



ACADEMY OF MUSIC AND DRAMA

The Snare Drum Roll

Lúcia Viana da Silva

Independent Project (Degree Project), 30 HEC, Master of Fine Arts in Symphonic Orchestra Performance

Spring Semester, 2017

Independent Project (Degree Project), 30 higher education credits
Master of Fine Arts in Symphonic Orchestra Performance
Academy of Music and Drama, University of Gothenburg
Spring semester, 2017

Author: Lúcia Viana da Silva
Title: The Snare Drum Roll
Supervisor: PhD Maria Bania
Examiner: PhD. Tilman Skowroneck

ABSTRACT

Key words: orchestral percussion, snare drum, technique, roll.

Like most other percussion instruments, the snare drum was introduced relatively late in the symphonic orchestra, and major changes and improvements concerning its playing techniques are still taking place. One of the most distinctive aspects of the snare drum is the roll, which consists of a challenge that most percussionists face eventually during their career. This project reflects my research on the snare drum roll during the last two years, gives a short background of snare drum playing and its technical development, and provides observations and reflections of different techniques to play a roll. As a percussionist myself, I analyzed and practiced on the execution of rolls as part of the research. This project includes notes on my interpretation of four orchestral excerpts, showing how technical development and control over the roll open musical possibilities to the orchestral percussionist.

ACKNOWLEDGEMENTS

I would first like to thank my supervisor, PhD Maria Bania, who was always available and responsive to my questions and supportive of my ideas. Her enthusiasm and constant demand gave me the drive and encouragement for writing this thesis. Her input was determinant in the final result of this project.

I would also like to acknowledge the experts Roger Carlsson, Fredrik Björlin and Fredrik Tiger for their valuable contributions for my research, as well as the students in the percussion class at the Academy of Music and Drama, who very kindly helped me during this process sharing their own experiences and listening about my struggles and progresses.

I would also like to thank Alexandre Moreira for his great work with the video and audio recording and editing. Alexandre's skills and professionalism are the reason why I had the chance to include professional quality recordings in this project.

I am very grateful to the community of musicians in the facebook group *Orchestral Percussion Talk* for their huge adherence to my survey. This research would not have been possible without their participation.

Finally, I must thank my boyfriend and my family, for providing me with unfailing support and continuous encouragement during my studies. Thank you.

Table of contents

1	Introduction.....	7
1.1	The problem of technical improvement versus tradition.....	7
1.2	Purpose and research questions.....	8
1.3	Exercises and study books.....	9
1.4	Method.....	10
1.4.1	The survey.....	11
2	The snare drum roll – an introduction.....	13
2.1.1	A short snare drum history.....	13
2.1.2	Basic Concepts.....	15
3	Different approaches of percussion players on the roll.....	16
3.1	The Ideal Sound.....	16
3.2	Roll variables.....	16
3.2.1	Number of rebounds per stroke.....	16
3.2.2	The speed of the strokes.....	18
3.2.3	The motion.....	19
3.2.4	Moving the sticks across the head.....	20
3.2.5	Technical and physical difficulties.....	21
3.2.6	Preparing the drum.....	22
3.3	Roll Techniques.....	22
3.3.1	The arm roll.....	22
3.3.2	Roll technique according to David Valdés.....	24
3.3.3	Roll technique according to Fredrik Björlin.....	25
4	My learning Process.....	27
4.1	The roll as I learned it.....	27
4.2	Arm roll: learning process.....	28
5	Musical Context.....	31
5.1	La Gazza Ladra Overture, Gioachino Rossini.....	31
5.1.1	My interpretation.....	34
5.2	Capriccio Espagnol, Nikolai Rimsky-Korsakov.....	36

5.2.1	My interpretation	37
5.3	Scheherezade, Nikolai Rimsky-Korsakov	41
5.4	Symphony no.5, Carl Nielsen.....	43
5.4.1	Cadenza using different roll combinations	45
6	Final thoughts	46
7	Bibliography	47

Attachments:

Survey conducted by me about one's personal approach to the snare drum roll (form only).



Your approach with the snare drum roll - Google Forms.pdf

Video Recordings:

Video 1: Demonstration of the aural result of moving the sticks across the head.

<https://youtu.be/wjPnDOezAcw>

Video 2: Slow motion recording of a snare drum roll performed by myself on a practice pad before the research.

<https://youtu.be/geJKwWXIBsg>

Video 3: exercise from *The Roll for snare drum* by Emil Sholle.

<https://studentguse0->

[my.sharepoint.com/personal/gussillc_student_gu_se/_layouts/15/guestaccess.aspx?guestaccesstoken=kF5sM4WaMwu%2fA23jebWnpZe4iUKkRpkc7Pb0KhMJEgc%3d&docid=11d212b3ec32a4091bc4152e56226db8e&rev=1](https://studentguse0-my.sharepoint.com/personal/gussillc_student_gu_se/_layouts/15/guestaccess.aspx?guestaccesstoken=kF5sM4WaMwu%2fA23jebWnpZe4iUKkRpkc7Pb0KhMJEgc%3d&docid=11d212b3ec32a4091bc4152e56226db8e&rev=1)

Video 4: Etude no. 4 from *Douze Etudes* by J. Delécluse.

https://youtu.be/tID7_h5kyw8

Video 5: Excerpts from *La Gazza Ladra Overture*, by Gioachino Rossini. Snare drum part played by myself, overlaying a recording by the Royal Concertgebow orchestra conducted by Mariss Jansons.

<https://youtu.be/oTAUDUIyjG4>

Video 6: Excerpts from *Capriccio Espagnol*, by Nikolai Rimsky-Korsakov. Snare drum part played by myself, overlaying a recording by Berlin Philharmonic Orchestra conducted by Zubin Mehta.

<https://youtu.be/CmoxASAZkv8>

Video 7: Excerpts from *Sheherazade*, by Nikolai Rimsky-Korsakov. Snare drum part played by myself, overlaying a recording by Saint-Petersburg Philharmonic Orchestra conducted by Yuri Temirkanov.

<https://youtu.be/G9mdtY4Ffcg>

Video 8: possible *cadenza* for Nielsen's 5th Symphony using different aspects of the snare drum roll. Performed and conceived by myself.

<https://youtu.be/bevmOwLVFi0>

1 Introduction

1.1 The problem of technical improvement versus tradition

Ever since history can tell, percussion instruments were used by mankind in various contexts. However, percussion was a quite recent addition to symphonic music and very lately developed when compared to other symphonic instruments.

The kettledrum was used in martial music in Europe during the 13th century crusades, but it is mentioned in occidental epic literature from the 12th century associated with the Muslim armies. Later on, in the 15th century, the kettledrums were played while mounted on a horse, one drum at each side of the horse rider, and were used in elite military regiments as well as at the principal courts throughout Europe.¹ During the 16th and 17th centuries, the kettledrum gradually became a part of the orchestra, first improvising within the bass line of the trumpets and later having its own written part. Lully was among those responsible for the true introduction of the timpani in the orchestra around 1670, and by the end of the century the use of the kettledrum in the orchestra was firmly established. From that point on, the timpani were a fully independent instrument, getting more and more attention during the romantic period from composers like Beethoven, Tchaikovsky and mostly Berlioz.

Although some composers already sporadically included other percussion instruments besides kettledrums in their pieces, it was not until the mid-19th century that the percussion family became a major part of the symphonic orchestra. This tendency was very much driven forward by the growing importance of rhythm in symphonic compositions in the 20th century and the technical developments in the instruments' construction and their players.

Since other percussion instruments than the kettledrum were introduced relatively late in the symphonic orchestra, major changes and improvements concerning their playing techniques are still taking place. With significant technical changes emerging with every new generation of percussion players, it is hard to find a balance between tradition - the sound and way of playing that orchestra players and conductors are used to - and technical evolution towards a performance less limited by technical difficulties.

When it comes to snare drum playing, players must deal with many different influences and traditions. Since it is one of the most primitive and universal membranophones, the way of playing the drum has developed in many in different ways depending on region and historical context – a clear example

¹ Grove Music Online, s.v. "Timpani" by James Blades and Edmund A. Bowles, accessed April 2, 2017, <http://www.oxfordmusiconline.com/>.

being the music history in the United States, where the snare drum went quickly from a military instrument used by the French troops to a central instrument in the New Orleans jazz scene.²

Despite technical improvements in percussion playing, the snare drum roll has been known as a fairly common handicap in percussionists, although it is such an idiomatic part of our playing. According to Anthony J. Cirone, one of the most respected percussionists concerning snare drum playing right now, forced snare drum rolls (resulting from the lack of technique of the player) and the way to articulate the end of the rolls are two of the main and most common factors lowering the players' scores on competitions.³

Usually the knowledge is transmitted from teacher to student and mostly in an empirical, almost intuitive way, without a theoretical base to rely on – very few authors of educational books on percussion playing are concerned about such specific themes as the snare drum roll. This absence of an established technique had a positive outcome, since it led to the development of very distinct forms of playing and concepts of sound, creating distinct traditions and making it possible to learn how to roll in countless ways.

1.2 Purpose and research questions

Every time I moved to a new school or met a new teacher – especially when moving to such a distant country as Sweden, with such different musical traditions from Portugal, my home country -, I found myself questioning how I play a snare drum roll and making changes to get closer to what my teacher did. As a student in symphonic performance and percussionist, I believe that playing a good snare drum roll is one of my major responsibilities in the orchestra and that the best time to develop it is now.

The purpose of this investigation was to look into different ways of playing the snare drum roll and improve my performance in the symphonic orchestra.

During this process, I focused on the following research questions: how the roll is done, how it could be done, why it is done in a particular way and how can I apply my growing knowledge to a musical context – concerning speed, use of the rebounds, starting position and movement. I looked into the differences between the several techniques explored, both from a theoretical point of view and the final aural result; and how I can play a roll in a more musical way by discussing my performance of rolls in different excerpts of orchestral music.

² For a deeper understanding of this subject, please read section 2.1.1, “The snare drum history”.

³ Posted on the facebook group *Orchestral Percussion Talk* on May 11, 2016.

<https://www.facebook.com/groups/107871555979309/permalink/789353187831139/> last access on May 12, 2016.

