools on how to work on the compositions within this thesis, and in general when learning unfamiliar music or bringing back familiar material to performance level. The thoughts are based on my performing experience in a multitude of musical genres and settings. I also apply some of the leading percussion pedagogues' thoughts and philosophies to the practice process. I will describe practice advice in detail and share and develop thoughts from some of the leading percussion experts in the field, as well as from pedagogical and practice-related literature. In a nutshell, my doctoral thesis has the following goals: to increase the appreciation and awareness of the xylophone as a solo instrument through my compositions, which are influenced by Stravinsky, and to offer audiences more possibilities to hear the xylophone not only in orchestra concerts but in recitals as well. Secondly, as mentioned before, I describe systematic and effective aspects on practicing for university level students. The aspects are based on pedagogical and practice-related literature and my own observations on the topic. Thirdly, I bring to my thesis the experiences that I have gathered through the compositional research process and performances of my Stravinsky-influenced compositions. My own new conclusions and results on the composition research process will connect these experiences with the two previous goals of the thesis.

1.5 The doctoral concert series

My doctoral concert series was constructed with well-known classics from the percussion solo and chamber music repertoire, alongside premier performances of compositions that I have commissioned during my doctoral project. All of the composers that wrote new works for me have had important influences on my career as a percussionist. The themes of my concert series are the music of Iannis Xenakis (1922–2001), Japanese percussion music, and percussion in the chamber music context.

First Doctoral Concert, March 25th, 2014, Camerata Hall, Helsinki Music Centre

The first doctoral concert was a unique representation of percussion music over a time span of nearly a century, from 1918 to 2011. I consider the xylophone, marimba, and snare drum to be my main instruments. I have also studied the tabla and performed as tabla player since my undergraduate studies at the University of Toronto, from the beginning of the millennium. In this concert program, I performed interesting and important works from the percussion repertoire specifically on those instruments that I feel are most expressive and versatile while playing. The ending of the program highlighted my role as a ragtime ensemble xylophone soloist and improviser on three compositions by George Hamilton Green (1893–1970).

Percussion Explosion

1. Sydney Hodkinson (b. 1934): *Kerberos* (1990), 6 min. Antti Ohenoja, snare drum

2. Steve Reich (b. 1936): *Nagoya Marimbas* (1994), 5’30 min. Antti Ohenoja & Bo Håkanson, marimba

3. Eric Sammut (b. 1968): *Side 2 in 1* (2011), Finnish premier, 9’30 min. Antti Ohenoja & Bo Håkanson, marimba

4. Bob Becker (b. 1947): *Palta* (1982, new version 1998), 12 min. Antti Ohenoja, tabla, Arttu Takalo, Riku Niemi, Sami Koskela, Bo Håkanson, Juhani Hapuli, Petteri Kippo, percussion, Jackie Kyung A Shin, piano, Harri Rantanen, bass guitar

5. Eric Sammut (b. 1968): *Libertango* (2002), 3’30 min. Antti Ohenoja, marimba

6. Áskell Másson (b. 1953): *Konzertstück* (1982), 9 min. Antti Ohenoja, snare drum, Jackie Kyung A Shin, piano

7. George Hamilton Green (1893–1970): *Whistler* (1925), 3’30 min. Antti Ohenoja, arrangement & xylophone, Anssi Nykänen, drums, Harri Rantanen, double bass, Varre Vartiainen, banjo & guitar

8. G. H. Green: *Spanish Waltz* (1918), xylophone & ragtime ensemble, 5’30 min. Antti Ohenoja, arrangement & xylophone, Anssi Nykänen, drums, Harri Rantanen, double bass, Varre Vartiainen, banjo & guitar

9. G. H. Green: *Charleston Capers* (1926), xylophone & ensemble, 6 min. Antti Ohenoja, arrangement & xylophone, Anssi Nykänen, drums, Harri Rantanen, double bass, Varre Vartiainen, banjo & guitar

Second Doctoral Concert, October 14th, 2015, Camerata Hall, Helsinki Music Centre

In the second doctoral concert, titled "Marimba Concertos and music by Xenakis and Ichiyanagi", I explored the combination of percussion with ensemble. Also, the chamber music theme of the concert series included the performance of Toshi Ichiyanagi's *Trio Interlink* (1990). Arguably Xenakis' most famous percussion solo work, *Rebonds,* opened the program. The performance of *Allegrìa marimba concerto* by Jarmo Sermilä (2003), which saw its premier performance here, was a long-time goal for me to perform. It brought a colorful and interesting sound to the program with its unusual orchestration. The composer drew inspiration from his trip to Cuba. It is written for a marimba soloist, strings, three trumpets, harp (with a prominent role), and percussion. The concert concluded with Emmanuel Séjourné's *Concerto for Marimba and Strings* (2005). The composition is widely performed and has established itself as an energetic and melodic concerto with an easily recognizable French atmosphere. Both of the concertos were accompanied by the Camerata Finlandia Chamber Orchestra, conducted by Jackie Shin.

Marimba Concertos and music by Xenakis and Ichiyanagi

1. Iannis Xenakis (1922–2001): *Rebonds* (1987-89), Antti Ohenoja, percussion, 12 min.

2. Jarmo Sermilä (b. 1939): *Allegrìa marimba concerto* (2003), premier performance, 18 min. Antti Ohenoja, marimba, Camerata Finlandia Chamber Orchestra, Jackie Shin, conductor

3. Toshi Ichiyanagi (b. 1933): *Trio Interlink* (1990), 12 min. Antti Ohenoja, percussion, Jackie Shin, piano, Eriikka Maalismaa, violin

4. Emmanuel Séjourné (b. 1961): *Concerto for Marimba and Strings* (2005), 14 min. Antti Ohenoja, marimba, Camerata Finlandia Chamber Orchestra, Jackie Shin, conductor

Third Doctoral Concert, May 3rd, 2016, Camerata Hall, Helsinki Music Centre

My third doctoral concert was a collaboration with wind players. I performed three wide scale solo works, beginning with Elliott Carter's *March* from his collection *Eight Pieces for Four Timpani* (1949/66). *The March* is one of the best-known timpani pieces in the timpani solo repertoire. The second solo work was David Maslanka's ethereal and virtuosic marimba solo *Variations on Lost Love* (1997), and the third solo composition was Maki Ishii's *Thirteen Drums*, op 66. (1985). *Variations on Lost Love* is based on a poem by Robert Graves (1895-1985), titled *Lost Love*.[1]

The compositions with wind instruments were Dave Maric's (b. 1970) *Lucid Intervals* (2006), which I performed with trumpet artist Pasi Pirinen. Kimmo Hakola's (b. 1958) *Five Clips* (2003) was the next duo with percussion and clarinet, which I performed with clarinetist Heikki Nikula. The last two compositions of the program were also for percussion and wind instruments. Ka Nin Chan's composition *Nature/Nurture* (2002) for marimba and wind instruments was performed by myself on marimba, and Finnish professional musicians from the capital area orchestras in Finland. The ensemble was conducted by Jackie Shin. The concert reached its climax with the premier of Eero Hämeenniemi's *Tiin chaar* (2014), which I commissioned. I had a wonderful duo collaboration with the RSO's first solo trombonist Darren Acosta in Hämeenniemi's new composition. It was important and rewarding to play the piece to the composer before the premier, to hear his thoughts on it and suggestions. The percussion part in the piece is a fascinating combination of marimba at the beginning, which then transitions to the tabla after the introduction of the work. Darren and I have since performed the composition several times in different festivals. These include the RSO chamber music concert series at the Helsinki Music Centre and Avanti's Summer Sounds Festival in Porvoo.

[1] Beers (2014, 16).

Antti Ohenoja, Lyömäsoittimet ja Puhallinorkesteri

Antti Ohenoja, Percussion and Wind Ensemble

1. Elliott Carter (1908–2012): *Eight Pieces for Four Timpani: mvt VIII, March* (1949/66), 4 min. Antti Ohenoja, timpani

2. Dave Maric: (b. 1970): *Lucid Intervals* (2006), 12 min. Antti Ohenoja, percussion, Pasi Pirinen, trumpet and flugel horn

3. David Maslanka (b. 1943): *Variations on Lost Love* (1997), 15 min. Antti Ohenoja, marimba

4. Kimmo Hakola (b. 1958): *Five Clips* (2003), 8 min. Antti Ohenoja, marimba, Heikki Nikula, clarinet

5. Maki Ishii (1936–2003): *Thirteen Drums*, op 66. (1985), 12 min. Antti Ohenoja, percussion

6. Ka Nin Chan (b. 1949): *Nature/Nurture* (2002), 15 min. Antti Ohenoja, marimba, Päivi Kärkäs, oboe, Ilkka Laivaara, flute, Heikki Nikula, clarinet, Janne Pulkkinen, bassoon, Tero Toivonen, French horn, Jackie Shin, conductor

7. Eero Hämeenniemi (b. 1951): *Tiin chaar* (2014), premier performance, 12 min. Antti Ohenoja, marimba and tabla, Darren Acosta, trombone

Fourth Doctoral Concert, May 26th, 2017, Sonore Hall, Helsinki Music Centre

In my fourth doctoral concert, I performed an extensive repertoire, that included Iannis Xenakis' percussion solo *Psappha* (1975), Toshi Ichiyanagi's *Wind Trace* (1984) for percussion trio, and Kazunori Miyake's *Chain* (2001) for solo marimba. The themes of my concert series, the percussion solo music of Iannis Xenakis, Japanese percussion music, and percussion in a chamber music context were strongly present in the program. The compositions

by Maric, Zivkovic, Ferchen, and Schwantner were demanding concert pieces that brought interesting and colorful aspects to the entire program.

Nykymusiikkia lyömäsoittimille Euroopasta, Pohjois-Amerikasta ja Aasiasta

Contemporary music for percussion from Europe, North America and Asia

1. Iannis Xenakis (1922–2001): *Psappha* (1975), 14 min. Antti Ohenoja, percussion

2. Kazunori Miyake (b. 1963): *Chain* (2001), 5'30 min. Antti Ohenoja, marimba

3. Dave Maric (b. 1970): *Predicaments* (2003), Finnish premier, 10'30 min. I Nomad II Deadlock Antti Ohenoja, percussion, Jouko Laivuori, piano

4. Nebojsa Jovan Zivkovic (b. 1962): *Pezzo da Concerto n. 1* (1987), 3'30 min. Antti Ohenoja, snare drum

5. Timothy Ferchen (b. 1947): *Sideman, for snare drums and tape* (1994), 10 min. I II III Antti Ohenoja, snare drums

6. Joseph Schwantner (b. 1943): *Velocities* (1990), 9 min. Antti Ohenoja, marimba

7. Toshi Ichiyanagi (b. 1933): *Wind Trace* (1984), 13 min. Antti Ohenoja, percussion, Jani Niinimäki, marimba, Petteri Kippo, percussion

Fifth Doctoral Concert, January 11th, 2022, Camerata Hall, Helsinki Music Centre

The fifth and final doctoral concert took take place in January, 2022. The concluding concert reflected the entire concert series, its impact on my artistic growth, and my aspirations for my whole doctoral degree. *At the Frontier*, the title of the concert, depicts the starting of a

new chapter in my life after finishing the degree and starting to apply all of the new ideas and experiences that I had gained during the process. The concert featured exciting new premiers by Lotta Wennäkoski and Ka Nin Chan. The Xenakis theme was highlighted with his explorative and innovative work for three djembes, titled *Okho* (1989).

At the Frontier - Antti Ohenojan viides jatkotutkintokonsertti

Antti Ohenoja's fifth Doctoral Concert

1. Bob Becker (b. 1947): *Prisoners of the Image Factory* (1992), 5 min. Antti Ohenoja, vibraphone, Arttu Takalo, marimba, Patrik Kiviniemi, piano

2. Toshimitsu Tanaka (1930–2020): *Two Movements for Marimba* (1965), 12 min. Antti Ohenoja, marimba

3. Lotta Wennäkoski (b. 1970): *Rimbalzi* (2021), premier performance, 9 min. Antti Ohenoja, percussion, Heikki Nikula, bass clarinet

4. Kalevi Aho (b. 1949): *Solo XV* (2018), Finnish premier, 8'30 min. Antti Ohenoja, marimba and triangles

5. Ka Nin Chan (b. 1949): *Pitkä Talvi* (2017), premier performance, 12 min. Antti Ohenoja, percussion, Maria Puusaari, violin, Lea Tuuri, violin, Jussi Aalto, viola, Pinja Nuñez, cello, Janne Valkeajoki, conductor

6. Iannis Xenakis (1922–2001): *Okho* (1989), 12'30 min. Antti Ohenoja, djembe, Patrik Kiviniemi, djembe, Elmeri Uusikorpi, djembe

2. A CONCISE HISTORY AND THE DEVELOPMENT OF THE XYLOPHONE

2.1. Historical aspects of the xylophone

The term xylophone is derived from the Greek language: *xylo* means wood, and *phoné* means sound. The name xylophone has been in use since the 19th century.[2] As categorized by Sachs-Hornbostel System, the xylophone is an idiophone where the whole instrument vibrates when struck. The xylophone is a virtuosic instrument that allows for highly sophisticated and advanced playing styles and techniques. In the symphony orchestra the xylophone is one of several mallet instruments.

It is difficult to date the birth of the xylophone because of its extremely long history. The area of the xylophone's origin is also debatable. It is suggested that the xylophone originated in Asia or in Africa. When Europeans arrived in Africa and Asia hundreds of years ago, the xylophone was already a highly sophisticated instrument in those societies.[3] For example, there are literary references to an Asian metallophone from AD 900. The

[2] Vienna Symphonic Library, entry "Xylophone - Brief description":

https://www.vsl.co.at/en/Xylophone/Brief_Description

[3] Blades (1984, 71-72).

metallophone is believed to have been an extension of the already highly developed trough xylophone.[4] In Africa, there were highly developed xylophones 400 years ago that have only small differences compared to the African xylophones of today. There were also many skillful players, and the xylophone was established as a popular instrument already at that time.[5] Blades suggests that the xylophone is in fact one of the earliest melodic instruments.[6] He furthermore notes that the Asiatic and African xylophones have much in common. The only major difference is that the Asian xylophones are commonly trough xylophones, where the wooden bars have a trough, (a wooden cradle under the bars), which resonates the bars' sound as one resonating chamber. The African xylophones usually have individual gourd resonators under the bars, like on balafon.[7] Blades suggests that these ideas may have been transmitted via personal connections made through migration or commerce, which may have allowed the instrument to travel between the continents.[8]

The xylophone travelled from Africa to Central America during the slave trade, starting in the 16th century.[9] After its arrival there, the xylophone had further developments and it started to be known as the marimba. It became an essential folk instrument, especially in Honduras, Mexico, and Guatemala.

[4] Ibid. p. 71.

[5] Ibid. p. 72.

[6] Ibid. p. 71.

[7] Ibid. p. 74. The figures 1 and 2 represent the the types of xylophones that are found in Asia (fig. 1) and in Africa (fig. 2). It is curious to observe how the instruments have been constructed. Especially in the Asian Gambang, the delicate ornamentation and the shape of the instrument present a clear connection to Asian architectural styles and aesthetics.

[8] Ibid. p. 74.

[9] Ibid. p. 74.

Fig. 1. Trough xylophone, Gambang. [10]

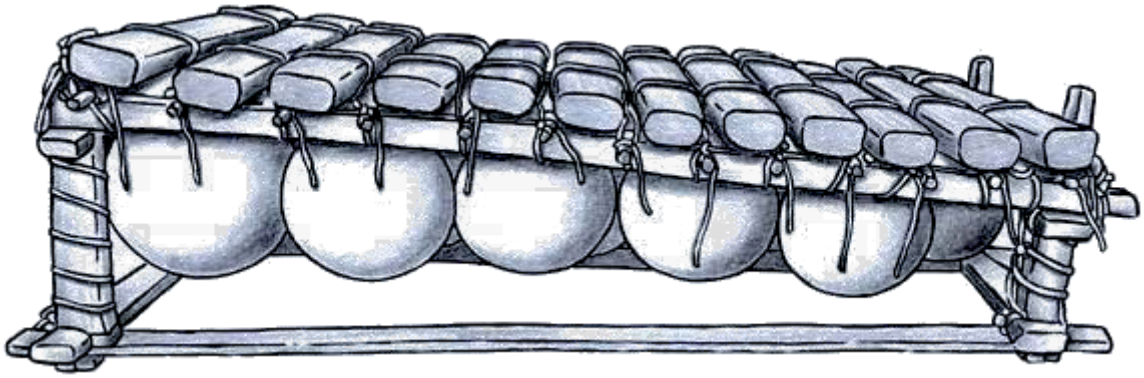

Fig. 2. Gourd-resonated xylophone.[11]

In Italian publications from 1686 by Giovanni Battista Ariosti and 1695 by Giuseppe Paradossi, the instrument found in Europe was called a *sistro* or *timpano*.[12] These terms sound confusing today, because timpani (single form timpano) is understood as a completely different

[10] Vienna Symphonic Library, entry ”Xylophone History”. History - Vienna Symphonic Library (vsl.co.at)

[11] Vienna Symphonic Library, entry ”Xylophone History”. History - Vienna Symphonic Library (vsl.co.at)

[12] Montagu (2002, 67).

instrument. A sistrum is also an ancient Egyptian rattle, and the nineteenth century name for the triangle, or possibly for the bell tree.[13] The xylophone as such was first mentioned in Europe when Arnolt Schlick called it *hültze glechter*, which means wooden clatter, in his early treatise on organ building published in 1511.[14]

2.2 The modern xylophone

The appearance of the xylophone has changed dramatically over the centuries, especially in its physical size and associated performance techniques. The early xylophones were smaller and had fewer bars than the modern xylophones. Their tuning was not fixed; rather, each instrument had its own unique tuning. Today's industrially manufactured concert xylophones are tuned to fit the western classical music context. The modern xylophone has bars made out of wood, preferably rosewood. A synthetic material called kelon is also sometimes used. The kelon sound is not nearly as good as the rosewood bars, because the fundamental tone of the bar is not as focused and clear as that of the rosewood bar. The kelon's overall sound color also does not compare in quality to the wood bars, and in addition is somewhat artificial. However, kelon is a cheaper and more durable bar material than rosewood. In intensive and heavy use rosewood starts to break and splinter. However, rosewood is nevertheless the best and most suitable material for xylophone bars, because its sound is superior to other woods and materials.

The bars are placed on top of the frame's horizontal rails, in a similar way as piano keys are laid out on a keyboard. In modern xylophones the bars have individual resonators placed underneath them (Fig. 3). These metallic resonators are located directly under the bars. They create resonating chambers, thus helping to amplify the sound of the bars and produce

[13] Ibid. p. 67-68.

[14] Anderson, Blades, Holland, List, O'Brien-Rothe (2001). Grove Music Online: Xylophone. https://doi-org.ezproxy.uniarts.fi/10.1093/gmo/9781561592630.article.49801

more reverberation. The distance between the bottom of the bar and the horizontal metal piece inside the resonator that provides the resonance with the wood bar is different for each resonator and bar. The distances are calculated to produce the best resonance and open sound production, and in this way the resonance of each bar can be maximized. For example, there is a wider gap between the horizontal metal piece in lower pitched bars than in higher pitched bars. For higher pitches, the metal is placed very near the bar to give a required resonance to the shorter wavelength pitches. Without the resonators the instrument's sound would be quite thin, staccato, and also softer than with the resonators. With the resonators, the sound of the instrument is louder, and the instrument also has a clear overtone presence and an open sound in general.

For transportation purposes the xylophone has four wheels on the frame's supporting legs. The most common range of the xylophone is f–C^4. Nowadays a xylophone with the range of c–C^4 is also quite common.

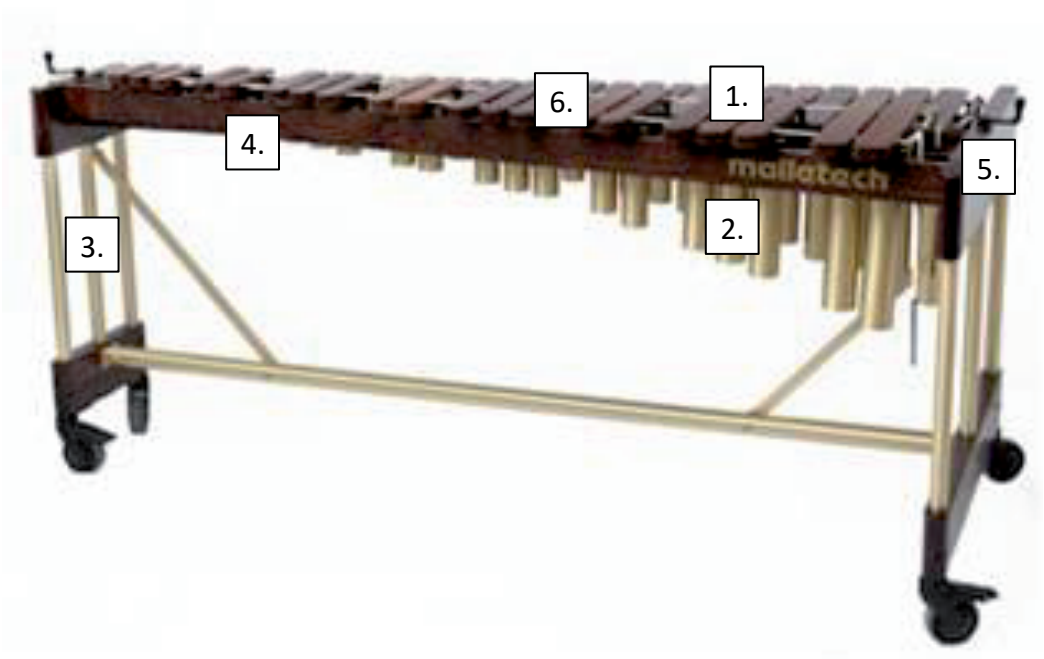

Fig. 3. Malletech 4 Octave Bob Becker Ragtime Xylophone. [15] 1. The bars of the xylophone. 2. The resonators. 3. The frame of the xylophone. 4. The supporting rails. 5. The height adjustment rod. 6. The cord that runs through the holes of the bars.

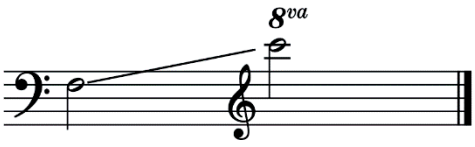

Fig. 4. The common range of the xylophone.

[15] Photo: Steve Weiss Music: https://www.steveweissmusic.com/product/malletech-xylophone-xb40/xylophone

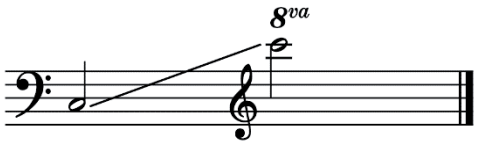

Fig. 5. The range of the modern xylophone, which is becoming more popular among xylophone manufacturers and performers.

The modern xylophone was created by the American Deagan and Leedy manufacturing companies in the early 20th century. Their instruments were played by many of the best xylophonists of the time. In those days the xylophone was regarded as a novelty instrument that had a "new" kind of sound. Xylophone players such as the aforementioned George Hamilton Green (1893–1970) and his brother Joe Green (1892–1939) played Leedy xylophones. They recorded vast amounts of compositions with their beautifully sounding instruments, making the xylophone a well-known and very popular instrument in the early 20th century ragtime era in North America. Teddy Brown (1900–1946), another pioneer on the xylophone, moved from the USA to make an impressive career as a xylophone soloist in the United Kingdom. His instrument of choice was a xylophone made by the Besson company. Nowadays, the old vintage xylophones from that time period are popular and sought after instruments among percussionists. Companies such as the Malletshop also acquire vintage xylophones and refurbish them to excellent condition and then resell them to customers.

The Deagan and Leedy xylophones have very characteristic sounds and brilliant tone qualities. The bars of the instruments were made of fine rosewood from Guatemala and Honduras. Their sound qualities cannot be reproduced in our times, because the large pieces of old and very dense trees are not available anymore for making xylophone bars. Most of the rosewood forests have been preserved or, sadly, cut down. Xylophone manufacturers such as the Adams Company, Malletech, Musser, Yamaha, and Concorde are the most known manufacturers today. Their new instruments rely strongly on the quality and tradition of the Deagan and Leedy xylophones from the early 20th century.

2.3 Xylophone repertoire and the different aspects of xylophone and marimba

The modern xylophone's repertoire includes among others the early 20th century ragtime compositions by George Hamilton Green (1893–1970) and Harry Breuer (1901–89), Morris Goldenberg's (1911–1969) etudes in the *Modern School for Xylophone, Marimba and Vibraphone,* Jacques Delecluse's (1933–2015) *Vingt Etudes pour Xylophone*, and classical orchestral parts. The aforementioned xylophone virtuosos George Hamilton Green and Harry Breuer, along with Red Norvo (born Kenneth Norville) (1908–1999) and Bob Becker (b. 1947), have been pioneers in the field of xylophone performance. Their solo recordings and ragtime and jazz compositions have also influenced and inspired classically trained percussionists.[16] The Romanian-born French composer with Greek ancestry, Iannis Xenakis (1922–2001), also utilizes the xylophone in his gigantic percussion work Pléïades (1979). William Cahn's (b. 1946) *In Ancient Temple Gardens* (1976) for xylophone soloist and chamber orchestra is an excellent example of colorful writing for the xylophone. Cahn made two versions of the piece; the original for xylophone and chamber orchestra and the second version for harpist and four marimba players. Cahn, an original member of the Nexus percussion ensemble, also performed the piece as a quintet with Nexus, with the four other members accompanying him on marimbas.

The first time the xylophone was used in a symphony orchestra was thought to have been in Camille Saint-Saëns' (1835–1921) *Danse Macabre* (1874), but new research has shown that Danish composer Hans Christian Lumbye's (1810–1874) *Champagne Galop* from year 1845

[16] For example, Bob Becker's ragtime recordings featuring Green's compositions with the Nexus percussion ensemble have become classics in the percussion field. In particular, George Hamilton Green's compositions are nowadays played by classical percussionists around the world. Bob Becker and William Cahn (b. 1946) from Nexus, who also appears as a xylophone soloist on the Nexus *Ragtime Concert* (1976) album, arranged the piano parts of Green's xylophone pieces to two marimbas played by four players, who accompany the xylophone soloist. Nexus, which at the time was a percussion sextet, made the Green ragtime arrangements a major part of their repertoire, along with the compositions written by Nexus members and free improvisations.

predates it. *Champagne Galop* is performed in festive concerts such as May Day concerts.[17] When the xylophone first appeared in the symphony orchestra, its structure was very different than today's xylophone, where the bars are placed chromatically, like on the piano. The bars were laid out in four rows, and they were placed on straw ropes. It became known as the wood and straw instrument, and Richard Strauss also called it Holz und Strohinstrumente.[18] In Stravinsky's times the mallet instruments in the orchestra, in addition to the xylophone, were the marimba, vibraphone, glockenspiel, crotales (which are also called antique cymbals), and tubular bells. Their roles in the orchestra are dictated by their sound colors, which are very different from each other.

The marimba, which was used in the orchestra already in Stravinsky's time, is the most recent addition to the mallet percussion arsenal in the symphony orchestra. The marimba is a member of the xylophone family, because it also has wooden bars and its frame is similar in appearance to the xylophone. The marimba also has resonators, and its bars are placed in the same way as the xylophone. The main difference between the two instruments is that the xylophone is a transposed instrument and the marimba is not. The xylophone's pitch is an octave higher than written. Also, the xylophone's bars are smaller and harder than marimba bars, which requires the xylophone to be played with harder mallets than the marimba. Marimba has a deeper and warmer sound than the xylophone, and the fuller sound of the marimba brings a different kind of character to the sound palette of the mallet instruments in the orchestra. Different kinds of tremolos work better on the marimba than on the xylophone, because it is usually played with relatively soft mallets. This makes the tremolos of the marimba sound more even and smooth. The marimba's sounding range goes a few octaves lower than the xylophone's register.[19] Although there are rare xylophones that have a range of five octaves, like the large range marimbas today, the majority of xylophones do not have a range larger than four octaves.

[17] Alexander (2014, 29).

[18] Holland (1978, 169).

[19] The five octave marimba's lowest c is written an octave lower than the lowest c of a four octave xylophone. However, because the xylophone is a transposed instrument up an octave, the actual sound difference of the bars is two octaves.

The marimba became a standard symphony orchestra instrument midway through the 20th century—over 100 years later than the xylophone. Composers became interested in the marimba's sound in the 1950s, and since then the marimba has been a standard mallet instrument in the percussion section.[20] The marimba is often played with four mallets, which emphasize its character and ability to play chordal passages. The majority of new pieces written for mallet instruments are composed for marimba. The xylophone, which is usually played with two mallets, was the most often used and thematically trusted mallet instrument for Igor Stravinsky. The xylophone has been a very popular instrument in Russia for a long time, so Stravinsky may have become familiar with the instrument already when he was growing up in Russia.

[20] Vienna Symphonic Library: entry "Marimba". https://www.vsl.co.at/en/Marimba/Brief_Description

3. AN INTRODUCTION TO THE ORIGINAL COMPOSITIONS INFLUENCED BY IGOR STRAVINSKY'S XYLOPHONE WRITING

The original compositions in my thesis are homages to two of the great xylophone parts that Stravinsky composed in his orchestral and ensemble pieces: *Les Noces* (1923) and *Petrushka* (1911). Stravinsky was one of the earliest composers who wrote for the instrument. His writing for the xylophone is especially extensive in *Les Noces*. Stravinsky created versatile parts that give plenty of color and life to the music. Stravinsky's use of the xylophone helped it to become a standard instrument in the symphony orchestra. Other composers who also utilized the xylophone and helped to establish its presence and importance in orchestral music most notably include his fellow Russian Dmitri Shostakovich (1906–1975), who composed extensively for the instrument in his symphonies and operas. Ukrainian born, Russian composer Sergei Prokofiev (1891–1953) also composed colorful xylophone parts for example in his cantata, *Alexander Nevsky* (1939), *Scythian Suite* (1915), and in the seventh symphony (1952). Hungarian Béla Bartók (1881–1945), German Paul Hindemith (1895–1963), and American George Gershwin (1898–1937) also strengthened the xylophone's arrival in the orchestral context through their compositions. Frenchman Olivier Messiaen also composed a vitally important part for the instrument in his composition *Oiseaux exotiques* (1956). Stravinsky used the xylophone both in *Les Noces*, which is a smaller ensemble piece, and in larger works such as in *Petrushka*. He also made a later version of the piece in 1947 for a smaller scale orchestra. His

purpose was to copyright it and to adapt it to a medium-sized orchestra.[21] He used the xylophone in *Firebird* (1910) as well, which is composed for a very large orchestra. *Les Noces* is influenced by folk music, so it is possible that Stravinsky added the xylophone to the orchestration due to it fitting the overall folk music character, as well as the timbral qualities that it could generate.

