



# The path of the right hand

– A study about improving the bow technique on the violin,  
using a baroque bow

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## ABSTRACT

Key words:

Violin bow, bow technique, Tourte bow, baroque bow

In this thesis the author is experimenting with violin bow technique, using a baroque bow. She is playing excerpts from the standard modern violinist's repertoire, solo and symphonic, with both a Tourte bow (modern bow) and the baroque bow. The different techniques used has then been documented and compared. The experiments have been filmed in normal speed and slow motion.

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# Introduction

This is a study about how the violinist can improve his or her bow technique by playing with a baroque bow.

I believe that it does not fall naturally for a human being to hold the bow in the ways that we do today. If you would give a bow to someone who do not play a string instrument he or she would probably grab it with a firm fist and lock the grip with the thumb, as if they hold a stick. There are many violinists who started play at a very young age, I myself as early as the age of five.

I believe that it is particularly hard for children to learn a correct way of holding the bow, since they by instinct usually grab a stick in their palm and lock the grip with their fingers and thumb. So, violin teachers have different ways and tricks to make their pupils hold the bows in their preferred way.

Since I started to play more baroque music I've discovered a certain passion for older instruments and especially older bows. To play with instruments made similar to those musicians used at the time gives me a greater understanding for the music. It has also awakened some questions. How do I adapt my technique to optimize my playing when I am using a lighter, slimmer and higher bow? I want to analyze that and transfer what I do to the Tourte bow, the modern bow. Thus, I want to embrace how I handle the "flaws" of the baroque bow. I think that the violinist gets a lot for free with the Tourte bow, in ways that you necessarily would not do with the baroque bow, and through playing for example music from the 19<sup>th</sup> century with the baroque bow I hope to discover flaws in my modern bow technique, and so improve it.

So in this study I will substantiate my bow adventures. I hope that it might be useful for you as a string musician, but also for all other readers since I strive to be a better musician by thinking outside the box.

# 1. Purpose

The purpose with this study is to examine how the violinist can refine his or her bow technique using a baroque bow. The baroque bow will have the function of a tool to visualize the flaws that perhaps do not normally show when playing with a modern bow.

## 1.1 Method

This is a study in how to develop a better bow technique by using the violinist's equipment in an unusual way. Since I focus on the improvement of my violin playing only, I have selected some excerpts, with different bow technique challenges. These excerpts have been relevant in my work as a violinist, I have studied these pieces during my two years in Högskolan för Scen och Musik.

The order of the excerpts in this thesis is the order I worked with them in real time.

### 1.1.1 Filming myself

I filmed myself when I play the excerpts in both normal video speed and in slow motion, with my two bows, and later I thoroughly analyzed these videos and thus seen the flaws in the bow technique that are more visible then I play with the baroque bow. I used the camera in my mobile phone (Iphone) and placed it in such an angle that the film focuses on the right hand.

Through the videos I have also discovered what I automatically do to make up for the limitations that comes with the baroque bow, both visually, in terms of sound and in the way it feels. After discovered my technical adjustments in my right hand I will be able to improve my modern bow technique by transferring the added technical skills learned from using the baroque bow.

## 1.1.2 The bows used in this study

The picture below displays the two bows that I have used in this study. The one at the top is a standard modern violin bow, a Tourte bow. It measures 74,5 cm from the tip to the screw and weighs 60 grams. The surface of the the horsehair is 12 mm wide.



*Picture 1: Modern bow above, baroque bow below. Photo by the author*

The bow at the bottom of the picture is a baroque bow that I ordered from the violin maker Philippe Dormond in 2017. This kind of bow was common in France in the middle of the 18<sup>th</sup> century. It is a quite long baroque bow (still shorter than a Tourte bow) and weighs 51 grams. The surface of the horsehair is 7 mm. Except for the measurements and weight I find it important to note that that the curve of the tourte bow is towards the hair, while the baroque bow has the opposite curve.

These were my conditions when I started the work with this study.

To avoid repeating myself in the text I will use the following abbreviations; The modern bow that I use in this thesis will be called **M**. The baroque bow I use I shorten to **B**.