1.3 Exercises and study books

Although there are a few theoretical books on percussion instruments such as *Percussion Instruments and their History* by J. Blades, the *Encyclopedia of Percussion* edited by J. Beck and *Percussion* by J. Holland, there are not many available reliable sources in which players can find clear instructions on technique and style.⁴ The most notable exception is the *Method of Movement for Marimba* written by L. H. Stevens,⁵ who is considered one of the inventors of modern marimba playing and unquestionably responsible for the development of this instrument's technique and repertoire. The *MOM* consists of three chapters, the first chapter is a detailed explanation of the grip and the movement used in marimba playing, the second is a compilation of exercises and the third is a reflection added in a later edition. Although this method focuses on marimba and specifically on the Stevens four-mallet grip, many ideas apply to percussion playing in general, making this one of the mandatory methods for any percussionist. The author himself states in the preface, that "this book makes no pretense of dealing with the problems of playing other keyboard mallet instruments. The author leaves it to others to decide whether the concepts of this method have application to xylophone, vibes, or other instruments of percussion."⁶

Considering the snare drum specifically, there are quite many exercise books, some of them include a preface or introduction with a brief technical explanation. The emblematic *Stick Control* by G. L. Stone and the later published method by the same author *Accents and Rebounds* are perfect examples: both consist of a large number of simple and repetitive exercises with a small preface.⁷ In *Stick Control*, Stone writes one single paragraph about the closed roll: "The closed roll (...) is commonly used in light orchestral playing. It has several rebounds to each stick movement, instead of just one, this being produced by a slight additional pressure, applied to the sticks as the roll is executed. This closed roll is not to be confused with that exaggerated type of roll known as the "scratch roll", produced by digging the sticks into the drum head with muscles tense, at a ridiculous high rate of speed, for which neither the author, nor indeed any musician has any use."⁸ As valuable as this small piece of information is, it represents basically all that could be found a couple of decades ago in terms of a

⁴ James Blades, *Percussion Instruments and their History* (London, 1973). ⁴ John Beck, ed., *Encyclopedia of Percussion* (New York : Garland, 1995). James Holland, *Percussion* (New York/London Schirmer/Kahn & Averill 1978, cop.). James Blades, *Percussion Instruments and their History* (London, 1973).

⁵ Leigh Howard Stevens, *Method of Movement for Marimba with 590 exercises, revised and expanded* (Marimba Productions, 1979).

⁶ Ibid.

⁷ George Lawrence Stone, *Stick Control for the Snare Drummer* (Randolph MA: George B. Stone and Son, Inc., 1935 -copyright renewed in 1963). George Lawrence Stone, *Accents and Rebounds* (Randolph MA: George B. Stone and Son, Inc., 1961).

⁸ Ibid, 3.

written theory of playing techniques. Among other influential snare drum methods are the ones written by M. Petters: mostly *Developing Dexterity* and the etude books *Elementary*, *Intermediate*, and *Advanced Snare Drum Studies*, which cover most aspects related to snare drum playing.⁹ *Progressive Steps to Syncopation* by T. Reed focus on rhythmic reading.¹⁰ *Master Studies* by Joe Morello, is a valuable contribution from a jazz drummer's point of view.¹¹ *12 Etudes for the Snare Drum* by J. Delécluse is a compilation of advanced orchestral etudes used as reference for most auditions.¹² *Portraits in Rhythm* by A. J. Cirone, is different from most methods by including performance notes on notation, technical execution and interpretation for all the fifty etudes it contains.¹³ This is in my opinion a game changer, since it gives to simple snare drum etudes a musical dimension that is too often ignored. It was not until James' *The Modern Concert Snare Drum Roll* that the percussionists could find detailed written information on this very specific matter, the roll.¹⁴ In this method, James compiles the theory, clear instructions and progressive exercises in order to achieve what he believes to be the best possible sounding roll.

All the study books mentioned were in some way influential to me and my way of playing.

1.4 Method

I started my research by analyzing my own snare drum roll, using a slow-motion video recording and reflecting on my teachers, colleagues and my own opinion. I have been working on my roll ever since, going back to exercises and studies that I and my teachers found adequate and practicing in front of a mirror. I did new recordings several times along the process to keep track of my progress, since most of my investigation focused on my own practicing and reflections. I did not include later slow-motion video recordings, since I thought it would be more interesting to check my progress in musical pieces rather than in recordings focusing solely on technique.

⁹ Mitchell Peters, *Developing Dexterity for Snare Drum* (Los Angeles,: Mitchell Peters, 1968). Mitchell Peters, *Elementary Snare Drum Studies* (Los Angeles,: Mitchell Peters, 1988). Mitchell Peters, *Intermediate Snare Drum Studies* (Los Angeles,: Mitchell Peters, 1976). Mitchell Peters, *Advanced Snare Drum Studies* (Los Angeles,: Mitchell Peters, 1971).

¹⁰ Ted Reed, *Progressive Steps to Syncopation for the Modern Drummer* (New York: Alfred Music Publishing, 1996).

¹¹ Joe Morello, *Master Studies* (Fairfield: Modern Drummer Publications Inc., 1983, 2000).

¹² Jaques Delécluse, *Douze Études pour Casse-Clair* (Paris: Alphonse Leduc Éditions Musicales).

¹³ Anthony J. Cirone, *Portraits in Rhythm – Complete Study Guide, Observations and Interpretations of the Fifty Snare Drum Etudes from Portraits in Rhythm* (Los Angeles, California: Alfred Publishing Co., Inc, 2000).

¹⁴ William J. James, *The Modern Concert Snare Drum Roll: A Comprehensive Guide* (Florida: Meredith Music Publications, 2014).

During the process of writing this thesis, I worked on exercises from Stone's *Stick Control, Accents and Rebounds* and Morello's *Master Studies* as a way to go back to the basics of snare drum playing and practicing on changing between single strokes and rolls. I used James' *The Modern Concert Snare Drum Roll* as an example for theorizing a roll technique and worked on some of the exercises in this book. Finally, during my master program, I have been consistently practicing Delécluse's *Etudes*.

I found new practicing and playing possibilities by meeting other players whose rolls I found particularly interesting, and tried to understand the way they played and relate it to what I did. When a meeting was not possible, I looked into other players' technique reading their blog entries and looking at videos.

I also listened to orchestral recordings and investigated how the roll's sounds related to which orchestra was playing, when, where, and how it changed accordingly to the musical context.

Part of my research was practicing on excerpts of orchestral music with an emphasis on passages with rolls, aiming to adjust my playing to the context. I have done this by studying the background of the composers and the pieces, the pieces' full scores and finally by trying different aspects of playing until I felt satisfied with how my playing sounded in the general musical context. At that point, I recorded myself playing, both with audio and video, so I could look at possible technical issues. This was a crucial part of the process, since it both enabled me to reflect on my performance and presenting the results to others.

1.4.1 The survey

Considering the ongoing development of percussion technique and the growing diversity of lines of thought, it might be difficult to learn about different approaches and find common aspects. In order to crowdsource some opinions and getting in touch with geographically distant realities, I conducted a survey on which I based a significant part of this thesis. The survey was entitled "Your approach to the snare drum roll" and consisted of fifteen questions about technical and musical aspects related to the snare drum roll. I posted the survey on the Facebook community *Orchestral Percussion Talk* and got 89 responses from players of different ages and backgrounds. This community is very diverse, including professional and amateur players, students, mostly from the US and Europe, all with a background in orchestral percussion playing, either symphonic, military or wind orchestra.

Because of the problem of technical improvement versus tradition, it was determining to have replies from people from many different generations.

The people taking part in the survey responded anonymously, were informed about my intentions regarding the survey and were made aware that their replies might be used for academic purposes.

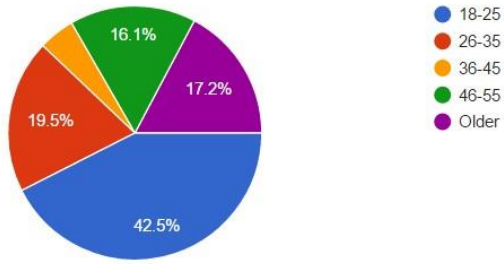


Figure 2 Chart showing the respondents' age groups.

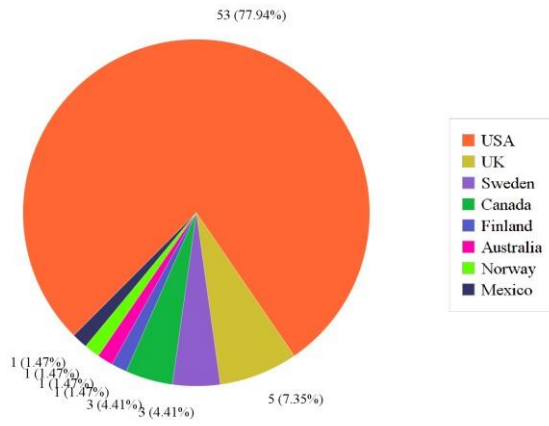


Figure 1 Chart showing the respondents' nationalities.

2 The snare drum roll – an introduction

2.1.1 A short snare drum history

Mankind's efforts to create a drum go way back in history.¹⁵ The most primitive attempts to create a percussion instrument are the drums of the earth – cavities of different depths made in the ground that, when beaten with the flat of the hands, produce a resonant sound. This later evolved into hollow tree trunks placed in a pit in the ground and stamped upon or stricken with long sticks. Due to the slit made in the tree trunks, the instruments with this characteristic are called slit drums. But the application of a membrane on a hollow wooden piece required more creativity and intelligence and is even considered by J. Blades “a mighty step forward in the history of music”. The first membranophone in recorded history dates back to 3000 B.C., although this date is controversial between archeologists and some evidences suggest that the membrane drum was actually a late arrival in music history. As *The New Grove Dictionary Of Music And Musicians* states, “the origin of the snare drum can be traced to the medieval tabor, which is clearly represented in early thirteenth and fourteenth century art as a rope-tensioned drum with one or more snares, usually on the head that was struck.”¹⁶

From the 14th century on the snare drum was used mostly with military purposes allowing the troops to communicate with one another. In 1706 the French composer Marin Marais introduces for the first time the snare drum (*tambourin*) in his opera *Alcyone* to evoke a storm.

¹⁵ This section is based on James Blades, “The Drum, A Step Forward” in *Percussion Instruments and their History* (London / Boston: Faber and Faber, 1984) 48-49.

¹⁶ Grove Music Online, s.v. “Drum” by James Blades, et al., accessed May 19, 2017, <http://www.oxfordmusiconline.com/>.



Figure 3 Excerpt from *Alcyone* by Marain Marais.¹⁷

Note the *tambourin*¹⁸ part in the end of the excerpt.

During the next century, it was common for the composers to use the snare drum to create a military atmosphere, as in Beethoven's *Egmont* (1810) and Rossini's *La Gazza Ladra* (1817). Meanwhile in the recently independent United States, the populations of African slaves, specifically in New Orleans, took over the drums left by the French troops and used them as an opportunity to start a musical practice of their one, since they were prohibited of playing European symphonic instruments.¹⁹ This led to the invention of the drum set, which included a snare drum, a pedal bass drum and one or more cymbals.

In the 19th century, like most instruments, the snare drum underwent big technical improvements. By the end of the century, most rope tensioning systems were replaced by metallic devices similar to those we use nowadays.

