

# **“Sweetenings” and “Babylonish Gabble”**

*Flute Vibrato and Articulation of Fast Passages  
in the 18<sup>th</sup> and 19<sup>th</sup> centuries*



# **“Sweetenings” and “Babylonish Gabble”**

*Flute Vibrato and Articulation of Fast Passages  
in the 18<sup>th</sup> and 19<sup>th</sup> centuries*

Maria Bania

School of Music and Drama, Faculty of Fine, Applied and Performing Arts,  
University of Gothenburg

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University of Gothenburg

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*For Isabelle and Gabriel*

# Abstract

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Flute Vibrato and Articulation of Fast Passages in the 18<sup>th</sup> and 19<sup>th</sup> centuries

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During the 18<sup>th</sup> and 19<sup>th</sup> centuries, vibrato as well as the articulation of fast passages was often not indicated in the musical scores, but was left to the players’ discretion within prevailing practice. A finger-vibrato technique that this study names the *flattement technique* was the most recommended vibrato technique in Western classical music throughout the 18<sup>th</sup> century. Another finger-vibrato technique used was called *martellement* or *Schwebungen*. During the first half of the 19<sup>th</sup> century the *flattement technique* coexisted on equal terms with chest vibrato, which was during most of the period under investigation slow and controlled, typically four waves on a long note.

The syllables and spellings documented for double-tonguing on the flute can be categorized in three techniques, *d-g/t-k*, *d-r/t-d* and *d-l/t-tl*, where *d-g*, *d-r* and *d-l* represent softer nuances. During the 18<sup>th</sup> and first half of the 19<sup>th</sup> century, *d-l/t-tl* was the most common double-tonguing technique in England and Germany, whereas in France it was not much used. Legato could be applied when not indicated; during the late 18<sup>th</sup> century and the first half of the 19<sup>th</sup> century the articulation patterns paired slurs and two slurred, two tipped were commonly recommended. In France, *d-g/t-k* was the dominating double-tonguing from the late 18<sup>th</sup> century and on, and the embracing of this technique also in Germany and England in the second half of the 19<sup>th</sup> century reflects a transition from the 18<sup>th</sup> century ideal of a rounder execution of an articulated fast passage towards a shorter staccato ideal.

The playing techniques recommended in the sources have been tested and evaluated in musical practice by the author. For a more complete understanding of the problem areas, sounding examples from concerts and recordings are integrated in the dissertation.

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Maria Bania, flute

Lars Ulrik Mortensen, harpsichord

Jane Gower, bassoon

Thomas Pitt, cello

Tilman Skowronek, fortepiano

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## Preface

Having played the recorder with my family from a very early age, the flute from the age of ten and the baroque flute from the age of 15, I developed a great affection for all three of these instruments. Over time, however, I grew consistently more and more enchanted with the baroque flute, this lovely instrument, with its responsive and yet profound repertoire, and from the age of 22, it has been the object of my main focus.

From the beginning of my baroque flute playing, studying Quantz's *Versuch* was an integrated part of my self-tuition; later I found it inspiring and enlightening to study the treatises of an increasing number of other flautists. Performing on period instruments indicates an historical awareness, and brings with it an obligation not to neglect the considerable amount of information on playing techniques and performance practice that is provided in the historical material. However, playing music on a professional level is a time-consuming activity, and the historical material available has grown considerably during the last 50 years, making it very difficult to study all the relevant material and still get enough time for practising and performing. I am therefore glad to present a study that covers a small part of this field, and hope that future studies will cover other areas.

The vibrato was, during most of the period investigated, an ornament used to adorn and embellish notes, and to enhance the expression. One of the names that was used for it was "sweetenings". The articulation of fast passages deals with the technical and musical solutions used to execute a fast passage. Sometimes these solutions were, like the use of vibrato, subjected to fierce discussion. An example of this is the debate in the early 19<sup>th</sup> century England, where the dominating double-tonguing technique was called "Babylonish gabble" by its antagonists.