The compositions in my thesis are aimed at university level students and professional xylophone players who are interested in playing xylophone solo pieces in their concerts and recitals, or in auditions as free-choice pieces. The compositions are also aimed at performers who are about to perform xylophone parts of *Les Noces* or *Petrushka* in concerts, or who are preparing the parts for auditions. My original compositions are designed to bring out musical possibilities in phrasing as well as to provide new viewpoints on interpreting Stravinsky's xylophone parts.

In my compositions, the xylophone phrases from *Les Noces* and *Petrushka* are first introduced in their original keys, and from there on they are developed and transposed to different keys, to show them in new light through practicing and performance. When the references to Stravinsky's original parts appear in the compositions, the phrases should be played in the same manner as one would when playing the parts with a full ensemble or orchestra. The projected sound should also be at the same dynamic level as when played in an ensemble. Both of the compositions have several passages from *Petrushka* and *Les Noces*. The pieces also have similar technical challenges to Stravinsky's xylophone parts. In addition, they have innovative and extremely challenging passages that require meticulous and focused practice. The aim and purpose of the compositions is to take the technical and musical abilities of xylophone players to another level, by using Stravinsky's orchestral xylophone parts as a framework.

In *Reflections on Petrushka*, I explore the innovative possibilities of playing rapidly moving arpeggiated chords and fast octave passages, among other musical and technical aspects. The two compositions in my thesis, *Reflections* and *Etude*,[22] create a fusion of Stravinsky's xylophone parts and my own material. Additionally, some passages also tie

[21] Stravinsky and Craft (1962, 139).

[22] Abbreviations for *Reflections on Petrushka* and *Etude Les Noces*.

Stravinsky's excerpts from different sections of the compositions organically to each other. In this way the passages will not sound too fragmented, but cohesive. The aim is also to make the compositions independent entities, even though they have influences from Stravinsky and my own compositional input.[23]

The xylophone orchestral repertoire is versatile in its musical styles and technical requirements. For some reason, there are almost no existing pieces that have an orchestral composition's xylophone part as the basis of their composition (which would include quotes and phrases from the original composition). In 1992, Danish percussionist and pedagogue Gert Mortensen (b. 1958) arranged the Shostakovich's xylophone part from the opera *Lady Macbeth of the Mtsensk District* (1932). Mortensen's arrangement is in the form of two pages, with the rests taken away from the full xylophone part of the opera. However, it has very little or none of the arranger's own music.

Etude Royal (published 1986) by Danish percussionist and pedagogue Bent Lylloff is a composition where he compiled excerpts from the standard orchestral percussion literature. The piece also has a piano accompaniment. In addition to the xylophone, the composition also has music written for the glockenspiel and piatti. French marimba soloist and pedagogue Eric Sammut (b. 1968) has composed a marimba solo titled *Variations on Porgy and Bess* (published 2015). The piece was strongly influenced by the music and especially by the famous xylophone part from George and Ira Gershwin's opera *Porgy and Bess* (1935).

The preparation and practice process of a xylophone part is often done in a fragmented manner, by playing an excerpt from the part and then continuing separately to the next excerpt. In doing so, the colorful melodies of the different excerpts within a composition

[23] In the snare drum repertoire, there are several etudes composed for snare drum that have references from important and challenging snare drum parts in the orchestral literature. They are often played in orchestral auditions to test the technical and musical abilities of the applicants, as well as their ability to play with artistic taste in different musical styles. In his etude for snare drum called *Århus Etude No. 9* (published 1969), Danish percussionist and educator Bent Lylloff (1930–2001) combines excerpts from several pieces. The etude has excerpts, for example, from Maurice Ravel's (1875–1937) *Bolero* (1928) and Nikolai Rimsky-Korsakoff's (1844–1908) *Scheherazade* (1888). In *Århus Etude No. 9* and other etudes based on similar ideas, the applicant has to be able to change the music quickly in his or her mind depending on the excerpt that is being played. When doing that, one can find the suitable atmosphere for each excerpt in the piece.

become disconnected from each other. Because xylophone excerpts are often quite short, I hope to introduce a new approach to xylophone excerpts that make them more connected, in the form of a piece. In my compositions I wrote pieces that draw musical inspiration from the excerpts, so that the excerpts come to life in new, innovative ways. In the compositions influenced by Stravinsky, I also researched and developed the systematics of practice so that it would be more comprehensive in comparison to the fragmentary approach to learning music.

One possibility that xylophone players could consider is to create visual journeys in their minds while performing these compositions. I like to approach compositions in this way, but of course not everyone likes to think about pieces in the same manner. However, this could help performers to discover the sensitive moods of the compositions, and through that sensitiveness to discover unique interpretations. This process could also help performers to decide on the specific stroke types, from a multitude of possibilities, to fit their artistic vision of the piece as accurately as possible.

As mentioned before, Stravinsky's xylophone parts have a lot of contrasts in them, so while composing the pieces I utilized and developed their elements. I also used the range of the xylophone to create differences and contrasts in the music. These are brought out by varying the music between the xylophone's highest octave, which has a bright and piercing sound quality, and the xylophone's lowest octave, which is not as bright because of the bars' lower pitch frequency, but which nonetheless has a stronger sound volume. In the next chapter I will write about *Etude Les Noces* in depth and detail, and in the following chapter I will go through *Reflections on Petrushka* in a similar way.

4. *ETUDE LES NOCES* AND THE APPROACH TO XYLOPHONE PRACTICE AND PERFORMANCE

4.1 My experience of performing *Les Noces*

Les Noces (1923) is a masterful work for four voice soloists, a mixed choir, four grand pianos, and percussion.[24] *Les Noces* is only rarely performed, probably because of its unusual cast of performers. Whenever it is played, it always reminds one of how modern Stravinsky's music was in the 1920s. The xylophone part in *Les Noces* requires very clear and precise rhythmic and dynamic control. It sometime has solo passages in the work, and it also often enhances the sound spectrum of the four grand pianos. It generates interesting sound colors and adds an eastern European flavor to Stravinsky's music.

When I performed *Les Noces*, I was amazed by the versatility and the role that the xylophone plays in the piece. Around the time of the composition in the early 1920s, the powerful syncopations, double stops, and scales that Stravinsky wrote for the xylophone were

[24] The percussion instruments in the work are timpani, xylophone, tambourine, triangle, a bell in B, 2 snare drums with and without snares, 2 tambours (deep side drums) with and without snares, crotales, cymbals, and a concert bass drum. The English translation of the percussion instruments is from Blades (1984), i.e. *Percussion Instruments and their History*.

innovative for the instrument's classical music repertoire.[25] Stravinsky was able to grasp the potential which the xylophone could create in an ensemble piece. In addition to composing *Les Noces*, Stravinsky also wrote its libretto.[26] The world premiere was on June 13th, 1923 at the Théâtre de la Gaîté-Lyrique in Paris. It was performed as a staged ballet. Stravinsky wrote several versions of *Les Noces,* of which the 1923 version is most often played, and is the focus in my thesis. "The first two versions, both incomplete, date from 1914–15 and are scored for two string quintets (one pizzicato, the other arco) and nine winds. Version 3 (1915–17), the first complete draft, is scored for an idiosyncratic combination of twenty-seven winds and brass, eight strings, harp, piano, harpsichord, and Hungarian cimbalom. Meanwhile, in his other works (L'Histoire du soldat, Symphonies of Wind Instruments), Stravinsky was already moving toward smaller ensembles and more austere instrumental sonorities as he positioned himself to join the Paris-based movement soon to be dubbed 'neoclassicism.' In this context, the rich sound-world of Version 3 must suddenly have seemed old-fashioned, and Version 4 of *Les Noces* (1918–19) is stripped down to two cimbaloms, harmonium, pianola, and percussion … But only in the definitive Version 5 (1922–23) did Stravinsky arrive at the 'perfectly homogeneous, perfectly impersonal, and perfectly mechanical' sound of four pianos and four percussionists, in which, crucially, only struck instruments are heard."[27]

[25] The 1910s and 1920s were a golden age in the early jazz ragtime music tradition, when the xylophone became a leading solo instrument with its clear and bright tone and sharp articulation. The written and improvised parts that xylophone soloists such as the brothers George Hamilton Green (1893–1970) and Joe Green (1892–1939) played were something that was previously unheard of in the classical music context. However, the brothers based their performance and practice methods on the European violin pedagogy tradition. Bob Becker has continued the tradition of ragtime xylophone performance and improvisation. I was very fortunate to be able to study ragtime improvisation and performance with Becker in Toronto. I have been able to use that style of playing in my ensemble Ragtime Rebels in Finland, and in the legendary Finnish jazz band Dallapé.

[26] *New York Times*: https://www.nytimes.com/1971/04/07/archives/igor-stravinsky-an-inventor-of-music-whose-works-created-a.html

[27] Wise Music Classical: https://www.wisemusicclassical.com/work/44960/

4.2 Introduction to the *Etude*

As mentioned above, the etude that I composed based on *Les Noces*, is a hybrid of my own ideas and the actual xylophone part of *Les Noces*. In the etude I re-imagine the piece's brilliant xylophone part. The aim of the etude is to create a coherent representation of the music that has influences from both Stravinsky and myself, with insight to xylophone players who are working on the *Les Noces'* intriguing part.

4.3 Musical form and description of the *Etude*

Etude Les Noces is an etude that utilizes several kinds of performance techniques. For example, octaves, tremolos, and double stop technique are frequently used. There is also a rich variety of different kinds of ornamental textures, such as glissandos, flams,[28] and grace notes. The duration of the etude is approximately 5 minutes, and there are 201 measures in the piece. The form of the work is through-composed with sections from A to I. Some of the sections have a and b subsections within them. The events from the *Les Noces* xylophone part proceed in the same order in my etude as in Stravinsky's *Les Noces*. As mentioned before, I have tied together and created different atmospheres between the material from the xylophone part and from my own imagination. The aim was to make the structure of the *Etude* as coherent and independent as possible. By doing that, the *Etude* functions well as its own concert piece, as well as a part study and technical study of *Les Noces* xylophone part.

[28] Flam is a single note ornamentation before a beat. It is played softer than the main note. The flam makes the sound of the main note seem longer.

Table. 1 . Form structure of *Etude Les Noces.*

Section		Measures	Duration in seconds
A		1—15	18
	Aa	1—11	12.5
	Ab	12—15	5.5
B		16—28	18
	Ba	16—20	6
	Bb	21—28	12
C		29—45	24
D		46—89	55
	Da	46—59	18
	Db	60—89	37
E		90—100	26
F		101—137	54
	Fa	101—117	24
	Fb	118—137	30
G		138—150	18
H		151—187	47
	Ha	151—164	17
	Hb	165—187	30
I		188—201 closing	26
			Total duration: 286 seconds (4 min 46 s)

Fig. 6. *Etude Les Noces*; percentual section chart. The percentage is calculated from the duration of the music, not from the amount of measures.

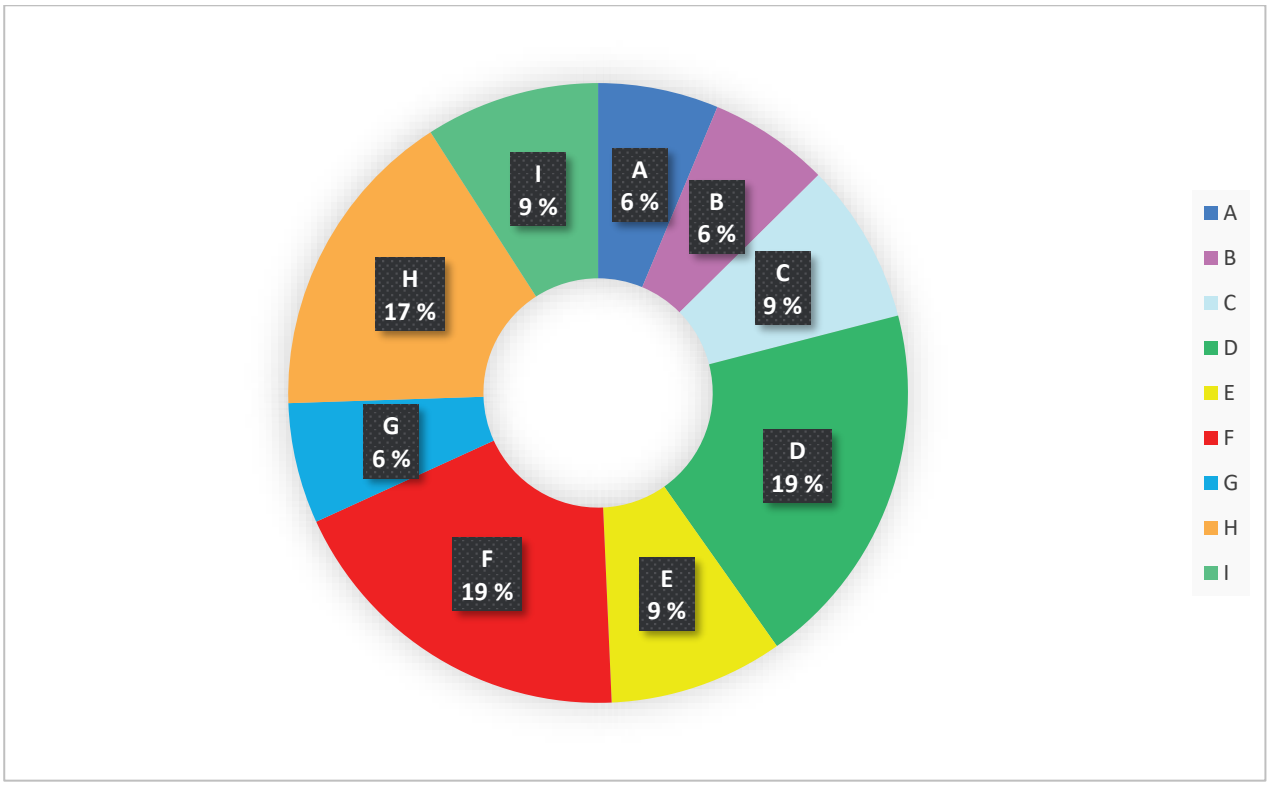

Fig. 7. Form structure of *Etude Les Noces*; the durations of the sections are displayed linearly.

4.3.1 A section, measures 1–15, with subsections Aa in measures 1–11 and Ab in measures 12–15

Etude Les Noces starts with a variation based on the beginning of *Les Noces'* soprano solo line with the xylophone part. In the original music the xylophone plays scarcely appearing D pitches. The beginning of the *Etude* is infused with harmonic elements from the score to create archaic sonorities. However, the tempo is much faster in the *Etude*, making the

musical resemblance relatively small to the actual beginning of *Les Noces*. At the very beginning of the *Etude,* after the tremolo in the first measure, lots of octaves and double octaves are used. For a xylophone player, hitting notes simultaneously between two octaves is challenging and is not a commonly used technique. When it is used, it usually appears as single strokes with rests and space around them. The octaves, perfect fifths, and perfect fourths play important roles throughout *Les Noces*, as well as in my *Etude Les Noces* (Fig. 8). In the first page of the *Etude* those intervals appear frequently. The *Etude's* marked tempo of dotted quarter note equals 80 beats per minute adds a technical challenge to the section, because the wide intervals that are in the music are difficult to play accurately at a fast tempo. However, when the passage is rehearsed and learnt through muscle memory, it is possible to play and phrase well. Hand-eye coordination is also very important at this point in the music, because both hands are moving constantly, and often in the opposite direction. It is often not possible to see all the xylophone keys directly while playing, because of the fast tempo and the leaping figures in the span of two octaves. The use of peripheral vision helps the brain to see the keys and their distance from each other, outside of the direct line of vision. The combined efforts of muscle memory, hand-eye coordination, and the use of peripheral vision give the best chances for note accuracy and phrasing at the beginning of the *Etude*. Although the passage is played in a wide range, there are not many different pitches played in the music at this point (Fig. 8).[29]

[29] The notes colored in blue in all of the music examples indicate quotes from Stravinsky.

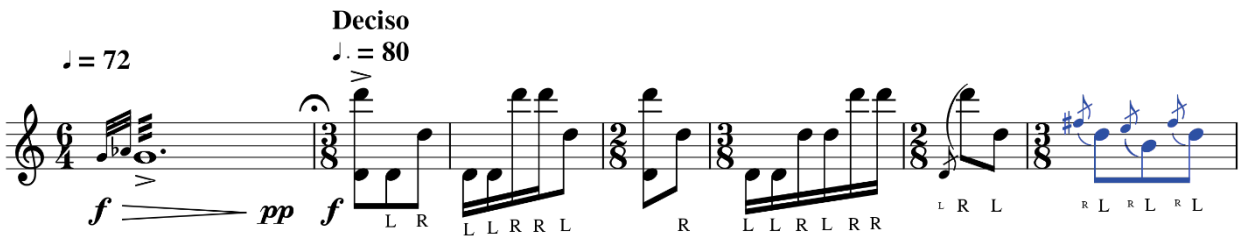

Fig. 8. *Etude Les Noces*, A section, measures 1–7. The beginning of the subsection Aa. The notes colored in blue indicate a quote from Stravinsky.

4.3.2 B section, measures 16–28, with subsections Ba in measures 16–20 and Bb in measures 21–28

An original melody appears from *Les Noces* in measure 12 (Fig. 9), which is ornamented in measure 20 with a phrase ending glissando to the high G^3 in fortissimo dynamic (Fig. 9). After that, the music is developed and transposed until measure 27, where a scale in perfect fifths descends, until it goes up again a major 2nd interval in the last eighth note of the measure. The double stop becomes a tremolo of the same pitches, G^1 and D^2 in measure 28, until the lower voice jumps down an octave to a low G. The low G and the D^2 double stop convey a connection to the rapidly moving textures with double octaves and octaves to the beginning of the *Etude*. This passage from the second beat of measure 20 to 28 is an example where the xylophone player plays through a variation of different melodic figures. These figures start on different notes in order to view the melodic material from several angles, so that the original passage from the *Les Noces* xylophone part will be learned very thoroughly. The original quote from Stravinsky is in measures 12 to the first quarter note of measure 20 (Fig. 9). I elaborate on those materials from the second beat of measure 20 to measure 28. My idea is to root the player deeper into the musical context by rhythmic repetition and melodic transpositions. From measures 16 to 28 the musical importance is on rhythmic precision and on the balance of the two melodic patterns. In these measures, the lower line has the melody and the upper line has the accompaniment. Hence, the lower line should be played louder. The only exceptions are measures 27 and the beginning of measure 28. Here, the melody is in the upper

line (Fig. 9). It is important to note that the simultaneously hit double stops should have a precise execution throughout the whole excerpt. The aim is that the two mallets hit the bars of the xylophone exactly at the same time, creating even sounding dyads (Fig. 9).

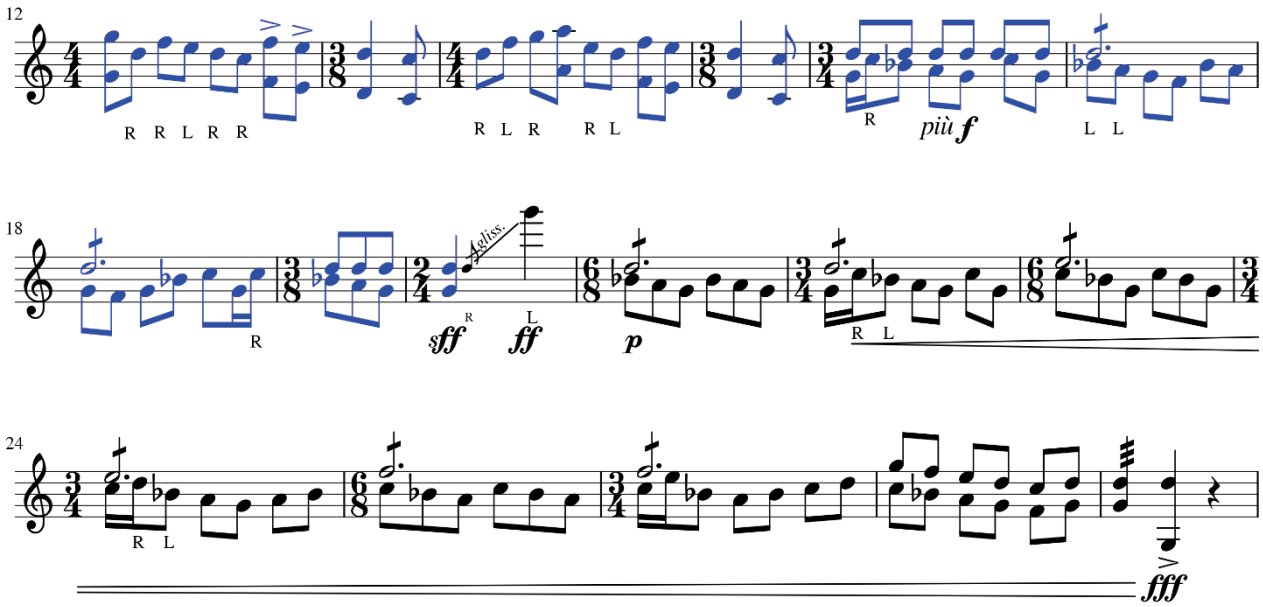

Fig. 9. *Etude Les Noces*, ending of the A section and the entire B section, measures 12–28.

4.3.3 C section, measures 29–45, scales and arpeggios emerge

Starting in measure 29, the ascending G dorian scale is a transformation from the C major scales that occur in *Les Noces* as well as in *Etude Les Noces.* Measures 29 and 30 demonstrate some of the key aspects of *Les Noces'* xylophone part, namely the scales and syncopation (Fig. 10). While performing these measures, it is important to keep a steady tempo. Neither of the measures have a downbeat, which enhances the syncopated feel of the passage. The overall tempo can become unstable if the rests in the beginning of the measures

are played too short. Careful metronome practice prior to a performance will help to keep a steady tempo in the passage.

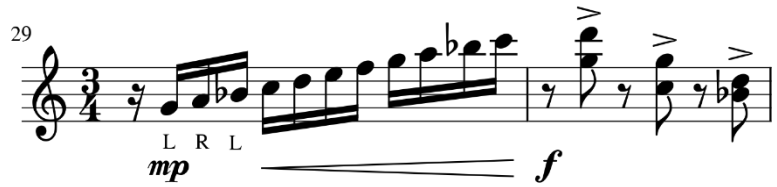

Fig. 10. *Etude Les Noces*, the beginning of the C section, measures 29–30.

The G dorian scale from measure 29 is then developed in measures 33 and 34 and expanded into *arpeggios* as well as to more scales in measures 35 to 43 (Fig. 11). Starting in measure 35, the section has a flowing and light feel to it, where the aggressive syncopations from the earlier parts of the piece make way for continuous lines of lyrical 16th note figures. The scales and *arpeggios* take turns between G dorian scale and F major 7th harmonies. The stroke techniques in this section should have as much *legato* and smoothness as possible. The F major 7th chord *arpeggios* that occur in measures 36–37 and 40–41 should have even rhythmic flow (Fig. 11). The phrasing of the passages should not be accented on the first or fourth 16th notes of the patterns, but should rather be played without accents entirely. The tempo feel in the 6/8 measures are in two. In measure 43 the tempo feel goes back to three beats per measure for a duration of one measure (Fig. 12). The tremolo in measure 44 cuts the flowing section abruptly and sends the music to a new and exciting D section, which has interesting scales, mixtures of dance-like patterns, and fast and virtuosic passages (Fig. 13).

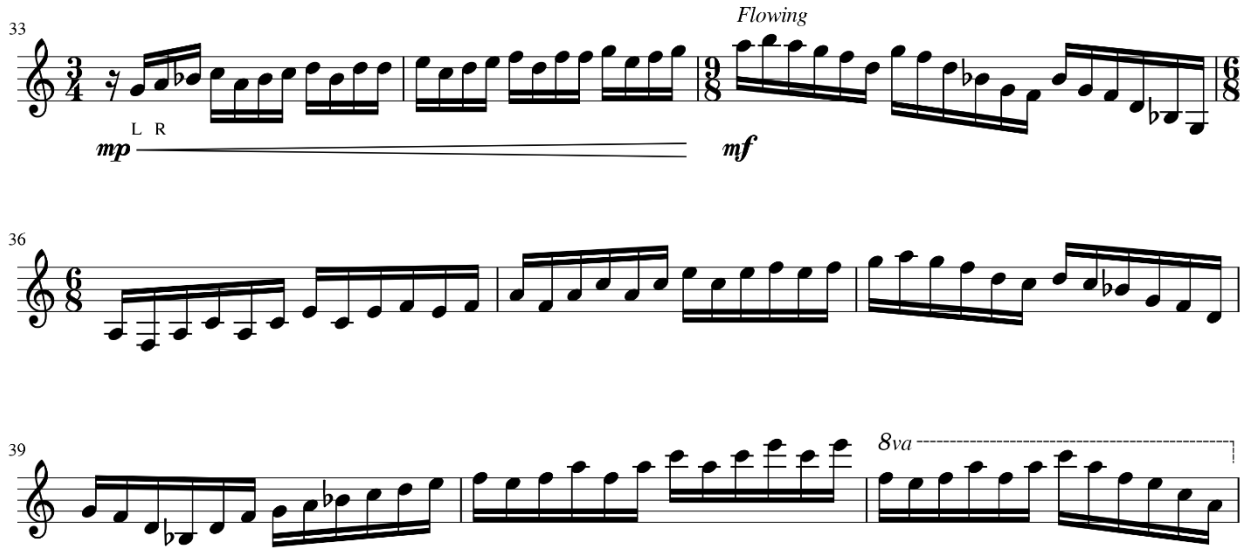

Fig. 11. ***Etude Les Noces***, **C section, measures 33–41.**

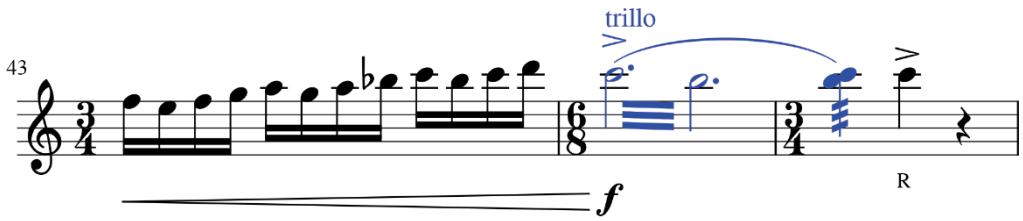

Fig. 12. ***Etude Les Noces***, **the ending of the C section, measures 43–45.**

4.3.4 D section, measures 46–89, with subsections Da in measures 46–59 and Db in measures 60–89

Between measures 46 and 61 the music almost transforms into a dance, with constantly changing time signatures (Figs. 13, 14). Measures 54 to 59 create an interesting contrast to the dance, when glissandos and complicated syncopations appear into the music. The time signatures change throughout the D section between 5/8, 4/8, 3/8, ¾, 6/8, and 9/8 measures. This section has the most musical contrasts in the whole *Etude*. There are glissandos, trills, upwards and downwards moving rapid chromatic figures, and simple melodic material. For a performer, it is important to keep a steady eighth note pulse in mind at this point in the music, because of the large numbers of syncopations and mixed meters.

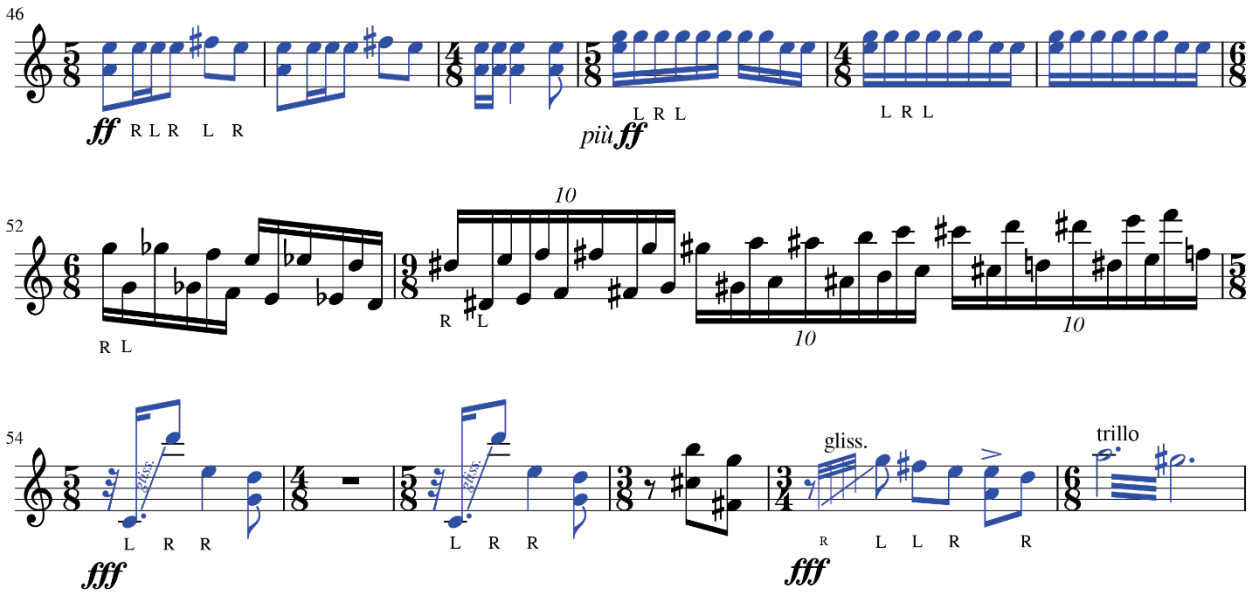

Fig. 13. *Etude Les Noces*, the beginning of the D section, measures 46–59, constituting the subsection Da.

Extremely fast passage in alternating octaves occurs in measures 52 and 53 (Fig. 13). It first starts as a descending sixteenth note line and morphs into ascending decuplets in measure 53.[30] The passage requires speed, accuracy, and control.[31] In measure 57 a very dissonant little motif appears that reminds one a bit of the xylophone textures from Dmitri Shostakovich's (1906–1975) *Polka* from the *Golden Age* ballet suite. The intention was not to compose it to make a clear connection to Shostakovich's music, but it ended up in the *Etude*, adding some humoristic touch to the music (Fig. 13). Measures 58 and 59 erupt in *fff dynamic*, which are the loudest measures of the piece (Fig. 13). These two measures have a glissando, a short scale descending from G^2 to D^2 and a violent trill in measure 59. There are only a few other places in the piece in the *fff* dynamic, for example on the second beat of measure 28, which ends the B section (Fig. 9).

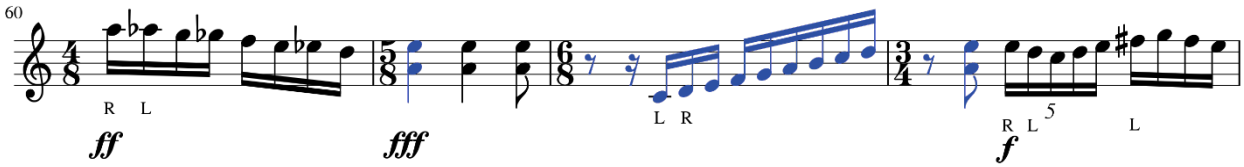

Fig. 14. *Etude Les Noces*, D section, measures 60–63, the beginning of the subsection Db.