The 1920's were the beginning of the golden decades in snare drum innovation, thanks to companies like Ludwig and Leedy introducing new

¹⁷ Marain Marais, *Alcyone* (tragedie. Mise en musique), (Paris: Chez l'Autheur, Hurel, Foucaut, 1706). Public domain on imslp.org.

¹⁸ *Tambourin* here refers to the French word meaning snare drum. Not to be confused with the English term tambourine which refers to a small frame drum with jingles played with the hand.

¹⁹ Marc De Douvan, October 2005, *Modern drum set history*, <http://marcdedouvan.com/en/modern-drumset-history.php>, last access April 19, 2016.

materials and designs. In the 1950's the plastic heads were introduced and rapidly became popular amongst drummers, replacing animal skin heads. Later in the 1970's cable snares replaced traditional gut snares, bringing us to the modern snare drum used nowadays.

2.1.2 Basic Concepts

One of the biggest limitations in percussion instruments is that they do not get to produce sustained sounds like bowed or wind instruments (the vibraphone and other pedal instruments are exceptions). The percussionist tries to create the illusion of a sustained sound with rolls. Roll technique varies according to the instrument and there is a big range of ways to do them. For now, I will focus on the snare drum roll.

The snare drum is inevitably a limited instrument: if we put it in a very simple way, the player can use single strokes (hand to hand playing), double strokes (two strokes with each hand) or buzz strokes, producing a closed roll. To not be capable of playing flawless rolls, is to neglect a third of the possibilities of the instrument!

There are essentially two types of roll: open and closed. The open or double stroke roll consists of two rebounds per strike, that when played in a fast tempo produces a kind of continuous but not too dense sound. This type of roll is associated with drum corps, rudimental and military playing, since it allows to play loudly without straining the arms too much and works great in open outdoor spaces. The close or buzz roll is created by having more than two rebounds per strike (the number may vary according to many factors) and is the most used roll in the orchestral context. If performed correctly, this roll will create the illusion of a sustained continuous snare drum sound, as if it was a wind or bowed instrument.

In order to get a good sounding closed roll, one should press the sticks into the drum's head and take advantage of its natural rebound, playing several notes in each arm motion (buzz stroke). The techniques and movements used in order to achieve the best possible roll vary according to style, character, dynamics, the room's acoustic, musical context, etc., but also according to schools, region and personal taste.

3 Different approaches of percussion players on the roll

3.1 The Ideal Sound

When answering the question “What is your idea of the perfect roll sound?” of my survey many players mentioned expressions such as “smooth”, “round”, “sustained”, “full”. Other respondents answered in a more metaphorical way: “like waves crashing on shore or a heavy rainstorm”, “paper tearing”, “an infinite zipper”, “sugar pouring out of a bag” and “like static on an old tv”.

Some of the respondents gave very complete, detailed answers, like these: “For the orchestral roll, it should be even without attack on any of the strokes. The sound should be fine and continuous with no breaks. In syllabic terms, think of holding a “s” or “sh” or “z” without attack on the front. Think of it as the long tone of the Snare Drum.” (Philadelphia, 18-25 y.o.); “Obviously smooth. The basic roll should not be too crunched. I believe the closed roll should have elements of the open roll to have the smoothest sound. Never think or play “into” the drum for the basic good sound. Think of allowing the drum to sing. Think open. So basically, never too fast or smashed.” (Chicago, 18-25 y.o.).

I agree with all these answers; in my perspective, the ideal roll should be a homogenous, continuous sound comparable to a long note on a wind instrument. The idea of homogeneity is very frequently associated with perfection in art. Although I believe music also lives out of the ideas of continuity and consistency, from a technical point of view, I think that a player must master technique and be consistent in order to be able to make nuances and get away from homogeneity.

3.2 Roll variables

3.2.1 Number of rebounds per stroke

When answering the question “how many rebounds should [the roll] have? Do you adjust this according to the musical context?”, one respondent of my survey wrote: “I’ve never considered the exact amount of rebounds; except for the open roll, and that is a given double stroke. But I do adjust it to the musical context in some ways. I guess that the louder I play, the fewer rebounds I have; otherwise the sound will get choked.” (Sweden, 18-25 y.o.).²⁰

²⁰ A stroke is a full wrist or arm movement, as used to play any percussion instrument; the rebounds are smaller movements that are the consequence of the stroke.

The number of rebounds per stroke is a very defining characteristic of the player's snare drum roll. This variable will give texture to the sound – fewer rebounds equals a more open roll as in more rebounds equal a closed, dense sound, many times described by percussionists as a buzz roll. Although the idea of a buzz sound might be compelling, playing a roll with too many rebounds might create an unpleasant sound with a choked timbre, with little expressive possibilities and ultimately technical and physical difficulties.

Most players in the survey and myself use the amount and the density of the rebounds as an expressive device, adjusting this variant to dynamics, musical context – color, character. One respondent wrote, “Yes, all technique should be in response to musical context otherwise hire a robot, not me!”.

When asking players from different backgrounds how many rebounds they use in each stroke, the responses varied quite much, although most of the respondents recommended to play 3 to 4 rebounds in a regular situation. Some players wrote that they play 5 or more rebounds per stroke, or even 10 to 15. There were also a significant number of players who said that they did not care about the number of rebounds, focusing only in how the roll adjusts to the musical context: “To try and quantify this is to ignore the music.”, “I don't think about rebounds per stroke, I think about strokes per roll length [with] regards to tempo and desired density of roll.” I myself believe, in contrast, that controlling the number of rebounds – as for controlling every aspect of the rebound -, is essential to achieve a good sound and to open expressive possibilities; furthermore, being able to have an equal number of rebounds in each stroke is fundamental to producing a homogeneous-sounding roll.

One of the most common things to do with the number of rebounds is to go down to two per stroke on rudimental and march/military playing. This is due to the fact that drums originally used in marching/rudimental are high tension snare drums which have very different features and sound from a symphonic drum. High tension heads are thicker than regular heads and sound dryer and more articulate. This means that a very closed roll played in a high-tension head would sound choked and dry. On the other hand, in order to get a sustained sound, these heads require faster strokes, so it is more important to have more strokes rather than rebounds – which also allows the percussionist to play louder dynamics, which is very often required in military music played outdoors.

The way I see it, there is a natural tendency to play fewer rebounds and faster strokes in loud dynamics and more rebounds and fewer strokes in softer dynamics. This happens due to the physical limitations – the players' hands will inevitably struggle in extreme dynamics -, but also due to the nature of the instrument, so I strive to play 3 to 4 rebounds per stroke in the medium dynamics and adjust for extreme dynamics. The percussionist should allow the head some time to ring in louder dynamics. One respondent wrote: “For the orchestral roll, it varies. The faster and louder the roll, the fewer strokes you will

be able to achieve as the speed of the stroke will be considerably higher. However, the number should NEVER be less than 3 strokes per motion.” (Philadelphia, 18-25 y.o.).

I agree with this respondent. From my experience, if an orchestral roll is played with fewer than three strokes per motion, it might sound too airy. To get more density in the sound, the player would then have to compensate with faster strokes, which would most likely create physical tension and wouldn't allow a relaxed, flowing roll.

3.2.2 The speed of the strokes

Independently of the number of rebounds, also the speed of the strokes will change the texture of the roll: the faster the strokes, the denser the roll. It's also obvious to associate faster strokes with louder dynamics and vice versa,²¹ as this respondent wrote: “The strokes should be adjusted according to musical context. Playing a crescendo is going to use more strokes near the tail than holding a straight *mezzoforte* buzz roll. Vice-versa for the diminuendo. Pianissimo rolls have more notes in the buzzes but less movement between hands. The inverse is true at fortissimo, fewer notes in the buzz motion but faster movement between hands.” (Philadelphia, 18-25 y.o.).

The strokes can be measured by second or beat, as some of the players taking part in the survey wrote, but the answers to the question “How fast are the strokes? Do you adjust this according to the musical context?” varied quite much in this topic: from “very, very slow” to “very fast”. Although many people tend to work on it from a rhythmical point of view, for instance, the strokes should be sixteenth notes on 130b.p.m., almost all the players say this depends very much on the musical context, dynamic, hall's acoustic and physical comfort. In the following quote, a respondent explained how to meter their rolls: “I meter my rolls. For pp rolls, my metronome clicks at 75 bpm and my arms move as sixteenth notes. For louder rolls, my arms will move faster. For really loud rolls, my arms move as sixteenth notes at about 110 bmp.” (unknown nationality, 46-55 y.o.).

When analyzing these two variables – stroke speed and number of rebounds -, it is clear that there is no established practice and that the ultimate goal is always to adjust to the musical context. This is an example of technique serving musicality – these are merely technical matters that are used as expressive tools and therefore fully understood and dominated by the competent player. It is clear to me that if flawlessly executed, any of the possibilities

²¹ Please read section 2.4.1.

mentioned before are perfectly valid from a technical and musical point of view and will produce adequate rolls.

In my practice, I always work with very slow and vary fast strokes, in order to be able to explore the most possibilities. A general rule in my own playing is to never sacrifice the number of strokes for the number of rebounds, rather the opposite, meaning that I prefer to play fewer rebounds and faster strokes instead.

3.2.3 The motion

The different possibilities regarding the motion when playing a snare drum roll are described in more detail in further sections. In summary, the player can choose which body parts to move or keep still during the execution of a roll, according to their way of playing. While many players fix their wrists and move the arm vertically, using the elbow as a pivot keeping their hands and fingers relatively stable, some people focus on the wrist and hand movement and only move the arm as a last resource for louder dynamics and even regard the arm movement as a technical flaw. The following respondent's answer explained it in a very clear way: "Same motion as a regular drum stroke with the exception of fingers. All that needs to be different from a normal stroke is the pressure on the sticks, which should not come from the fulcrum. Wrists do the up/down motion (well, it's the rotation point of the motion), arms should be mostly immobile in most conditions, fulcrum doesn't move or change pressure, fingers give the pressure." (Canada, 26-35 y.o.).

A few players described their style as a mix of many ideas as a flow from the shoulder to the fingers, as this respondent did: "Everything from my shoulders to my fingertips. The only stable part is the fulcrum created by my first finger and thumb." (USA, 18-25 y.o.).

A smaller number of the respondents include shoulders, neck and even the whole upper body while playing a roll.

Many of the questioned players said to have different or very different motions for the roll or single strokes, which was one of my concerns when approaching the arm roll.

3.2.3.1 Adjusting the motion depending on the dynamic

As a percussion player, it might feel like if I need to adjust the motion to a given dynamic, my technique is not working as it should, but most of the questioned players assumed to change in some way their motion according to the dynamic. Some people talked merely about the height of the sticks, while others say to have a rounder movement, dragging the sticks across the head in louder dynamics. One respondent said: "The louder the dynamic, the more big muscles are used to compensate for the faster shifts in hand motion. For softer dynamics,

the smaller muscle groups are used more to compensate for dragging out the length of the buzz stroke.” (USA, 18-25 y.o.).