## Acknowledgements

I would like to thank the many people who have aided and encouraged this project; firstly, my supervisors Eva Nässén, Magnus Eldénius, Sverker Jullander, Johannes Landgren and Ola Stockfelt, who patiently gave me helpful advice during the whole process. The musicians Lars Ulrik Mortensen, Jane Gower, Thomas Pitt and Tilman Skowroneck made a great contribution with all their musicality and professionalism. Their participation in the recordings and concerts were of inestimable value. Tilman also provided advice and help during the whole working process.



I am especially grateful to Anna-Karin Lundgren for sharing her material on Swedish 19th century flutists with me. Many thanks also go to Robin Blanton for her encouragement and helpfulness in her proofreading of the English language, and my fellow doctoral students for valuable viewpoints and comradeship.

My husband Gabriel helped me reading the French and Italian sources, and patiently supported me throughout the whole project.

The staff at Partille Church Parish generously welcomed us to record in Jonsered Church, and Urban Hägglund agreed to record both the sonatas by Roman and the recital Flöjtens Beethoven.

Per Broman and Signe Rotter-Broman have given me valuable advice and support, and Lars-Anders Carlsson has patiently helped me with various computer functions. I would also like to thank the staff at the Academy of Music and Drama Library and the University Library at the University of Gothenburg for their kind assistance; a special thank you goes to librarian Anders Larsson, who helped me to interpret a piece of Swedish handwriting.

Thanks also to Emma Corkhill for the layout, the Göteborg Organ Art Center community who let me work at their micro-film reader and Anna Frisk for her guidance during the last period of this project.

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## Conventions

In the quotes, I have replaced spaced-out letters, extra bold type and capitals used for whole words with italics. Punctuation marks such as long hyphens have also been modernized.

If nothing else is indicated, Tilman Skowroneck is the translator of the German quotations, and if nothing else indicated, Robert and Linda Schenck are the translators of the French quotations.

The music examples by Kuhlau (examples 35-37, 40, 42, 43, 99, 104 and 110) are made by Fredric Bergström. The music examples 97, 100 and 102 and the fingering charts (examples 1, 2 and 23) have been done by Lars Anders Carlsson, and Lars Ulrik Mortensen made the music examples by Scheibe (examples 74 and 76).



# Introduction

## I. Subject and purpose

To create interesting and fresh performances of already existing music is now, as in the previous century, a central activity of the Western art music scene, to which research in performance practice has contributed with ideas, knowledge and inspiration. The use of historical playing techniques is an important ingredient in historically informed performances, and several of the playing techniques used today would not have been available to us without careful research.

This study aims to disclose and define the execution and use of certain flute-playing techniques that are documented in Western Europe in the 18<sup>th</sup> and 19<sup>th</sup> centuries, with respect to vibrato as well as to the articulation of fast passages.

Flute vibrato is, in the dominating Western classical playing tradition, an integral component of the sound, contributing to the sound quality, while its absence became one of the characteristic features of 20<sup>th</sup> century baroque flute playing.

During the 18<sup>th</sup> and most of the 19<sup>th</sup> centuries, vibrato was considered an embellishment; questions raised in this study include how it was supposed to be

added to appropriate notes in accordance with the prevailing taste, how the way it was supposed to contribute to musical expression varied over time, and how its different purposes were reflected in how and with what techniques it was executed. Vibrato was (and is) rarely indicated in the score; its application was left to the performer according to prevailing practice. The tradition of using most of the vibrato techniques in this study was interrupted in the performance of Western classical repertory. A question concerning both vibrato and the articulation of fast passages is to what extent a technique and/or its execution was connected with the type of flute used in a certain period or by a particular player.

The articulation of fast passages has always been a subject of great concern and much labour for flutists in the Western classical music tradition. In the 18<sup>th</sup> and 19<sup>th</sup> centuries, syllables were used that are not commonly used by flutists today apart from in historically informed performances, both for very fast and moderately fast passages. Flutists were supposed to know the art of applying articulation, since that often was not specified by the composers. Today, there is an interest in a greater variety of articulation techniques. It is reasonable to assume that the extensive discussions and technical advice from the 18<sup>th</sup> and 19<sup>th</sup> centuries contain useful information on the subject. One question is whether all the syllables and spellings documented for double-tonguing in the 18<sup>th</sup> and 19<sup>th</sup> centuries could be categorized into one of three techniques, *d-g/t-k*, *d-r/t-d* and *d-l/t-tl* respectively, with *d-g*, *d-r* and *d-l* representing the softer nuances within the technique. Other questions include which techniques (different double-tonguing techniques, single-tonguing and/or legato) dominated for fast passages in a certain period and/or national style. The investigation of legato playing focuses on indications of how players related to notated articulation; whether players were supposed to apply legato or articulation patterns with legato where it was not indicated; and, if so, which, if any, articulation patterns were common or recommended. It was necessary to study and describe the execution of moderately fast passages to a certain extent for a more complete understanding of how fast passages could have been executed, and what the alternative to a recommended technique would have been.