[30] I first learned how to play these kinds of fast passages at the end of 1990s, when I was introduced to the ragtime xylophone music from the beginning of the 20th century. This kind of playing technique is used and explained particularly in method books and compositions by the aforementioned American xylophone soloist and composer George Hamilton Green (1893–1970). He composed hundreds of pieces for xylophone and is considered one of the greatest xylophone players of all time. His method books' basic techniques are based on the European violin pedagogy tradition.

[31] Those skills are commonly required in ragtime music, because the tempos tend to be brisk. The improvised choruses in particular give a xylophone player the freedom to showcase his or her improvisational skills to develop melodic material and to highlight their control of the instrument through speedy passages.

Measure 60 starts the subsection Db of the D section. The rhythm becomes more stable starting in measure 60 with chromatic 16th notes (Fig. 14). The section is full of scales, and a few double stops also appear with A^1 and E^2 pitches to create breathing points in the music. After that, the rapid scales take over again like wildly cascading waterfalls.

The scale that takes place in measures 66 and 67 is developed in the following nine measures. In measures 68 to 73 the rhythms stay the same as in measures 66 and 67, but the scales start a major second interval higher each time to create upwards movement and anticipation in the music (Fig. 15). The only exception in the upwards movement of the scales is in measure 72, where the scale starting on F^1 is a minor second higher than the previous scale that started on E^1 in measure 70 (Fig. 15). The passage resolves in an interesting rhythmic deterioration in measures 74–76, where triplets and syncopated rhythms break the flow of the earlier scale movements. The tempo also slows down and the dynamic becomes softer.

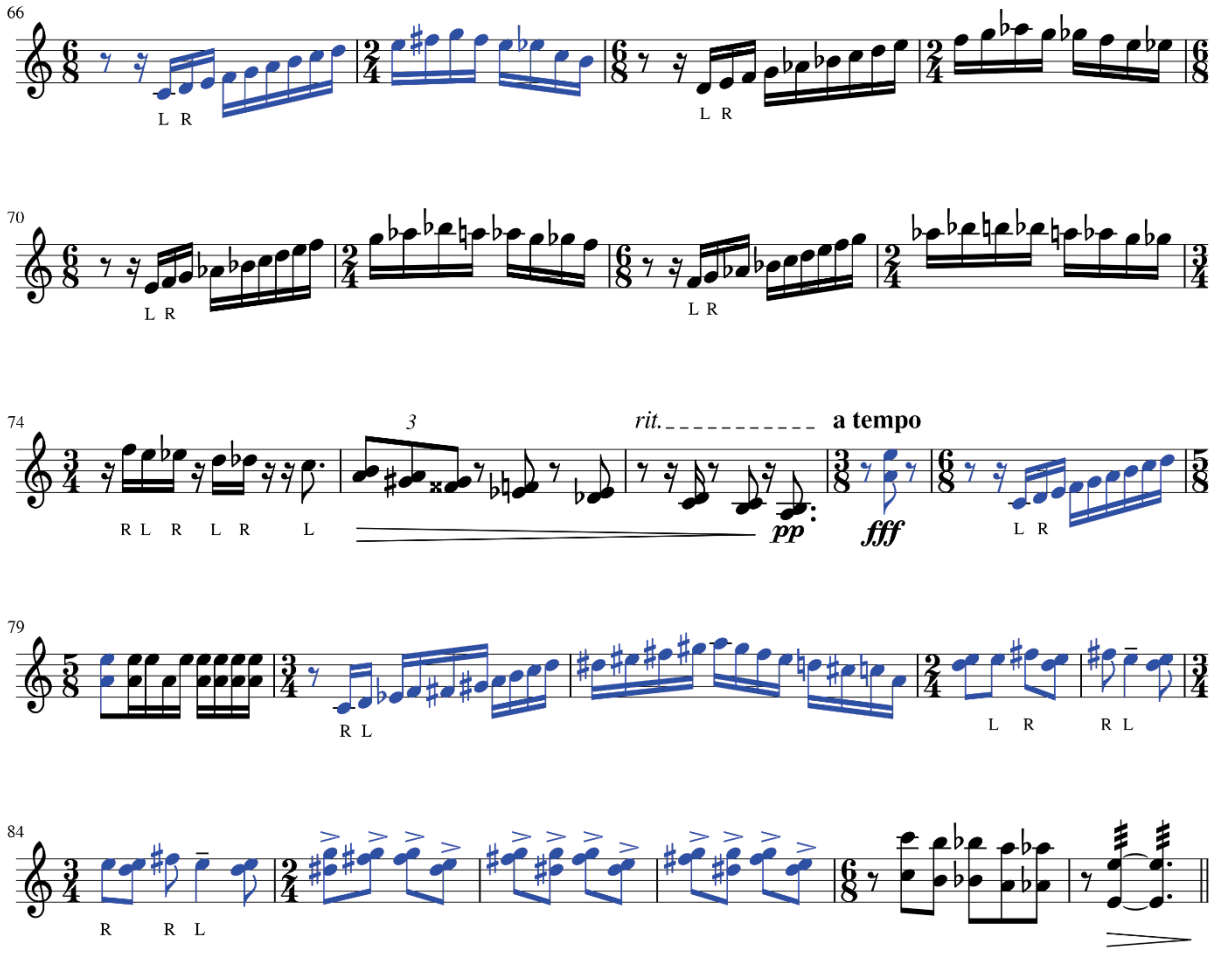

Fig. 15. *Etude Les Noces*, D section, measures 66–89, the ending of the subsection Db.

Right after that, a surprising entrance of the familiar perfect fifth interval occurs in measure 77 (Fig. 15). The tempo has returned to the tempo before the *ritardando*, although it is hard to perceive yet, because the double stop lands on the second eighth note of the 3/8 measure. It is a very significant change to the previous passage, as the dynamic is now *forte fortissimo*. At the end of measure 76 the dynamic went down to *pianissimo*. Starting in measure 78 the scales again take the lead. In measure 79 the perfect fifth interval with A^1 and E^2 double stops reappear for the last time in the piece. The four consecutive double stops at the end of the measure require a high degree of speed and control. To be able to play this group of notes clearly and with a good sound, it is important to keep the hands as relaxed as possible.

Following the double stops, a final scale from the D section appears in measures 80 and 81 (Fig. 15). The music is in an extremely strong *fff* dynamic. The scale leads the music to a passage that also has double stops, but with a very different atmosphere. The new melody that arrives in measure 82 is a fusion of different parts from *Les Noces* (Fig. 15). Measures 82 to 87 are a combination of solo soprano, sopranos from the choir, piano 1, and xylophone parts from *Les Noces*. At this moment in the music, I wanted to bring in material from the *Les Noces* score to the *Etude*. In *Les Noces*, the xylophone plays a syncopated passage without the additional tones that the soprano soloist, sopranos from the choir, and piano 1 have in their parts in the first three measures of the passage. Stravinsky divides this melodic line up for many performers. These measures in the *Etude* are 82 to 84. I added the tenuto lines in measures 83 and 84 to emphasize the phrasing of these measures (Fig. 15). The melody has folk music influences in it, which is created by the major second intervals and the dance-like rhythms. Measures 85 to 87 in the *Etude* are directly from *Les Noces*. The passage is dissonant, and almost creates an element of mockery in the music. The D section ends with descending octaves in measure 88 that jump down to an E^1 and E^2 octave tremolo in measure 89 (Fig. 15).

4.3.5 E section, measures 90–100

The E section starts in a 7/8 time signature in measure 90 (Fig. 16). This passage also utilizes double stops, like the end of the D section. In the E section, double stops are used more than elsewhere in the *Etude*, and their effect here is to create a playful character in the music. Even though the music grows in dynamic in measures 93 and 98, the playful character continues. The mixed meters enhance the positive spirit and lilt in the music. The section is an imaginative continuation of the earlier music. It starts with a tritone interval jump in the left hand in a *mezzo piano* dynamic. The musical lines in the E section have a melodic connection to the D section. Measures 88 and 89 descend in octaves, clearly emphasizing a direction to the music (Fig. 15). Measure 90 also starts with an octave, which establishes a small connection to the previous section. The Db octaves on the first and fifth eighth notes are the anchoring tones of the measure (Fig. 16).

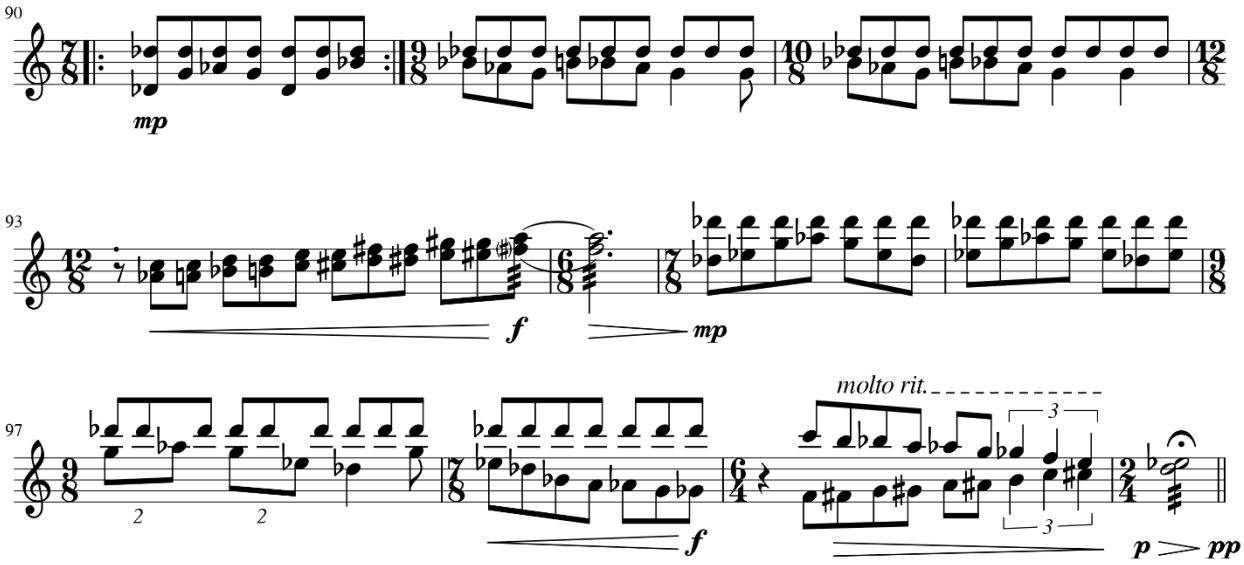

Fig. 16. *Etude Les Noces*, the entire E section, measures 90–100.

From the performance standpoint, it is essential that the phrases are played smoothly and in a stable tempo. Also, the graduation of the hands should be aimed so that the left hand is leading the melody. The double tone major 3rd, minor 3rd passage in measure 93 takes the melody up to an F#^{2} and an A^2 pitch tremolo, which goes up to a *forte* dynamic at the last eighth note of measure 93 (Fig. 16). When playing measure 93, I think of it as being very rich in harmonic content. Even though there are only two notes moving, it is important to know the harmonies which are rapidly going upwards. In my mind, the chords are root position major and minor triads. To maximize the impact of the harmonies, one might think internally about adding the 'missing' chordal notes to the music. This is one of the ways to approach it. In this way, the double stop passage is mentally upgraded to a maximum broadness in a performance situation. The tremolo that emerges on the last eighth note of measure 93 has the trait of a culmination point, and feels like a short, breathing cadenza before the quick double stops continue again in measure 95 (Fig. 16).

When I play the tremolo starting at the end of measure 93, I try to make it very bright for a short time, spanning into measure 94. The performer needs to apply a bit more

tension in the hands at the beginning of the tremolo. After the initial impulse of tension, the hands can be relaxed completely and allow the movement energy to create the *diminuendo* effortlessly. The double stop passage starting in measure 95 is an echo from the beginning of the section in measure 90 (Fig. 16). This time the passage is one octave higher. The dynamic in the music is now *mezzo piano* with both hands playing eighth note figures.

Two against three beats hemiolas appear in the music in measure 97 to add rhythmic ambiguity and excitement. This creates a polyrhythmic effect that had not been used earlier in the *Etude*. In measure 98 the music grows to forte, and in the next measure the upper and lower voices descend and ascend against each other chromatically with a significant slowing down of the tempo. The two melodic lines arrive to a minor second interval in measure 100.[32]

4.3.6 F section, measures 101–137, with subsections Fa in measures 101–117 and Fb in measures 118–137

The F section starts with straightforward individual notes and double stops until measures 104 and 105, where syncopated double stops occur (Fig. 17). In measure 106 I added rhythmic variety with the descending E minor seventh chord. The beginning of the first beat is empty, and the two sixteenth notes start on the offbeat on the second eighth note. The measure has a smooth character (Fig. 17). The phrase ends with the eighth and sixteenth note melody in measure 108. To begin the new phrase in measure 109 a subconscious melodic idea surfaced, which I later realized was again inspired by Bartók's music. Here, in measure 109 there are again two voices moving simultaneously, this time however in opposite directions; the top line moving upwards, and the lower line descending. The units of the rhythms are also identical with each other. Although the bar is in duple feel, inside it the music happens in triple feel (Fig. 17).

[32] I am an admirer of Béla Bartók's (1881–1945) music**,** and measure 99 is definitely inspired by Bartók's use of melody and counterpoint (Fig. 16).

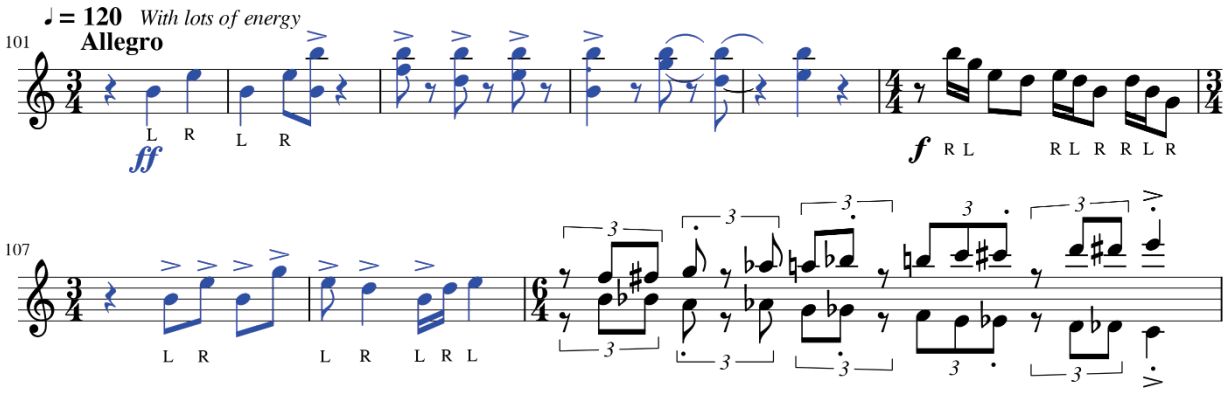

Fig. 17. *Etude Les Noces*, the beginning of the F section, measures 101–109.

Measures 110 to 115 are in the harmony of an E minor seventh. These measures are directly from the *Les Noces* xylophone part and the dynamic starts in *forte* (Fig. 18). Measure 112 anticipates measure 138 (Fig. 21), which is the beginning of the G section. In measures 113 and 114 Stravinsky introduces the F^2 passing tones, which add the minor ninth harmonic to the measures (Fig. 18). In measure 116 I added chromaticism into the music. The descending octave passage sounds very big, especially because the dynamic is *fortissimo*. The written range in this measure is also in one of the loudest sounding parts of the xylophone. In this octave the sound has a more aggressive flavor than, for example, the brighter upper octaves of the xylophone.

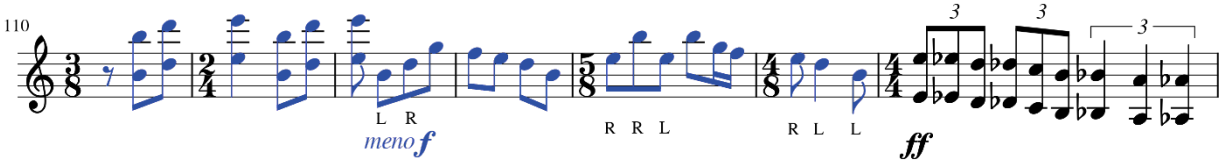

Fig. 18. *Etude Les Noces*, F section, measures 110–116.

An upward glissando at the end of measure 117 to a G^2 pitch in measure 118 starts the subsection Fb of the F section (Fig. 19). The ten measures from 118 to 127 are from *Les Noces*. The xylophone's melody in 118 to 123 is a leading voice in the music when it occurs in *Les Noces*. Stravinsky treats this simple melody in a fascinating way. It seems to be moving along independently and without minding a traditional hierarchy of the beats in a ¾ measure, where the first beat of the bar has more weight than the two following beats. For example, the end of the musical motif in measure 121 on the third beat creates an interesting illusion of blurring the ¾ meter, so that a listener (as well as a performer) might lose the straightforward feel of the music for a moment (Fig. 19).

When playing the measures 118 to 123 of the *Etude*, I have to count 1-2-3 in my mind so that I do not lose the bar structure in my head. Measures with similar kinds of bar structure ambiguities occur two more times in the *Etude*. The measures are 141–143 (Fig. 21) and 170–171 (Fig. 23). In these measures, the performer must be focused to be able to play the figures accurately, without repeating them too few or too many times.[33]

[33] Personally, I very much enjoy these kinds of moments in music, where a sense of anchoring in the music is looser. These kinds of moments create questions like: where is the music going, and how and when does it come out of the passage? I have discovered that sometimes the music 'plays itself' in a way. When that happens, it is very important to listen and try to keep the mind open and just focus on the energy and flow of the music. These kinds of sensations are possibly even stronger in a chamber music setting, compared to playing solo, because in a chamber music setting the ambiguities are multiplied by the number of the performers. In those moments the level of focus should be at its peak. Once the passage is over and performed accurately, there is a feeling of relief, and also possibly a renewed emotion in the performance. I also often feel more relaxed performing after these kinds of challenging moments.

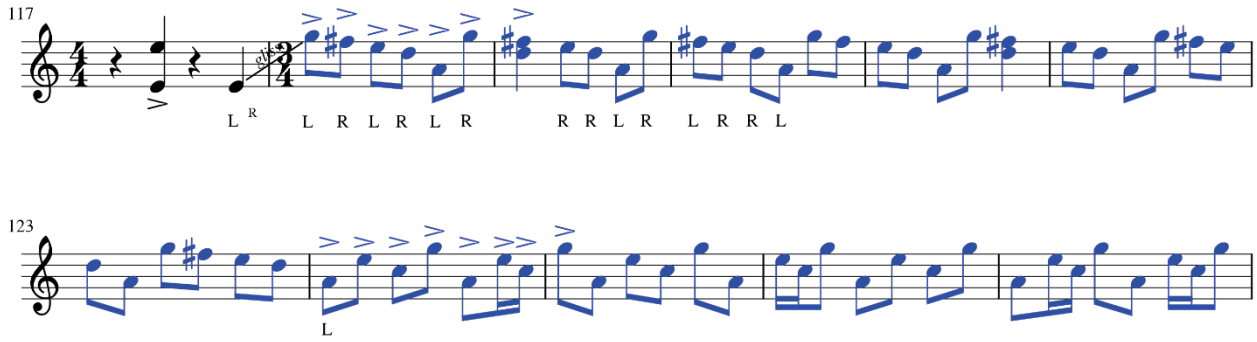

Fig. 19. *Etude Les Noces*, F section, measures 117–127, the ending of the subsection Fa and the beginning of Fb.

Measures 124 to 127 have a pattern in an A minor seventh harmony that is very rewarding to play (Fig. 19). In *Les Noces* it is played together with one of the pianos. All of the notes in measure 124 are accented, and the first eighth note of measure 125 is also accented. Measures 124 to 127 are played only on the natural keys of the xylophone. The passage feels very percussive, almost like playing a four drum part. It is very straightforward, but also has a strong character. The placement of the sixteenth notes creates a groove that almost has a 6/8 feel to it. Through its melody and rhythms, the passage creates an archaic atmosphere, that has very old and earth-like sounding elements in it. In this passage the performer demonstrates how he or she thinks about the accents in relation to the phrase (Fig. 19). The whole passage is played hand to hand.

Starting in measure 128 I developed the melody from measures 124–127 by keeping the same rhythm (Fig. 20). The rhythm is basically a 3 against 2 hemiola rhythm, without the first and fourth eighth notes played by both hands simultaneously, which would be the correct 3 against 2 hemiola when the first and fourth eighth notes are played by two hands at the same time. In the music, the hands do not play together on the 1st and 4th eighth notes. Nevertheless, the resulting sound is a hemiola, because all of the sounding beats are in the rhythm. Like measures 124 to 127, which were played hand to hand, measures 128 to 136 are also exclusively played with alternating hand to hand strokes. In these measures it is important to be able to achieve a bodily experience and a deep understanding of the rhythmic elements in the music. The rhythms are utilized in several different melodic permutations. By doing this, the

aim is to gain a feel for the underlying tempo, where the hemiola rhythm is in constant dialogue with the quarter note pulse. There are a lot of dynamic swells going up and down from measure 130 all the way to the end of the section in measure 137 (Fig. 20). Sometimes changes in dynamics can make the inner tempo of a performer unstable. The changes in dynamics can make the tempo rush or drag, which can actually be unnoticeable to the performer. This is not desirable when the tempo is meant to be steady. This challenge can be worked out and ultimately resolved by concentrated practice with a metronome and recording oneself. It is also very useful to remember the places in the music where one tends to push or slow the tempo, and to do intensive metronome practice on those passages. A good and solid sense of tempo helps the percussionist in every area of music performance.

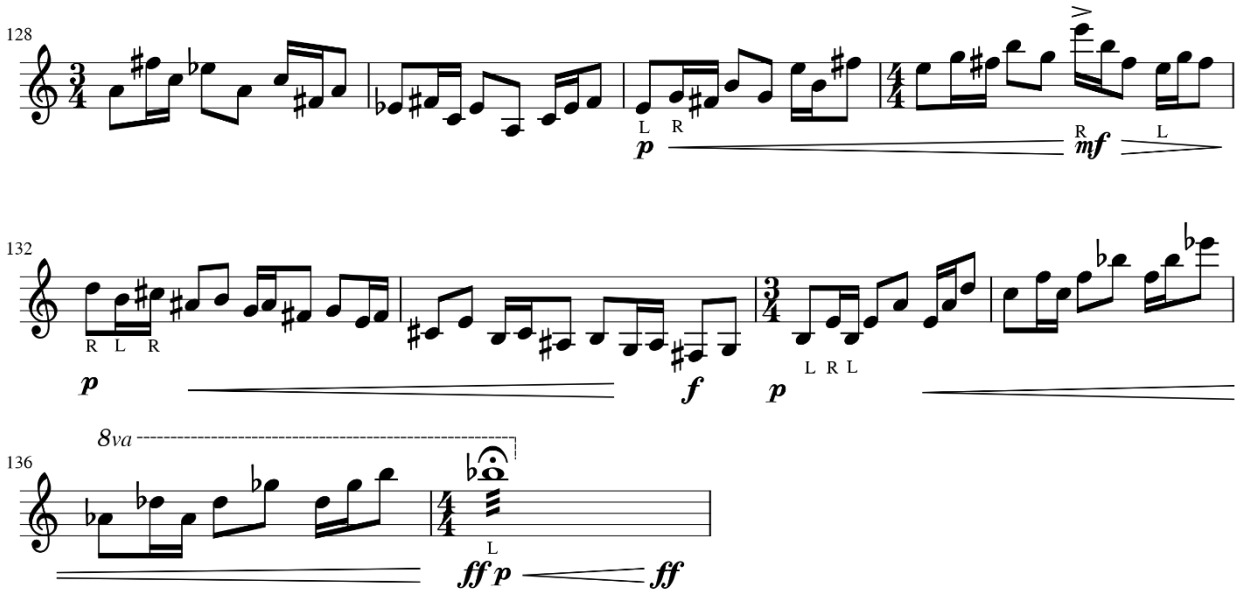

Fig. 20. *Etude Les Noces*, the ending of the F section, measures 128–137.

4.3.7 G section, measures 138–150

The G section is a relatively short section that is entirely from the *Les Noces* xylophone part. It is taken from the fourth part of the piece, titled "*Le Repas de Noces*" (*"The Wedding Meal")*. I have edited the part in my *Etude* to make it more compact. However, none of the notes have changed. The tremolo in measure 144 is one measure in duration, whereas in Stravinsky's *Les Noces* the tremolo is three measures long (Fig. 21). After measure 145 there is a Db^2 tremolo in the original part that has a length of three measures and a quarter. I have omitted this tremolo from my *Etude* and jump directly to the exciting glissando passages, which in my *Etude* are at measures 147 and 149.[34]

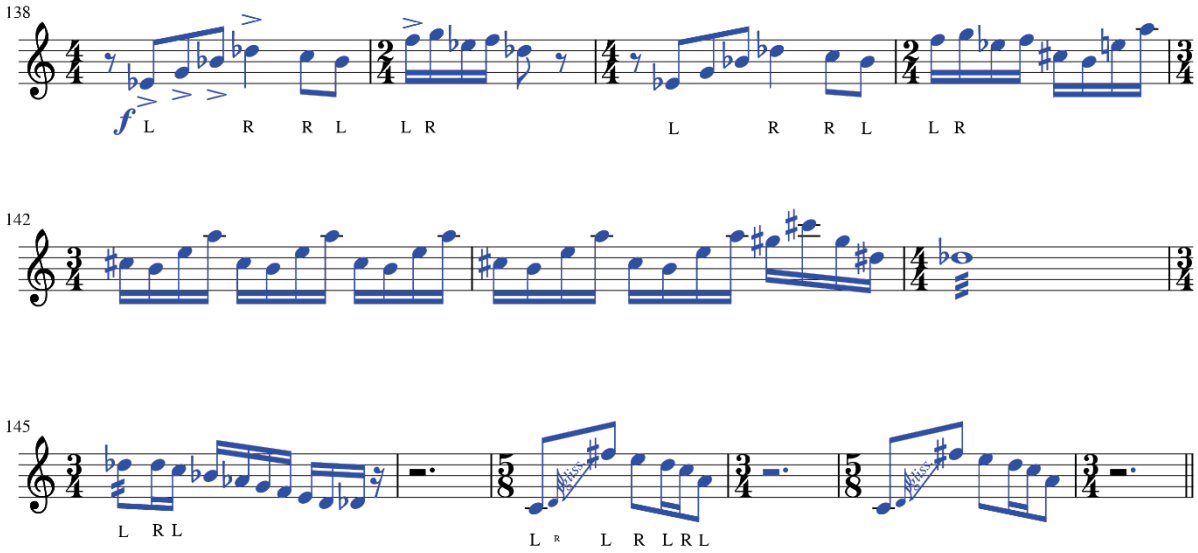

Fig. 21. *Etude Les Noces*, the entire G section, measures 138–150.

[34] I omitted The Db^2 tremolo because its effect in a solo piece was not very important. In my *Etude* I tried to connect different sections from *Les Noces* to my own compositional style as organically as possible.

In the G section, it is important to observe and follow the different accentuations in measures 138 and 140 (Fig. 21). Their notes are identical, but measure 140 is completely unaccented. The reason why measure 138 is accented can only be guessed at. I believe that Stravinsky wanted to accent the notes to support the events going on in the music, and also to make the entrance of the xylophone clearly audible. In Stravinsky's part, the xylophone had two measures of rest before the E flat 7th entrance in measure 138. When the xylophone plays the same passage again at measure 140, it is in the middle of a longer passage (Fig. 21). Perhaps that is the reason why Stravinsky did not accentuate that measure. Interestingly, the only accents in this section are in measure 138 and on the downbeat of 139. Everything else until the end of the section is unaccented. Naturally, this does not mean that everything should be played monotonically; rather, one can place a little emphasis on the rhythms to give direction to the phrases.

Even though the G section is quite short, it has many wonderful textures and melodies for the xylophone. The passage from measure 141 to 145 is one of the most exciting and colorful moments in the entire *Les Noces* xylophone part (Fig. 21). It is full of fast sixteenth notes that leap in different directions. It repeats a four-note melodic pattern six times between 141 to 143. In measures 141 to 145, one can easily forget and omit one of the four sixteenth note patterns, as discussed earlier in relation to the other two similar passages with rhythmic ambiguity. I discussed a similar bar structure ambiguity in measures 118 to 123 and 170 to 171. In this passage, as in measures 118 to 123, it is important to have very good concentration in order to keep the different time signatures in mind while playing. If one would, for example, forget that measure 141 goes in 2, the next few measures might become blurry and playing the right amount of notes can then become very challenging. A slow practice with a metronome helps to create a mental map, so that one can play these measures accurately and with lots of musical drive.

At the beginning of measure 145, I like to suddenly play a faster tremolo on the downbeat. The tremolo starts in the previous measure of 144, and I think that it fits very well in the music to give a little signal at the beginning of measure 145, after a long tremolo in the previous measure. It also makes the rhythm clearer for the descending pattern starting on the second eighth note of measure 145. I also emphasize the descending pattern with a tiny accent,

so that the passage's rhythmic precision is clear. To me, there is a risk of the pattern losing its utmost clarity, if the beginning of the scale on the second eighth note in 145 is played without a small accent.[35]

4.3.8 H section, measures 151–187, with subsections Ha in measures 151–164 and Hb in measures 165–187

The H section is perhaps the most versatile section in the piece. It has a wide variety of musical and technical elements such as double stops, *arpeggios*, and *glissandos*. The subsection Ha changes to the subsection Hb between measures 164 and 165, which emphasizes a change of characters and textures in the music (Fig. 22 and Fig. 23). Measures 151 to 154 have fascinating syncopated rhythms with an archaic character (Fig. 22). The musical figures sound to me like voices brought back to the present day from centuries ago. The sharp attack and quick decay of sounds create in my mind vivid impressions and visual images. The music has a duality of both joyful and sad feelings with its inevitable onwards movement.

[35] The accent is not written in the original part by Stravinsky, but I think about it as an agogic phrasing.