There are basically two main variants: using more arm in softer dynamics in order to have looser hands and more control over the strokes and more wrist and finger pressure on louder dynamics; or keeping stable wrists through all dynamics and moving the arm from the elbow, increasing finger pressure on softer dynamics.

I strive to keep a consistent movement, but do not completely reject the idea of adjusting to the dynamic. Through experience, I realized it works better for me in the softer dynamics to lock my wrist, move my arm from the elbow and increase the pressure of the stick against the head.

3.2.4 Moving the sticks across the head

Video 1: Demonstration of the aural result of moving the sticks across the head.

<https://youtu.be/wjPnDOezAcw>.

In this video, I demonstrate how the snare drum sound differs depending on which place of the head is being played, both on single strokes and rolls. In my opinion, the roll sounds more uniform and with less high pitched overtones when the drum is played on a small area of the head.

Many players move their sticks across the head of the drum in a circular or “v” motion (from close to the rim to the center) when playing a roll. Some do it unconsciously, others do it because it gives a better, easier flow. Although most players can agree that there is some comfort in playing with a rounder motion, one can argue that the sound of the drum changes depending on the place in the head that is being played and that will result in a less uniform roll.

One respondent claimed to use a motion towards the center to compensate for the dynamic decrease between strokes, since the center of the head produces a louder sound: “[I move the sticks] a bit towards me, mostly because it feels natural and traveling toward the center tends to counteract the loss in volume after a few strokes.” This perspective makes sense, but for me as a percussion player, I’d rather search for a better solution for the dynamic of the rebounds without compromising the homogeneity of the sound. The following respondent puts it in a very clear way: “Some people will say to move in towards the center throughout the stroke, which changes the color of the sound. It's like starting a conversation in English, and in the span of .5 seconds going to French and Chinese. They do it to get the "blossom" sound, aka crescendo. This can be achieved in other ways.” (unknown).

3.2.5 Technical and physical difficulties

My own technical and physical difficulties are discussed throughout this paper, particularly in sections 2.5.1 and 3.1.

In order to understand other players' struggles, I included two questions in the survey on this matter: "Have you experienced any physical difficulties with the snare drum roll? (Muscular tension, not enough stamina, etc.). If so, do you think they were related to technical difficulties?" and "Have you experienced technical difficulties with the snare drum roll throughout your career and/or studies? If so, what did you do to overcome these difficulties?" One of the respondent replied in a simple yet brilliant way: "Of course. Practice more!". Although relentless and mindless practice cannot solve technical problems, when it comes to overcoming technical difficulties in the roll, the most part of it is really a matter of time invested in it.

The most commonly referred technical problems were moving the fingers and/or wrists too much, problems with the grip (too tight, too loose), and inconsistency between right and left hand. The most suggested solution was, obviously, relentless practicing, but also practicing in front of a mirror and being always aware of the hands and the sound.

Other players just acknowledged that the roll takes a long time to develop and it's a constant work in progress and to keep doing exercises in order to cover different aspects of the technique. One respondent claimed: "I think the roll takes longest time to develop. I've played lot of exercises where you go from double strokes to roll and back again in slow to fast tempo without changing the motion of the arm, which have helped a lot. I have also tried to make slow motion and bounce as many times as possible and tried to get a fluid sound. And also just do exercises with just pressing the sticks and make accents for practicing to lift the stick so you don't press it too much in the head." (Sweden, 18-25 y.o.).

As for physical difficulties, I found it quite surprising that a large part of the respondents claimed to have none. Many players agreed that stamina was always a problem, although not necessarily related to technical issues. Muscular tension is also a common problem, and the solution suggested by most of the respondents is relaxation and awareness. This respondent mentions the importance of good posture: "In this approach, you must be aware and careful of shoulder and neck tension. Head should be up so neck should be free of tension and eyes are using peripherals. Shoulder should be dropped so the drum should be adjusted appropriately so that the shoulders can move without being raised." (USA, 18-25 y.o.).

I think that regardless of the unquestionable value of good posture, the advice for how to stand or sit while playing snare drum – or any other percussion instrument – is not really any different from any other situation in daily life, making this common knowledge.

3.2.6 Preparing the drum

Most players in the survey tend to not prepare the drum in any particular way when they have passages with rolls, since a well maintained, good sounding drum should cover most of the nuances of playing. Some people in the survey recommended to dampen the head less than in regular, rhythmical playing so that the head's natural ringing sound helps filling in the roll's sound. Most people referred to the importance of choosing the right snares and the right tension, stating that the snares should be responsive even in the softest dynamics but not so tight that they will "choke" the sound and make it difficult to play an even roll. These respondents elaborated on the use of the snares: "I try to tune drum and snares to be responsive and clear across as wide a range of dynamics as possible. The thinnest snare side head is important. I don't like coiled-wire snares, nothing lighter than guitar strings. Cable probably preferable for general use, well maintained and tuned gut can be excellent, but requires much knowledge and experience." (USA, >55 y.o.); and "Rudimental drums have gut snares. Drum set snare drums have wire snare. My orchestral snares are set-up in three different configurations. One is all wire snares for mostly softer volumes and chamber music. The second is half wire and have cable and a great general purpose drum. It responded well at soft volumes and as you move up the volume range the cables respond adding clarity. The last drum is set up half cable and gut. This drum works well for larger ensembles and outdoor playing." (USA, 46-55 y.o.).

I use a triad strainer for my snares, which allows me to adjust three different kinds of snares to achieve the best possible combination. My way of preparing the drum will be described in detail in section 4.

3.3 Roll Techniques

3.3.1 The arm roll

The arm roll technique consists on locking the wrist in a stable position (so the knuckles of the fingers should be always facing forward), keeping the motion in the forearm and elbow. The speed of the rebounds should be controlled by the pressure in the grip (index finger and thumb) while the rest of the hand basically just lies there, ideally with no tension.

The big advantage of this technique is that it takes away some of the punch in the first note that usually the wrist is responsible for and by having a good control of the grip one can achieve rhythmical evenness on the rebounds.

The problem with this technique however is that the player has no way to influence the dynamic of the rebounds following the first note, making it hard to have a large number of even rebounds. The solution for most people who use it is

to do no more than three rebounds per stroke, this way eliminating the softer strokes and the *diminuendo* effect.

Drummers initially tend to use the wrist to play rolls because that is the technically correct way to play single strokes, which is the first thing they learn to do on the snare drum. The player only starts to play rolls after mastering the single stroke technique, so both the brain and the muscles will resort to this technique in the first place.²²

My problem with this technique is that it goes against one common principle to all percussion instruments' technique: big muscles are used in big movements, small muscles are used in small, precision movements. The roll, which is an extremely meticulous movement, should, according to this principle be primarily controlled in the fingers and wrists, and maybe get some energy from the arm. It also implies that the player should have a completely different approach when playing single strokes, like a rhythmical pattern – that should be played with the wrist -, and rolls. To make an absurd comparison to make it clearer to “non-percussion” players, it would be like a violin player holding the bow in the middle of its length to play piano.

On the other hand, some of my colleagues and teachers are able to handle this technique in a way that works very well.

²² James, The modern Concert Snare Drum Roll.

3.3.2 Roll technique according to David Valdés

As David Valdés explains in his blog *Percusize me!*²³, having a large number of rebounds per stroke, contrary to what most people are taught, will produce a bad sounding roll with a clear hand-to-hand sound. This happens because the last rebound will always be much softer than the first one in the other hand.

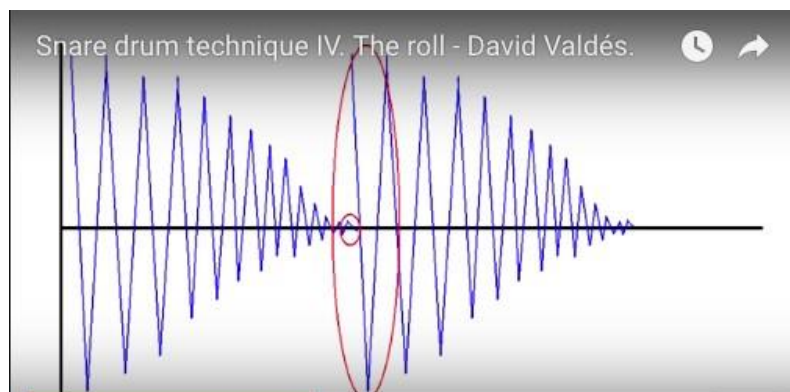


Figure 4 Graphic representation of a closed roll, enhancing the volume differences when changing hands.

When using no more than the first three notes, the *diminuendo* produced from the loss of energy between rebounds will be much more subtle.

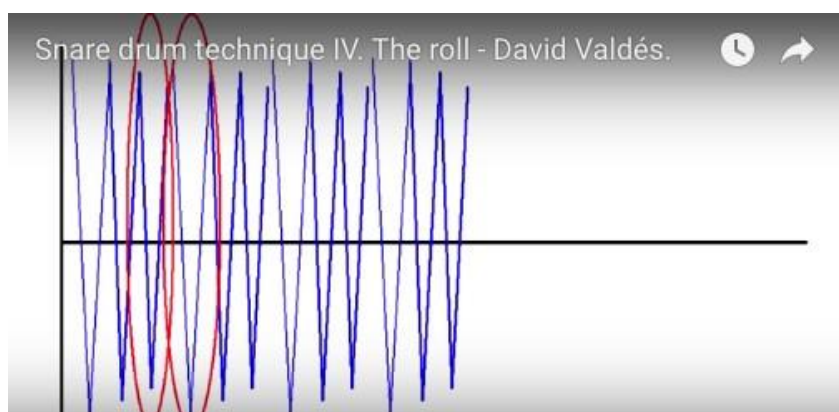


Figure 5 Graphic representation of a closed roll with 3 rebounds per hand.

²³ <http://davidvaldespercussion.blogspot.se/2012/02/snare-drum-technique-roll.html> , last access April 3, 2016.

All figures from David Valdés video "Snare Drum technique IV: The roll – David Valdés" <https://www.youtube.com/watch?v=uvSwbEy8JKQ>.

According to him, the closed roll should not have just as many rebounds as possible, since that means that the player has no control over the stick, leaving it to chance. Instead, the player should be able to pick a number of rebounds per stroke and keep it in both hands. If both hands don't have the same number of rebounds, the roll will not be homogeneous.

Valés also argues that the sticks should move towards the center of the head bouncing as if pebbles in the water surface.

Although Valdés doesn't really explain why he does it, I can verify that it is actually easy to play the roll if the sticks are moving in the head. On the other hand, it worries me that the sound of the drum clearly varies depending on the place of the head being stroke, so this technique might actually be disadvantageous to the homogeneity of the roll.