My activity as a professional flutist on period instruments has guided me in choosing my research topics as well as the scope and direction of the research. The period of the study was chosen for a number of reasons: the turn of the 18<sup>th</sup> century marks the beginning of a solo flute repertoire, and the earliest treatise for baroque flute (Hotteterre's *Principes de la Flute Traversiere, ou Flute d'Allemagne*) dates from 1707. Modern vibrato practice originated in the Taffanel school of play-

ing, which coincides roughly with the beginning of gramophone recordings and the turn of the 19<sup>th</sup> century. At that time, a practice in which double-tonguing with *d-g/t-k* dominates and most legato slurs are indicated in the score was already established. Flutes of types that were used in this period were accessible to me and I am trained in playing on them.

Two important assumptions for research in performance practice are that a playing technique can be learned from written instructions in the source material, and that the documentation reflects actual practice to a reasonable level. The focus on France, Germany and England reflects the documentation of flute playing activity in Western Europe during the 18<sup>th</sup> and 19<sup>th</sup> centuries: in the early 18<sup>th</sup> century, Western flute playing was a predominantly French phenomenon, while around the middle of the century a largely uniform style of playing and composing had become common in most of Western Europe. Later in the 18<sup>th</sup> century the French and German styles of flute playing diverged, and in the 19<sup>th</sup> century differences in playing style in England, France and Germany had developed, which were to remain influential through the 19<sup>th</sup> century and beyond.

## II. Previous research

Previous research on historical flute vibrato and articulation of fast passages has resulted in a number of studies. Greta Moens-Haenen's substantial *Das Vibrato in der Musik des Barock* covers vibrato on all instruments up to 1750.<sup>1</sup> Instrumental and vocal vibrato is discussed in Clive Brown's *Classical and Romantic Performing Practice 1750-1900*,<sup>2</sup> including some information on flute playing. Two major articles about vibrato on wind instruments are Bruce Dickey's "Untersuchungen zur Historischen Auffassung des Vibratos auf Blasinstrumenten,"<sup>3</sup> and Bruce Haynes' "Das Fingervibrato (Flattement) auf Holzblasinstrumenten im 17.,18. und 19. Jahrhundert."<sup>4</sup> Rachel Brown's excellent *The Early Flute: A Practical Guide* provides a survey of the history of the flute, playing techniques, repertoire and treatises, and

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1. Moens-Haenen *Vibrato*.

2. Brown *Classical* 517-557.

3. Dickey *Untersuchungen*.

4. Haynes *Fingervibrato*.

includes chapters about vibrato,<sup>5</sup> articulation,<sup>6</sup> double-tonguing,<sup>7</sup> triple-tonguing<sup>8</sup> and slurs.<sup>9</sup> It contains a vast amount of information in a limited space. B. Eldred Spell's dissertation "Selected Aspects of Performance Practice in the Flute Tutors of Charles Nicholson" discusses flute vibrato in England in the first half of the 19<sup>th</sup> century<sup>10</sup> and various aspects of articulation in the same period.<sup>11</sup> A chapter about flute vibrato in Robert Philip's *Early Recordings and Musical Style*<sup>12</sup> deals with the changes that took place after the mid-19<sup>th</sup> century. John Robert Bailey discusses Maximilian Schwedler's vibrato and articulation of fast passages with a survey of double-tonguing techniques prior to Schwedler in his dissertation "Maximilian Schwedler's Flute and Flute-playing: Translation and Study of Late Nineteenth-century German Performance Practice."<sup>13</sup> *Jochen Gärtner's Das Vibrato unter besonderer Berücksichtigung der Verhältnisse bei Flötisten. Historische Entwicklung, neue physiologische Erkenntnisse sowie Vorstellungen über ein integrierendes Lehrverfahren* provides a historical survey and a thorough examination of the vibrato technique of his own time.<sup>14</sup> Ingrid Grave-Müller focuses on articulation on the recorder in "Tungens figur paa vinden," but also discusses some of the flute treatises.<sup>15</sup> Marcello Castellani and Elio Durante's *Del Portar della Lingua negli instrumenti di Fiato* deals with articulation on wind instruments and brass in the 16<sup>th</sup> to 18<sup>th</sup> centuries, and includes a thorough chapter on phonetics and valuable quotations from a number of flute sources.<sup>16</sup> Many of the techniques described in this study are used on numerous historically informed CD recordings, although without documentation concerning which technique is used and where.