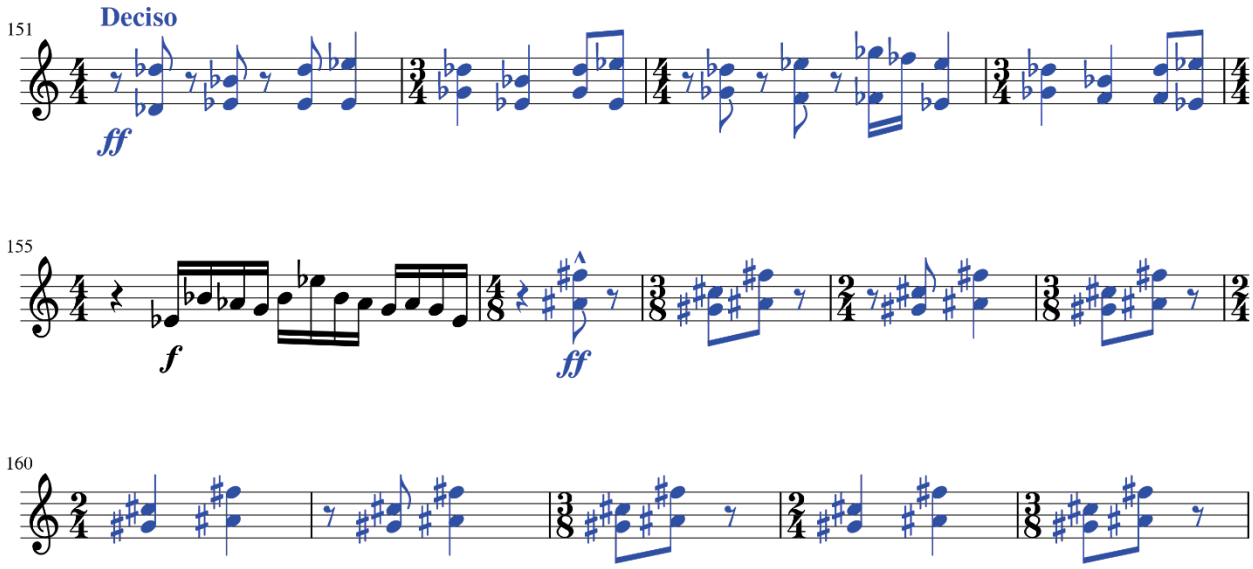

Fig. 22. ***Etude Les Noces*****, the beginning of the H section, measures 151–164, the entire subsection Ha.**

Measures 151 to 154 are directly from the xylophone part of *Les Noces*. Like double stops in general, the two mallets should hit the xylophone keyboard exactly at the same time, as if played by one mallet, so that the articulation sounds as clear as possible. There is a possibility for small phrasing within the measures 151 to 154. For example, I like to play a very small accent on the fourth beats of measures 151 and 152. In measure 153 I also place a slight emphasis on the Gb^2 and Fb^1 double stop on the second half of the third beat (Fig. 22). Again, I play a very small accent on the last eighth note of measure 154. These small accentuations within the phrase give extra character and color to the music. Even though the accents are not written in the part, artistic liberties can be taken, especially in a solo piece.

Measure 155 is a quick transition that I composed to connect the quite contrasting materials from 154 to the next phrase, which goes from measure 156 to 164. These measures are also from Stravinsky's *Les Noces* xylophone part. The measures have syncopations in them, and the melodic motifs are relatively short and accompanying in nature. In *Les Noces*, the tenor soloist is singing the main line at this point in the music, and the choir adds shouted accents with the xylophone and the rest of the percussion section and the pianos. The xylophone and

pianos have very similar lines together in these measures. The measures almost have a certain pattern, but there are small differences in the rhythms that interrupt the formation of a specific, clear pattern. Because of that, one has to memorize the measures and practice them diligently to know and remember them thoroughly. There is only a single accent in measures 156 to 164, and the accent is right on the first note of the passage in measure 156 (Fig. 22). I like to bring out the second eighth notes of the 3/8 measures in 157, 162 and 164 to make the music sound joyful and energetic (Fig. 22). In these nine measures I try to keep my playing very clear and light.

The subsection Hb of the H section starts in measure 165. The music changes quickly when a descending glissando occurs from F^3. The music then climbs up to F^2 through the G major chord pitches G^1, B^1, and D^2 (Fig. 23). The arpeggiated chord then becomes a G dominant 7th chord when the F^2 is reached on the first beat of measure 166. In this part of the H section the music is filled with sixteenth notes and the textures change rapidly.

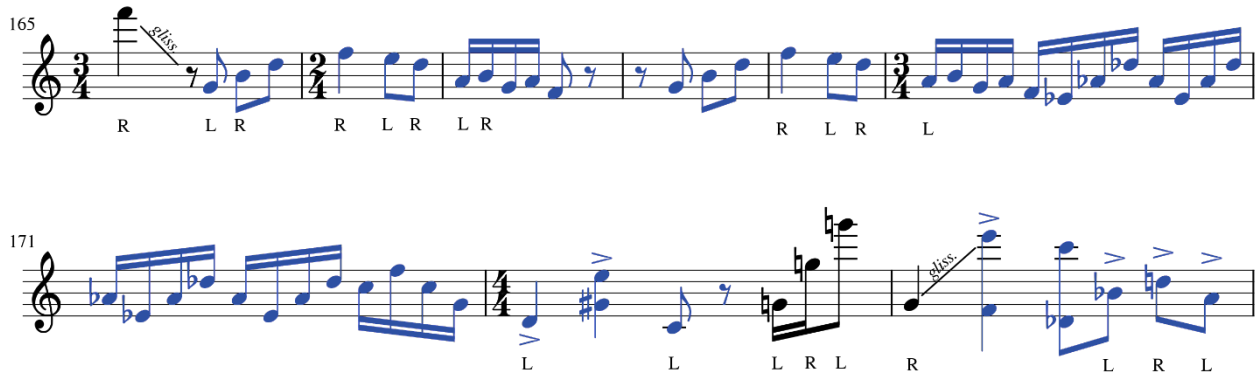

Fig. 23. *Etude Les Noces*, H section, measures 165–173, the beginning of the subsection Hb.

In measures 170 and 171 (Fig. 23) a quick sixteenth note pattern appears after the repeated ascending G major chord in measures 168 and 169. The chord also appeared in measures 165 and 166 (Fig. 23). Starting on the second beat of measure 170, repeated

arpeggios in perfect fourth intervals take the lead. The F^1 at the beginning of the second beat does not have the perfect 4^{th} interval relation with the following Eb^1, but the interval relationship between the Eb^1 and Ab^1 on the second beat already establishes the interval motif. The hierarchy of the ¾ time signatures is altered in these two measures 170-171. These two measures are also from the *Les Noces* xylophone part. Stravinsky keeps the patterns moving over the bar line, and changes the pattern on the third beat of measure 171. He keeps the perfect fourth interval sonorities even though the chord changes. For a brief moment the sixteenth notes give way to accented quarter notes in the beginning of measure 172. The three G's that ascend by octave leaps on the fourth beat of the measure and the glissando starting on the G^1 note in measure 173 are my additions to the passage from the *Les Noces* xylophone part (Fig. 23).

The final long phrase of the H section begins in measure 178 (Fig. 24). Measure 178 is from *Les Noces*. In measure 179 I developed the harmony from measure 178 while keeping the rhythm and stickings almost unchanged for the next eight measures. The smaller original pattern becomes more versatile and complex in the music. The performer will probably experience the rhythm in a more bodily way, because of practicing similar rhythms with different physical movements around the instrument for a duration of nine measures. As a result, it makes the musician find different ways to adjust his or her body and playing position when playing the same rhythms on different parts of the instrument. The H section ends with a G major dominant 7^{th} arpeggio chord (Fig. 24), which goes directly into the I section (Fig. 25). The music in measure 187 is in a way derived from the rhythms of the past nine measures. It has similar sixteenth note rhythms, and also a triplet figure to bring fascinating change to the previous rhythmic material (Fig. 24).

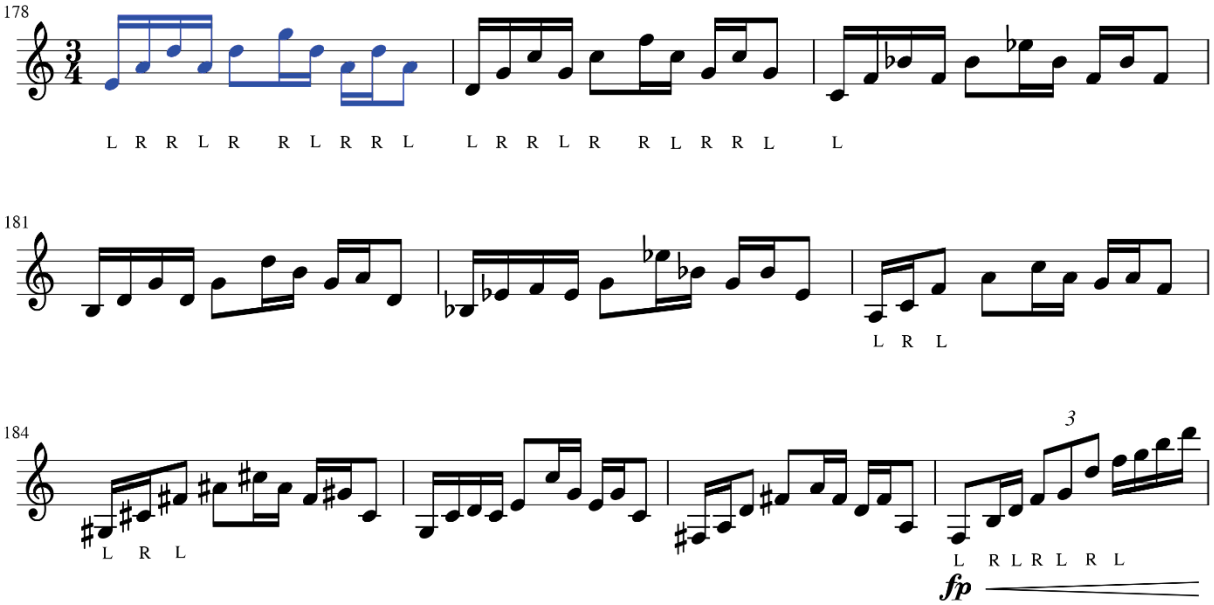

Fig. 24. *Etude Les Noces*, H section, measures 178–187, the ending of the subsection Hb.

4.3.9 I section, measures 188–201 closing

The I section is the final section of the piece. It works in a way as the piece's coda. At the beginning of the section, the music is calming down after the colorful and virtuosic H section. The amount of musical elements are little-by-little becoming more scarce, and the music starts to express the upcoming ending of the piece. In this final section, most of the musical material is my own. There are quotes from *Les Noces* xylophone part in measures 188, 190, and 192 to 194 (Fig. 25). Measure 188 still has an aggressive entrance at the beginning of the I section, but on the fourth beat the music becomes calmer with the entrance of the Db^2 and Bb^2 tremolo in *pianissimo* dynamic. The tremolo continues to the following measure, and lasts a whole ¾ measure in *pianissimo*. Measures 190 and 191 follow in a similar manner; the syncopated rhythm in 190 is followed by a tremolo in measure 191 (Fig. 25).

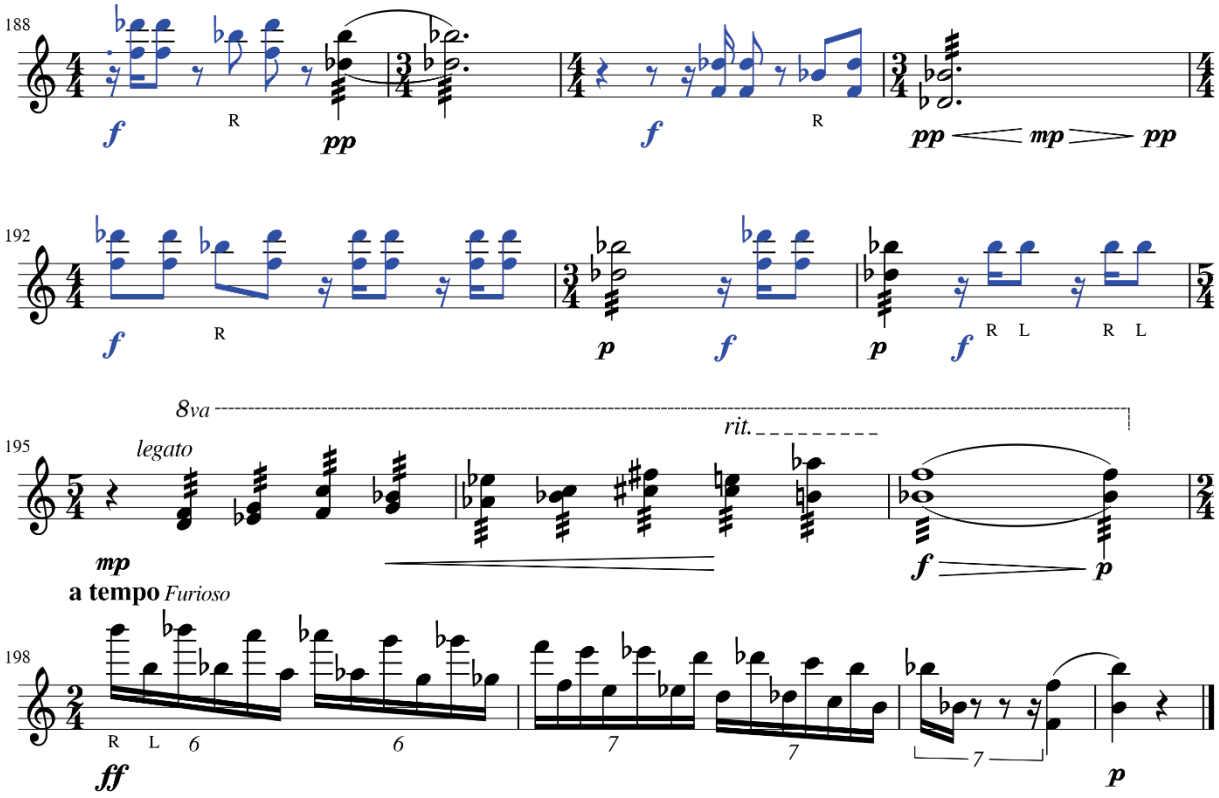

Fig. 25. *Etude Les Noces*, the entire I section, measures 188–201, the closing of the composition.

In measure 191 the tremolo has a *crescendo* from *pianissimo* to *mezzo piano*, and a *diminuendo* right after the tremolo's highpoint in *mezzo piano* is reached. The tremolo should be played as smoothly as possible, without any strokes jumping out from the *crescendos* and *diminuendos*. In the *crescendo*, every note should be minutely louder and stronger than the previous one, and in the *diminuendo* each stroke should be softer than the previous one. This musical effect reminds me of a wave approaching a sea shore and then returning back to the sea. The tremolo should sound very organic. This kind of musical effect is very challenging to execute on an instrument like the xylophone, because of its bright and very articulate sound.[36]

Measures 192 to 194 follow the beginning style of the section. The music has

[36] Learning how to play *legato* on the xylophone is one of the hardest things to do in xylophone playing. It can be learned after years of intensive practice, experience, and experimentations on different kinds of stroke types.

contrasting double stops and syncopations, alternated with soft tremolos. It is as if the quick syncopations want to take the music to a new course in the piece and continue its musical progress, but the soft calming tremolos pull down the efforts to infuse new energy into the music (Fig. 25). My own material takes over the piece from measure 195 to measure 201, which is the ending of the piece. These measures do not have music from the *Les Noces* xylophone part. However, the measures have been influenced by the musical events that took place earlier in the piece, thus concluding the composition.

In measures 195 to 197 I composed tremolos that take the music into a final virtuosic octave cascade. The double tone tremolos in the beginning of measure 195 start in *mezzo piano* and slowly get louder until the downbeat in measure 197, when the two notes land on a perfect fifth interval and start becoming softer (Fig. 25). The whole passage starting with measure 195 is played *legato*, so all of the chords should move very smoothly. When practicing the tremolos in measures 195 and 196, it is a good idea to decide which hand leads the melody. Doing so helps the flow of the tempo and makes it easier to tie the notes together smoothly when the harmonies change. The resolving tremolo in 197 releases all of the energy from the two previous measures with chromatic movements, and becomes very soft in a *piano* dynamic at the end of the measure. I like to play the tremolo at the beginning of measure 197 very strong at first, and gradually relax the hands to almost no tension at the end of the measure. When the hands become relaxed, the tone color of the tremolo becomes light and transparent in the soft dynamic.

The final four measures, 198 to 201, are very colorful and contrasting. The cascading octaves are powerful and furious and require full sound. The passage is very fast, so slow and deliberate practice with a metronome is essential to be able to fully grasp the technical challenges of the descending octaves. The tempo can then be sped up, once the slower tempo is under control. The rhythm of the octaves also changes from sextuplets to septuplets in measure 199. This speed change must be counted and played accurately in relation to the metronome pulse. The beginning of measure 200 is in septuplets, and they should be played very precisely, so that the two notes in the beginning of measure 200 are not played too early or too late according to the tempo. The pick-up to the last downbeat of the piece is slurred. With that I am looking for the effect of utmost connection between the two notes. The xylophone's very articulated sound creates a challenge to making the piece's last notes sound connected, but in fact it is possible to achieve. The right proportion between the

two sounds must be found when playing, so that the soft downbeat of measure 201 connects and almost melts into the previous note's sound. However, it should still have a clear and audible attack to hear the final pitch of the piece.

5. *REFLECTIONS ON PETRUSHKA*

5.1 Introduction to the composition with form analysis

Reflections on Petrushka is a musical fantasy and a journey of imagination. It is the second xylophone composition that I examine in my thesis. I composed it in the spring of 2020. It is influenced by Stravinsky's *Petrushka* (1911). In 1947, Stravinsky revised *Petrushka* for a smaller symphony orchestra. In *Reflections on Petrushka* the focus is on the original 1911 version's xylophone part and the beginning parts of the orchestral score. *Reflections on Petrushka* is somewhat different in terms of its approach than *Etude Les Noces*. Stravinsky's xylophone part in *Les Noces* is much larger and has a lot more to play than the xylophone part of *Petrushka*. Because of the smaller amount of material, the approach to *Reflections on Petrushka* is freer. However, all the well-known passages from *Petrushka* are in *Reflections on Petrushka*, and they have been developed and placed within a xylophone solo composition context, which is a new and different viewpoint to Stravinsky's original piece. As was the case with *Etude Les Noces*, parts of Stravinsky's xylophone music are continued from my own imagination within *Reflections on Petrushka*. In this piece, I aimed to use melodic language similar to that Stravinsky used in the xylophone part of *Petrushka*; and also to expand the technical elements to even more challenging techniques. Furthermore, I tried to create musical

atmospheres that are fitting around Stravinsky's melodies. To achieve that, I analyzed the chords that Stravinsky utilized in the xylophone part of *Petrushka* and used them as inspiration in the piece.

Reflections on Petrushka has eleven sections, proceeding from A to K. In a broader perspective, the elements and musical functions of the piece can be divided into three movements. The first part of the piece, with a lively tempo until the D section, can be thought of as the first movement. The second movement is the D section, with its cadenza-like, freely moving *arpeggios* and rapid scales. The two movements that surround the D section are faster and have a clear tempo most of the time. The final third part of the work starts with a fast section in measure 42, which is also a quote from *Petrushka's* xylophone part. The K section, which is the last section of the piece, also has a concluding coda starting in measure 102 and continuing until the ending (Table 2 and Figures 26-27).

Table. 2. Form structure of *Reflections on Petrushka*.

Section		Measures	Duration in seconds
A		1—7	10
B		8—18	18
C		19—36	26
	Ca	19—31	12,5
	Cb	32—36	13,5
D		37—41	20
E		42—49	11
F		50—59	18
G		60—65	24
H		66—72	31
I		73—83	11
J		84—99	21
K		100—106 closing	22
			Total duration: 212 seconds (3 min 32 s)

Fig. 26 ***Reflections on Petrushka*****; percentual section chart of durations. The percentage is calculated from the duration of the music, not from the amount of measures.**

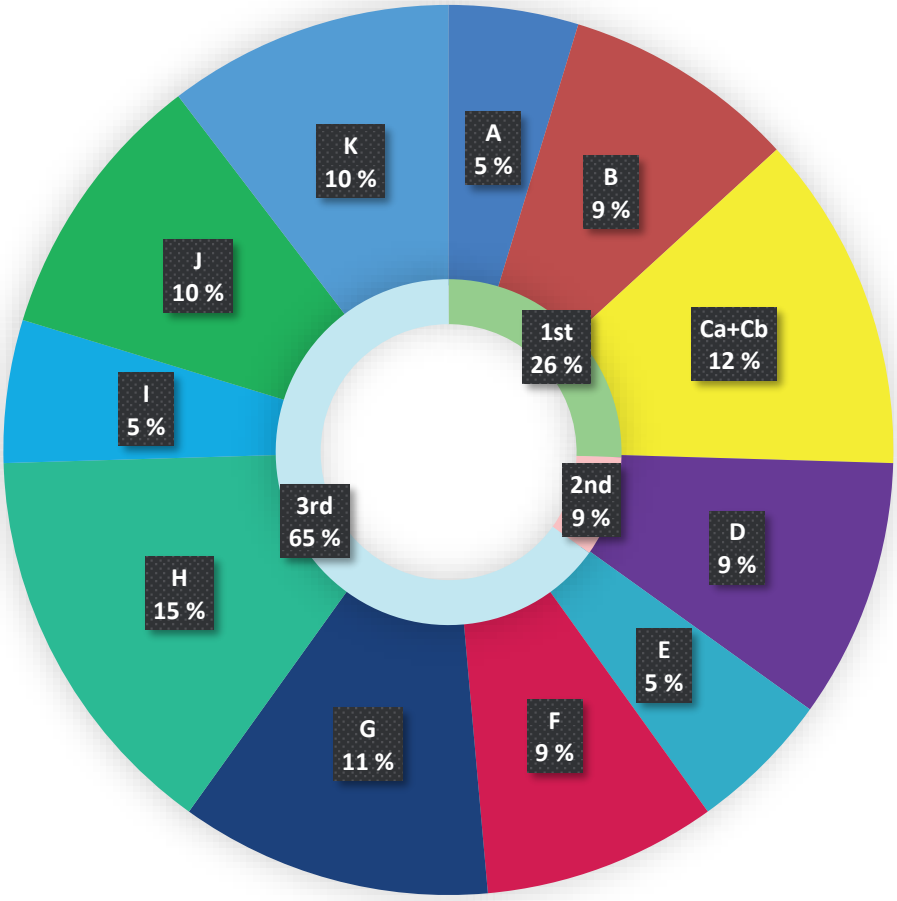

Fig. 27. Form structure of ***Reflections on Petrushka*****; the durations of the sections and the movements are displayed linearly.**

A	B	C=(C^a+C^b)	D	E	F	G	H	I	J	K
1st movement			2nd mvt	3rd movement						

5.1.1 A section, measures 1–7

The beginning of the piece is a quote from the beginning of the orchestral score of *Petrushka*. The melody that is first introduced by the flutes and continued by the celli takes place in *Reflections on Petrushka* right at the beginning and continues until the first quarter note of measure eight. The tied notes that start on the second sixteenth note of the second beat in measure one, and on the second sixteenth notes of the first and third beats in measure two, and also on the third beat of measure three, do not have tremolos in the orchestral score of *Petrushka*. In *Reflections on Petrushka* I wrote tremolos on those notes because the sound of the xylophone's single stroke is not long enough to connect the following notes to the initial tied note, which is required to have a clear and resonant sound for the duration of almost two quarter notes (Fig. 28).[37] Even though all of the long notes in the A section are played by using tremolo, the idea of sound in the xylophone player's mind at that point should be a long note, that would be played as evenly and smoothly as possible.

[37] As mentioned in the previous chapter, the notes colored in blue in the music examples indicate a quote from Stravinsky.

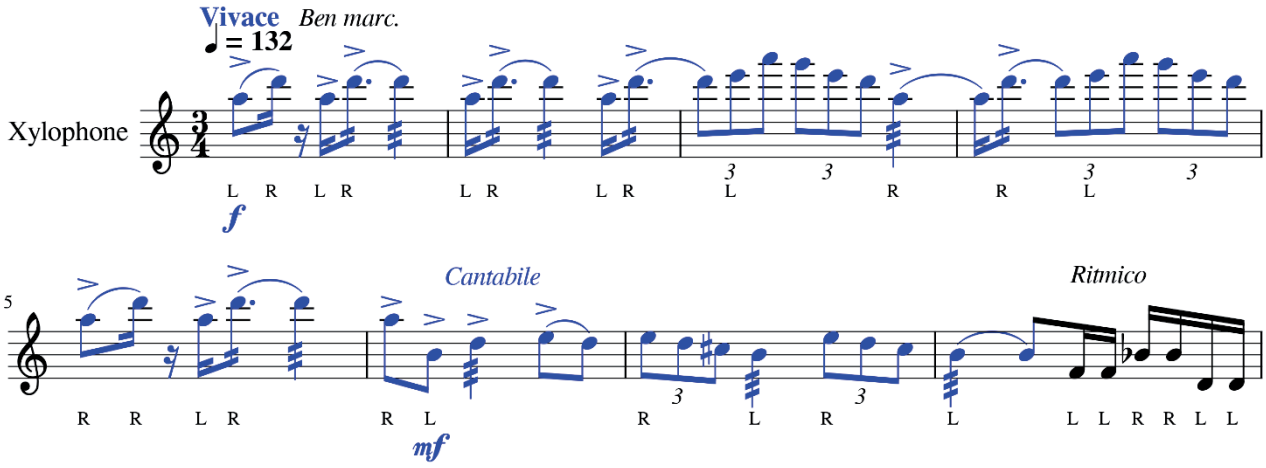

Fig. 28. ***Reflections on Petrushka*****, the entire A section and the first measure of the B section, measures 1–8.**

5.1.2 B section, measures 8–18

The triplet figures with a B-natural pitch on the second beat of measure 7 lead the music to the B section, which starts in measure 8 (Fig. 28). The music is mainly in 16th notes. For a performer, a good control of double strokes and single strokes is key to making the music sound fluent at this point. Subtle agogic phrasings can also be utilized to create an extra amount of liveliness and energy in the music. The legato tremolos are to be played with passion. My aim was to compose an organic continuation, as much as possible, to the *Petrushka* quote from measures one to seven. I wanted the overall mood to be passionate and harmonically rich at the beginning of the B section. Starting in measure 8, the music goes to pairs of double tone sixteenth notes that are played by using double strokes (Fig. 28). In measure 9, there is a key change to B flat major. The climax of the phrase is reached on the second beat of measure ten, when the melody jumps from the double E's and G's to a D^3 half note tremolo. From the D^3 the melody goes down a whole tone to C^3, which is also played by using tremolo (Fig. 29).

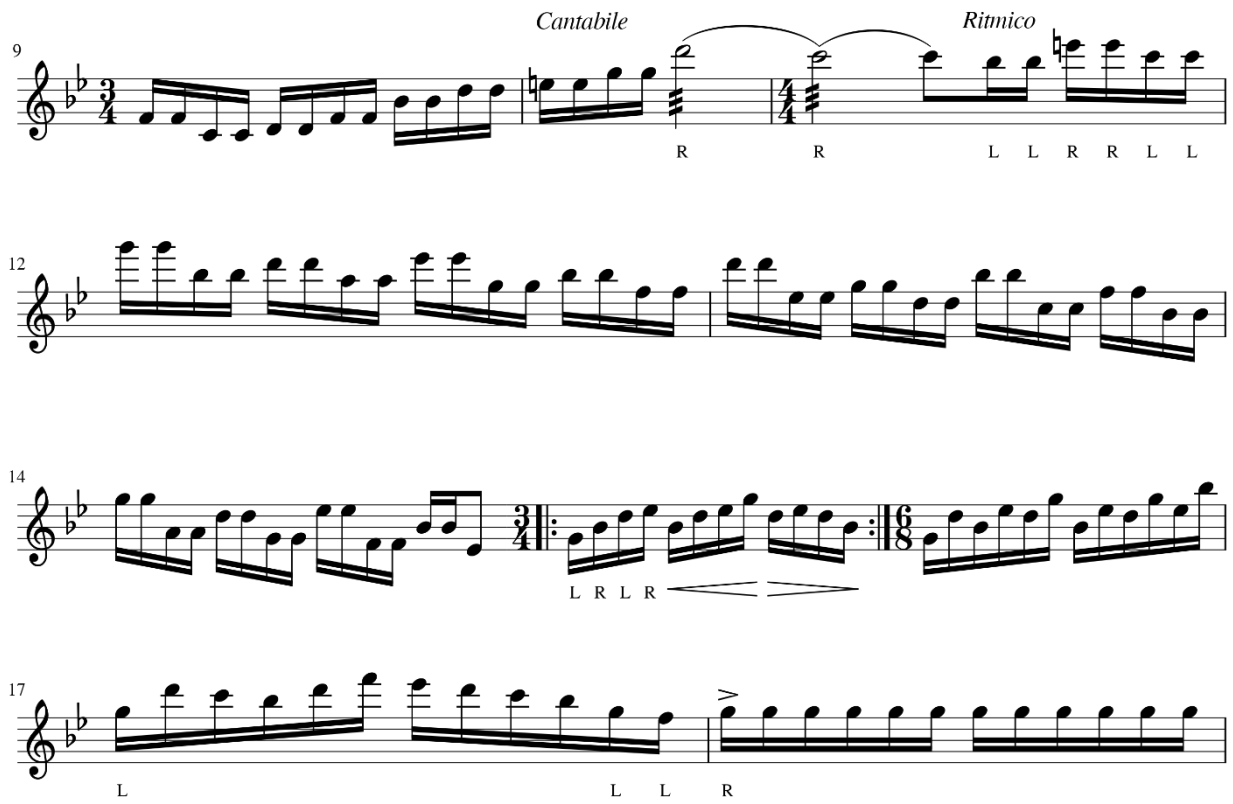

Fig. 29. ***Reflections on Petrushka*****, B section, measures 9–18.**

In measure 12 the melody starts to descend in the form of a sequence. The passage continues with double note figures, which are played by using double strokes (Fig. 29). The top notes of the figures starting in measure 12 descend in pairs of perfect fourths on the main beats, where the highest notes of the figures are G^3 on the first beat and D^3 on the second, and then on the third and fourth beats Eb^3 and Bb^2. They are followed by D^3 and G^2, Bb^2 and F^2 in measure 13, and G^2 and D^2, Eb^2 and Bb^1 in measure 14. The offbeat sixteenth notes also descend in a stepwise motion in a B flat major scale in measures 12 to 14. On the second eighth note in measure 12 the starting point of the offbeat eighth notes is Bb^2. The following offbeat is an A^2, then a G^2, et cetera. This creates an interesting passage where the on-beat note pairs are in perfect fourth connections and the offbeat notes are in a stepwise descending Bb flat major scale motion.

In measure 15 the music continues the flow in sixteenth notes (Fig. 29). The G^1,

which is the third of an E flat major chord, starts the repeated arpeggio of an E flat major 7th chord. The key signature of the passages below is Bb flat major. I composed measure 15 to continue the harmony from where the sequence ended at the end of measure 14. The last quarter note of measure 14 has two Bb^1 sixteenth notes and an Eb^1. Measure 15 starts with the E flat as the center of the harmony, although the passage starts with a G^1. The E flat major chord also has a D natural, which is the seventh degree of the scale. The E flat major 7th chord added a fitting harmonic continuation. The sequence from measures 12 to 14 was also full of quickly moving musical events, so I wanted the music to stay in a single chord for a brief moment before it starts to move again towards the C section. Measure 16 is an interesting permutation of the E flat major 7th chord found in measure 15. The time signature changes to 6/8, and both patterns have an ascending direction of an E flat major 7th chord. Measure 16, as well as measure 15, are suggested to be played hand to hand, starting with the left hand.