When I play with **B** I normally have a smaller grip around the stick than I would if I played with **M**. The fingers are closer to each other. Also, my hand is further away from the frog than it would be if I played with **M**. **B** is much lighter than **M\***. Therefore the violinist needs to give more effort to produce a thick tone with depth and core.

It is not a wise option to violently push the bow into the string in the same way that you can with **M\*** since **B\*** has a narrow horse hair surface and an upward curved stick. But it is certainly possible

to get a large tone with **B\*** if you use the right technique. My suggestions to accomplish that is presented in the analysis chapter.

### 1.1.3 Another student's research within the subject

In my process of finding material for this thesis I came across a master thesis from an earlier year. Vilma Monto, a violinist from Finland wrote her thesis “On the way towards a professional orchestra: A Violinist’s Battle with Bow Technique and Stage Fright”<sup>1</sup>. I found it interesting because I can recognize myself in how she describes her bow technical journey and the problems she had to face over the years. She describes how various teachers over the years have asked her to change to change how she holds the bow.

What especially caught my attention was the section about the movements of the fingers of the right hand, since this is something I also focus on in my own thesis. She used her daily scale exercises to carefully watch the bow hand and noticing the movements of the fingers.

*By carefully concentrating on the way my fingers hold the bow and observing this in the mirror, I started playing the scales first really slowly. Based on the feeling in different fingers I started making bowing variations still on the notes of 2-octave scales.*<sup>2</sup>

### 1.1.4 Leopold Mozart

Leopold Mozart's (1719-1787) book *Versuch einer Gründlichen Violinschule*<sup>3</sup> (A Treatise on the Fundamental Principles of Violin Playing) is one of the most famous books about violin playing and violin teaching. I find this book very interesting and relevant for this my thesis, as it was published in 1756, the same time period when bows like my own baroque bow were used.

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1 Vilma Monto : “On the way towards a professional orchestra” (Masters thesis, University of Gothenburg, 2011).

2 Monto : “On the way towards a professional orchestra” , 8.

3 Leopold Mozart, *A Treatise on the Fundamental Principles of Violin Playing* , Oxford: Oxford University Press , 1756.

In the second chapter in paragraph 5 he describes how the violin student should hold the bow;

*“The bow is taken in the right hand, at it's lowest extremity, between the thumb and and the middle joint of the index finger, or even a little behind it.”.... “The little finger must lie at all times on the bow, and never be held freely away from the stick, for it contributes greatly to the control of the bow and therefore to the necessarily strength and weakness, by means of pressing or relaxing.”<sup>4</sup>*

This is new to me, since I have been told during my violin studies that the bow hold can advantageously be moved towards the middle of the stick when playing music from before the romantic period.



Picture 2: Mozart, Leopold: Versuch einer Gründlichen Violinschule<sup>5</sup>

In the book there are many illustrations and the one above teaches the student how to hold the bow. L. Mozart's figure 4 shows a bow hold that is quite similar to how I myself hold a bow, with one exception; the little finger is almost lying on the stick and not placed on top of the stick.

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4 L. Mozart, *A Treatise on the Fundamental Principles of Violin Playing* , 58.

5 L. Mozart, *A Treatise on the Fundamental Principles of Violin Playing* , 59.



### 1.1.4.1 Trying Leopold Mozart's bow hold

In the previous mentioned quote from the book, L. Mozart points out the importance of the little finger, stating that it should at all times lie on the bow, not being placed on top of the stick.

In the picture below I show how I hold (with the little finger upon the stick) and how I hold the bow like L. Mozart describes in the book.



Picture 3: The authors own bow hold (on the top) versus L. Mozart's bow hold (on the bottom)

The pictures on the top is how I hold the bow. The space between the thumb and index finger has an oval shape and my little finger is placed on top of the stick. The three pictures on the bottom is my attempt of recreating L. Mozart's illustrated description on a Tourte bow.

When my little finger is placed with the tip on top of the stick, I find that the finger can steer the movements of the bow very precise, without using too much pressure. The finger feels quite strong because of the vertical placement.

