

# **Bow Distribution Analysis in Professional Violin Performance Practice**

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# Introduction

- Prior research: developing new material for advanced violin bowing technique by formulating systematic exercises and applying them in practice
- Common practice to notate left-hand fingering with no equivalent system for notating right-hand division
- Adapting a bow notation system from Lucien Capet in his annotations of etudes as early as 1916 and applying to systematic study material

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# Background and purpose

- According to the literature there are virtually no new developments for advancing bowing technique which took place from the early twentieth century onwards. (Stowell, 1992) (Hodgson, 1941)
- First sources: Francesco Geminiani *Art of Playing the Violin* (1751), Giuseppe Tartini *Trattato Di Musica* (1754).

# Background and purpose



Figure 1. Bartolomeo Campagnoli, *Nouvelle Méthode De La Mécanique Progressive Jeu Du Violon* (c.1810; repr., Leipzig: Breitkopf and Härtel, 1824).

	Example I	Example II	Example III	Example IV
<b>Dynamic</b>	<i>p, cresc., f, decresc.</i>	<i>f, decresc., p</i>	<i>p, cresc., f</i>	<i>p, f, p, f, p</i>
<b>Type</b>	Spun sound	Diminished sound	Increasing sound	Nuance/colour

# Background and purpose

➤ Pierre Baillot, *L'art Du Violon* (Mainz: B. Schott, 1834).

Divided the bow into three parts:

Division	Attribute	Use:	Sound/Effect:
Upper third	Soft	Power strokes with flat hair ( <i>martelé</i> ), phrase off	Strong, accented, airy and soft
Middle third	Balanced	Strength with flexibility, balanced weight for full tone, light strokes possible due to elasticity of the wood	Sweet/singing ( <i>dolcé</i> ), expressional
Lower third	Strong	Accents, downbeats, chords, power	Concentrated slow speed, mimic the redraw of singer's breath

Figure 2. Three divisions of the bow and their function according to Baillot. Baillot, *L'art Du Violon*, 93 Mainz: (B. Schott, 1834)

# Background and purpose

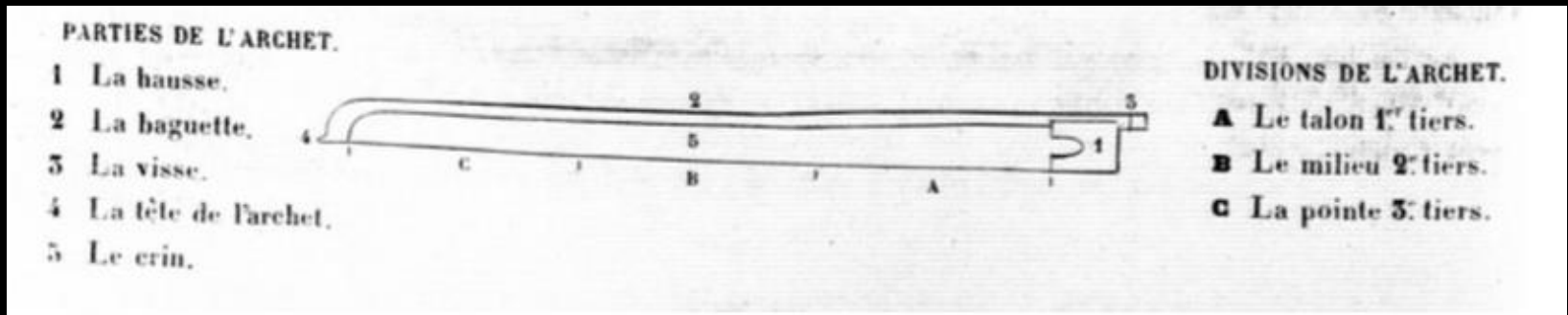


Figure 3. Divisions of the bow into three main parts by Charles Augusta De Beriot, *Méthode. De Violon, Op.102*