Although several of these studies examine a great deal of historical evidence, none of them have fully investigated the material concerning vibrato use or the articulation of fast passages during the 18<sup>th</sup> and 19<sup>th</sup> centuries. Several of the non-academic studies do not include a more detailed discussion because of the limited

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5. Brown *Early Flute* 108-115; vibrato is also discussed on p. 49.

6. Brown *Early Flute* 49-59.

7. Brown *Early Flute* 59-63.

8. Brown *Early Flute* 63.

9. Brown *Early Flute* 63-67.

10. Spell *Nicholson* 70-86.

11. Spell *Nicholson* 139-171.

12. Philip *Recordings* 109-118.

13. Bailey *Schwedler* 180-186 and 196-203.

14. Gärtner *Vibrato*.

15. Grave-Müller *Tungens figur*.

16. Castellani/Durante *Lingua*.

space allotted for these topics. Concerning vibrato, the shifting terminology in the sources – sometimes specifying the technique, sometimes not, with different terms sometimes used for the same technique, and the same term for different techniques – required further attention and analysis. The tendency in the studies on articulation to use the syllables and spellings in the sources without categorizing them into techniques has left the material still somewhat unclear. Though for several of the studies playing certainly has been used as a method for the evaluation of the sources, this method is not fully described, and the techniques are not documented and analyzed in performances. Recorded materials are lacking in these studies, apart from Grave-Müller's work on the recorder.

### III. My contribution

My focus on a small area of flute technique has enabled me to study a long period of time, and still carefully analyze a large quantity of source material related to the subject. In this way, I have arrived at a richer comprehension of my topics, reaching slightly different conclusions and correcting some misunderstandings. Directions and tendencies were detected and through the numerous comparisons that were made possible, techniques were recognized when occurring in another period and/or with another name. I have been able to fill in gaps in the work of the aforementioned writers and disclose practices in areas previously not fully described, such as recommendations for the application and use of double- as well as single-tonguing and the application of legato for fast passages among French flutists in the first half of the 19<sup>th</sup> century. The study reveals that the chest vibrato recommended in the 18<sup>th</sup> and first half of the 19<sup>th</sup> century is slow and controlled, not necessarily involving the vocal chords. The finger-vibrato described under the names *martellement* and *Schwebungen* is the same technique. The double-tonguing technique with *d-l/t-tl* that Quantz describes is, in my opinion, the same technique that was used by 17<sup>th</sup> century woodwind players. This technique was not, however, used to a greater extent by French players during the 18<sup>th</sup> and 19<sup>th</sup> centuries. The type of finger-vibrato that I call the *flattement technique* was the dominating vibrato technique during the 18<sup>th</sup> century, and coexisted with the chest vibrato during the first half of the 19<sup>th</sup> century at least in England and Germany. Until the later half of the 19<sup>th</sup> century, flute players were expected to know the art of applying articulation when

not indicated by the composer; students were, however, requested to pay attention to composers' indications. Double-tonguing with *d-r/t-d* was used by a minority of flute players during most of the period, and accomplished flute players could master more than one double-tonguing technique and use them for different musical purposes.