When I tried L- Mozart's illustrated bow hold, I immediately found that the hand felt a lot more unstable. To prevent myself from dropping the bow I instinctively bent my thumb in the opposite direction than before, so that a bigger surface of the finger could support the bow. The bow hold felt quite tensed and it was more difficult to get achieve a flexible and relaxed motion while playing the

violin. I could feel the stick sliding under my little finger as I started to move my arm. The whole experience was surprisingly unstable.

With this “Pre-experiment”, inspired by Leopold Mozart book, I choose to expedite my bow experiment with my normal bow hold, both when playing with the Tourte bow and the baroque bow.

## 2. Experiment and analysis

### 2.1 Part one of the experiment

In this chapter I present the parts of the musical pieces that I have chosen for this study. Some score examples are connected in the text. The excerpts in this thesis have been relevant in my work as a violinist, as a part of my education at Högskolan för scen och Musik. The order of the excerpts in this thesis is the order I worked with them while I was studying them in this education.

#### 2.1.1 Brahms violin concerto

(video no 1, 2, 3, 4)

In the following example have I made some experiments with Johannes Brahms's violin concerto. I played the solo introduction both with **M** and **B**, and during practice and later on analyzed what I do to make **B** produce as large a tone as possible and finally transferred the result to when I play with **M**.

The image shows a musical score for the first movement of Johannes Brahms' Violin Concerto. The title is 'Allegro non troppo'. The score is in 3/4 time and D major. It consists of two staves: the top staff is labeled 'Violin' and the bottom staff is labeled 'Vln.'. The music begins with a forte (f) dynamic. The top staff features a series of eighth notes, a quintuplet of eighth notes, and a triplet of eighth notes. The bottom staff features a triplet of eighth notes. The tempo is marked 'Allegro non troppo'.

Music example 1: Johannes Brahms, Violin concerto<sup>6</sup>

When I played the solo part introduction with **B** for the first time everything felt very unstable. Since **B** has the shape of a longbow and less surface of horsehair than **M** there is a bigger risk that the bow will accidentally slide to the side and flip over.

My observation is therefore that **M** is much more forgiving when playing on the side of the horsehair since it has a more robust construction, with broader horsehair, thicker stick, and because the hair and stick are much closer together on **M** than on **B**.

<sup>6</sup> Johannes Brahms, *Violinkonzert D-dur opus 77*. Edited by Linda Correll Roesner, München: Henle Verlag, 2009.

To flip the surface of the horse hair to one side is a common violin technique to produce a softer but still clear tone, but I believe that this phenomenon can be found in various violinist's playing when perhaps not needed. I believe that many violinists, including myself, unconsciously flip the bow almost all the time when we play, which may not be as much of a problem when playing with **M**, but when playing with **B**, this becomes a much more obvious problem. So, if I consciously compensate my sideways angeling by slightly leaning the bow hold in the opposite direction, I will place the horsehair fully on the string, and thus get a more stable bow hold.

As mentioned, **B** is lighter than **M** which leads us to the next issue. The first solo entry of the concerto has the dynamic *forte*, but traditionally more a soloistic *forte* or even *fortissimo*, that needs a lot of force from the bow. This forte is much more easily gained “for free” from **M\*** than from **B\***. I have experimented with how I can make **B\*** produce a larger and louder tone. To play with longer bow strokes turned out to be ineffective. Although the sound became louder, the strokes became much more unstable and more accidental intruding sounds such as scrapings appeared.

To violently push the bow into the string did not feel like a good idea either since it can be bad for both the instrument and for the violinist in ergonomic ways.

I chose to focus on developing what I call finger *playing*. By distributing the balance point between the fingers depending on where on the bow the violinist chooses to hit the string, one can focus the tone all the time. For example, when playing at the tip of the bow, the index finger has more weight than the other fingers, and the closer to the frog one gets, the other fingers, and especially the little finger takes over the responsibility. But the weight of the bow is not equally distributed since the frog weights a lot more than the tip, and that is why I let the index finger have the weight point for a longer bit of the bow than the little finger.

I distribute the weight point between the fingers according to the illustration below.