Figure 6 Imaginary lines in the drum's head, showing where the sticks should be moving

The control over the rebounds and consequently the roll will open new expressive possibilities for the player. Varying the number of strokes, rebounds on each stroke and their dynamic will make it possible for the player to adjust their roll to the musical context.

3.3.3 Roll technique according to Fredrik Björlin

Fredrik Björlin has been working as co-principal percussionist for several years at the Gothenburg Symphony Orchestra.²⁴

In order to understand his thoughts about the roll it is important to understand his conception of the snare drum sound. Björlin usually plays on

²⁴ The information about Björlin's playing is a result of lessons and conversations during 2016 and was approved by him for use in this project.

drums with quite stretched calf heads tuned in a high pitch, with quite tight snares (pressed against the resonant head on the bottom of the drum) producing a dry, crisp and articulated sound. This will make rolling more difficult, since the less resonance there is in the drum, the more exposed the strokes are. Björlin argues that a tighter head requires more control of the stick and the bounce but when mastered, it will create a better feeling of the drum.

Björlin's roll technique is based on the arm roll (see previous section). He moves the forearm from the elbow in a motion parallel to the drum, locking the wrist so that the knuckles in the hand are always in the same line as the forearm. The thumb and index finger secure the stick, while the rest of the hand is basically motionless. The pressure on the grip is responsible for the amount and the speed of the rebounds.

To calibrate the amount of pressure in the grip, Björlin suggests some exercises in which the player should execute simple rhythms (going from sixteenth notes to triplets, for instance) with different pressure on the grip: from as much pressure as possible to loosening the stick until the point in which there are only two rebounds per movement).

The grip should be the same as used in other orchestral percussion instruments (as xylophone, glockenspiel and other instruments that don't require as much force as the snare drum), meaning that the stick should rest on the distal phalanges and not in the middle phalanges, as some players do, providing a better, finer, stick control.



Figure 7 Two grip options: holding the stick in the middle phalanges (right side), and holding the stick in the distal phalanges (left side).

Since the wrist and fingers are not moving and so some of the player's force is so to say wasted, Björlin recognizes that the arm roll technique might be limiting concerning loud dynamics. His solution for this problem is to add some weight in the arms movement, producing large amounts of sound from the type of movement and not necessarily from its amplitude.

Regarding moving the sticks along the snare drum's head as suggested by Valdés and used by many players, Björlin doesn't recommend it since it will

produce a different pitch for every rebound, creating a subtle descending melody for every stroke. This movement might give the player a good flowing feeling and might be subtle enough to go unnoticed sound-wise in a somehow forgiving drum with a loose head and snares, but it might damage the homogeneity of the roll anyhow.

4 My learning Process

4.1 The roll as I learned it

Video 2: Slow motion recording of a snare drum roll performed by myself on a practice pad before the research. <https://youtu.be/geJKwWXIBsg>

I learned to do a roll long after I started playing, by decision of my teacher at the time. Considering I started playing percussion at age of six, my hands and arms were too small and weak to try this demanding technique, so I started practicing on rolls when I was about 12. As it happens in most cases, my teacher gave me some general directions, such as using the natural rebound of the head, keeping my hands equal, but mostly using my ears to find some way to achieve a continuous sound. So most of the process of learning to play a roll was trial and error, going back and forth, which brought me to the present moment.

When analyzing a slow-motion recording of my roll in a *mezzo forte* dynamic, when beginning my master studies, I could notice that:

- I was playing around 3 rebounds in each hand.
- The main movement was done by bending the wrist.
- There was an upwards motion in the forearm for every stroke.
- The sticks were moving in a diagonal motion towards the drum's head.
- The 3rd, 4th and 5th fingers were opening and closing as the stick moves in the hand, mostly on the left hand.
- Although the dynamic level between the rebound was similar enough, they were not “rhythmically correct”, creating a syncopated pattern.

This last point might be the reason why my roll sounded inconsistent and sloppy. Also, the movement in the fingers is something I could not quite justify and if there is no technical point in it, it might be creating unnecessary tension in the hand.

In conclusion, I had essentially two things to work on: finding a way to make the rebounds rhythmically even and figure out why the fingers were opening and closing.

4.2 Arm roll: learning process

The quality of my roll was being compromised by the uneven rhythm of the rebounds. While looking for a solution for this problem, it was my understanding that this problem would be minimized by using the arm roll technique.

I started working on the arm roll by playing in front of a mirror and observed the changes in the way I played. The first exercise I did was to play triplets with each hand, using a downwards arm movement for the first note of each triplet and letting the natural rebound of the stick play the second and third notes. None of the notes should be accented.

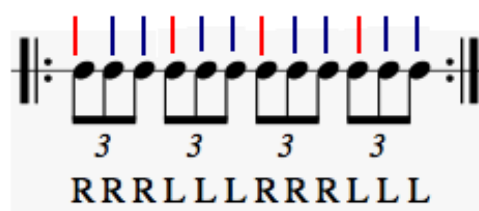


Figure 8 Triplets exercise: the notes with the red bars are produced by the arm movement while the ones with the blue bars are bounces of the former.

At first, this exercise proved to be harder than it appeared, since it forces the player to let go of one of the fundamentals of percussion player: to control every stroke (by using wrist and fingers) as far as the speed allows it. When playing triplets at quite a low speed with no finger or wrist control, the strokes feel too loose and even sloppy. With this exercise, I learned how to control the two last notes of the triplet (the rebounds) by changing the pressure in my index finger and thumb: the tighter the grip, the closer the rebounds will come out. I started working on the exercises from *The Roll for snare drum* by Emil Sholle.²⁵ Each exercise in the chapter I worked with should be played in three different tempos - 76 - 84 - 92 - 100, and in three different ways: buzz stroke (full pressure) on every note, open roll (2 rebounds) per note, and an intermediate version with 3 rebounds per stroke. Video 3: exercise from *The Roll for Snare Drum* by Emil Sholle. https://studentguse0-my.sharepoint.com/personal/gussillc_student_gu_se/layouts/15/guestaccess.aspx?guestaccesstoken=kF5sM4WaMwu%2fA23jebWnpZe4iUKkRpkc7Pb0KhMJEqc%3d&docid=11d212b3ec32a4091bc4152e56226db8e&rev=1

²⁵ Emil Sholle, *The Roll for Snare Drum* (Ohio: Brook Publishing Co., n.d.).

These exercises proved themselves to be extremely helpful for grip control, requiring me to go from full pressure to almost none and then finding the adequate force on the grip to obtain the desirable three even bounces. At this point I was feeling more confident about my roll, so I started to incorporate it in my repertoire, namely in the etude number 4 from the *12 Etudes for the Drum* by Jaques Delécluse.²⁶ These etudes are known for their difficulty and are very frequently asked on orchestral auditions. The etude starts with a pianissimo, very delicate roll, and contains some challenging loud and long rolls.

Video 4: Etude no.4 by Jaques Delécluse. https://youtu.be/tID7_h5kyw8

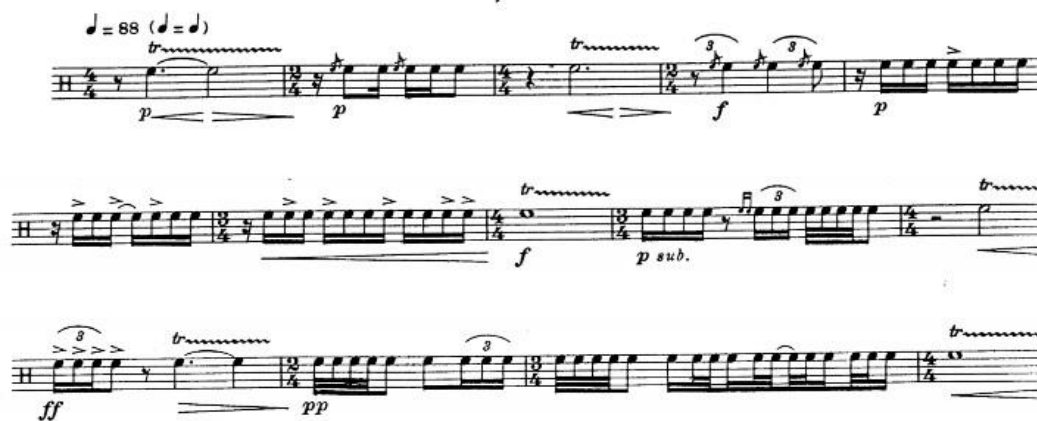


Figure 9: Beginning of Etude no. 4 from *12 Etudes for the Drum* by J. Delécluse. Note the roll passages.

Although I was happier with the way my roll sounded, the change of movement between single notes – played with the wrist and fingers – and the arm roll felt quite uncomfortable.

In order to explore this issue, I started working on George Lawrence Stone’s method *Stick Control for the Snare Drummer*.²⁷ This is one of the most universal snare drum methods, used by both drummers and classical percussionists, and despite the simplicity of its exercises it is really a great tool to build up a strong technique. The chapter “Short roll combinations” is, as the title suggests, a list of very simple exercises mixing single notes with rolls.

²⁶ Jaques Delécluse, *Douze Études pour Casse-Clair* (Paris, Alphonse Leduc Éditions Musicales).

²⁷ George Lawrence Stone, *Stick Control for the Snare Drummer* (Randolph MA: George B. Stone and Son, Inc., 1963).

Short Roll Combinations

Figure 10 Excerpt from *Stick Control* by G. L. Stone

These exercises made me realize the awkwardness caused by totally changing the movement between single strokes and arm rolls and since this happens in most of the music written for snare drum, I see it as a significant flaw in this technique.

Arm Roll recapitulation: pros and cons

Pros:

- Stable triplet rhythm between rebounds.
- Adequate for a big dynamic range.
- The roll itself might sound great.
- Quite straightforward, does not require such a long learning process.

Cons:

- Different movement from “regular” playing, making it awkward when combining rolls and single notes.
- The fact that the wrist and the fingers are not moving, having all the motion from the elbow to the end might create tension in long, loud rolls.

For the time being, I decided to stick to this technique and perfect it. Although there are several cons to it the aural result is worth it. Besides, I had the luxury to have people nearby who could help me learning it. I do not exclude the possibility to learn new techniques in the future or to incorporate these principals in to the way I played before, if I find the need.

5 Musical Context

Working intensively on my snare drum technique and particularly in my roll opened, as I expected, many musical possibilities regarding the interpretation of orchestral excerpts, from the execution point of view. On the other hand, having a deeper understanding of the mechanics of the roll and carefully observing other percussionists helped me greatly in coming up with creative, more musical solutions for these same excerpts.