The B section ends with sixteenth note figures in measures 17 and 18 (Fig. 29). The musical direction of the passage will eventually descend to a measure of sixteenth note G^2 pitches via an F^2 on the last sixteenth note of measure 17. In my suggested stickings for the end of measure 17, I recommend a double stroke with the left hand, to be able to land with the right hand on the downbeat of measure 18. That prevents a need to cross hands on the two last sixteenth notes of measure 17, and provides the possibility to play all of the G^2 pitches in measure 18 hand to hand, starting on the right hand. If the player is left-handed, then playing the second last sixteenth note with the left hand and the last sixteenth note with the right hand, landing on the left hand in measure 18, is probably the most comfortable way to perform these measures.

5.1.3 C section, measures 19–36, with subsections Ca in measures 19–31 and Cb in measures 32–36

The subsection Ca starts with an excerpt from the xylophone part of *Petrushka* (Fig. 30). The first five measures in subsection Ca are filled with glissandos and the key signature

goes into C major, although the tonality is flexible.[38] Stravinsky uses bitonality in *Petrushka,* which was a new way of using tonality in the beginning of the 20th century. He composed *Petrushka* in 1911, and bitonality started to appear in compositions of other composers around that time as well. Stravinsky was in the front lines of musical development already at that time. He also adapted new musical influences into his music throughout his career, making him an extremely versatile and innovative composer.

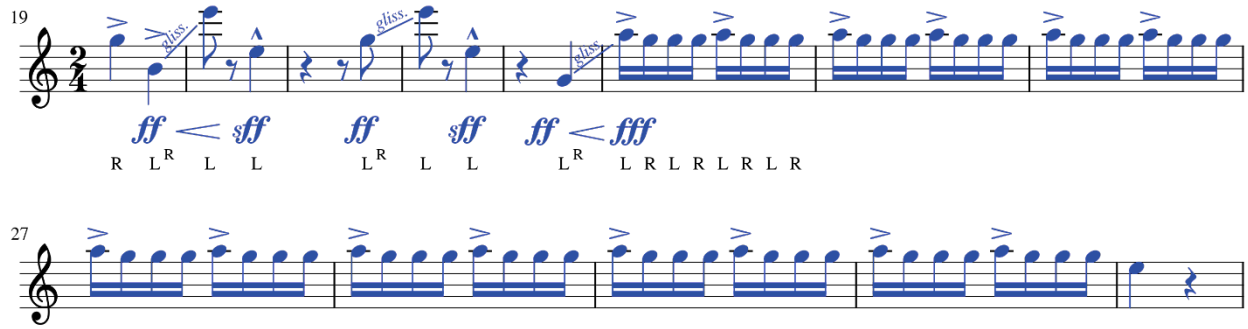

Fig. 30. *Reflections on Petrushka*, the beginning of the C section, measures 19–31, the entire subsection Ca.

The glissandos in measures 19 to 23 could be played by using only one hand, but I like to play the beginnings of the glissandos with the left hand, so that the attack of the glissando note starts very clearly (Fig. 30). The sliding of the glissando is done with the right hand in this excerpt, and at the end of the glissando the next main note is played with the left hand. In measure 24 a new, simple and minimalistic sixteenth note pattern is repeated until the downbeat of measure 31 (Fig. 30). This passage is also from the xylophone part of *Petrushka*. The dynamic is *forte fortissimo*, so it should be played very strongly and with a lot of sound projection. The first note of the group of four sixteenth notes is always accented. While

[38] The key signature is in C major in *Petrushka's* xylophone part, starting at measure 19. I adjusted the notation and kept the quote in the same key.

practicing the piece, one can experiment with the ratio of loudness between the accented and non-accented notes. A good balance, where the accent is not too dominating but in the right balance, is very important. Even though the first note of the pattern is accented, it does not mean that it should be much louder than the non-accented notes, but rather a way of showing the impulse and the hierarchic movement of the rhythm. The groove of the rhythm is also very essential. If the accent is too loud, the pattern does not have a nice flow. In *Reflections on Petrushka* one of my main ideas for the performance of the piece is that it should have as good flow and interesting interpretation as possible, and that the transitions between the sections should be played as musically and organically as possible.

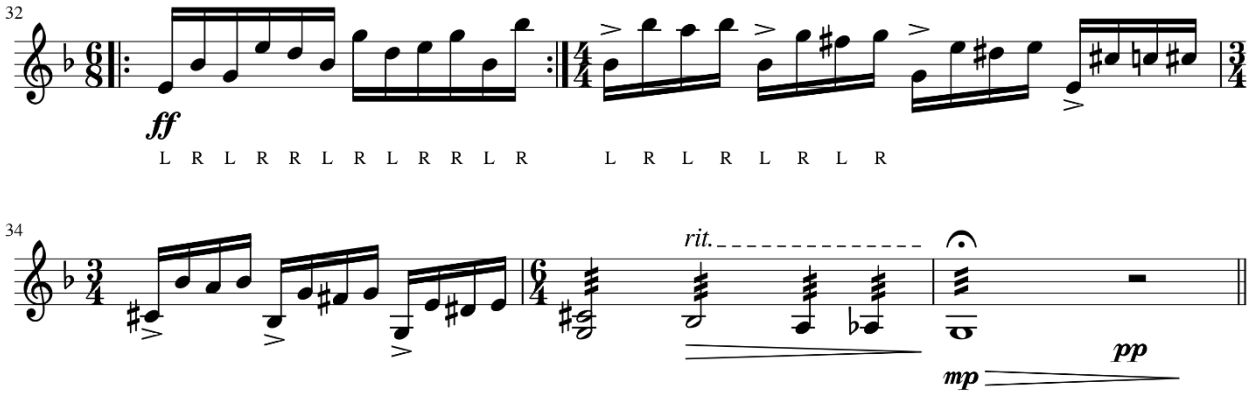

Fig. 31. *Reflections on Petrushka*, the ending of the C section, measures 32–36, the entire subsection Cb.

Measure 32 starts the subsection Cb (Fig. 31). In the subsection Cb, much harmonic importance is placed on the augmented fourth interval and the diminished seventh chord. Measure 32 starts with a tritone interval between the E^1 and Bb^1. The last three sixteenth notes of the first beat also have tritone sound qualities, through the downwards moving melody from E^2, D^2, and Bb^1. The notes with the most musical tension in the first dotted quarter note of measure 32 are the E^1, Bb^1, E^2, and again the Bb^1 on the last sixteenth of the first beat. Although

the G^1 and D^2 make the chord an E half-diminished seventh chord, the placement of the notes highlights the tritone sounds within the chord.

The diminished seventh chord is present in the accented main notes of measures 33 and 34. The beginning of measure 33 has Bb^1 and Bb^2 notes on the first and second notes of the pattern, while the upper notes after the main beats descend between the three last sixteenth notes of the first and second beats. Starting on the third beat of measure 33, the accented notes also start to move in a downwards motion. The diminished seventh chord that the accented notes establish goes to a dramatic tritone tremolo in the first beat of measure 35 (Fig. 31). The passage resolves to a g natural tremolo in measure 36, which becomes gradually quieter towards *pianissimo* (Fig. 31). Measure 36 also ends the C section.

The tremolo in measure 36 goes down to *pianissimo* during a fermata, which makes the note's duration longer than four beats. Playing a *diminuendo* to a quiet dynamic on the xylophone can be challenging in terms of the evenness of the strokes and the smoothness of the *diminuendo*. The hard xylophone mallets do not have the same dynamic flexibility while playing a tremolo on a xylophone, compared to yarn mallets when playing a tremolo on a marimba.[39] When playing a long *diminuendo* on the xylophone, a good way to do so is to have a relaxed feeling in the hands and a mental idea of the stroke speed and the ratio, in which the hands become slightly slower when reaching the end of the *diminuendo*. The focus at the end of the tremolo also has to be on the gentleness of the strokes and on minimizing the height of the hand movements.

After the fermata, there is a half-note rest at the end of measure 36. Together with the fermata, a relaxed and clear break can be taken to show that the first movement is ending, and that the second movement of the piece, the D section, is about to start.

[39] With yarn mallets, one can change the angle of the mallets when striking the marimba bars. For example, one can get a smoother attack from the area close to the tip than from the center part of the mallet. Changing the angle of the mallets helps, for example, to execute *morendos*, where the sound gradually dies away to silence.

5.1.4 D section, measures 37–41

The D section is cadenza-like, without a specific tempo. It adds a contrasting element to the music, which has had a pulse and active rhythms until this point. The D section forms the second movement of the piece.

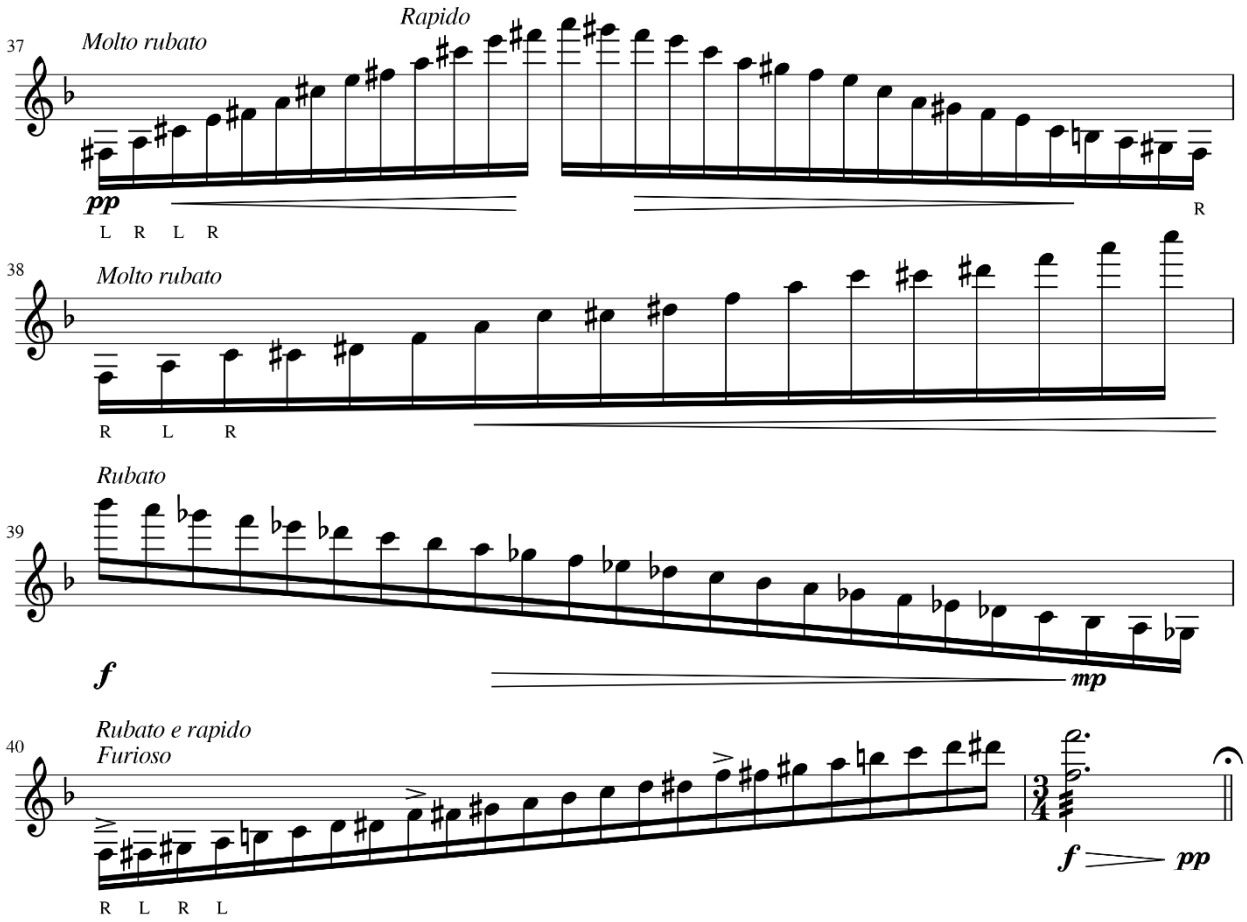

Fig. 32. *Reflections on Petrushka*, the entire D section, measures 37–41.

The f# in measure 37 starts the D section (Fig. 32). The whole D section is shown in Figure 32. The performance suggestion for the beginning of the D section is *molto rubato*, and *rapido* later in measure 37. The player can decide how he or she phrases the measure. As mentioned earlier, I would like the piece to be played as musically and organically as possible. I think that the space between the notes at the beginning of measure 37 should not be too long, so that the sound of the notes would not be disconnected from each other. The phrase should also be quite fast by the time that the *rapido* performance suggestion is reached. In terms of the dynamic phrasing, the *pianissimo* dynamic at the beginning of the measure should be very soft, but still audible. When the dynamic starts to become louder, the notes also start to accelerate. The music goes back to a soft dynamic gradually after the highpoint in A^3 has been reached in the middle of the measure. The *crescendo*s and *diminuendos* should also be played very gradually, as if a picture that is far away would be taken closer to the viewer and then taken away again, back to a distance when the *diminuendo* happens in the music.

Measures 38 and 39 follow the phrasing structure of measure 37, even though they are harmonically different and dynamically more dramatic. The dynamic goes up to *forte* at the beginning of measure 39, and simultaneously the music starts to cascade in B flat harmonic minor, starting on C^4 (Fig. 32). In the middle of the measure the music starts to get softer again until the *mezzopiano* dynamic has been reached at the end of the measure. Measures 40 and 41 conclude the D section. Measure 40 is a furious octatonic scale starting on the f pitch, going up to an octave tremolo in F^2 and F^3. The octatonic scale in measure 40 covers most of the xylophone's range.

5.1.5 E section, measures 42–49

The third movement starts with the E section. It begins with a short quote from Stravinsky's *Petrushka* xylophone part in measures 42 to 45 (Fig. 33). In the empty measures of 44 and 46, it is important to keep the tempo going in one's head, so that the overall tempo does not change. Especially when playing this *Petrushka* excerpt in an audition, a good and steady tempo is very important.

In measures 47 to 49, I varied the phrase and composed it in octaves, and also transposed the following two entrances of the phrase in measures 48 and 49 (Fig. 33). Here, the octave passages are technically quite challenging to execute at a quick *a tempo*, which is the original tempo of 132 beats per minute from the beginning of the piece. By transposing the original phrase, it can be viewed from a different perspective for a deeper understanding of its melodic construction. The piece also becomes more colorful when the melodic content is expanded using octaves and transpositions.

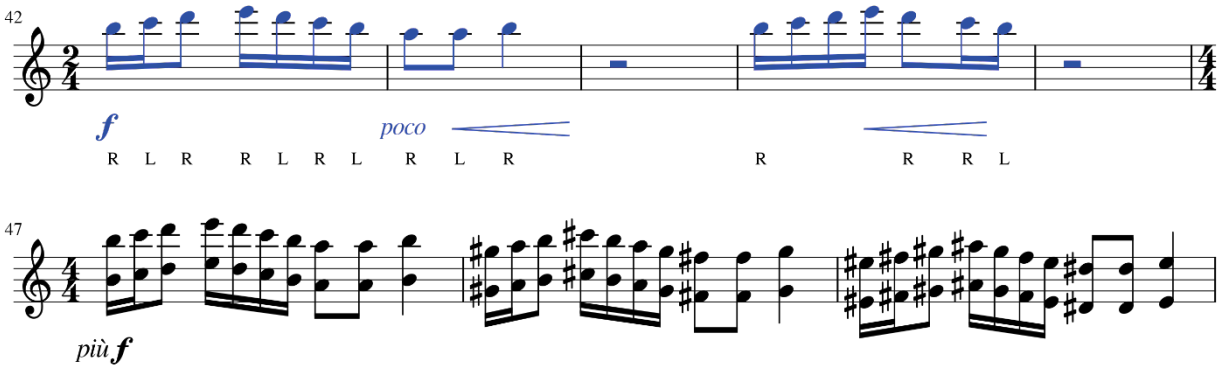

Fig. 33. *Reflections on Petrushka*, the entire E section, measures 42–49.

5.1.6 F section, measures 50–59

In the F section the music becomes very dense and full of fast *arpeggios*. The arpeggiated chords last for a full 4/4 measure without changes in pitches until the 7/16 measure of 55, except in measure 53, where a low b flat on the first beat changes to a b natural on the third beat (Fig. 34). The musical events do not change very rapidly between measures 50 to 54, and the full sounding harmony of the music is a leading musical idea in these measures. The F section should have a certain magic and spark to it, and thus the section is also marked to

be played magically (Fig. 34). Ideally, the quintuplet passages should be played quite lightly, so that the music does not become too heavy. For note accuracy, it is very important to keep the mallets low. The dynamic is *piu forte*, so the strokes do not have to be very strong. The number of multiple notes sounding simultaneously through the fast *arpeggios* also create a *piu forte* effect of louder than regular *forte* dynamic.[40]

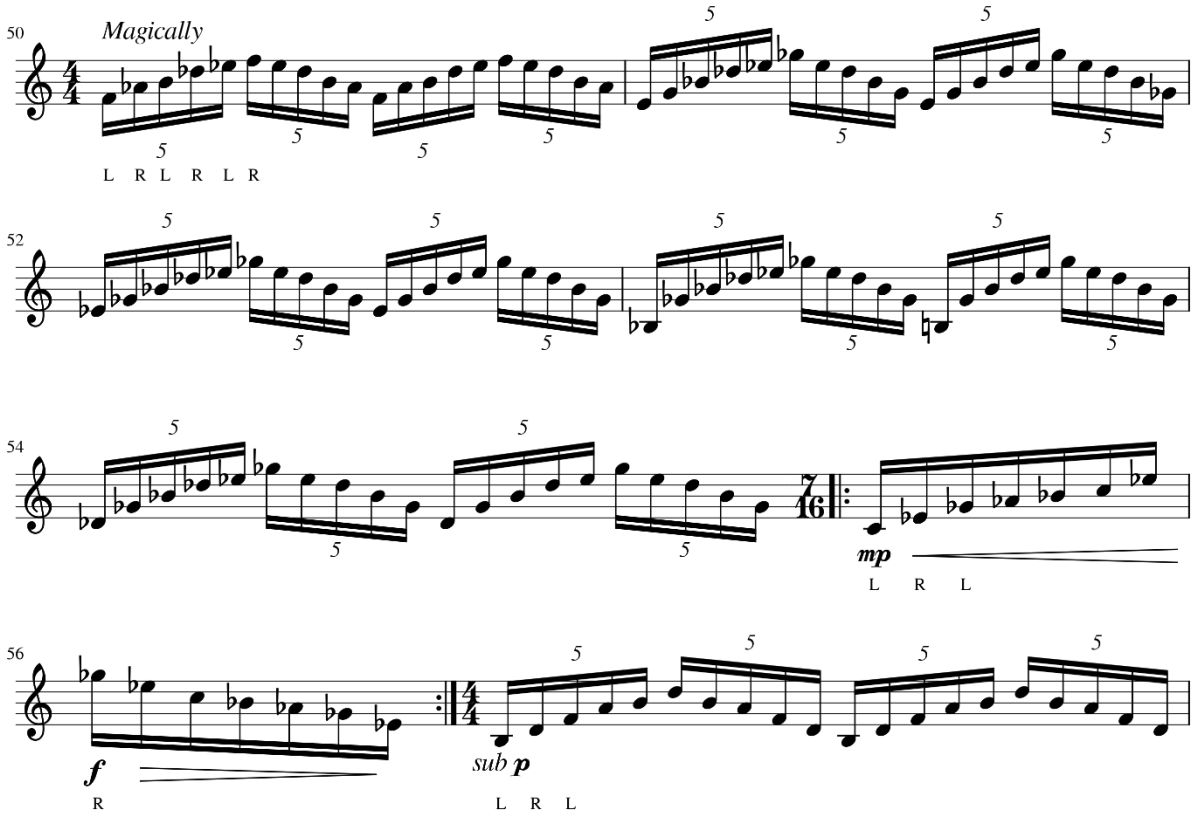

Fig. 34. *Reflections on Petrushka*, F section, measures 50–57.

[40] Although the xylophone has one of the shortest sound decays among the orchestral mallet instruments, depending on the acoustics the sound resonates for a short time after the notes are hit, thus creating an effect of several xylophone bars resonating at the same time. This is especially true in louder dynamics.

Measures 55 and 56 have a partial C half diminished scale.[41] In *Reflections on Petrushka*, D^1, F^1, D^2, and F^2 were omitted from the half-diminished scale in measures 55 and 56 (Fig. 34). The *crescendos* and *diminuendos* in those two measures should be played as gradually as possible. The measures are quite short, so to achieve a clear effect with the dynamic changes the *mezzo piano* and *forte* dynamics should be reached right on the downbeats of measures 55 and 56 accordingly. The quintuplet at the end of measure 54 is in the earlier mentioned *piu forte* dynamic, so the dynamic goes instantaneously down to *mezzo piano* at the beginning of measure 55. Here, the dynamic change is completely different than between measures 55 and 56. The hand tension and power of the strokes have to become loose and relaxed right at the beginning of measure 55, so that the C^1 note does not sound accented and loud. It is essential to the colorfulness of the music to play the terrace dynamic from *piu forte* to *mezzo piano* between the end of measure 54 and the downbeat of measure 55 (Fig. 34).

The tempo feel also gets a curious character change between the quintuplets of measure 54 and the sixteenth notes of the measure 55 in the 7/16 meter. The quintuplets of measure 54 are in a 4/4 meter, and the sixteenth notes in the uneven meter of 7/16 in measure 55 are a bit slower. It is important to highlight the ratio of the rhythms accurately, so that the listener can perceive the meter and pulse change quickly and without confusion. The music returns to quintuplets in 4/4 meter after the repetition of the 7/16 measures in measure 57 (Fig. 34).

5.1.7 G section, measures 60–65

In the beginning of the G section, the tempo becomes slower, *meno mosso* (Fig. 35). The *a tempo* of 132 beats per minute from the beginning of the piece now changes to 96 beats per minute. Additionally, the performance suggestion guides the performer to play with lots of emotion. Even though the tempo becomes slower, the intensity and the speed of the notes increase. The upwards and downwards moving *arpeggios* are very challenging to perform in the

[41] The complete C half-diminished scale is C, D, Eb, F, Gb, Ab, Bb, and C.

marked tempo, especially when bringing out the detailed ideas in the music (Fig. 35).

When playing the septuplets in the G section, I like to make small *crescendos* and *diminuendos* in the music to create micro phrases inside the longer musical line. I make the crescendos when going up the septuplet patterns, and small diminuendos when coming back down to the lowest octave of the instrument, where the patterns start. These are tiny interpretational elements that I like to add to this part of the music. By doing this, I can make the extremely fast passages breathe a bit more.

The G section is technically quite heavy to play because of the fast notes without rests. It is important to think of playing lightly and elegantly, even though the texture is dense. Often, when thinking about lighter strokes, it is possible to keep technically heavy passages more in control without sounding too robust.

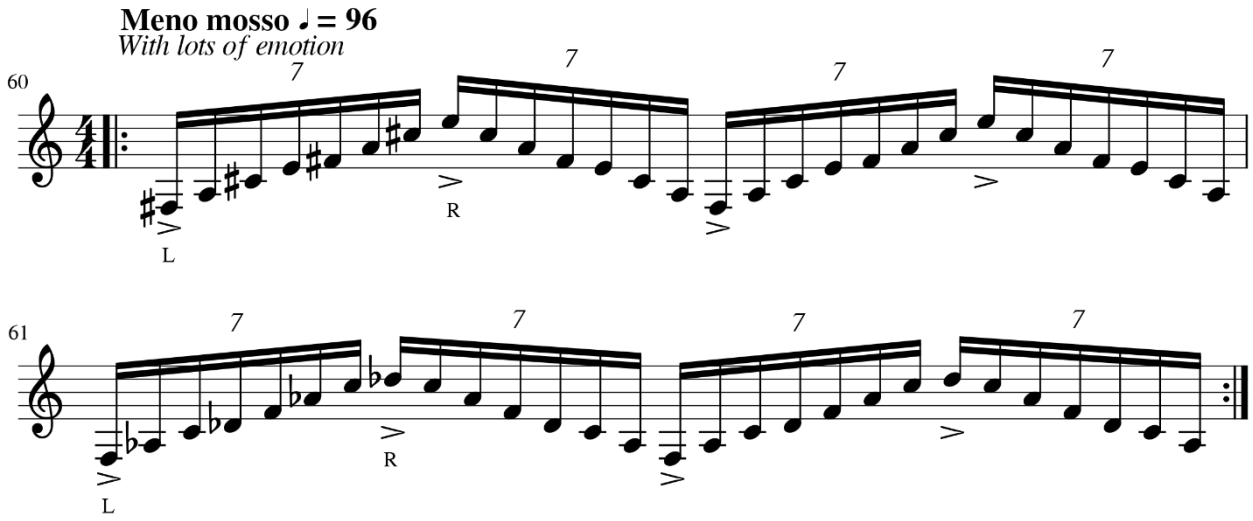

Fig. 35. *Reflections on Petrushka*, the beginning of the G section, measures 60–61.

The ending of the G section is harmonically dramatic, when the E flat major chord with an added major 9th interval starts on the accented Bb on the first beat of measure 64, and changes to a B half-diminished chord on the third beat of the same measure (Fig. 36). The septuplets start to slow down at the end of the third beat and go up to an F^3 and A^3 tremolo,

which is agogically marked with a fermata. Measure 65 descends in a whole step movement, while the dyads stay in the same relationship of major third interval tremolos. They also grow in volume up to a *fortissimo*, which should be very prevalent at this point in the music. It is the most dramatic part of the composition.[42]

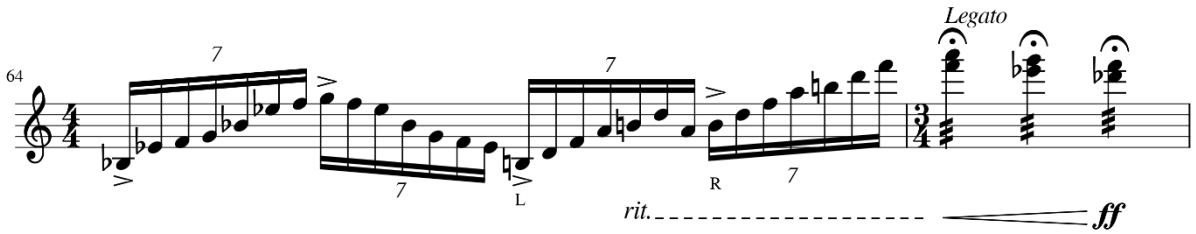

Fig. 36. *Reflections on Petrushka*, the ending of the G section, measures 64–65.

5.1.8 H section, measures 66–72

The H section is slower, where the music becomes wistful and serene. Measure 66 starts as *meno mosso* (Fig. 37). The section stays at a slow and calm tempo, even though there

[42] While composing measure 65, I was loosely influenced by Maurice Ravel's (1875–1937) wonderful work *La Valse* (1920). In *La Valse*, Ravel explores the Viennese waltz and its possibilities in phrasing musical lines rhythmically. Several kinds of agogic elements are a vital part of the performance practice of the Viennese waltz, for example the famous waltz pattern where the second beat is played before its actual place. It gives a light and elegant lilt to the waltz rhythm. In *La Valse*, Ravel incorporates the Viennese influence brilliantly. I have performed *La Valse* more than a few times, and each time I have really enjoyed performing it. Playing any of the percussion parts is a joy, because Ravel's writing is very colorful and the music is full of energy and excitement.

are fast septuplet and sextuplet passages in the music. Similarly, as in the end of the G section, the tremolos in measure 66 are also in the major 3rd interval. This time the melody is going upwards, and arrives at the accented dissonant augmented fourth interval on the third beat of the measure. From there on the music becomes more active, with the introduction of the quintuplets and septuplets in measure 67. The music becomes quite chromatic, but still has harmonic points through important notes such as the E^3, C^3, and Bb^2 on the third beat of measure 67, which emphasize the C major dominant seventh chord (Fig. 37).

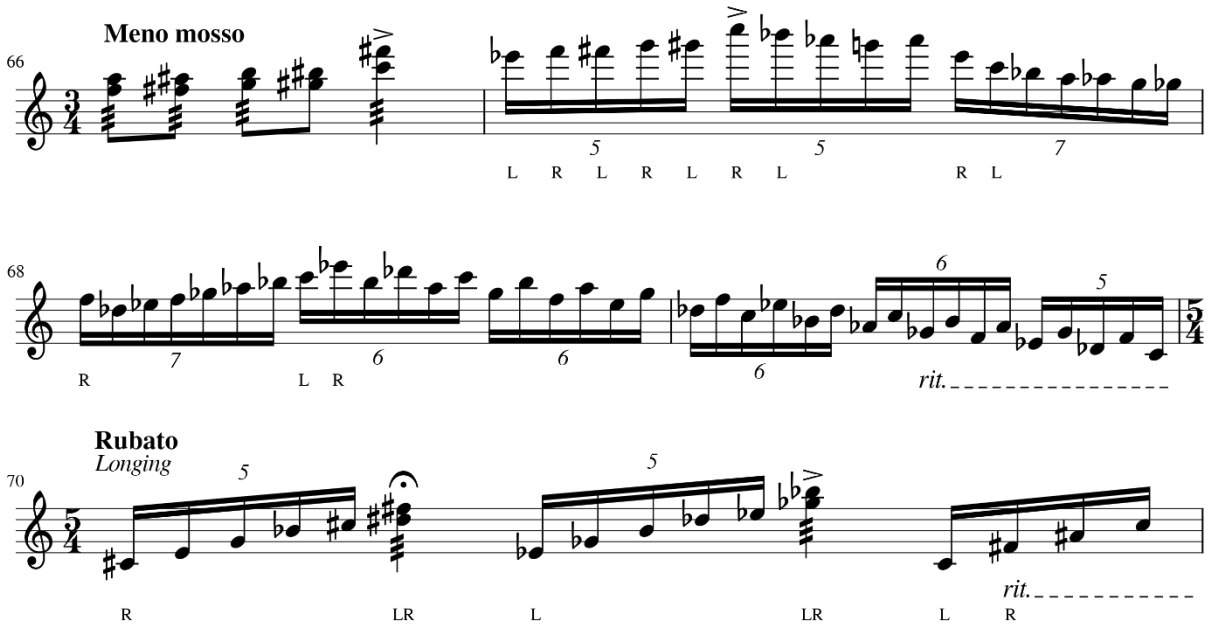

Fig. 37. *Reflections on Petrushka*, the beginning of the H section, measures 66–70.

Measures 68 and 69 are composed in D flat major. Measure 68 starts from the third of the scale, the F^2, and goes down to Db^2, from where the music goes up the Db major scale (Fig. 37). The melody then descends in major and minor thirds from the second beat onwards until the end of measure 69. In measure 70 the harmony goes enharmonically to a C sharp diminished 7th chord on the first beat, which is followed by $D\#^2$ and $F\#^2$, which are part of a shorter micro-phrase that ends on the second beat of the measure (Fig. 37). The $D\#^2$ and $F\#^2$ are part of the C sharp octatonic scale, where the second note after C sharp is D sharp. On the third beat the harmony goes to E flat minor seventh, which is followed on the fifth beat by the F

sharp major chord starting on the C#[1].