Picture 4: How the author distributes the bow. Illustration by the author

Apart from the *forte* indication, the first solo also includes many articulation notations, both wedges, dots and accents. I quickly discovered that to produce them with **B** takes a lot more work than with **M**.

It would probably not be possible to produce a louder sound, counted in decibel, with **B**, so my conclusion is to compensate the physical advantage versus disadvantage by taking the articulation a step further when playing with **B**. In this sense, the meaning of a soloistic *forte* may not necessarily mean to play louder, towards a *fortissimo*, but rather to find ways to make your tone reach out and be heard, even in a big room with an accompanying symphony orchestra. Studying Brahms with **B** I learned two things; to rely of the heaviness of the right arm instead of pushing and making the articulation more precise with the index finger.

## 2.1.2 Haydn's Symphony 101

**Presto**

Violin 1

6

12

19

Music example 2: Joseph Haydn, *Symphony no 101, Presto*<sup>7</sup>

The next example is an orchestral excerpt from Joseph Haydn's symphony 101 in A major, written and first performed in 1794. The *presto* and the dotted notes suggests that the violinists should focus on to get the speed and lightness in the staccato notated eighth notes, which I tried to obtain in this experiment.

After having played the excerpt a good number of times with **M** I noticed how unstable the playing became when I switched to **B**. To get a good staccato with **M** I needed to make the bow bounce a

<sup>7</sup> Joseph Haydn, *Symphony no 101*, Leipzig: Breitkopf und Härtel 1855.

lot, so that the distance between the horse hair and the string became longer. This is not needed when playing with **B** since the light weight makes it easy to make it bounce without putting much effort in it to make it happen, and in this case, it was the factor that I tried so hard that made the bow strokes unstable.

So after having tried switching back and forth between **M** and **B** a couple of times I decided to interrupt the Haydn experiment, since I found that playing the excerpt with **B** wouldn't improve my technique, since it in this particular case takes more effort to play it with **M** than **B**.

As mentioned earlier in this thesis, François Tourte constructed the bow that string players use today; the Tourte bow, in the 1780's.<sup>8</sup> But between the baroque bow era and the Tourte bow era, there was a short period when a transitional bow was used; the classical bow.<sup>9</sup> The classical bows are the middle way, longer and heavier than the baroque bow, but not as long or heavy as the Tourte bow.

This symphony is a late work of Haydn, which could mean that it was played with the classical bow in its premier in 1794, which explains why I found it easier to play with **B** than with **M**.

As disappointed I am that my Haydn experiment didn't work as I had hoped, I still want to highlight that what happened when I used this piece in this thesis. In these experiments, I used **B** as the “week” bow, and it also became the better choice. The late classical repertoire on the verge of the romantic period required a heavier, longer and steadier bow, but when it comes to play fast spiccato sequences, **B** is still much easier to use. There are many big pieces written in the romantic era that probably would be easier to play it the bows used were lighter and perhaps even have the stick curved upwards instead of downwards.

**Allegro vivace** ♩ = 144

Violin 1 

*Music example 3: Robert Schumann, Symphony no 2, second movement<sup>10</sup>*

One example of that is the second movement of Robert Schumann's Symphony no 2, see the example above. The very fast tempo and the quiet spiccato would really be easier to play with **B**. The violinists wouldn't need to put as much effort in getting a good, quiet and fast spiccato, and

<sup>8</sup> Sohlmans Musiklexikon, second edition 1979, s.v. "Stråke".

<sup>9</sup> <https://www.corilon.com/shop/en/info/classical-bow.html> .

<sup>10</sup> Robert Schumann , *Symphony no 2* , Leipzig: F. Whistling, 1847.

instead focus more on getting the right notes, which in this particular case is a big challenge since the tonality doesn't fit the left hand in an ideal way.

### 2.1.3 Prokofiev's Symphony no 1

**Molto vivace**

Music example 4: Sergei Prokofiev, *Symphony no 1. Fourth movement*<sup>11</sup>

The final movement of Prokofiev's first symphony is really fast, which caused me a lot of struggle when I first started to learn it. The large number of articulation notations in the score points out the importance of playing the melodies perfectly clear, which in tempo of this movement can be as fast as 80-90 BPM when beaten in one. This is an aggravating circumstance.