In this section, I will discuss and present possible interpretations of four orchestral excerpts from different eras and genres. I will base my interpretations on information about the composers' style, the historical context in which the pieces were written, the role of the snare drum in the plot or the piece and on the orchestration and musical character in the particular excerpts

Each excerpt is documented in a video recording so that the reader can establish a parallel between my thoughts and the aural result.

5.1 *La Gazza Ladra Overture*, Gioachino Rossini

Gioachino Rossini (1792-1868) was the most acclaimed Italian composer of his time, setting the standards for his contemporary Italian opera composers such as Donizetti and Bellini.²⁸

La Gazza Ladra ("The Thieving Magpie") is an *opera semiseria* in two acts composed by Gioachino Rossini with a *libretto* by Giovanni Gherardini based on *La Pie Voleuse* by Théodore Baudouin d'Aubigny and Louis-Charles Caigniez. It was premiered in 1817 at La Scala, Milan.²⁹

The plot is about the love between a serving girl, Ninetta, and her boss's son, Giannetto, who is returning from the war in the very beginning of the opera.

The Overture is one of the most celebrated pieces of music by Rossini. It is composed in a quite classical way, in a light, lively character, except for the two snare drums used antiphonally that start the piece with three long rolls.

The way I see it, the snare drum roll is used by Rossini as a scenic element, representing the comeback of Gianetto from the war. The long rolls, along with the martial character of the first theme in the overture are a clear bellicose reference. The snare drums are seldom used throughout the opera, which makes perfect sense since the war is now past in the action.

The snare drums part is written in an ambiguous way, with some variations in different editions, and different traditions of playing have been established. The edition by Paccini, for instance, only states *tambours* in the

²⁸ Grove Music Online, s.v. "Rossini, Gioachino," by Philip Gossett, accessed February 2, 2017, <http://www.oxfordmusiconline.com/>.

²⁹ Gioachino Rossini, "*La Gazza Ladra*" (*opera semiseria* in three acts), libretto by Giovanni Gherardini.

beginning of the part with no other indication of how many snare drums should play the part and which bars should be played by who.³⁰ There is, however, two simultaneous notes written in the third bar, implying that this bar should be played by more than one snare drum.



Figure 11 First bars of the snare drum part in *La Gazza Ladra* Overture, ed. Paccini.³¹

The edition by Raynor Carroll, which is found on his compilation *Orchestral Repertoire for the Snare Drum* is much more detailed.³² Carroll includes a footnote stating that “although written for two players typically positioned on opposite sides of the stage, the part may be performed by one player”.³³ Throughout the piece, the editor specifies which bars should be played by whom and which should be played by both; in general, player one plays the rhythmical text and the second player only executes some of the rolls and some stereophonic -like parts, as, for instance, from rehearsal mark E to F.



Figure 12 Opening bars of *La Gazza Ladra* Overture, ed. by Carroll.³⁴ Note the indications such as “I.” meaning player one, “II.”, meaning player two and “@2” for *a due*.

³⁰ Gioachino Rossini, “*La Gazza Ladra*” (*opera semiseria* in three acts), libretto by Giovanni Gherardini (Paris: Paccini).

³¹ Rossini, *La Gazza Ladra*, ed. Paccini.

³² Raynor Carroll, compiled and edited, *Orchestral Repertoire for the Snare Drum*, (California, Batterie Music), 1997, 70-73.

³³ Carroll, *Orchestral Repertoire for the Snare Drum*, 70.

³⁴ Carroll, *Orchestral Repertoire for the Snare Drum*, 70.

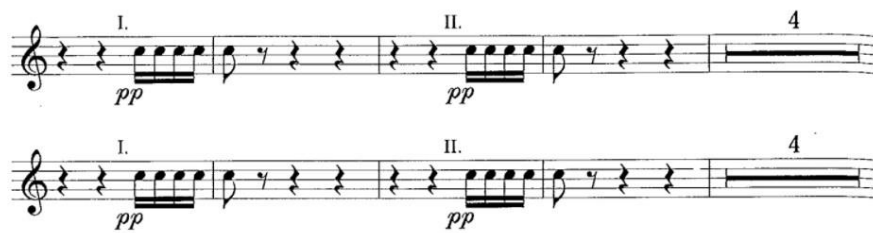


Figure 13 Rehearsal marking E in *La Gazza Ladra Overture*, ed. by Carroll.³⁵

Although there are some suggestions like Raynor Carroll's and a few different established traditions in the way of playing this piece, the composer himself and most editors give no guidelines regarding the distribution of the snare drum part, so it is usually up to the players and the conductor to find the best way, taking the logistic limitations into consideration.

When there is only one snare drum, it is common that some dynamics are changed in order to simulate the distance effect, so the roll on the second bar should be piano. This could also be done because of the room's specifications or by musical choice.

In the recording by the Royal Concertgebouw Orchestra with Mariss Jansons conducting, the snare drums are located on opposite box seats and both play throughout the entire piece (except in the solo rolls and rehearsal mark E to F).³⁶ The second snare drum solo rolls are played in a soft dynamic. When comparing to the interpretation by Vienna Philharmonic with Claudio Abbado,³⁷ one of the drums is by the right side of the timpani and the other one is on the left of the low brass. Both initial rolls are played in a loud dynamic and although it is hard to say due to the limited quality of the recording, it seems like the players are dividing the rhythmical text between the two snare drums, alternating approximately every two bars. In both recordings, the drums are quite different in pitch and overall sound, creating more diversity and making it obvious to the audience that there are two different parts.

When investigating how this passage was played in the opera version, I could not find any conclusion. I asked Fredrik Tiger, principal percussionist at the Gothenburg's Opera,³⁸ and although he never played the opera version of this

³⁵ Carroll, *Orchestral Repertoire for the Snare Drum*, 71.

³⁶ Rossini, Overture to *La Gazza Ladra*. Royal Concertgebouw Orchestra, conducted by Mariss Jansons. <https://www.youtube.com/watch?v=V9eBv62OZkg> last access on February 4, 2017.

³⁷ Rossini, Overture to *La Gazza Ladra*. Vienna Philharmonic, conducted by Claudio Abbado, 1991. <https://www.youtube.com/watch?v=qdm8lflnalg>. Last access on February 4, 2017.

³⁸ Conversation with Fredrik Tiger on the 14th of March, 2017. He authorized the inclusion of his name and opinions in this text.

piece, he thought it would be logical to have the second snare drum playing off-stage.

I played the second snare drum in this piece once with the Gulbenkian Orchestra and I was asked to play only the solo rolls in the written dynamic, sitting to the left of the low brass.

5.1.1 My interpretation

Video 8: Excerpts from *La Gazza Ladra Overture*, by Gioachino Rossini. Snare drum part played by myself, overlaying a recording by the Royal Concertgebouw orchestra conducted by Mariss Jansons.

<https://youtu.be/oTAUDUIyjG4>

When performing this excerpt, I do not ignore the military background behind the snare drum part but I do not base my whole interpretation on it either. The part is written for *tamburo* (translating to snare drum) and not to *tamburo militare* or *tamburo grande* (military drum, field drum). My interpretation is that Rossini wants the military character with the touch of elegance and lightness of the Italian opera.

The very first roll starts the opera: therefore, I play it loudly, vivid and full of sound. In order to achieve this, I play a considerably fast roll, around sixteenth notes in 100 b.p.m., closed but not too buzz-like, around three to four rebounds per stroke. The last note I play with an impulse, as an accent. In a normal orchestral situation, I would lower the dynamic after the first beats, but since this is a solo, I consider it important to keep the dynamic stable with a slight impulse in the beginning of the roll. The roll in the third bar is played as a big crescendo, joined by the orchestra in the third beat with a trill. The ending of this roll in the first beat of the next bar is very important so I think it should be clear and articulate, since it goes together with the melodic line.

I like to add just a touch of the military style by playing the rhythms not precisely in tempo, but rather with the shorter notes closer to each other. In the fourth bar, for instance, the sixteenth note would be slightly late and with a *staccato* feeling, as for the triples in the fifth bar would be a little bit squeezed together, in my point of view. Please note that this is just a very small nuance and would always depend on the orchestra's reaction.



Figure 14 Bars 4 and 5.³⁹

The rolls in bar ten are written in a rather ambiguous notation. It could be interpreted as a regular two beat roll, two separate rolls or one roll with two small accents. My version is to separate the two notes just a fraction and slightly accent each beat. I do this by playing each roll in triplets with three rebounds in the first two triplets and a single stroke in the last one. The beginning of the roll should be an impulse – small accent –, and the last note of the phrase, in the following bar, I play as a *staccato* note, very articulate and distinct from the rolls before.



Figure 15 Bars 10 and 11.⁴⁰

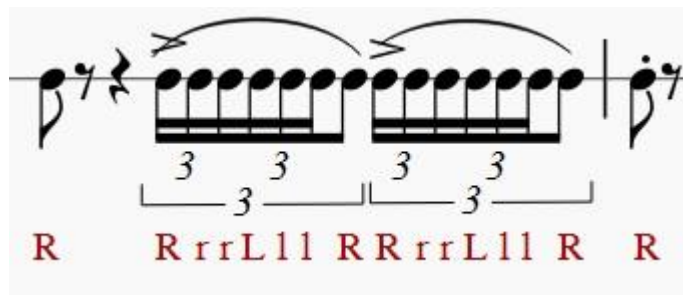


Figure 16 Representation of my execution of bar 10.⁴¹

One of the good things about this version is that it is musically coherent, since the snare drum will then be playing the same rhythm as the melodic instruments do. If the roll needs more filling, the three rebounds per stroke can be substituted by buzz strokes (in which the sticks are firmly pressed in to the head).

In bar 51 (1:59) the rolls from the beginning reappear, followed by a long nine-bar roll. The roll starts pianissimo, and the whole orchestra plays a crescendo for four bars, culminating in a fortissimo that lasts five more bars. If played by both snare drums, the roll should start in a very quiet dynamic to

³⁹ Carroll, *Orchestral Repertoire for the Snare Drum*, 70.

⁴⁰ Carroll, *Orchestral Repertoire for the Snare Drum*, 70.

⁴¹ Please note the sticking indications: "R" is for right hand, "L" is for left hand. Capital letters are for strokes – arm movement –, lowercase letters are for rebounds.

create room for the crescendo, which, in my opinion, should be saved for the third and fourth bars of the roll. Regardless, I as a percussionist would follow the dynamic of the orchestra. The fortissimo in this part of the piece should not, in my point of view, be too loud, especially if both drums are playing, and in this case, is quite easy to achieve a full sound without the risk of playing too loud. The orchestra is playing vertical chords, leaving the snare drums playing “uncovered” for half of the bar, so there’s no need for very loud dynamics; besides, this moment is the end of the first of three parts of the piece and there is no need to make the listener tired already.