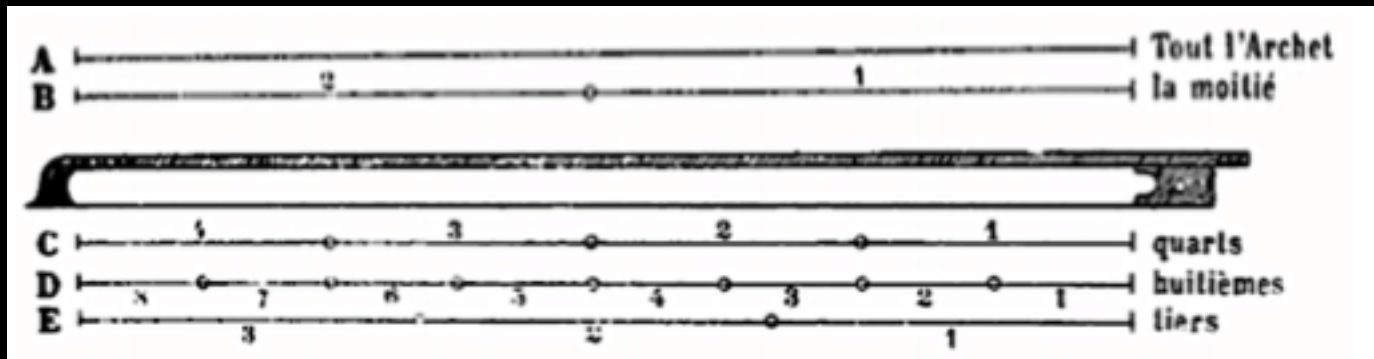


Figure 4. Lucien Capet, ed. Stephen Schipps, trans. Margaret Schmidt., *Superior Bowing Technique* (Maple City, MI: Encore Music Publishers, 2007), 10.

Ex. ①

Ex. ②

Figure 5. Annotated Fiorillo exercises with bow division notations by Capet. *36 Études* (Senart, 1915)

# Background and purpose

- If distribution of the bow was accurately measured, variables of bowing (ratios of speed, weight, flexibility of the stick) could be more accurately documented.



# Aims of presentation

Two components:

- 1) creation of systematic study exercises with accompanying bowing division annotations
- 2) What is visible on my score for performance

Bach's Solo Sonata No.1 in G minor, BWV 1001. I Adagio is used to.

# Bow Division Map

D	8	7	6	5	4	3	2	1	
C	4		3		2		1		
A									
B	2				1				
BOW TIP			MID BOW			BOW HEEL			
F	6	5	4	3	2	1			
E	3		2		1				

Figure 6. Adapting and extending a bow notation division system by Lucien Capet.

# Bach Solo Sonata No.1, BWV 1001, I. Adagio

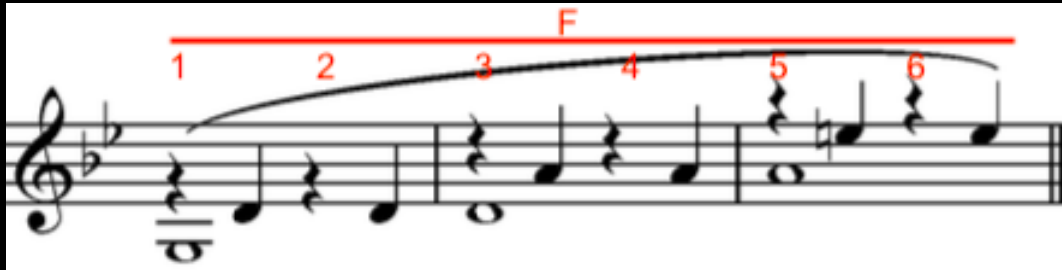


Figure 7. Bach Solo Sonata No.2 in G minor. BWV 1001. I. Adagio. Addressing bar 1. Applying spun-sound exercises on open strings; applying even bow distribution via the six-part division 'F'.



Figure 8. Bach Solo Sonata No.2 in G minor. BWV 1001. I. Adagio. Addressing bar 1. Applying spun-sound exercises on open strings; applying even bow distribution via the four-part division 'C'.