## IV. Method

### IV:1 Selecting the source material

Descriptions of playing techniques are generally found most abundantly in musical treatises. During the 18<sup>th</sup> and the early 19<sup>th</sup> centuries the flute was the instrument *par excellence* of the educated connoisseur, which is one reason why more than 130 flute treatises are known from these two centuries, many of them of a high quality and very informative.<sup>17</sup> Together with other sources from the period, such as sheet music, newspaper articles and reviews, articles in encyclopedias, books about flutes and flute playing, collections of practicing material and treatises for other instruments, this number of treatises seems satisfactorily large, even when taking into consideration that there was a tradition of how a flute method was supposed to look, and a tendency among writers to draw upon earlier works, often to the extent of plagiarizing. Many 18<sup>th</sup> and 19<sup>th</sup> century flute methods are today available in facsimile reprints and/or in copies from libraries, which enabled me to examine 60 of the treaties directly, and another seven through secondary studies. Sheet music from the period is most often accessible in facsimile editions; in some cases I have studied the scores through copies from libraries. I found it valuable to compare the playing heard on some recordings from the early 20<sup>th</sup> century; in some cases those recordings are made by flutists who are also the author of a treatise. Though these recordings, strictly speaking, fall outside the time limit of this study.

I chose to focus on the geographical area with the most documentation of the techniques under investigation in order to get as much material as possible from a certain area. I therefore did not include the American and Italian 19<sup>th</sup> century treatises in my study.

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<sup>17</sup> Powell *Bibliography*.



#### **IV:2 Flute treatises as source material**

The treatises reflect the social context and position of the flute in 18<sup>th</sup> and 19<sup>th</sup> century society. The material includes short, elementary books for amateurs as well as thorough methods for professionals and future professionals. Generally speaking, the 18<sup>th</sup> century treatises are more often directed towards the gentleman amateur. For a reader of the 21<sup>st</sup> century, many treatises contain a curious mixture of very basic information on music theory and flute playing for the beginner, with sophisticated discussions of style and performance advice for the advanced flutist. Likewise, many books contain easy little pieces as well as difficult etudes. Over time the number of methods directed at people studying to become professionals increased, which is reflected in the fact that the amount of musical material in the books increased, while the amount of text in many treatises relatively decreased. The design of the methods also reflected national styles. Among the French methods there is advanced musical material and not much text already in Charles Delusse *L'Art* from c. 1760. The German methods generally lack easier practicing material in the form of tunes or duets, which is more abundant in the treatises published in England, where the upper class was a market for flute books also in the 19<sup>th</sup> century.

#### **IV:3 Evaluating and analyzing the sources**

The analytical tools I have used in critically evaluating the evidence include aggregation, comparison and contrast. When interpreting historical statements, apart from understanding what is written and whether the statement is meant to apply generally or only in a particular situation, it is necessary to understand what it means in the context in which it is written. The author might have more or less thorough knowledge about what he/she describes or a special reason for making a certain kind of statement. In this study the chronology of the statements has been carefully attended to in the analysis, as well the extent to which particular authors might have been aware of other authors' works, and the relationships between authors. Attention was also given to which milieu a treatise reflects, and to which extent it influenced contemporary and later players.

For all research in performance practice, an awareness of the fact that our understanding is to some extent always coloured by our present situation, and might be influenced by conscious or unconscious agendas of our own, is necessary.

#### **IV:4 Playing as a method of evaluating the sources**

Putting the treatises' recommendations about playing techniques into practice was, in this study, an essential step in evaluating them, and I used my playing to improve the quality of my understanding of the evidence and therefore my conclusions. I used most of the techniques described both in practicing and in concerts, and I tried out all the technical descriptions, including the fingering charts for finger vibrato techniques. I also studied and played the musical examples and pieces in the treatises with vibrato or a specific articulation indicated. My playing enabled me to comment on the technical outcome of an indication and to detect where the reason for a suggestion might have been technical.

During the 18<sup>th</sup> and 19<sup>th</sup> centuries the flute underwent radical changes in construction, and consequently fingering, blowing technique and so forth. When discussing any playing technique, attention has to be paid to which type of flute a comment was intended for. In this study, the descriptions of the techniques and the musical pieces in the treatises were put into practice on instruments of types that the treatise was written for. This involved the use of twelve flutes of different types, whereof two original instruments, all of which are referred to in the text.