The long roll in bars 115 to 131 (2:15) is simply written as forte for sixteen bars. In these situations, it is usual for percussionists to do a diminuendo after the first one or two bars, to make room for everything else going on in the orchestra. In this particular moment, there is the option of playing a subtle forte-piano each four bar phrase to keep the part interesting and to help the melody’s phrasing, as I did on the video recording.

Before rehearsal mark F (bars 251 to 274) there is a 24-bar roll starting in pianissimo and with the indications *crescendo poco a poco* and *sempre crescendo*. Since this section is building up in dynamic in the entire orchestra, the percussionists should of course follow everyone else’s dynamic, but my personal choice would be to keep the soft dynamic for as long as possible, not reaching the *mezzopiano* until the 16th bar, allowing me to play a more explosive *crescendo* in the end of the phrase and also, again, to not tire the listener. A great way to create musical tension in the roll without raising the dynamic is to increase the number of strokes per beat, manipulating the density of it. So, I start the roll in a regular speed, then, around the fourth bar, increase the strokes speed without changing dynamic and only then, allow the dynamic to slowly get to *forte*.

5.2 *Capriccio Espagnol*, Nikolai Rimsky-Korsakov

Nikolai Rimsky-Korsakov (1844-1908) is one of the most acclaimed Russian composers of all times. He was very influenced by Balakirev and one of the most relevant composers within The Five group. Rimsky-Korsakov was quite prolific and most of his works are operatic; regardless, his orchestral music has achieved great success and is very often considered a model of outstanding orchestration.⁴²

Spanish Capriccio (1887) and *Scheherazade* (1888) are very often acclaimed for their orchestration, featuring a large percussion section written in a very particular way, including techniques and articulation details rarely found

⁴² Grove Music Online, s.v. “Rimsky-Korsakov: (1) Nikolai Andreyevich Rimsky-Korsakov” by Mark Humphreys and Marina Frolova-Walker, accessed February 26, 2017, <http://www.oxfordmusiconline.com/>.

in music from this period.⁴³ Despite their success, Korsakov was annoyed by the critique's focus on orchestration, as he later wrote in his autobiography:

The opinion formed by both critics and the public, that the *Capriccio* is a *magnificently orchestrated piece* — is wrong. The *Capriccio* is a brilliant *composition for the orchestra*. The change of timbres, the felicitous choice of melodic designs and figuration patterns, exactly suiting each kind of instrument, brief virtuoso cadenzas for instruments solo, the rhythm of the percussion instruments, etc., constitute here the very *essence* of the composition and not its garb or orchestration. The Spanish themes, of dance character, furnished me with rich material for putting in use multiform orchestral effects. ⁴⁴

The snare drum part for *Spanish Capriccio* is technically quite demanding and includes many of the most difficult and delicate techniques in snare drum playing. The third movement – “Alborada” – has a very busy snare drum part, containing the rhythmic foundation for the melody and adding the Spanish-like character with the fast triplets. The fourth movement – “Scena e Canto Gitano” – is one of the most well-known excerpts in the snare drum repertoire. The movement starts with a long loud roll accompanying a melody in the brass, followed by a sudden *diminuendo* in the roll, stabilizing in *sempre ppp* during the violin *cadenza*. In the end of this very long and exposed roll, a new section of the piece begins with the indication *a tempo* in which the snare drum plays a *pianissimo*, very articulate rhythmic passage. The combination of solo long rolls in *forte* and *pianississimo* and soft articulate rhythms makes this one of the most technically demanding orchestral excerpt for snare drum.

5.2.1 My interpretation

Video 6: Excerpts from *Capriccio Espagnol*, by Nikolai Rimsky-Korsakov. Snare drum part played by myself, overlaying a recording by Berlin Philharmonic Orchestra conducted by Zubin Mehta.

<https://youtu.be/CmoxASAZkv8>

⁴³ Wikipedia, s.v. “*Capriccio Espagnol*”, last modified on 11 January 2017, accessed February 26, 2017, https://en.wikipedia.org/wiki/Capriccio_Espagnol .

⁴⁴ Wikipedia, s.v. “*Capriccio Espagnol*”.

5.2.1.1 “Alborada”

Vivo e strepitoso ♩ = 126

f

3 3 3 L L 3 3

[H] 12 [I]

f

3 3 3

[K] 29 (b.d. & cyms.)

f *attacca*

Figure 17 Spanish Capriccio, mov. III Alborada, ed. Carroll.⁴⁵

In the third movement – “Alborada” -, I find the most relevant thing about the snare drum part (as well as the other percussion parts) to be the character. The percussion section’s role in most of this piece, particularly in this movement, is to grant the Spanish-like character to the music.

The tempo marking in this movement is *vivo e strepitoso* which translates to lively and resounding. In order to achieve the *vivo* character, I play with faster, closed rhythms whenever possible, as in every grace note and triplet, meaning that the grace notes will be placed very close to the beat and the triplets will not be mathematically perfect, rather slightly faster and closer together. Regarding the rolls, I play them rather closed, keeping a sixteenth note structure and aiming for around four rebounds per stroke. This means that, for instance, in the two opening bars, the roll in the quarter note will have four strokes, each with four rebounds.

I interpret the rolls in this movement as rhythm rather than purely sustained notes. I do that by playing every note with a slight *marcato* feeling.

From the rehearsal marking “I”, I do sustain the rolls to keep a somehow *quasi legato* articulation, but I still play *marcato* in every note. This way, I’ll keep

⁴⁵ Carroll, *Orchestral Repertoire for the Snare Drum*, 62.

my part coherent with the melody played by the orchestra. I do a slight emphasis on each syncopated rhythm to keep it interesting and in character.

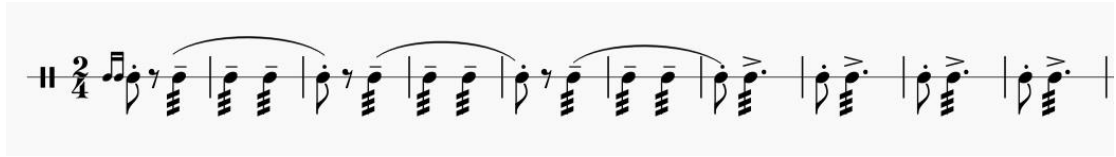


Figure 18 Representation of my suggestion of the articulation for rehearsal marking I.

5.2.1.2 “Scena e Canto Gitano”

The image displays three systems of musical notation for the opening of "Scena e Canto Gitano".
 - The first system features the 1st horn part (treble clef, 6/8 time) with a triplet of eighth notes marked "con forza". Below it is the "Tamburo Solo" part (treble clef, 6/8 time) with a sustained note and a trill (tr) marked "f".
 - The second system continues the horn part with triplet markings and dynamic markings "dimin." and "cresc.". The tamburo part remains a sustained note with a trill.
 - The third system is labeled "Cadenza II Violin Solo" (treble clef, 6/8 time) with a triplet of eighth notes marked "f". The tamburo part is marked "dimin. ppp sempre ppp". To the right, the timpani part (bass clef, 6/8 time) is marked "p" and "a tempo ♩ = 69", with a dynamic marking "pp" below it.

Figure 19 Opening bars of Spanish Capriccio, “IV. Scena e Canto Gitano”, ed. Caroll.⁴⁶

The fourth movement, “Scena e Canto Gitano”, is the real challenge for the snare drum player. The tempo markings *quasi cadenza* and *cadenza* do not provide so much useful information to the snare drum player. The snare drum is basically sustaining a note, filling up the silences in the melody and providing the right atmosphere. This is one of those pieces in the repertoire where I aim for the

⁴⁶ Carroll, *Orchestral Repertoire for the Snare Drum*, 63.

perfect sound as described in section 2.3: uniform, not too opened, not too closed, not too choked but not too airy.

I find it extremely important to have, in this case, as much information about what else is being played, preferably having the horn and later the violin part on my score, as it is done in Carroll's edition.

To keep a sustained loud roll for the entire first *cadenza* would be, in my opinion, not musical, not expressive and very tiring, both for the listeners' ears and for the player's arms. What I do in my interpretation is to start the roll in a loud dynamic and then discretely follow the many dynamics and expressions in the melodic line. In the end of the first *cadenza*, I do a quick *diminuendo* and then I stabilize the dynamic in *pianississimo* for the entire violin solo. The fact that the composer cared to include the word *sempre* (always) in the dynamic indication restricts the dynamic freedom that I had in the first *cadenza*. A very soft roll will not be tiring for the audience and it will not interfere too much with the violin solo.

I do struggle with this passage because I find it quite hard to sustain a roll in such an extreme dynamic as *pianississimo* for a long time. If my technique is not absolutely on point, it might happen that my roll will sound uneven, with peaks, and not as soft as I would like. When discussing this with Roger Carlsson, percussionist at the Gothenburg Symphony Orchestra, he showed me a different way to perform this kind of roll. Instead of trying to get the usual three to four rebounds, Carlsson plays each stroke with some more pressure, almost as a buzz stroke, playing fewer, slower strokes with more rebounds and slightly overlapping each stroke.⁴⁷ This produces a closer roll, still with the relaxed feeling of having slow strokes, and makes it far easier to keep the roll uniform for a long time. The buzz sound is not disturbing in such soft dynamics and it works better than the usual three rebound roll in concert halls.

One more important thing to discuss about this excerpt is which snare drum to use and how to prepare it. I use a small drum to get all the articulate parts such as the rhythmic figures in marking L to sound very crispy and dry, but I don't want to compromise the full drum sound for the loud rolls and other loud passages. My solution is to use one more drum, rather deep, such as a 5, 5.5 or even 6-inch drum, to play the louder passages that require a richer, bigger sound.

⁴⁷ Conversation with Roger Carlsson on the 7th of March, 2017. Carlsson authorized the inclusion of his name and opinions in this text.

5.3 *Scheherezade*, Nikolai Rimsky-Korsakov

Scheherezade is an orchestral suite composed by Nikolai Rimsky-Korsakov in 1888 based on *One Thousand and One Nights* (commonly known as *The Arabian Nights*). The orientalism present in this piece is one of the reasons for its rich and colorful orchestration.

This is a mandatory piece in the orchestral percussionist's repertoire: every part is written in a very innovative and unique way and many parts are frequently asked for in orchestral auditions, such as tambourine, triangle and mostly snare drum.

Although the third movement – “The Young Prince and The Young Princess” -, is the most famous one for its snare drum part which mainly consists of a very soft and articulated pattern, I will now focus on the fourth movement – “Festival at Bagdad”, since it is more diverse and includes more roll passages.

5.3.1.1 My interpretation

Video 7: Excerpts from *Sheherazade*, by Nikolai Rimsky-Korsakov. Snare drum part played by myself, overlaying a recording by Saint-Petersburg Philharmonic Orchestra conducted by Yuri Temirkanov.