In measures 70 and 71 the tempo calms down, and the measures have a serene atmosphere (Figures 37 & 38). The mood can be enhanced with a sensitive touch of the performer's strokes.[43] The music dies away in measure 72, with the gentlest touches that the player can accomplish with the tremolos. I like to make small swells inside the first and second dyads, to color the phrasing ever so slightly. The hand speed in the tremolos can also be altered to enhance the emotional aspects of these measures. One way of doing it is by starting the tremolo slowly on the downbeat of measure 72 and then increasing the hand speed, eventually slowing down on the last fermata of measure 72. Measure 72 concludes the H section.

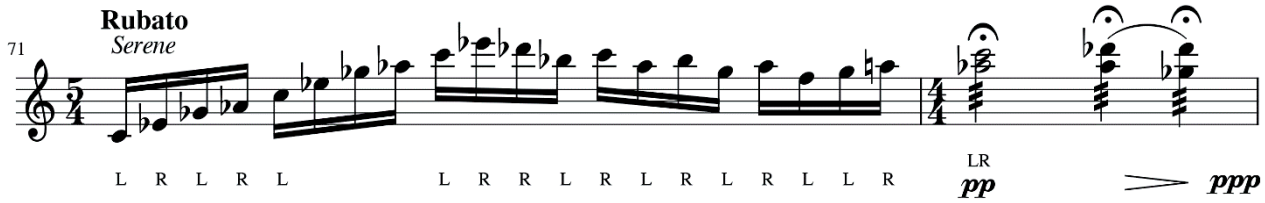

Fig. 38. *Reflections on Petrushka*, the ending of the H section, measures 71–72.

5.1.9 I section, measures 73–84

The I section's musical material is entirely from Stravinsky's *Petrushka*. It is a famous excerpt that is often on the audition repertoire lists of symphony orchestras around the world. The musical challenges in the excerpt are mainly the fast arpeggios of the B half-diminished and

[43] In measure 71 my suggested stickings are aimed to create smaller hand movements between the xylophone keys by doubling some of the notes with one hand on smaller intervals. By doing that, awkward wide interval hand to hand movements are avoided and the desired phrasings can be performed easier with more logical stickings.

the D minor 7th chords (Fig. 39). The accelerando that begins in measure 78 creates a feeling of ambiguity in the excerpt. Because the accelerando starts on the second beat of the measure in measure 78, and the whole excerpt has patterns on the second beat from measure 73 to measure 80, (except measure 75 which also has an arpeggio on the first beat), it is easy to confuse the number of times the pattern is repeated. The accelerando can also become too fast very quickly, so it is a good idea to keep a calm mind when performing these measures.

Even though the passage looks simple, there are a lot of things to consider during a practice process, so that the execution of the excerpt can be performed as precisely as possible. These details are the very exact tempo feel and counting, controlling the hand movements and minimizing any unwanted extra movements for note accuracy, and adjusting the accelerando that starts in measure 78. The stroke types have to be right in order to convey the desired tone colors from the xylophone keys and the mallets. In this excerpt, my mallet strokes are quite relaxed. I like to phrase the musical lines towards the high notes of the patterns. It is also a good idea to think about an imaginary orchestra playing in the performer's head, so that the atmosphere from *Petrushka* can be expressed to the audience.

The dynamic of the excerpt does not change much, only from *forte* to *fortissimo*. The forte at the beginning of the excerpt should not be too strong, so that the *fortissimo* dynamic does not end up sounding too harsh and aggressive.

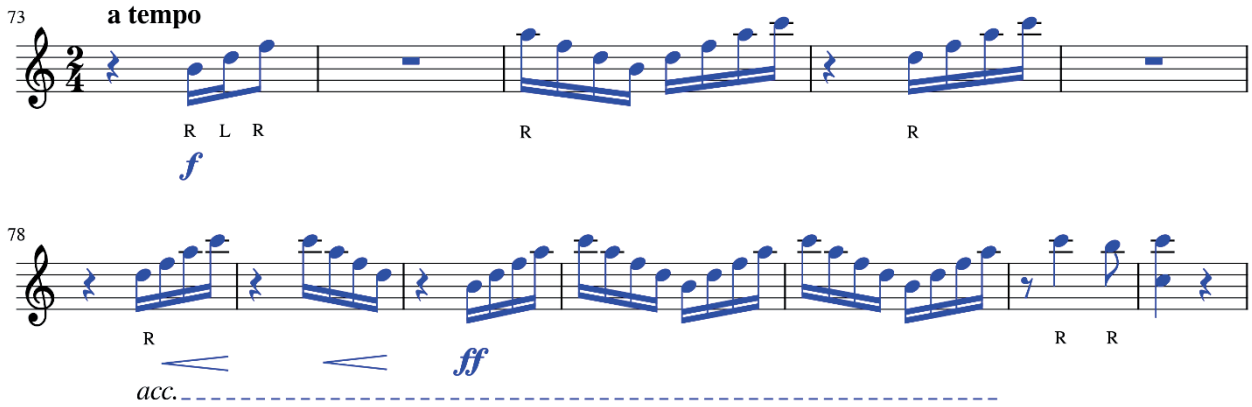

Fig. 39. *Reflections on Petrushka*, the entire I section, measures 73–84.

5.1.10 J section, measures 85–99

The J section starts with an excerpt from *Petrushka*. The tempo becomes *meno mosso*, 100 beats per minute. The *a tempo* in the I section was approximately between 132-138 beats per minute. In measure 85, the sextuplet passage is in the G Mixolydian scale, which follows the C major scale pitches (Fig. 40). The sextuplet passages are very well known among percussionists, and these passages instantly indicate the colorful *Petrushka* textures. Even though the sextuplets are faster than the sixteenth notes in the previous I section, they are easier to play than the I section's sixteenth notes, because the sextuplets are closer to each other in terms of the interval connections and they are also composed in scales.

My approach to measures 85 to 89 is to make the overall atmosphere light and playful. In measure 86 I also make a tiny diminuendo going to the G^1 pitch on the downbeat of measure 87 (Fig. 40). I continue to make swells in measures 87 and 88 as well, by increasing the volume ever so slightly when going up to F^2 in measures 87 and 88, and decreasing the volume when going down to G^1 in measure 88. I think that this kind of agogic movement creates a nice lilt to the music, making it sound more interesting than if playing the passage without any inflections.

In measure 89 the double stops are hit separately, so that the lower note acts as a grace note to the upper note. However, they are both played more-or-less in the same dynamic, which is different from the usual way of playing grace notes. The grace notes are typically played softer than the main note. In measure 89 the upper note is on the beat, and the lower note a fraction before the main beat.

The music changes in measure 90, which is my addition to the music. The soft tremolos in *piano* dynamic are meant to create an archaic sonority that broadens the framework of the music. I wanted the tremolos to add another dynamic dimension, so that the contrasts would compliment the different dynamical aspects of the music. When the sextuplet figure returns to the music on the second beat of measure 91, the first impression that comes to mind is that the music is going back to the rascal sextuplet sounds that were heard in the

beginning of the J section, in measure 85 (Fig. 40). However, the quiet *piano* tremolos return frequently, until the third last measure of the section. For the xylophone player, it is important to consider how the dynamic levels can have the largest possible impact on the music in terms of the colors and contrasts. For me, the more I can emphasize the different characters of the music, the more interesting the music becomes. The *piano* characters in the J section are distant and, as mentioned before, quite archaic. The *forte* dynamic sextuplets are more vivid and energetic. I like to imagine the *fortes* being at the front of an imaginary musical stage. The *Petrushka* quotes in measure 98 and on the first beat of measure 99 are the last quotes from Stravinsky in the piece.

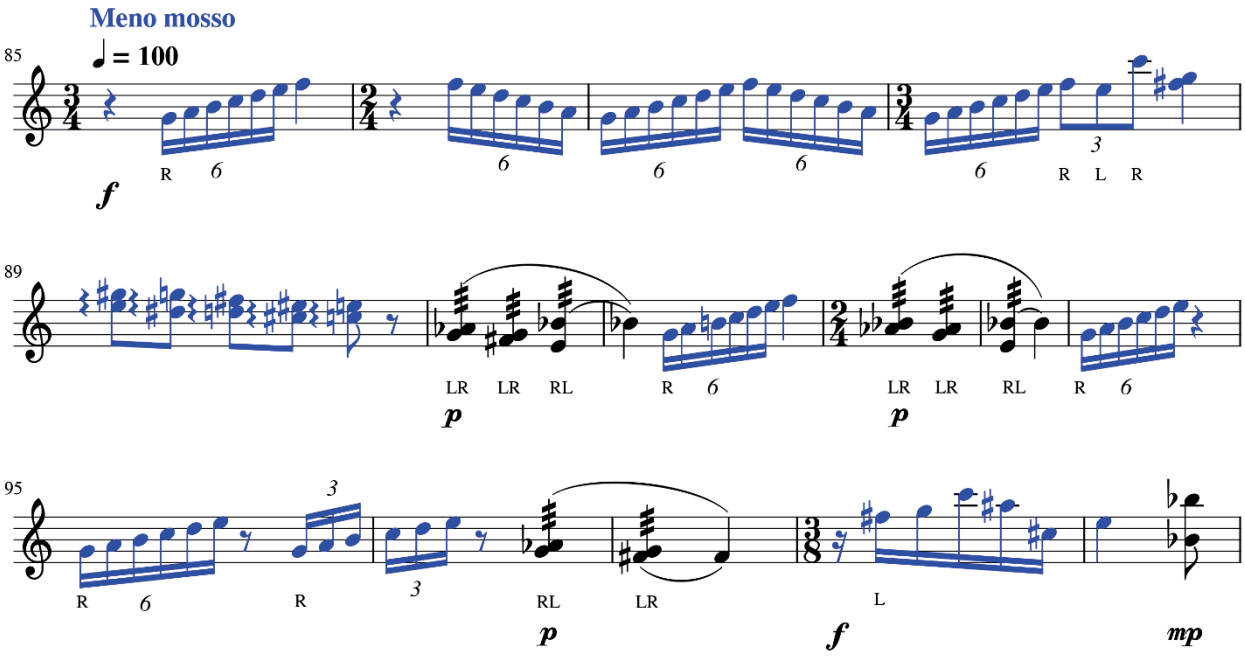

Fig. 40. ***Reflections on Petrushka*****, the entire J section, measures 85–99.**

5.1.11 K section, measures 100–106 closing

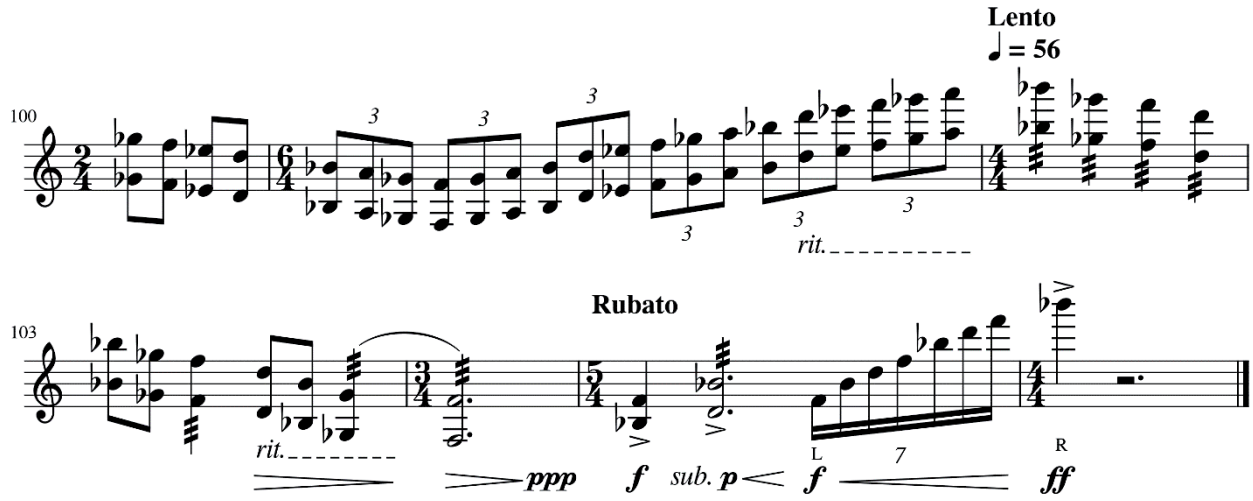

Fig. 41. ***Reflections on Petrushka*****, the entire K section, measures 100–106, the ending of the composition.**

The K section starts in measure 100 (Fig. 41). The pick-up on the last beat in measure 99 guides the music to a dramatic ending with a jubilant nuance.[44] The K section is composed mainly by using octave passages. Measure 101 is especially rapid, with the triplet figures. The triplets require plenty of legato strokes and elegant phrasing for the measure to have a good direction towards the next measure. I think about measures 100 and 101 as being very dramatic. When I phrase these measures, I play measure 100 quite *tenuto* and keep the notes very even in relation to each other. In measure 101 I shape the melodic line by starting to make a slow agogic crescendo towards the end of the measure, and trying to make the music as dramatic and decisive as possible (Fig. 41).

Starting in measure 102 the tremolos release the energy that was gathered in the previous measure. I like them to be played very legato, so that an effect of continuous, smooth sound is established even though the mallets are playing quickly repeated notes in the high register of the instrument.[45] At the end of measure 104, the dynamic goes to an extremely soft *ppp* dynamic (Fig. 41). Technically, this requires plenty of soft dynamics and low strokes control. It is easy to become nervous at this point when going down to the softest playing dynamic on a bright sounding instrument such as the xylophone. During the diminuendo it is essential to trust one's training and the practice process of the piece, and to just let the hands go to the tiny mallet movements required in the soft dynamics. Keeping the mind cool and relaxed also helps the sensation in the hands, so that the tremolo can be executed effectively.

The last two measures of the piece are an exclamation point to the whole ending (Fig. 41). They are the final big contrast of the composition. Going from the *ppp* dynamic to *forte* in the first beat of measure 105 and then going down to the *piano* dynamic for the last time in the composition on the second beat of measure 105 creates an exciting, contrasting platform for the septuplets to jump up on the last beat of the measure, going rapidly to the

[44] When I composed *Reflections on Petrushka* I was intensively listening to Brahms' symphonies. I feel that the music in the K section is influenced heavily by the music of Johannes Brahms (1833–1897).

[45] Because the tremolo is divided in the area of an octave, it is important for the xylophone player to carefully listen to the evenness of the tremolos. The two bars probably do not have identical articulation, so extra emphasis has to be given to listening to their combined sounds.

highest B flat on the xylophone on the downbeat of measure 106, which ends the composition. The technical approach to the septuplet figure is definitely something to pay attention to. At this point, the technical challenge is not in controlling the extremely soft dynamics, but rather the opposite. It is very easy to miss a note on the ascending B flat major *arpeggio* on the last quarter beat of measure 105, because one has to execute the passage in a crescendo that ends at maximum volume. To be able to perform it with the required amount of brilliance, energy, and volume, the strokes have to be open and played from quite high up.[46] The last note of the piece, the Bb^3, has a duration of one quarter note. Despite the fact that the B flat has a very fast decay of sound, it is a good idea to imagine that the last note has a full sustain of the written quarter note. The obvious reason for this is the fact that it is the final sound of the piece, and that it should have an important role as a conclusion. When I play the last note, I leave my hand up for a little while for the musical moment to conclude with enough time and silence in between. After that, I lower my hand. I hit the last note with my right hand and lift my hand up with the energy created by the hit of the last note of the composition. I also utilize the upstroke after hitting the final Bb^3.

[46] To get the septuplets as secure as possible, it is very important to practice them slowly with a metronome. Developing one's peripheral vision, by trying to "see" the notes outside of the main vision field, is also crucial for mallet instrument performance. When practicing the septuplets with a metronome and slowly increasing the tempo, the muscle memory is also developed, which makes it easier to hit the right notes. For more on the practice process, see chapter 6.

6. XYLOPHONE PRACTICE AS A PROCESS

6.1 Introduction to the chapter

This chapter combines the earlier two chapters and the practice process for xylophone excerpts from my original compositions. I discussed my new compositions, which are influenced by Stravinsky's xylophone parts of *Les Noces* and *Petrushka*, in the previous two chapters. In the sixth chapter I will present my thoughts on xylophone practice and the preparation of musical material for auditions and concerts. The previously outlined points are examined further, along with other observations, through excerpts from *Etude Les Noces* and *Reflections on Petrushka*. The excerpts are viewed from several perspectives. My aim is to provide answers to questions such as: what is efficient practice? How can we practice musical material in a more time-efficient manner, and how can we practice repertoire so that a peak performance level is reached at a specific time? I also discuss how to improve the connection between the performer and the xylophone.

Practice is essential for learning new music. This also applies to music that one already knows beforehand. For example, the orchestral xylophone excerpts are core repertoire for a classical percussionist. Most of the musicians' time with their instruments is spent alone in a practice room where new ideas and already learnt techniques can be polished and absorbed through a musical osmosis. The level of practice efficiency can thus have crucial significance for one's preparedness in auditions, competitions, and concerts. So, how should one start a practice session on the xylophone?

6.2 Thoughts on Raynor Carroll's advice on practice

Raynor Carroll, the retired principal percussionist of the Los Angeles Philharmonic Orchestra, gives excellent and detailed advice on practice for percussionists.[47] Carroll worked with the Los Angeles Philharmonic for 33 years.[48] In the beginning part of his books he explains six general advice tips in a page-long outline, which can help percussionists make their practice time efficient and well balanced. Below, I enumerate Carroll's points and discuss them based on my own practice processes and experience.

6.2.1 Have short- and long-term goals in mind

Goals are excellent tools to enhance practice motivation for percussionists. A tangible goal, such as an audition in two months, represents a lot to plan and process. In such moments, focus and concentration are very important for the actual planning of short- and long-term goals. The long-term goal in this case would be to plan a practice and preparation schedule for the entire two months. An example of a short-term goal is to make a practice plan

[47] Carroll (2000, 6).

[48] Raynor Carroll taught for nearly 20 years at his alma mater California State University Los Angeles. He also taught at other universities, including the University of California Los Angeles and University of Southern California. His seven orchestral percussion method books are a huge source of percussion parts, and are regularly studied at universities and used as material for percussion auditions. They are published by Carroll's publishing company, Batterie Music. See www.batteriemusic.com , https://percussioneducation.com/raynor-carroll-retirement/ , http://www.batteriemusic.com/about-raynor-carroll

for a single day, and to think beforehand, "what are the goals that I want to achieve in today's practice session." A weekly practice plan that spans the whole time until the audition day is also very useful. In that plan, one should make a guideline of which excerpts would be worked on each day. It can also include which recordings one is going to listen to daily. For example, if I have planned to work on Nikolai Rimsky-Korsakov's (1844–1908) *Scheherazade*, Maurice Ravel's (1875–1937) *Bolero*, and Jacques Delecluse's (1933–2015) *etude n. 9* from his *Douze Etudes pour Caisse-Claire* on snare drum on day 10, then on that day I can also record myself playing the excerpts and the etude and listen to the recording while following all the details from the solo score and the orchestral score in the case of *Scheherazade* and *Bolero*. During that same day I can listen to orchestral recordings of the pieces and play along with the recordings as well. When practicing for auditions, I also like to listen and play along with suitable recordings of Delecluse etudes from YouTube. It is very important to hear how other people play the repertoire, in order to enhance one's own thoughts about and perceptions of the music. In this way, one can have a conversation with the performed versions of the piece while still making one's own musical decisions. The musical vocabulary can be expanded by trying to perform excerpts in other performers' styles, and with their musical ideas. When one is able to play an excerpt in different ways, the performance possibilities of the excerpt become more malleable and versatile.

Applying the short- and long-term goals in my practice on *Etude* and *Reflections*[49] can also be done systematically. Long-term goal: As mentioned above considering the audition preparation, fixing a timetable for the pieces should be decided and written down on a calendar. For example, if I were in a situation where I was going to start practicing the pieces without earlier knowledge of them, and where I would be performing them in a month, I would start to sight-read the music today and decide within a few days when I should have both of the pieces memorized, and when they should be performance ready. After I have made the decision, I make a note in my calendar, so that I have a reference point and a reminder to keep me on my chosen course. The calendar note also makes the amount of days clearly visible and concrete. In this way one doesn't miscalculate the actual time before the performance. I would also decide when to play the piece for people in a lesson or in a mock performance, before the

[49] Abbreviations to *Etude Les Noces* and *Reflections on Petrushka*.

actual concert performance. In this time frame, I would preferably like to have memorized the pieces a week before the performance, and also to have set two or three mock performance dates for the final week before the concert. I could thus fully concentrate on the practice routine for three weeks and do all the necessary exercises to get the pieces ready, with regard to interpretation and the technical aspects. It is important to have tangible goals within a timeframe established against a deadline. It will make the short-term planning clear and effective.

Short-term goals for the practice process are numerous. First, the daily practice sessions should be planned in ways that are most useful and valuable to the end result. I like to practice the pieces so that I play larger parts of the music, so that I can get a structure of the music in my head. I also practice very small passages, so that I can focus on their technical and musical aspects as thoroughly as possible. In those situations the musical microscope is zoomed in to the tiny building blocks of the music. I work on them with a metronome and a recording device, so that I can be certain of the tempo, phrasing, and the dynamics. Varying the stroke types from low to higher strokes, with lower and higher dynamics, also makes the timbral aspects colorful and organic. It is practically impossible to hear all of the musical events in real time while playing. The recording device provides the opportunity for that kind of work.

The short-term goals of the practice process also include deciding on the final performance tempo, choosing the mallets, and even deciding which instrument to use, if one is in a school or in an orchestra that has more than one xylophone. In contemporary music there is often a printed tempo in the score, and in the classical repertoire there are often generally accepted tempos, even though there might not be specific printed tempos on the score. It is important to know the tempos well, so that well-known compositions do not sound unfamiliar and out of their musical context. When playing a contemporary piece, especially if it is a solo piece, one can make small tempo adjustments. If the composer will be present in the dress rehearsal or the actual concert, it is important to contact the composer during the practice process about the tempo. The composers will often agree with the performer, knowing that they will choose the best tempo for them to express the composer's ideas. However, the tempo should not be drastically different from the composer's intentions.[50]

[50] In addition to the tempo, it is important to make small artistic swells in the music to make the music lively. There

6.2.2 Never sacrifice the basics

In Carroll's second point, he emphasizes counting and making sure that the rhythm and tempo are steady, with and without the metronome. Metronome practice is important, but, as Carroll mentions, sometimes it is also a good idea to practice without the metronome. When practicing without the metronome, I believe that it is advisable to record the practice session. In this way the percussionist can hear himself or herself and make sure that the tempo and other musical elements are steady and clear. On the other hand, when practicing and working with a metronome, I like to use the metronome in several different ways.[51] I like to practice the 3rd movement of the Scheherazade snare drum part by having the metronome click on the 1st and 4th beats of the measure. I also practice it on the 2nd and 5th eighth note pulse from the metronome in the 6/8 time signature, and play the drum part in relation to

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might not be accents or dynamic changes in the music, but small agogic inflections are usually very welcome in the music. This prevents the performance from becoming monotonic. Ultimately, music is a language where subtle details are created with different kinds of sentences and musical vocabularies. Every performer's interpretations create a new instance of the composed music in a different way each time they play. New ideas and ways to understand the musical journey follow the personal paths of interpretation taken by the performer, and every performance is different. This is one aspect that makes music so fascinating and rewarding to perform and listen to. I feel that music becomes a bit flat if a performer does not bring their personality into the music continuously, to varying degrees. I always think while practicing a piece of music, what are the aspects that I could bring to the piece to make the music sound as interesting and colorful as possible.

[51] The most effective metronome/recording device practice that I know is to turn on a recording device and start recording before starting to play the piece, and to turn on the metronome to show the tempo of an exercise or a piece. Then before one starts to play the piece, the metronome is turned off but the initial beat of the metronome is followed in the percussionist's mind. The player then plays the passage trying to stay in tempo as much as possible. When the end of the passage is reached, the recording is stopped. When the player starts to listen to the recording, the metronome is turned on to tap exactly with the beginning of the recording's metronome tempo. The metronome is then kept beating and the recording is listened and observed with the metronome beating the tempo. This way, one can hear immediately if the tempo is rushing or slowing down. My friend and colleague Edward Choi from the Seoul Philharmonic Orchestra in South Korea told me this practice method.

those beats.[52] After I have practiced the part in that way and feel comfortable with the pulse, I then set the metronome to sound on the 3rd and 6th eighth notes of the measure. In this way I can mirror the snare drum part against different beats.[53] The same kind of metronome practice works well for xylophone excerpts, and of course for all kinds of instrumental excerpts as well. When practicing Stravinsky's *Les Noces* excerpts on the xylophone, the aforementioned metronome practice works effectively. Another variation is to reduce the beats of the metronome to one beat per measure. At first, one's playing might be ahead or behind if the metronome beats, for example, only on the fourth beat of the measure.[54] But once one keeps repeating that metronome cycle and repeats the excerpt, something starts to happen and the excerpt's tempo becomes more and more precise in correlation to the metronome. I believe that this is a sign of the percussionist's internal tempo developing, and the excerpt becoming more familiar in a bodily manner.[55]

A good place to practice the reduced beat technique and increasing the internal tempo in *Etude Les Noces* is, for example, in the C section starting in measure 35 (Fig. 11). The time signature is in 9/8 and the music is filled with 16th notes. Here, one can be very creative with the placement of the metronome beats. Adjusting the metronome to beat, for example, on the last sixteenth note of each dotted quarter note main beats can be very uncomfortable at first. Therein lies the brilliance of this kind of metronome exercise, because the written rhythm is explored from many different angles through the placement of the metronome beats. One

[52] Practicing a 4/4 time signature excerpt with a metronome beating on the offbeats, rather than on the main beats, is also an effective way of feeling the musical phrases differently.

[53] I usually repeat the 6/8 passage with the metronome beats on 1st and 4th eighth notes, and after that I re-adjust the snare drum passage in relation to metronome beats on 2nd and 5th eighth notes, and finally by playing the passage on the 3rd and 6th eighth note beats on the metronome. I practice in this way often, and I try to utilize this metronome practice method on a variety of pieces, for example on solo and chamber music repertoire as well as on orchestral excerpts.

[54] The tempo often starts to become unstable during rests. Keeping the melody of the music in mind is a very effective way to keep a steadier tempo.

[55] In other words, the bodily experience of the piece is becoming stronger, and the player can sense a stable tempo, and can observe whether the tempo is slowing down or getting faster.

has to make the music fit and flow well in relation to the metronome. When performing the piece without the metronome after doing this kind of metronome practice, one will find that many different aspects of the music's characteristics have been discovered and learnt.

Internal tempo is very important, especially in orchestral auditions, where one rarely plays with anyone else. Most of, if not the entire audition is played solo, so if the tempo is not solid the audition panel will hear it quickly.[56] The three basic pillars that have to be absolutely precise in an audition are: the time (i.e. tempo), intonation—which in percussion only applies to timpani—and the rhythmic integrity,[57] which shows that the candidate has the technical abilities to control the instrument.[58]

In the context of playing in a symphony orchestra or in another ensemble, there are different kinds of approaches to the feel of the tempo and rhythmic execution, when playing one's own part. Some players like to play on top of the beat, so that their sound will not sound behind to the audience in front of the orchestra. Some of my colleagues who have studied in Germany like to play very actively on top of the beat. I also know a very successful German timpanist whose sound attack is often the first in the entire orchestra. If the other musicians of the orchestra are not used to it, it might not be very pleasant for them to play together and adjust their tempo to the active tempo of the percussionist or timpanist. David Herbert, the principal timpanist of the Chicago Symphony Orchestra, has said that being early is like a mortal

[56] An audition moment is demanding, and will likely cause nervousness in candidates. The elevated awareness and stress put these qualities under more pressure, so they have to be practiced extensively during the practice process. Mock auditions are excellent ways to generate an audition-like setting multiple times before the actual audition. The candidates that can stay calm and relaxed, especially when playing soft excerpts on snare drum or xylophone—which utilize the tiny movements from muscles to perform extremely intricate patterns on instruments that can produce very loud dynamics—will have a significant advantage in the audition. When able to stay calm, one can concentrate more on the music and interpretation than thinking about the technique under pressure.

[57] I think of integrity in a rhythm context as a balanced and cohesive flow of rhythmic figures inside a measure or beats. Even if the big beats of the rhythm are in tempo, the faster passages between the main notes have to be in a clear and steady relation to the main beats of the measure. If the notes are uneven or rhythmically unbalanced, the integrity of the rhythm is compromised.

[58] Haaheim (2020).

sin in orchestral playing. It makes people upset, and he refuses to play early.[59] These days there are also many concert halls with a 360 degree audience placement around the orchestra. Playing noticeably ahead of the beat is risky. It is actually not a good idea to play ahead of the beat, because the audience at the back might be thinking, why is that percussionist playing so early? In fact, it can disturb the audience's enjoyment of the music. Playing ahead of the beat stems from playing in acoustics with lots of echo, like in churches. The older style 'shoe box' concert halls also situate their audience only on the front side of the orchestra. The ideology for timpanists and percussionists to play a bit ahead of the beat in those kinds of halls, in order to match the timing of the other instruments at the frontal parts of the stage, has probably been the most important reason for that kind of tempo treatment.

6.2.3 Listen to the sound you are producing

Jason Haaheim, the principal timpanist of the Metropolitan Opera, said the following on a TAPS online masterclass about his core proposition on practice process:

"Our job as musicians is to vibrate air at people to make them feel a thing. Being effective at this requires refining your craft through lessons and practice. But many aspiring musicians make insufficient progress refining their craft… not because they're not 'talented', but because they never figured out how to REALLY practice. Once I put my mind to it, my unique background as a scientist predisposed me to figure out how to REALLY practice. Researcher Anders Ericsson coined it 'Deliberate Practice.' And here's the great thing: Deliberate Practice does NOT depend on innate talent. Rather, it depends on being tenacious and methodical, essentially applying the scientific method to the craft of music over a long period of time."[60]

[59] Herbert (2020).

[60] Jason Haaheim: TAPS Online Masterclass, My Core Proposition, JRH Timpani Seminar, April 29th, 2020. He worked as a nano technologist in a nano technology firm in Chicago for ten years. I was very fascinated by his presentation, and how he was able to make his ideas very clear to the audience. His message resonated in me, and

Carroll emphasizes that it is very important to strive to achieve the best sound possible by using the proper stroke techniques and striking the bars in the correct area. He also tells the percussionist to record and listen to himself or herself regularly, and to be very critical and demanding of oneself.[61] I agree with Carroll's point. It is very important to pay attention to sound quality during practice. A single factor such as the accuracy of playing the right notes and eliminating the wrong notes can sometimes take the focus away too much from the actual sound that is produced. However, the sound quality (along with accuracy) is of the absolute core importance in playing musical instruments.