# Bach Solo Sonata No.1, BWV 1001, I. Adagio

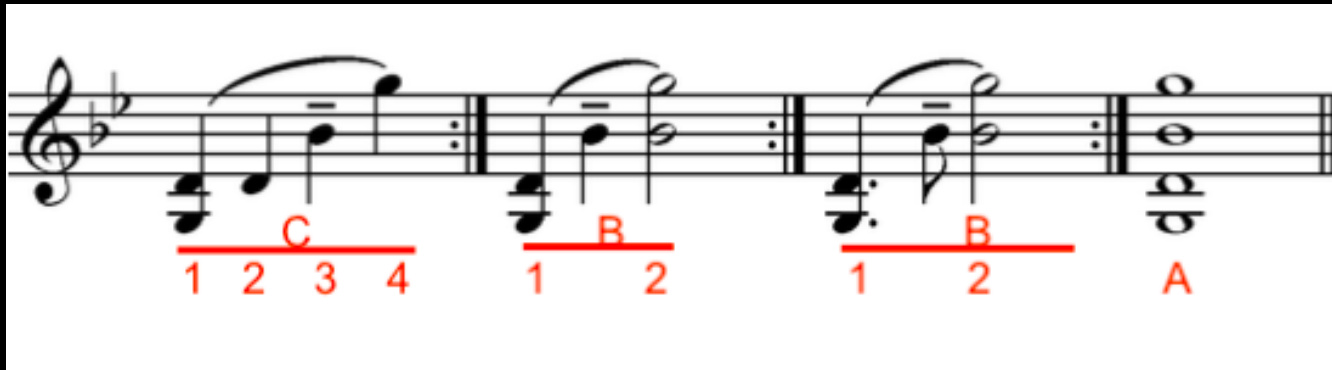


Figure 9. Bach Solo Sonata No.2 in G minor. BWV 1001. I. Adagio. Addressing bar 1. Pivoting exercise using four-part division 'C' and two-part division 'B'.



Figure 10. Bach Solo Sonata No.1 in G minor. BWV 1001. I. Addressing bar 1. Sustaining the middle G between two double-stops in chord two.

# Bach Solo Sonata No.1, BWV 1001, I. Fuga

Figure 10. The seven bow angles: G, G and D together, D, D and A together, A, A and E together and E.

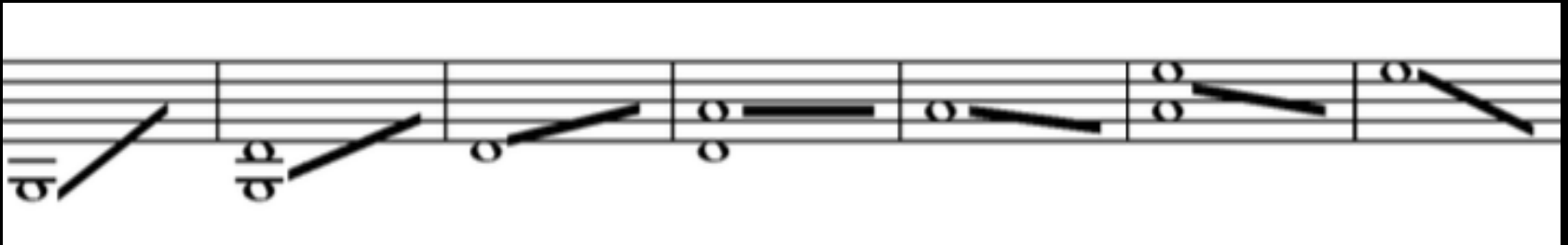


Figure 11. Marking the angles of the bow in the score

# Examples of formulated exercises

for oscillation - Balance of the bow according eye  
(123 (last) interval: sixth - fifth.

Figure 12. Dotted rhythms train nuances by demanding fast motion responses

Pivoting Exercises

Get uses horizontal movement w/ pressure on the middle string as in (ex 116) in BZ + A

Figure 14. Train string crossings with pivoting exercises

(145-148 last)

\* Spun sound exercise  
\* Tone exercise

Figure 13. Train tone production by alternating bow pressures and exploring dynamic range

# Example of Performance Score

**Sonate**  
Komponiert 1916–1917 · Erschienen 1917

L. 148 (140)

**I**

Allegro vivo  $\text{♩} = 55$

The score is written in treble clef with a key signature of two flats and a 3/4 time signature. It consists of six staves of music, each with various performance markings and annotations. Red annotations include fingerings (e.g., 0, 3, 1, 3, 1), slurs, and dynamic markings like *p dolce espress.*, *più p*, *cresc. poco a poco*, *decresc.*, and *mf cresc.*. Green annotations include the words *melodic* and *rhythmic* placed above specific notes. Other markings include *en serrant*, *a tempo*, *dolce vibrato*, and *simili*. Roman numerals (III, I, II) and letters (V, B, C, E, A) are used to denote chords or specific notes. The score ends with a double bar line and a fermata.

9 *p dolce espress.*

16 *en serrant* *a tempo* *p* *cresc. poco a poco* *f*

23 *dolce vibrato* *simili*

30 *p* *cresc.* *decresc.* *mf cresc.*

36 *melodic* *rhythmic* *f*

# 6. Reflection

Highest level practical teaching requires analysis of the Right-Hand and the literature has not caught up.

Notating bow divisions allows for more study material to be produced for advanced right-arm technique.



# Bibliography

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