<https://youtu.be/G9mdtY4Ffcg>

In the fourth movement, the snare drum starts playing in the *Vivo* (lively) section. In order to achieve the desired character, I play very closed grace notes, as well as quite closed rolls and enhanced dynamics.

In the first intervention (the bar before the rehearsal mark “C”), I play a very pressed roll with three strokes in each eighth note. This way, I have enough strokes to play a consistent, fast crescendo, without struggling with the fast tempo. I start each rolled eighth note with my left hand, so that I can play the end of the *crescendo* with the right hand while preparing the next roll. The dynamic in this passage is *mezzoforte* with *crescendo* in every bar. Since this indication is quite vague, it is traditionally played going down in dynamic to piano in before each *crescendo* and quickly getting to a full, louder *mezzoforte* with a heavier felling on the accentuated notes.

The next intervention (at the rehearsal mark “E”) is a longer roll that starts in *forte* and quickly goes down to *piano*. The danger here is to play a *fortepiano* instead of a quick *diminuendo*, so the roll should be really smooth and controlled. I strive for a clear, articulate eighth note to finalize the roll, as it is written. In the following bars, I keep the roll as before, with three strokes per eighth note, except that now I do a slight accent in the beginning and end of each roll to be coherent with the rest of the orchestra.

Figure 20 *Scheherazade*, mov. IV “Festival of Bagdad”, ed. Carroll.⁴⁸

The passage starting four bars before the rehearsal mark “N” is well known amongst percussionists for its difficulty. The hard thing about this passage is not the roll itself, but what follows it: eighteen bars of *pianissimo* sixteenth notes providing the tempo reference for the orchestra. Adding the *crescendo* roll and the *sforzando-pianissimo* before makes it even more technically demanding. My solution for this place is to play a regular three bounce roll, with four strokes per bar in the first two bars and five strokes per bar in the third and fourth bars. By adding more beats to the roll, I am naturally producing a *crescendo* and increasing musical tension; besides, playing five strokes per bar means that I will alternate hands (one bar will start with the right hand, and the next one will start with the left hand) which I personally find very comfortable and gives me a sense of continuity. Conveniently enough, I end my roll with my right hand in the *sforzando* note, allowing the left hand to quickly move closer to the drum’s rim, where the *pianissimo* passage will be played.

⁴⁸ Carroll, *Orchestral Repertoire for the Snare Drum*, 67.



Figure 21 *Scheherazade*, mov. IV *Scena e Canto Gitano*, ed. Carroll.⁴⁹

5.4 *Symphony no.5*, Carl Nielsen

Carl Nielsen (1865-1931) was a Danish composer and is defined by Grove Music Online as “one of the most important and free-spirited of the generation of composers who straddle the 19th and 20th centuries (...)”.⁵⁰ His six symphonies are his most acclaimed works and significantly contributed to the renewal of the genre in the 20th century.

His fourth and fifth symphony reflect Nielsen’s troubled love life, a period of a creative crisis and the first world war. Grove Music Online states that “(...) the Fifth Symphony of 1921–2, now widely held to be Nielsen's greatest masterpiece, pits a side drum against the full orchestra in its first movement, following this with a double-function finale in which the sonata development section is a controlled collapse, the interposed scherzo and slow movement convey panic-ridden stasis and thoughtful reconstruction, and the recapitulation channels energies away from formerly dangerous paths into positive life-assertion.”⁵¹

The snare drum part in the fifth symphony is written like no other percussion part before. The first intervention is a rhythmical theme that dominates the first movement, repeated in different dynamics, with *crescendo* and *diminuendo*, giving the listener the impression of a moving scene, getting closer or away from the musical action.

⁴⁹ Carroll, *Orchestral Repertoire for the Snare Drum*, 68.

⁵⁰ Grove music online, s.v. “Nielsen, Carl (August)” by David Fanning, accessed on April 19, 2017. <http://www.oxfordmusiconline.com/>.

⁵¹ Ibid.



Figure 22 Rhythmic motive in the first movement of *Symphony no. 5*, ed. Carroll.⁵²

In my opinion, the special thing about this snare drum part is how it totally differs, and in a way, interferes with the rest of the orchestration. While the orchestra plays long, *legato*, pleasant melodies, the snare drum keeps repeating this strict theme, full of military energy, interrupting and disturbing the melodic lines.

From rehearsal marking 34, the snare drum plays in its own tempo, completely unrelated to the tempo in the rest of the orchestra. After a few bars in the new tempo, the snare drum plays then a *cadenza* improvised by the player – something so unique and original that can be hardly compared to symphonic music written before or after this symphony. The musical tension achieved in this moment then culminates in a perfect cadence and a series of snare drum rolls.

⁵² Carroll, *Orchestral Repertoire for the Snare Drum*, 31 .

34 The drum plays in the tempo of ♩ = 116.
ff 3 3 3
 35 *pp* < *ffz*
fz fz fz fz fz *ff* 3 3 *ff* > *pp*
ff fz fz ffz *ff* 3 3 *ffz* 3 3 *ffz* 3 3 *ffz*
 2 36 7 37
Cadenza ad lib.
 The drum continues freely with diverse pauses until a measure before 37.
mp < *fff* *dim.*
pp

Figure 23 Passage from the first movement in *Symphony no. 5*. Note the tempo indication on 34 and the *cadenza ad lib.*⁵³

5.4.1 Cadenza using different roll combinations

Video 8: possible *cadenza* for Nielsen's 5th Symphony using different aspects of the snare drum roll. Performed and conceived by myself.

<https://youtu.be/bevmOwLVFi0>

< *pp* < *ff* > *sfz sfz* 3 3 3 6 *sfz* *mf* *cresc.* - - *ff*
 3 3 3 3 3 3 3 3 3 3 3 3
 < > *mf* < *ff* *p* < *ff*

Figure 24 Nielsen's 5th Symphony snare drum cadenza, written by myself in 2015– stress on rhythmical patterns.

⁵³ Carroll, *Orchestral Repertoire for the Snare Drum*, 32.

When writing my cadenza in 2015 – before starting this research – I mostly focused on exploring rhythmical motives, some of them quoting other Nielsen’s pieces, such as the clarinet concerto. This is how a regular cadenza for this piece can look like.

For the purpose of this investigation, I wrote a cadenza for this piece based on exploring as many roll possibilities as I can. My intention was to explore my roll in a musical way and in as many forms as I can, doing it on a musically interesting way, and also showing the reader the result of combining many aspects discussed along this thesis in a short musical moment. This would not be the way I would perform this cadenza in a regular orchestral situation, for which I would have a more rhythmical approach.

6 Final thoughts

My major achievement with this project was to be able to deconstruct an apparently simple and straightforward technique into many levels of technical skill and artistic approach. It was important for me to prove to myself that a good technical control is almost always connected to a richer musical interpretation.

Another realization I had while conceiving this project was that there are so many different ways of approaching technique and that all of them are correct on many levels.

This research gave me a much broader understanding of the technical and musical possibilities of the snare drum roll. After researching how the roll is done, how it could be done, why it is done in a particular way and how I can apply that to a musical context, I am a more capable musician and my snare drum playing is much more versatile. My purpose from the beginning was to look into different ways of playing the snare drum roll and improve my performance in the symphonic orchestra, which was successfully fulfilled.

Another very important realization during this process was that the percussion community is extremely generous and with the help of social media anyone can get insight from percussionists all over the world. This is, in my opinion, revolutionary, and I will take advantage of it more often from now on.

In conclusion, this project was very important to me, since putting my thoughts on paper helped me to improve my technique and ultimately become a better percussionist.

7 Bibliography

Beck, John. *Encyclopaedia of Percussion*. New York: Garland, 1995.

Blades, James. *Percussion Instruments and Their History*. London: Faber and Faber Limited, 1973.

———. “The Drum, A Step Forward.” In *Percussion Instruments and Their History*, 48–49. London / Boston: Faber and Faber, 1984.

Blades, James, and Edmund Bowles. “Timpani.” *Grove Music Online*, n.d.
<http://www.oxfordmusiconline.com/>.

“Capriccio Espagnol.” *Wikipedia*, n.d. https://en.wikipedia.org/wiki/Capriccio_Espagnol.

Carroll, Raynor, ed. *Orchestral Repertoire for the Snare Drum*. California: Batterie Music, 1997.

Cirone, Anthony J. *Portraits in Rhythm - Complete Study Guide, Observations and Interpretations of the Fifty Snare Drum Etudes from Portraits in Rhythm*. Los Angeles, California: Alfred Music Publishing, 2000.

De Douvan, Marc. “Modern Drumset History,” October 2005.
http://marcdedouvan.com/en/modern_drumset_history.php.

Delécluse, Jaques. *Douze Études Pour Casse-Clair*. Paris: Alphonse Leduc Éditions Musicales, n.d.

Fanning, David. “Nielsen, Carl (August).” *Grove Music Online*, n.d.
<http://www.oxfordmusiconline.com/>.

Gossett, Philip. “Rossini, Gioachino.” *Grove Music Online*, n.d.
<http://www.oxfordmusiconline.com>.

Holland, James. *Percussion*. London: Macdonald and James, 1978.

- Humphreys, Mark, and Marina Frolova-Walker. "Rimsky-Korsakov: (1) Nikolai Andreyevich Rimsky-Korsakov," n.d. <http://www.oxfordmusiconline.com/>.
- James, William J. *The Modern Concert Snare Drum Roll: A Comprehensive Guide*. Florida: Meredith Music Publications, 2014.
- Marais, Marain. "Alcyone (Tragedie. Mise En Musique)." Paris: Chez l'Authour, Hurel, Foucaut, 1706. imslp.org.
- Morello, Joe. *Master Studies*. Fairfield: Modern Drummer Publications Inc., 1983.
- Peters, Mitchell. *Developing Dexterity for Snare Drum*. Los Angeles: Mitchell Peters, 1968.
- . *Advanced Snare Drum Studies*. Los Angeles: Mitchell Peters, 1971.
- . *Intermediate Snare Drum Studies*. Los Angeles: Mitchell Peters, 1976.
- . *Elementary Snare Drum Studies*. Los Angeles, California: Mitchell Peters, 1988.
- Reed, Ted. *Progressive Steps to Syncopation for the Modern Drummer*. New York: Alfred Music Publishing, 1996.
- Rossini, Gioachino. *La Gazza Ladra (Opera Semiseria in Three Acts)*. Paris: Paccini, n.d.
- Sholle, Emil. *The Roll for Snare Drum*. Ohio: Brook Publishing Co., n.d.
- Stevens, Leigh Howard. *Method of Movement for Marimba with 590 Exercises, Revised and Expanded*. Asbury Park: Marimba Productions, 1979.
- Stone, George Lawrence. *Stick Control for the Snare Drummer*. Randolph: George B. Stone and Son, Inc., 1935.
- . *Accents and Rebounds*. Randolph: George B. Stone and Son, Inc., 1961.