These days, the top tier orchestras around the world play concerts basically 'mistake-free' in terms of wrong notes or not being 'together' while playing as an ensemble. Hence, it is often the sound quality, along with phrasing, that sets orchestras and players apart from each other. The importance of sound quality cannot be emphasized enough in the practice process, because it correlates automatically to the sound one produces and presents while playing with other people in ensembles and orchestras.[62]

When practicing *Etude Les Noces* and *Reflections on Petrushka,* the sound quality is naturally also an important factor. I prefer to play to the center of the bars as much as possible. It is not as easy to play in the centers of the bars, compared to playing to the ends of the bars, where the accidentals and natural keys are close to each other. However, the bar sounds more resonant in the center than when struck at the end of the bar. The timbre of the sound has

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I realized that I had followed in my own practice many of the points that he had made. The statistics that he presented about the likelihood of certain excerpts being asked in an audition made me think about my own practice process, in terms of using my time and choosing the ratio of practicing time divided between excerpts. It is advisable to spend more time on well-known standard excerpts, because they are the most likely to be asked to play in an audition, and often also in the first rounds.

[61] Carroll (2000, 6).

[62] In a broader perspective, many famous symphony orchestras in the world, for example the Berlin Philharmonic, Vienna Philharmonic, and Royal Concertgebouw Orchestra are specifically known for their sound. The Philadelphia Orchestra was also very well known for its darker and warm sound in the times of maestros Leopold Stokowski and Eugene Ormandy, who conducted the orchestra for nearly seventy years combined. Stokowski developed the concept of the 'Philadelphia sound.'

more presence in the center. The mallets also naturally have a huge impact on the sound. I like to play the *Etude* and *Reflections* with either rosewood mallets made by Playwood or Malletech's Becker BB32 plastic head mallets. I will review mallet types and my preferred mallet choices in chapter 6.3.3.

6.2.4 Use a mirror to check hand positions, stroke techniques and mallet heights

This is a continuation of the previous point, as stroke techniques, hand techniques, and mallet heights affect the produced sound when the instrument is hit. It is interesting to utilize the above-mentioned techniques and observe how the sound changes. When playing different kinds of scales and *arpeggios* on the xylophone, it is essential to keep the stroke heights identical between the hands to achieve evenness of sound.[63] However, when practicing *Etude* and *Reflections* I regularly change the stroke heights and the intensities of the strokes to be able to create various sound colors, which are the building blocks of phrasing.

Using a mirror while practicing non-pitched instruments and timpani is much easier to do than when playing pitched instruments like the xylophone. Mallet players have to keep their eyes on the music and the xylophone bars a considerable amount of time while playing, to ensure the best note accuracy. However, it is a good exercise to watch your hand movements in a mirror, even on the xylophone. The exercises should be quite simple when doing a mirror practice on the xylophone. The main focus should be to watch the hand and arm movements. When practicing looking down at the keyboard after doing a mirror practice, the note accuracy might become enhanced and the overall performance might feel more comfortable than

[63] Practicing scales is vital for learning the technical intricacies of musical instruments. Classical musicians often mainly practice the major, harmonic-, natural-, and melodic minors. I think that it is very useful to also learn and practice the two whole tone scales and the two types of octatonic scales per each note. The familiarity and knowledge of scales helps to see their connections to chords, and the scales also help develop a melodic sense in music.

before.[64] For xylophone practice, video recording oneself is the most effective way to observe the mallet and hand movements. In addition, many aspects of phrasing, dynamics, and the overall feeling of the music can be observed effectively through watching and listening to the camera recording. A slow motion camera is also an excellent tool to hear the rhythm accuracy and to see the movements of the mallets in slow motion.

6.2.5 Practice on a regular basis

This is the most obvious point, but still very worthwhile to mention and discuss. In my opinion, the best results in playing are achieved with consistent practice. Mental practice is also very much recommended today by many performers and educators, for example by innovative sports and performance psychologist Dr. Don Greene.[65] Carroll also emphasizes that "it is much more productive to practice daily for an hour, as opposed to practicing once or twice a week for a few hours."[66]

One of the reasons that this is so important is that there are so many instruments and techniques to focus on as a percussionist and timpanist. As mentioned earlier, I think that

[64] Sight-reading practice also helps to map the keyboard mentally without looking down at the keyboard. An excellent sight-reading exercise is to read and play an entire piece of music without looking down at all at the keyboard. The gaze is kept only on the printed music on the music stand. The note accuracy is then dependent on peripheral vision and muscle control.

[65] I attended two of Greene's Q&A sessions on TAPS online masterclasses in April and May, 2020. Greene has written books about performance and audition preparation that helped me to change my music career. Especially his numerous methods for mental preparation and practicing for auditions and performances have been extremely helpful. He has worked with numerous musicians, and has taught at the Juilliard School and at the New World Symphony in USA. He holds a Ph.D. in psychology from the United States International University.

[66] Carroll (2000, 6).

making a practice schedule is a very important thing to do. Here are some of the things that I practice regularly on xylophone: scales, *arpeggios*, etudes, excerpts, sight-reading, and solo pieces. It is practically impossible to put in good and thorough work on every major percussion instrument in one day. Therefore the most efficient practice is done by dividing the workload between different days. As a result, it is important to practice every day, as Carroll mentions. By doing so, the percussionist can continuously develop skills and repertoire on several percussion instruments during a certain rotating time period.[67]

When practicing *Etude* and *Reflections*, it is worthwhile to play the pieces in contrasting ways, so that one does not get stuck to a carbon-copy practice session ritual each time. The aforementioned metronome practice, sound and video recording, stroke technique, and mallet height observations are all excellent ways to add new viewpoints and aspects to practicing. To keep the interest going in the practice, I often use dynamic experimentation and various kinds of mallets. The dynamic experimentation includes playing entire sections in a *pianissimo* dynamic to alter the feel of the music in my hands. This process also makes the brain reflect the music differently, which can lead to new and surprising phrasing ideas when going back to the written dynamics. Varying the use of different kinds of mallets gives the music new spice that I might not experience otherwise. Even though I would not change my preferred mallets for the performance, other mallets can generate new timbres for the practice sessions, thus making them more interesting than just practicing with the same mallets all of the time.

6.2.6 Allocate your time properly

According to Carroll, each practice session should include the three following categories of work: a warm-up, the lesson plan, and sight-reading. A warm-up should consist of playing slowly repetitive patterns such as scales and *arpeggios*. It is important to start the warm-up in a relaxed way, so that the muscles have enough time to get ready for the more

[67] I only take a break from practicing when I am on a holiday. Even then, I often have my sticks and practice pad with me to do warm-ups and short technique practices, as well as reading through upcoming concert repertoires.

strenuous passages later on in the session. I find that practice sessions can sometimes become quite physical, if there are a lot of fast passages in the music that require polishing and metronome work. When I start to practice *Etude Les Noces* or *Reflections on Petrushka*, I do a thorough warm-up. I always do hand and body stretches even before picking up my mallets. I feel that I can get the most out of myself when my body is warmed up. The preparation routine is also important mentally, before stepping in front of the xylophone. In a way, the focus gets shifted to the practice mode and non-musical thoughts make way for the music.

Carroll's second part of the practice session is the lesson plan. During the lesson plan the focus is on the repertoire that is being prepared for lessons and upcoming concerts and/or auditions. I consider this part of the practice session to be the most important of the three parts. It requires concentration and self-critical observations to gain the best possible benefits. The practiced pieces can be excerpts, etudes, solo pieces, or chamber music. Carroll emphasizes that during this part of the practice session it is essential for the percussionist to play slowly at first with a metronome, and after a passage is going smoothly and well, one can increase the tempo gradually to reach the desired tempo. The final part of the practice session is sight-reading, where a percussionist plays through unfamiliar music at a steady tempo.

In a nutshell, the whole three-part session starts with a warm-up that literally warms up the player. I believe that the warm-up also develops the percussionist's technique in the long run, when it is done every day before practicing the pieces. The lesson plan then develops the repertoire that is being practiced for a lesson, concert, rehearsal, or audition. The sight-reading section develops the musician's capability to absorb new musical material through reading a lot of music. The skill level of one's sight-reading will also improve when practiced frequently. Carroll emphasizes in the practice routine that "practice does not make perfect. Correct practice makes perfect."[68] Also, "keep in mind that the reason you are practicing is not merely to play the notes, but ultimately to make music."[69]

[68] Carroll (2000, 6).

[69] Carroll (2000, 6).

6.3 Elaboration on the practice process, based on Carroll's points

The following points are a continuation of my own thoughts on the practice process, which I already began discussing in the previous chapter based on Carroll's points. When practicing a challenging passage In *Etude* or *Reflections*, I play it first with a metronome at a very slow tempo. In this way a bodily experience is developed and achieved in the long run, striving for a deep embrace of the musical textures. I enjoy the fact that I can put the music under a microscope and zoom in to the atomic levels of the passages. In short, I want to be in control of how my hands and body move, and how they reflect the music. I also want to give my mind some time to process all of the information as broadly as possible. This gives me the opportunity to devote my full concentration to the process. In doing this, I am able to explore the building foundations of the music at hand, when everything in the music is moving at a slow pace. At that moment I can listen to myself and understand and evaluate where the music flows well, and which might be the individual places in the music that could be brought out more or performed differently. As mentioned previously, using a video recording will provide additional help after playing the passages. I am curious to know how my body interprets the musical messages and how my body moves in between the notes. Because many of the percussion instruments are big and quite physical, the movements around the instruments are key factors in musical and technical challenges.

The practice process continues by increasing the speed by one or two beats per minute until the printed tempo is reached. I also often record myself during the process, to be able to hear at an early phase how the phrasings, dynamic levels, and evenness of the strokes sound. This kind of practice process is very thorough, and by the time the performance tempo is reached, I feel like I know the passage well, both musically and technically. Some of the questions I like to ask myself during the practice process include the following: are the individual dynamics of the notes in relation to others too loud or too soft? Are some of the notes possibly unbalancing the melodic line in terms of their dynamic impacts? Are the lines of the phrases clearly audible? What is the musical message in this part in terms of mental association? What kind of visual thoughts does the music awake in me? How can I communicate the visual images through the instrument, and how can I get a feeling of

becoming one with the instrument?[70]

Every xylophone is unique, and the tone balances of the instrument can sometimes result in some notes sounding more resonant or muted than other notes, even if played with the same strength. This results in the effect that louder or softer sounding tones can influence the sound of a musical phrase. To prevent this from happening, certain procedures can be followed. When I detect this, I often start to play the tone that sounds louder or softer and improvise with that tone and other tones surrounding it. The purpose of this practice is to get a clear picture of how much the tone's sound differs from the other tones in its vicinity. My goal is also to program my body to take that into consideration when playing an orchestral part, an exercise, or an etude. For example, if a muted sounding tone is an F sharp in a D major scale, I try to think about the F sharp in a similar balance as the other tones. The focus of the process is mental, and can take a little while to adjust to. I also try to solve it physically. I experiment, so that if I play the muted note a bit louder, will it sound in balance with the more resonating tones. Understanding the instrument's possibilities and limitations can bring new musical ideas to the percussionist. Recording and listening to the phrases also helps the percussionist to polish the dynamic balances of the passages.

6.3.1 Practicing an orchestral mallet part on a tight schedule—six steps

In the previous sections, I have focused on effective practice methods with a longer time horizon. These points were based on Raynor Carroll's brief practice advice tips, which I expanded on with my own thoughts. In this part of the text, I will go deeper into my own thoughts and cover the preparation and practice processes in my own performance approach. Another matter not yet discussed is how to prepare a piece of music quickly, particularly for a mallet instrument like the xylophone. Musicians may occasionally find themselves in a situation where they face a sudden change in personnel, or a newly discovered and challenging mallet part surfaces in a symphony orchestra's music library, from a publisher, or from a composer. In

[70] Greene has also pondered this question recently. He thinks that becoming one with the instrument is absolutely possible. Greene (2020).

these instances, one might have to prepare and perform the new part in a short period of time. For these kinds of situations, I have a plan that I use, which is outlined below.

1. Go through the part and check which points in the music need the most practice time. In other words, make a quick evaluation of the part's degree of difficulty.

2. Check the tempo markings and search the internet to see if there are recordings of the composition available. If you find recordings, listen to the piece while reading the music, without playing at first. Find out if there are challenging general pauses, *accelerandos*, *ritenutos*, or *rubato* sections in the recorded interpretation. Check if the recording matches your part in those aspects.

3. Start practicing the piece slowly with a metronome. Because there is less time to work on the part than usual, one has to focus really hard and try to start increasing the tempo as soon as possible. In this practice session, try to find melodic patterns that are repeated later on in the music. In this way, one can start to familiarize the part and make a mental map of the musical events in the piece.

4. Make stickings[71] in the part. When there is little time to practice the part, making the stickings is very helpful. Go through the pattern several times, and try different sticking options. Think and consider, which stickings are the best for a passage if it has, for example, a lot of fast 16th notes. Is it better to play double notes on one hand to be able to land on the stronger hand at the end or beginning of a passage, or is it better to try to play alternating strokes as much as possible? Doublings are often used to avoid crossing over the hands, which would otherwise be played with alternating hand-to-hand stickings. This can help make the phrase smoother and more even. On the other hand, playing with alternating strokes may feel more solid, enabling the player to keep a better time in the music.[72] While going through the stickings, try to form a

[71] For non-percussionists, sticking is a term used to indicate whether a note is going to be played with right or left hand.

[72] I always make the stickings based on the music at hand. I use both of the systems to get the best possible results. Alternating strokes and doublings work very well in different kinds of melodic passages, so it is a good idea to utilize them both.

phrase structure of the music. Different stickings have the ability to emphasize phrases and melodic passages in different ways. This gives the player the ability to express different kinds of musical characters by incorporating varying stickings and stroke types. Make a decision on the stickings. Choosing the stickings and considering different alternations should be decided fairly quickly, because the time to prepare the part is limited. Then, when musical ideas are added on top of the stickings and music, an interpretation starts to form in the performer's mind.

5. Add other instruments' cues and entrances to your part. This is very important. If there is no recording available, try to obtain a score for the piece, so that you can make notes in your own part and see from a larger perspective what is going on in the music, who is playing with you, and who you should be listening to with extra attention.[73]

When one jumps in as an emergency substitute, for example in a symphony orchestra's dress rehearsal, it is very important to be able to follow, and to know where the music is going. The dress rehearsal is often more-or-less a run-through of the pieces. If the available preparation time before the dress rehearsal is short, it is crucial to write cues in the music, in order to be able to play and execute the part as well and musically as possible. The conductor will probably stop the music and take the passage again if he or she hears that some parts are missing, but naturally one should try to avoid being lost as much as possible. On top of that, if one can add musical nuances and not be afraid to show their understanding of general phrasing concepts in music, it is a very convincing and mature way of performing. The conductor and your fellow musicians will notice it quickly, and they will feel more relaxed about having a new substitute musician playing a part in the dress rehearsal. In fact, in orchestral and ensemble contexts the conductors often ask musicians to shape their melodic lines and make little emphases in the music. Listening and reacting to musical influences from other musicians, and not just simply following the conductor's beat, is also a very important chamber music skill in orchestral performance.

6. Try to maximize your practice time. During this process, being able to practice as much as possible is of utmost importance. It is crunch time, where you have to push your endurance and focus to maximum short term efforts. The more you can practice the mallet instrument

[73] Score study is also important in the regular preparation process for rehearsals and concerts.

passages, the more your body and mind will adapt to the part. The muscle memory starts to improve in relation to the part, which in turn helps the playing process with the orchestra. In the dress rehearsal, one has to follow the conductor, subdivide the beats in one's mind, and—most importantly—listen to the other musicians. If your muscle memory already has a good grasp of the part, it is much easier to follow the musical information coming out of the orchestra.[74] After the hard work is done, it is also important to relax and rest before the concert, so that one is able to have as much energy as possible to focus during the performance.

[74] Percussion instruments, excluding hand drums, finger drums, and concert crash cymbals (also known as piatti), are the only instruments where the sound is produced without touching the instruments with one's bare hands. The instruments are played with sticks and mallets or metallic beaters. For example, a xylophone player plays the instrument by hitting the xylophone with mallets. Visually looking at the bars and muscle memory are important factors in performing successfully on the instrument. To me, this is also an important psychological factor. Because percussionists do not have a direct sensation of touch with the instrument when playing, we should emphasize and visualize being one with our instrument, creating an image of a connection. Sometimes I feel jealous of the fact that other instrumentalists get to hold, even almost hug their instruments while playing (particularly the cellists and double bass players). The visual connection between our instrument and the music sheet is very important. The xylophone player has to look at the keyboard as much as possible to achieve an accurate execution of the music. On the other hand, the music part is often not memorized, which means that the player has to develop sight-reading skills to be able to see the keyboard through their peripheral vision. Many professional percussionists highly emphasize the importance of sight-reading skills. It is possible to practice and develop one's peripheral vision substantially through repeated practice. One of the best ways to practice this is to play and read music on a mallet instrument without looking at the keyboard at all. In this way, the two crucial elements of sight-reading, peripheral vision and muscle memory in relation to the keyboard, will become enhanced. Often, one does not have a lot of time to learn new parts. Concert projects with many pieces can also represent an almost insurmountable task without good sight-reading skills. Sight-reading is also often required in auditions for percussion and timpani positions in North American symphony orchestras. Additionally, a xylophone player has to be able follow the conductor's directions in rehearsals and concerts. This is an equation that could raise a question from a non-musician: how is all of that possible to process and manage while playing and making music?

6.3.2 Performing and musical visualization

I have been using visualization in my practicing and performing for several years. Because visualization is subjective, like music, it is not difficult to start creating one's own mental images based on one's own unique personal musical experiences. At first, it can feel a bit challenging to connect the music to a visual mental process, but after practicing it regularly the visual images will start to gradually appear in the mind. When I practice a new piece for the first time, I try to start feeling the mood of the music early on. At that point, I am completely open to whatever images the music might create in me. I do not try to force anything. When I practice, for example, a new marimba solo piece, I just read the notes and keep my senses open to the sounds coming from the instrument. I try to feel comfortable with my body movements and the feeling of the four mallets in my hands. Even if my goal is to learn the piece by heart, the first few days of practicing are spent reading the music and exploring its phrasing possibilities.[75]

My personal visualization process is different when considering *Etude* and *Reflections*. Because I composed the pieces, I worked on them at the grass roots level, deciding which notes to write and how they should be notated, and so on. On the other hand, when I practice the pieces now, after having finished them only a little while ago, the memories and feelings from the time of the composition come to my mind. It is almost like a time machine trip. Some sections in the pieces already formed visual images in my mind during the composition process. For example, in *Etude Les Noces* the double stop passage in measures 151 to 154 represent to me a river landscape during a summer night's sunset (Fig. 22). The representation is very personal, with archaic tonalities and centuries old voices that surface into our time through the music.

[75] Unfortunately, this kind of preparation is often not possible. While preparing an orchestral part, I regularly have to be as efficient as possible due to time constraints. In those cases, I practice the part as efficiently as possible before the rehearsals start, and then keep fine tuning it during the week of orchestra rehearsals, trying to polish the part and make adjustments based on the information that I heard in the other musicians' playing.

I use visualization in practice in two different ways. Firstly, one can go through the piece in one's mind, following the score and notes in the mind as well as possible and 'hearing' the music. The aim of this process is to learn to 'play' the piece in one's mind without the instrument. This is a very helpful way to learn a piece more thoroughly than just by playing it physically on the instrument. The other way, which I have been discussing so far, is the emotional visualization that creates an image or a feeling in the mind, which can help to associate the music on a deeper level with a unique and personal image or a story. This is an effective tool in making the expression of the piece more musical. It can also make the conveyed musical message more vivid and strong for the audience during a performance.

I have discovered that these images start to come to my mind instinctively when preparing a piece. After I have learnt the notes of the composition, I go deeper into the music by using visualization and theoretical analysis. The theoretical analysis gives me a map of the harmonic movements of the music and the structure of the composition. It also helps me to decide which notes are important and which notes are accompanying the main line. When I do the theoretical analysis, I do not go through every note, chord, or sequence, but rather get an overview of the movements of the music and its specific harmonic and rhythmic tendencies.

These visualizations guide me emotionally in the music. To me, visualization and the theoretical analysis are like yin and yang, the two inseparable and contrasting parts of the whole. These two main themes guide me in my practice and preparation process, also providing me with guidelines on how to develop the interpretation. I think that the understanding of a piece is not complete without the analytical and emotional sides. When I get a mental image that I like, and that I think fits the energy of the piece, I start to develop it. When listening to my practice recordings of the piece, I expand the visual image's qualities and try to make it as detailed as possible in my mind. I usually have a single picture in my mind for a rather long part of the piece. If it is a single movement solo piece, I create an image based on its structure. If the piece has two clear parts, I use two visual images that change when the music changes to another part. The visual image often has a curious and profound atmosphere. Sometimes it can be more of a hazy picture with more emphasis on a strong mood.[76] When I think about pieces

[76] I feel this to be the case when performing baroque music. In my percussion duo work with Swedish percussionist Bo Håkanson, I experienced a strong mood and energy in playing Johann Sebastian Bach's *Goldberg Variations* on two marimbas. In the 20th century music and contemporary pieces, I associate the music better with

that I have played, oftentimes the visual images refer to nature. Many times, the visual images have extensive scenic settings that include forests, rivers, seas, and the sky. I feel a strong connection to them, and they quickly infuse their influence into the music. The stronger the emotion with the image is in my mind, the more I can reflect the emotion through my performance. Through that process, I can let my individual message of the music come through me.

6.3.3 Choosing the xylophone mallets

The number of different kinds of mallets and sticks that are available today is vast, with new models being made and designed continuously. There are many mallet companies all over the world that make mallets with fine gradations between the hardness and weight of the mallet models. One can gather a palette of sound colors that has a plethora of different nuances and seamless differences between the mallets. There are many mallet options for solo and orchestral performing contexts. In addition to these mallet choice options, a xylophone player's ability to vary the stroke types adds another level of timbral possibilities to their playing. Combinations of finger strokes, wrist strokes, and arm strokes form the vocabulary of the xylophone player. Additionally, the grip and fulcrum point on the mallet, and the angle and height of the strokes, determine the aspects of the sound quality. By applying one's musical knowledge to the choice of stroke and specific mallet, one can create the most suitable sound for each musical situation. I prefer the sound of wood mallets compared to plastic mallets on the xylophone for most orchestral excerpts. On the other hand, when I play ragtime music as a soloist, I often use plastic Bob Becker mallets made by Malletech. The tone color is a bit darker and rounder with the plastic mallets, compared to the wood tipped mallets.

There are also different kinds of wood mallets, with smaller and larger wood tips. The size of the tip changes the playing feel and balance of the mallet, and also affects the sound color. I usually do not play very soft dynamics with large wood tipped mallets, because of the

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a visual image. Perhaps this is influenced by post-tonality and the importance of non-pitched sounds and irregular rhythms in 20th and 21st century music.

mallets' feel and balance. A mallet with a small wood tip is usually better for soft dynamics, because it is easier to control. The soft dynamics between smaller and larger tips does not effect timbre as extensively. Other factors that influence the balance and feel of the mallets include the shaft lengths. I like short shafts on xylophone mallets. My hands are big, so to me the shorter shafts feel agile in my grip. Interestingly, many of the xylophone mallet models these days do not have short shafts, but are usually medium or medium-long in length.

I usually hold my mallets in approximately the same place, whether the mallet is longer or shorter. My hand grip's distance to the tip of the mallet is the same regardless of the shaft's length. This is because of the balance of the mallet. It is important to think about and find a spot on the mallet where it feels most comfortable and natural. The longer and shorter shaft mallets also have certain advantages when compared to each other. As mentioned above, the shorter shaft mallets are more agile than the longer shafts. One might also get a sensation of better control when playing with the shorter shaft mallets compared to the longer shafts. On the other hand, when playing with longer shaft mallets, one can take advantage of the mallets' length to, if needed, produce extremely loud and piercing dynamics by holding the mallet close to its back end. In this way the performer can produce a large amount of volume with a large arm movement, and generate more energy when compared to a wrist or a finger stroke. The mallet also travels a longer distance in the air when held from its back end, and in the process gathers more kinetic energy than when held from the normal hand grip position close to the center.

Because the balance changes between mallets of different lengths and weights, it is a good idea to practice pieces with many contrasting kinds of mallets. In this way one can become accustomed to new mallet types quickly, and the varying balance differences between the mallets will not confuse the xylophone player. Eventually one must make his or her own decisions about which kinds of mallets to use. Sometimes a conductor may ask in a rehearsal for different kinds of mallets, to produce specific sounds and effects. In those cases, it is important to have several different mallets ready, to be able to satisfy the musical wishes of the conductor.

7. CONCLUSION

This thesis is meant to be a guide and source of information for percussionists, and especially for university students, who are learning the xylophone excerpts from the core classical repertoire, in which Igor Stravinsky is a towering figure. My aim has been to explore the concepts of performance and preparation on multiple levels. Aspects such as playing technique, phrasing, and theoretical analysis, have all been considered here from the viewpoint of a performer and as elements of the practice process, in order to achieve as broad a view as possible for those who might take the path to become an artist and professional musician. I have striven to bring out the unspoken accumulated knowledge of my own thinking about xylophone artistry. It is a vast topic that takes many years to master. In this thesis, I have brought out the aspects and thoughts that I ponder regularly when preparing a xylophone solo piece or an orchestral part. I hope that this thesis will help other future xylophonists on their own individual paths.

The results of the thesis are 1) two new xylophone compositions by the author that are based on Stravinsky's xylophone parts, 2) a concise historical and developmental overview of the xylophone, 3) a discussion of the musical ideas reflected in the two compositions, and 4) a deep review of practice as a process. Practice process is a large area of study in itself, which could be a single topic for a dissertation. In this thesis, the practice process topic has been roughly divided into two aspects. Firstly, a detailed account has been given of how to practice effectively and how to prepare for a musical challenge—a solo piece, an orchestral part, etc.—

in a way that is as effective as possible. This is the case especially when working under tight time constraints. Secondly, a psychological approach to practice was examined, specifically regarding mental techniques where one creates certain musical images in his or her mind, and where the music is then visualized in the mind as a story. This approach has been very valuable for me for several years, and I have thus shared and discussed it in my thesis, hoping that it can also help others.

I may also develop my research results into a more formal practice method as a post-doc project, which will combine and further develop the aspects that I have identified during the process of writing this thesis. I am interested in combining this practice method with a collection of new original compositions, to be composed using the same approach as *Etude Les Noces* and *Reflections on Petrushka*. I would continue this composition process with Stravinsky's *Firebird* and Dmitri Shostakovich's xylophone parts. The new method could provide university level students a thorough viewpoint that could be applied effectively in their percussion studies.

This has been an honest account, providing advice as clearly as possible based on my own experiences and the ideas that I have taken in from many leading percussionists and pedagogues. I have worked as a percussionist on three different continents, and have amassed a considerable amount of information on music, especially in the field of percussion. This thesis is a synthesis of the knowledge I have gained so far on my path as a musician, and I offer it in the hope that it will help other students and professional musicians who have taken up the xylophone.