I found **B** really helpful here. As discussed in the Haydn section (page 10) it is easier for me to play fast notes with a light bow. To get a good articulation I experimented with the length of the bow strokes, and as I did shorter strokes, the more precise the articulation became. I find this technique very useful when switching to **M**, especially when it comes to make different articulation notations sound different, like accents versus dotted notes. So in order to make this more precise in terms of articulation, less is definitely more.

As I watch the film of me playing in slow motion I notice that I do not use finger playing even half as much when playing this piece as for example in the Brahms excerpt earlier mentioned. Only

<sup>11</sup> Sergei Prokofiev, *Symphony no 1*, Paris: Editions Russe de musique, 1921, 4<sup>th</sup> movement.

when the notes are “long” I tend to move my fingers. Apparently, I compensate the absence of a lighter and tighter tensed bow (**B**) with a more tensed hand and arm and I find this method quite effective. So in this case, once again I find that there are advantages of playing with **B**. Instead of identifying the weaknesses in **B**, I now found its assets compared to **M**.

## 2.1.4 Verdi's Requiem

Violin 1

**Allegro agitato** ♩ = 80



*ff*

Music example 5: Giuseppe Verdi. *Requiem. Dies Irae*<sup>12</sup>

The following excerpt is the powerful start of *Dies Irae* from Giuseppe Verdi's *Requiem*. I did struggle with one specific bow technique issue in this passage, the upbow strokes with an accent on the second and third beats in the third bar and the second beat in the fourth bar. After filming myself in my usual way, with **M**, **M** in slow motion, **B** and finally **B** in slow motion I noted two things.

First, playing this excerpt with **B**, I tend to flick my wrist quite a lot, also my middle finger and my ring finger did move a lot more than when playing with **M**. I know that my bow hold when playing with **B** is much looser than when playing with **M** and I guess that the additional movements are effects of that, but I was not conscious about this effect until I saw the video.

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<sup>12</sup> Giuseppe Verdi, *Requiem*, Leipzig: C.F Peters, 1934.



## 2.2 Part 2 of the experiment- Ševčík

Ottakar Ševčík's étude books are one of the foundations of modern violin technique, and especially bow technique. I have been a frequent user of his books for many years. The construction of his violin bow technique books is very simple; a slow and simple melody and various variations of it, where different bow techniques are practiced. Most of the time I find them very easy to read, which suites me in my daily bow technique practices. The simplicity of the music allows the violinist to go back to the very basics of violin playing, and focus on every motion of the arm, wrist and fingers.

In this section of my thesis I will focus on two études, taken from the Ševčík's opus 3, variations 1 and 2. This book was published in 1893. Like in my previous experiments with the baroque bow, I have filmed myself playing these variations and analyzed them. This time though, I found it more interesting to see what has been improved in my modern technique, and so I have chosen not to use the baroque bow.

### 2.2.1 The first Ševčík variation

**Allegro**

Violin

Fr<sup>3</sup> Fr Fr Fr simile<sup>3</sup> simile<sup>3</sup> simile<sup>3</sup>

Music example 6: Ševčík, Ottakar. Violin Studies op 3 variation 1<sup>13</sup>

In the first Ševčík variation the violinist is focusing on switching between different bow techniques, the détaché and up-bow spiccato. The simple melody allows the violinist to exaggerate the different markings in the music. The marking *Fr* under the notes stands for frog, suggesting that this whole étude should be practiced at the frog of the bow, in order to get maximal control and a concentrated sound. I have discovered that for me, this étude can also be used as a strength exercise, since playing only at the frog for a longer section of music demands a lot of endurance and physical strength, since the whole arm has to be lifted quite high all the time.

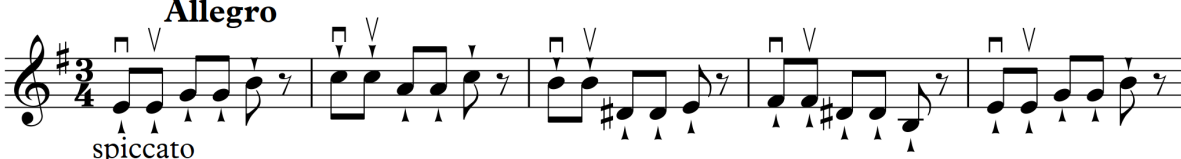
The triplets are underlined, which means détaché (long and even bow strokes). I aim to play them loud but at the same time, smooth and precise. I also concentrate on not giving them accents unconsciously.

<sup>13</sup> Ottakar Ševčík , *Violin Studies op 3- 40 variations* , London: Bosworth Company 2001 , variation 1 .

As I watched the videos of me playing the variation I am glad to see how relaxed my right hand is and how smoothly my fingers move with in harmony with the arm's motion.

## 2.2.2 The second Ševčík variation

Violin



Allegro

spiccato

Music example 7: Ševčík, Ottakar. Violin Studies op 3 variation 2 <sup>14</sup>

The purpose of this étude is to get an even spiccato. I find this étude a bit easier to play than the previous one, since in this one there is no switching between different bow techniques. However, a minor challenge for me is the string crossings. When the violinist is playing a moderately fast spiccato it can be hard to maintain the evenness of the notes.

As I watch the video of myself playing this variation, I notice that I move my arm quite a lot, maybe more than I need. I do however also move my index finger in a way that seems to make the spiccato more precise. I played the variation some more times and focused on not moving the arm as much. I believe that many violinists struggle a bit with this particular problem, and I know that this is something I need to think about on a daily basis when playing.

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<sup>14</sup> Ševčík, *Violin Studies op 3*, variation 2.

## 3. Conclusion

### 3.1 My bow technique

I must say that my bow technique has been much improved during these two years. I have learned to use the fingers of my right hand in benefiting ways.

I think that the most important discovery in this experiment is the usage of the index finger, which turned out to be a very important factor in my bow technique. I feel the most content with that my bow experiments showed me how important the index finger is. I am surprised that I have not really touched on the subject before now, since there is a lot to gain from using the index finger more consciously.

When powerful playing is needed (for example in the Brahms violin concerto) I believe that the index finger can truly be a helpful tool. Using it in a good way can save the rest of your hand, arm and even the whole body of the violinist a lot of effort. I discovered that the index finger is the key to a concentrated sound.

### 3.2 The bows

So, naturally I found that playing romantic and modern repertoire is harder when I was using the baroque bow. But for me there is one exception; Playing fast and short articulated notes. In both the Haydn and the Prokofiev excerpts it was easier with the baroque bow. The baroque bow is bouncing on the string in a way that the modern bow is not. Nevertheless I would think twice before using a baroque bow in other repertoire than from the baroque era. Even though it was easier using the baroque bow in those excerpts, it was in a way a failure for me, since the purpose of the baroque bow in this very experiment was to make the playing harder, not easier. But I can happily say that in most cases, the baroque bow served its quite unusual purpose for this thesis.

## 4. Final words

My subject for this theses may have been very narrow, how to perfect my bow technique in a very specific way. To be honest, sometimes I have doubted the experiment, thinking that it does not make any sense playing repertoire with a “wrong” bow. But now after these two years I can see a connection between this experiment and every single technique exercise musicians do. The connection is *consciousness*. It does not matter what you try to improve in your playing, as long as you are conscious about what you do, how you do it and what exact details about it you want to improve you have the ability to do it. I have found that in violin technique studies, consciousness is the key. The musician needs to be aware of every tiny motion, the ones that are wanted as well as the unwanted ones, in order to prevent them from appearing.

*So, did I in the end get a better bow technique these two years in Gothenburg?*

Of course, practice makes perfect. After two years of intense studies in an institution providing such great teachers and tools, I believe it is hard not to improve as a musician after this amount of time and devotion spent practicing my instrument.

I can say now that by choosing the baroque bow for my experiments I did not choose the most straight road. But the consciousness about my bow technique, the habit I now have of really paying attention to the right arm, the muscles, the hand, the fingers and my general playing has made me improve enormously. It is when you recognize your problems yourself that you can improve them. That is my greatest lesson with this thesis.

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