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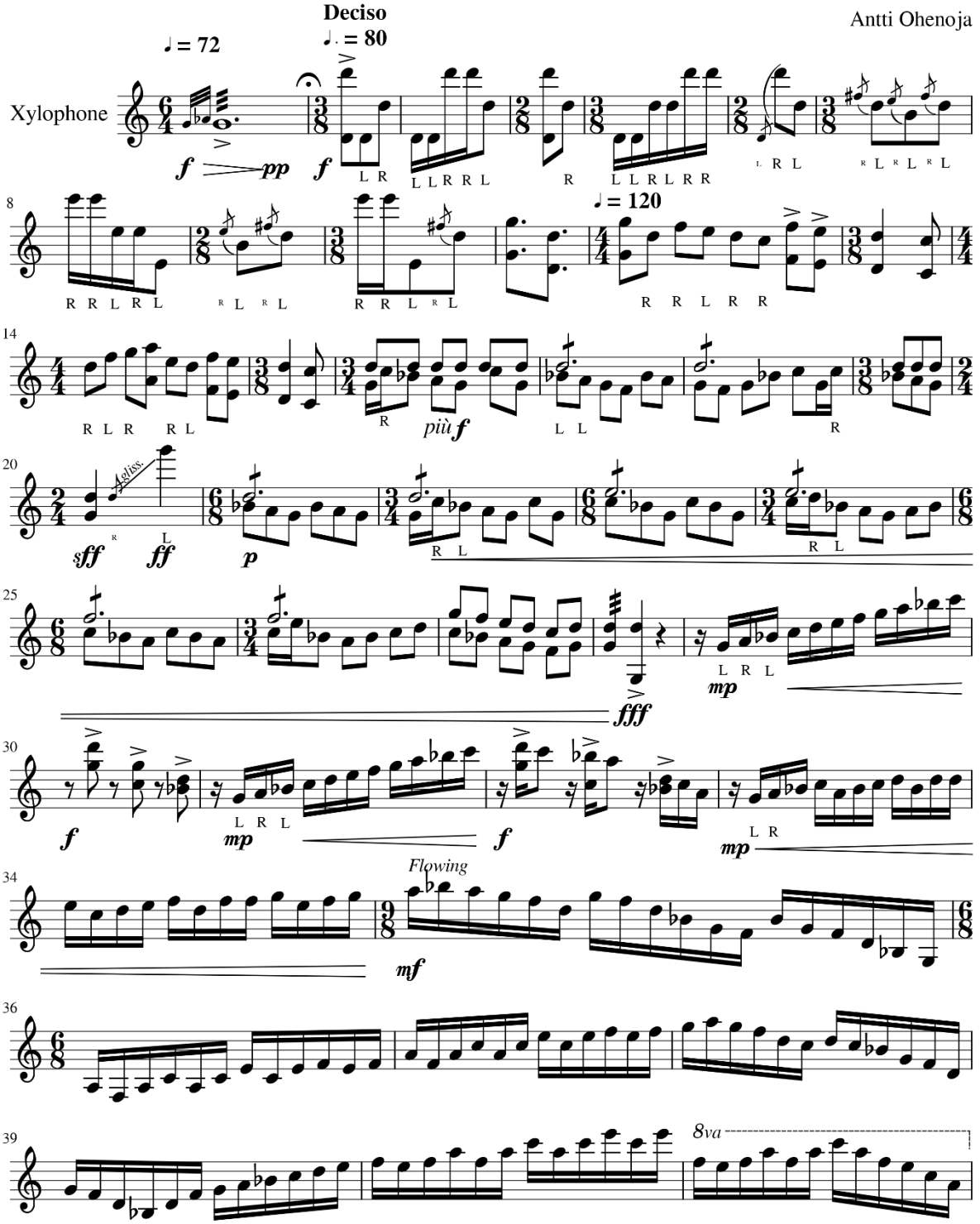
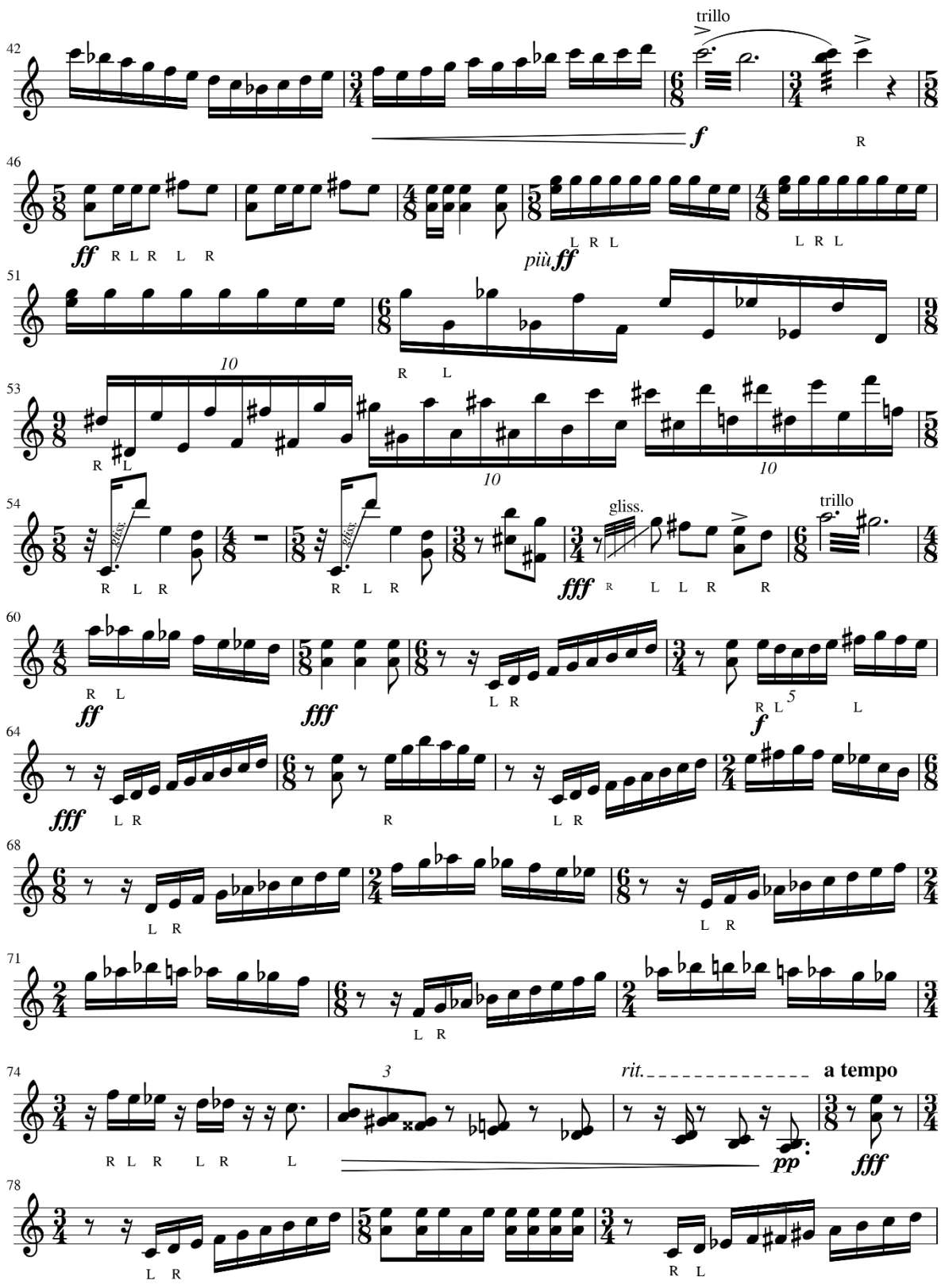
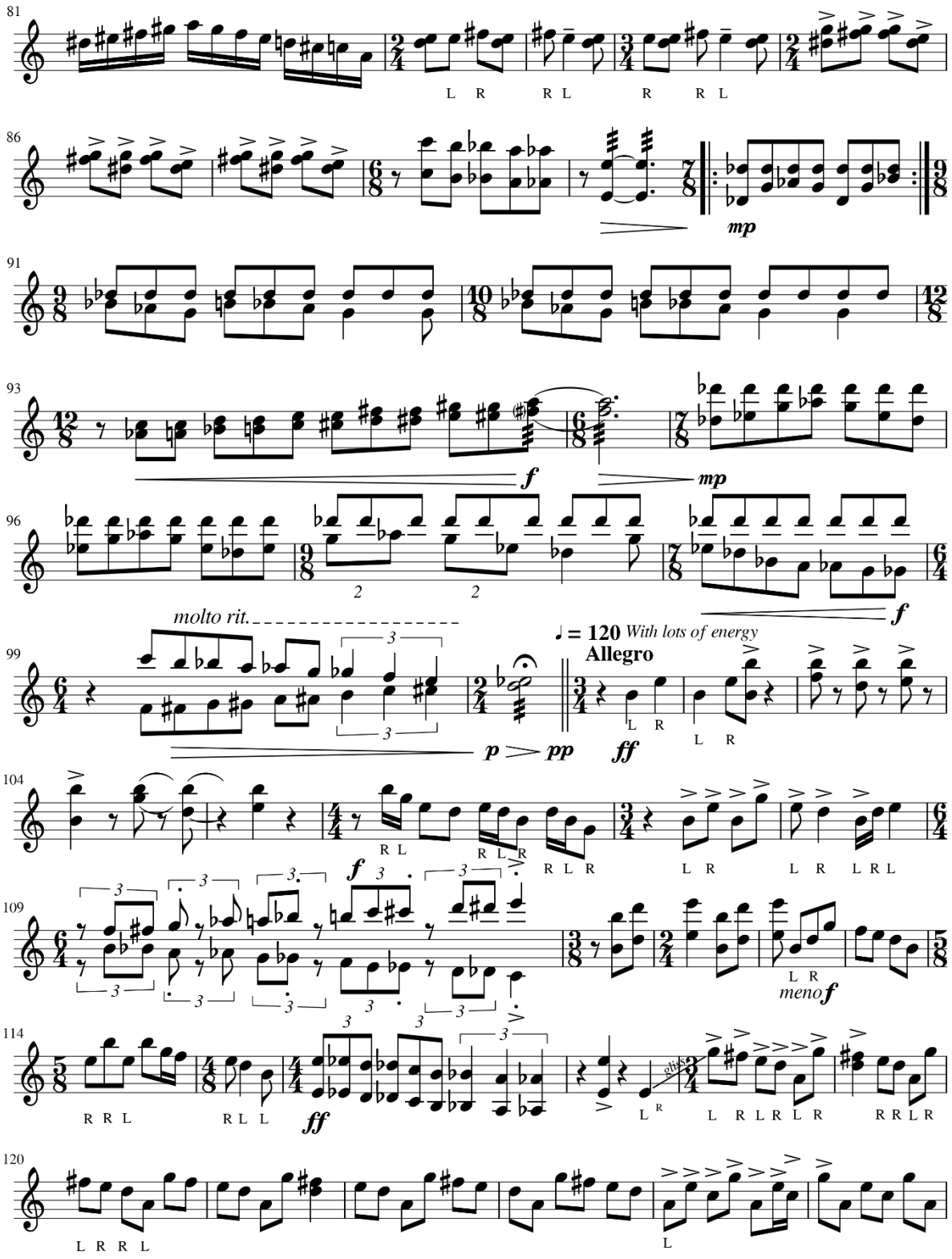
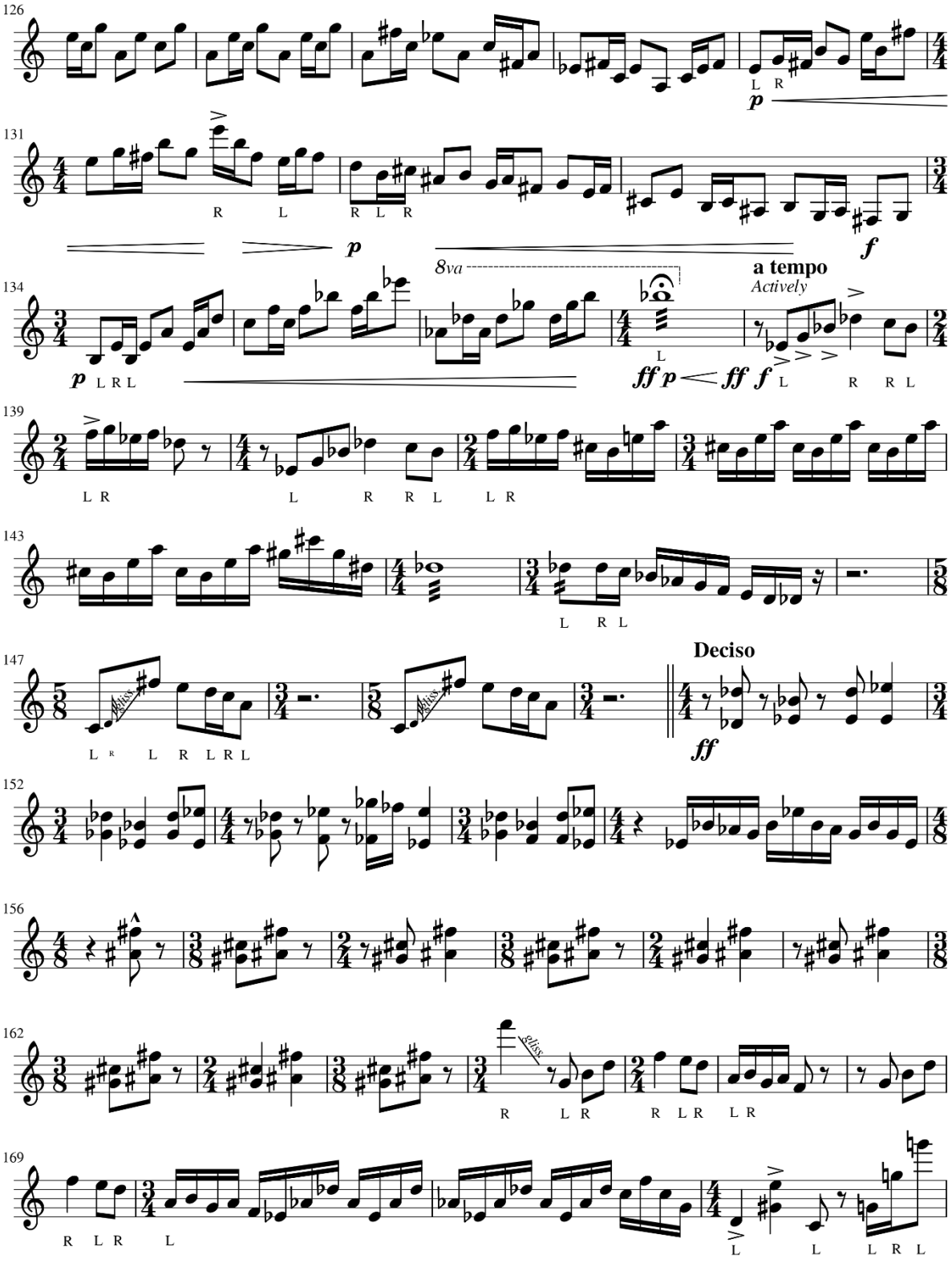
APPENDIXES 1 AND 2: THE SCORES OF *ETUDE LES NOCES* AND *REFLECTIONS ON PETRUSHKA*

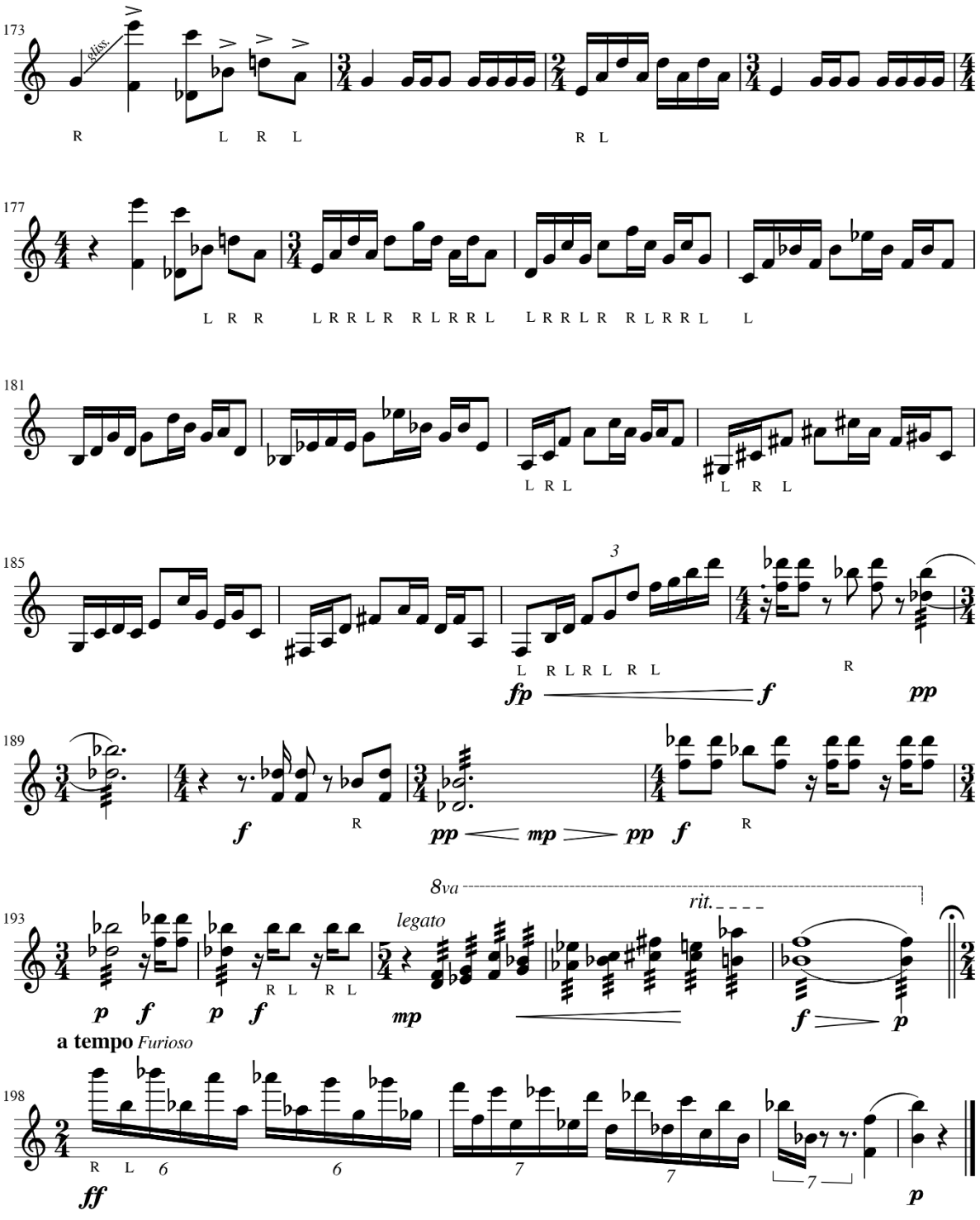
Etude Les Noces





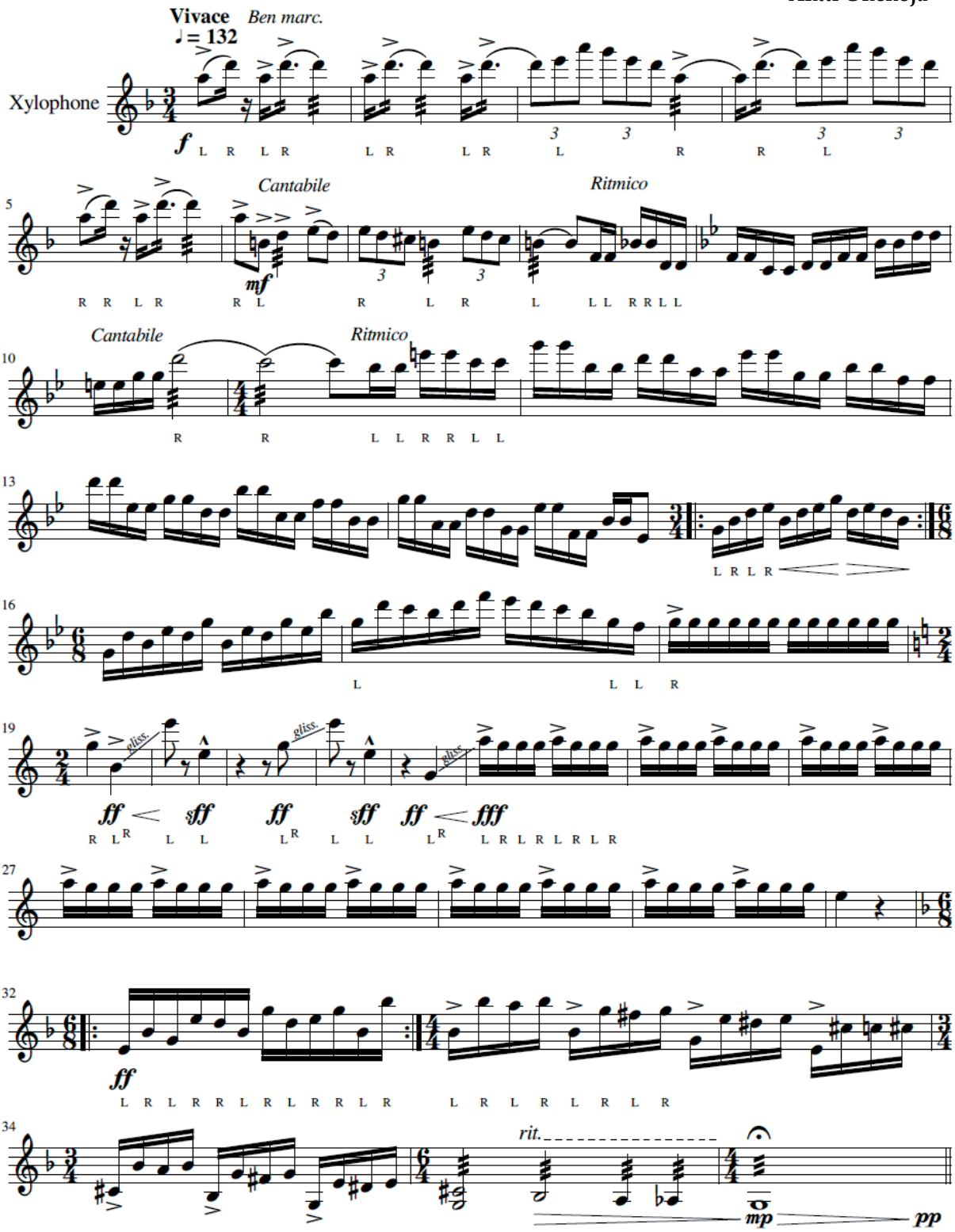


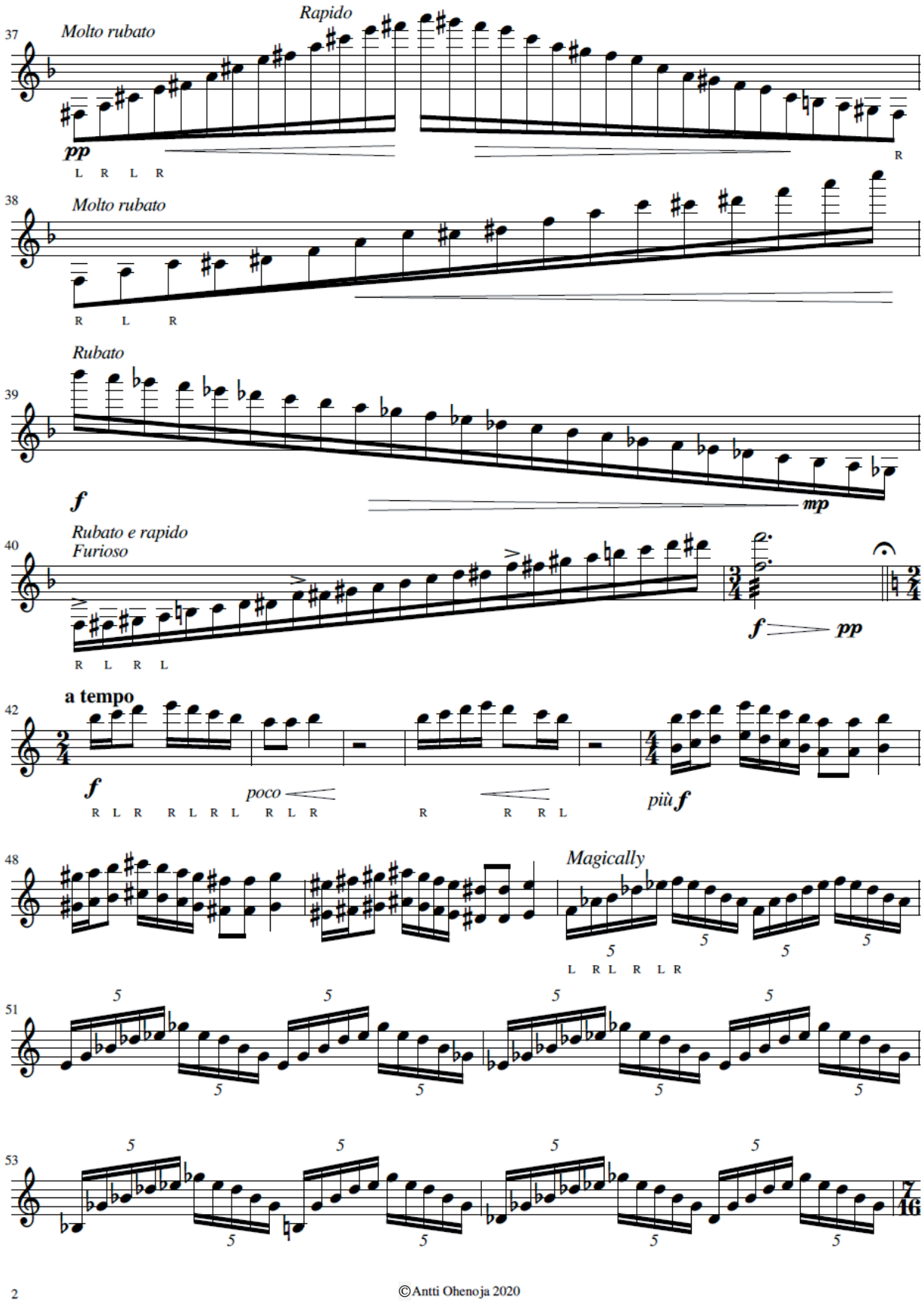


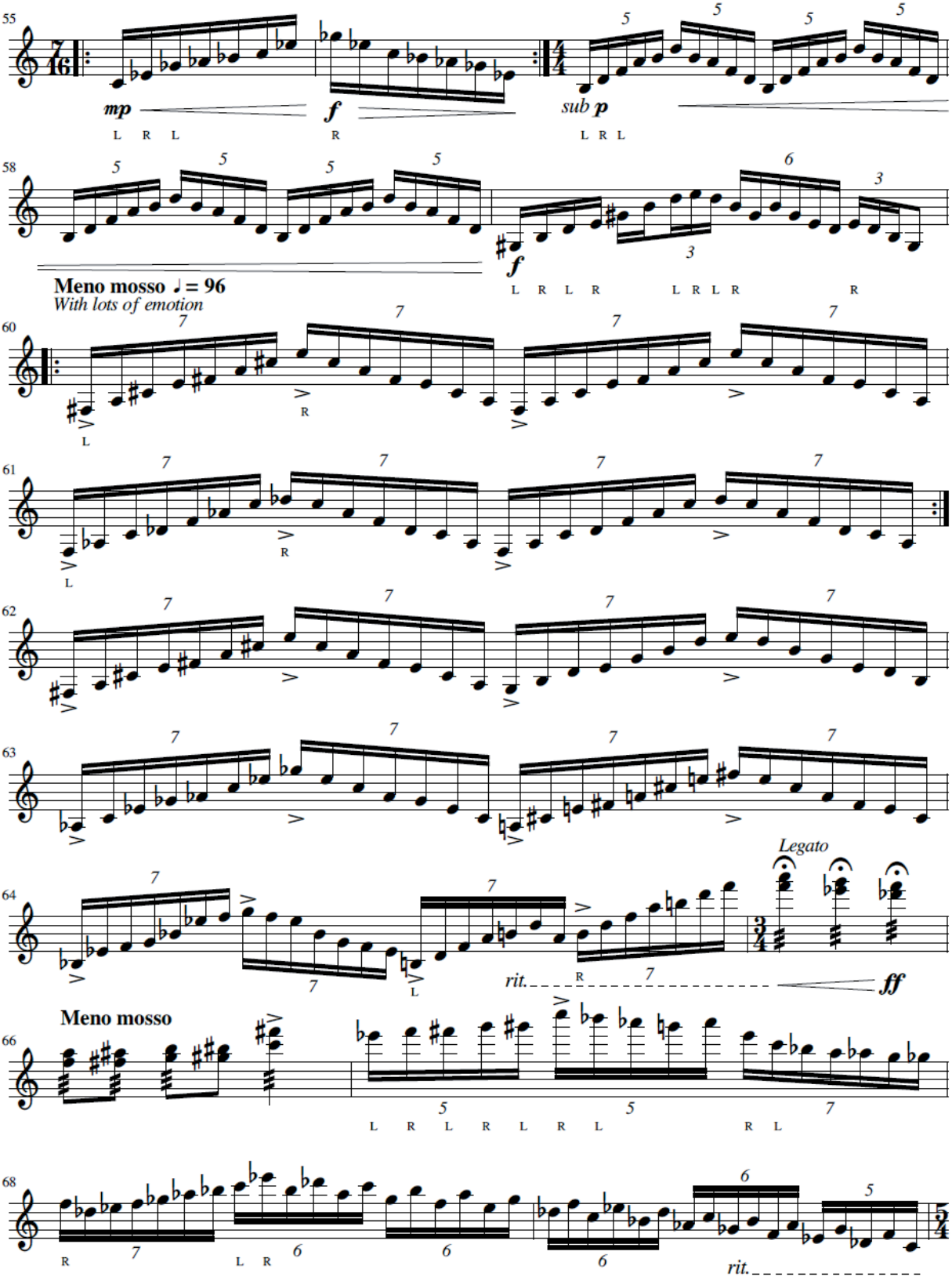


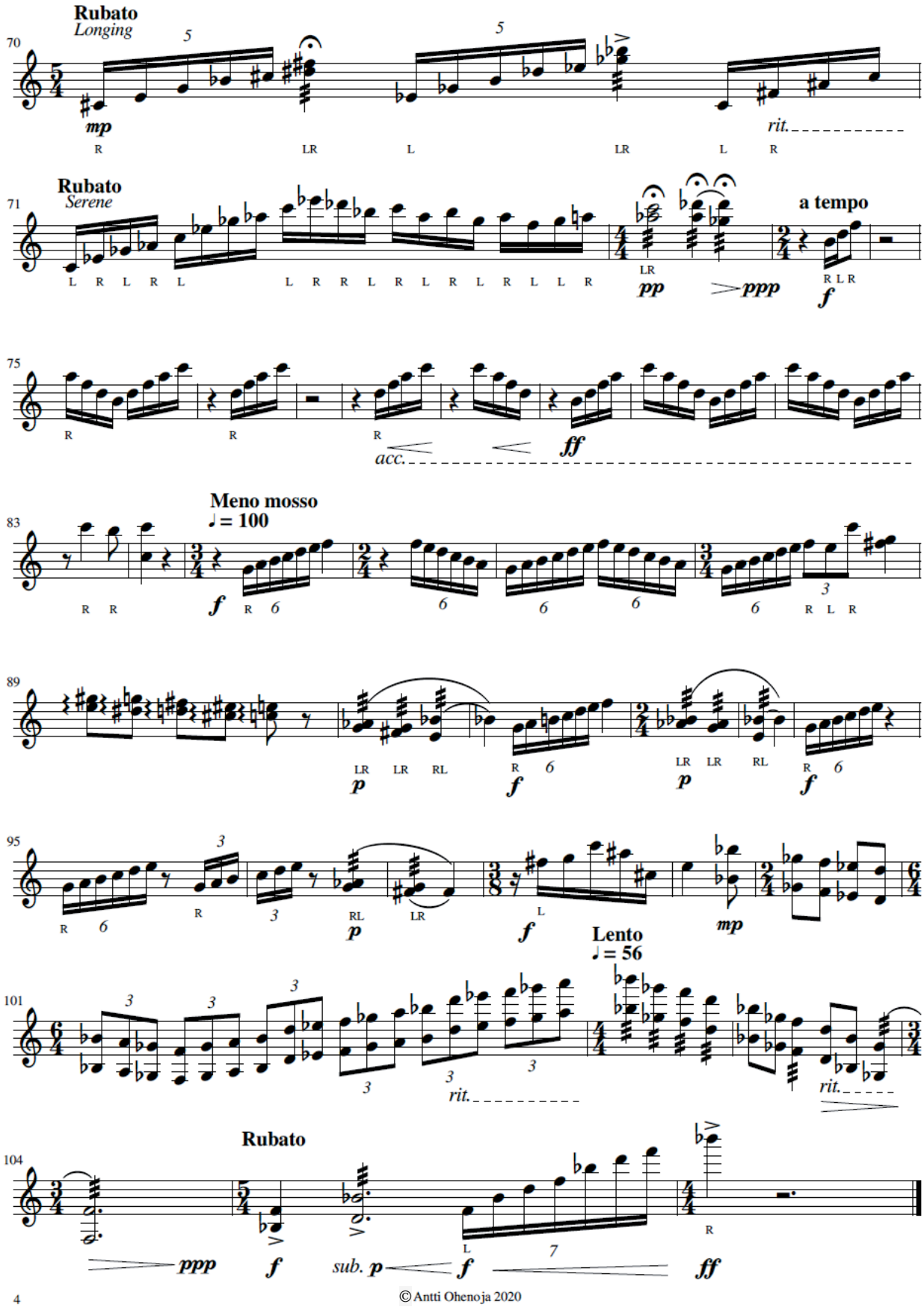
Reflections on Petrushka

Antti Ohenoja





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95
mp
Lento
♩= 56
101
rit.
Rubato
104
ppp
f
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ff
4
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I have been fascinated by Igor Stravinsky's (1882–1971) xylophone writing since I first heard it on recordings many years ago. Whenever the sound of the xylophone appeared in the music, I felt a sense of excitement and an immediate elevation of interest in the music. In my thesis I will review and discuss my own xylophone compositions, which I composed based on Stravinsky's xylophone parts of Les Noces (1923) and Petrushka (1911). My original compositions are designed to bring out musical possibilities in phrasing as well as to provide new viewpoints on interpreting Stravinsky's xylophone parts. The history and background of the xylophone will also be discussed. The final chapter of the thesis focuses on practice as a process, with the author's own viewpoints combined with ideas of some of the leading pedagogues and performers of the percussion field. I will also provide another perspective on my original compositions in the context of practice as a process.

EST 63

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