#### **IV:5 The function of artistic research**

This study was conducted within a program for artistic research in music, where both musical craftsmanship and creative artistic work (in the case of this study, concerts and other performances) are fundamental and integrated parts of the research process.

To master a playing technique, the player has to incorporate the technique into her/his repertory on a relevant instrument and to internalise the way the technique is or was used in different styles. A playing technique is always governed by taste; in order to acquire knowledge about its function and execution it has to be studied in its musical context.

For this study, I made two CD recordings and gave a recital, recorded for Swedish Radio. The recordings are: *J. A. Scheibe, Morten Raehs, Sonatas for flute and harpsichord*<sup>18</sup> and *Johan Helmich Roman: Sonate a flauto traverso, violone*

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<sup>18</sup>. Recorded at Diamanten, The Royal Library, Copenhagen, 1-13 January 2002, and released as dacapo 8.224213.

*e cembalo*, (a double CD).<sup>19</sup> The recital had the title *Flöjtens Beethoven*.<sup>20</sup> All recordings were preceded by a number of recitals,<sup>21</sup> where preparatory concerts for *Flöjtens Beethoven* included pieces by J. P. E. Hartmann and Ch. E. F. Weyse. The sonatas by Scheibe and Raehs are recorded on a copy of a flute by August Grenser (1720-1807). For the sonatas by Roman a copy of an instrument by Jacob Denner from c. 1720 is used, and in *Flöjtens Beethoven I* play on a copy of a flute by Wilhelm Liebel from c. 1820.

In the recordings, my focus at the moment of recording and editing was not particularly on the techniques chosen as topics of this study. The function of a playing technique is to serve and enhance a musical intention, and if I were to focus during playing on a particular ornament or technique, its function would have been altered. Likewise, the choices of repertoire were not made to illustrate the playing techniques studied. In the recordings I used the knowledge that I built up through working with the text as a way to obtain an artistic result, to reinforce the musical expression desired, and to serve a musical idea. The aim of this study is not to point to a “correct” way of performing music of the time. Neither do I claim that the music recorded sounds as when first performed.

Rather than recording some of the few pieces in which the techniques discussed in the study are indicated, I applied the knowledge achieved from my material to music without such techniques indicated, which is the common situation for flutists. In playing pieces with the techniques indicated my role would have been to solely reproduce the composer’s notation. To exclusively record music examples from the treatises and/or realizations of the technical descriptions would not have been artistic research.

For all of the music I studied for these recitals and recordings I made thorough notes on which of the techniques in the study I used, as well as where and how.

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19. Recorded in Jonsered Church 19-21 February and 24-26 September 2006, and released by Caprice Records as CAP 22060.

20. Performed in Artisten, Gothenburg, 17 September 2005.

21. “Scheibe, Raehs” concert in Artisten, Gothenburg 1 December 2000.

“Scheibe, Raehs” concert in Diamanten, Copenhagen 5 December 2000.

“Flöjtens Beethoven” Gunnebo Castle, 1 September 2002.

“Flöjtens Beethoven” Läckö Castle, 24 July 2003.

“Till Ulrika Eleonora” (Sonatas by Roman) Gothenburg Cathedral and Alingsås church, 18 February 2006.

“Till Ulrika Eleonora” Vara Concert Hall, 19 February 2006.

“Till Ulrika Eleonora” Gunnebo Castle, 24 September 2006.

Examples from the recordings are commented on in the text and reproduced on a CD included in the study as well as the full movements commented on. The criterion for inclusion on this CD was the relevance to the text; for an artistic evaluation of the study I refer as well to the released recordings of the sonatas by Scheibe, Raehs and Roman. The sounding examples aim to illuminate and deepen the reader's understanding of the playing techniques described. They are not a historical text in the manner of a picture from the period; when my musical activities have contributed to or supported the conclusions, this is expressed in words.

## V. Disposition

The sections on vibrato and fast passages are each organized chronologically and geographically. The chronological organization highlights the element of discussion in the methods and articles over time. For the late 18<sup>th</sup> century and the 19<sup>th</sup> century, the material is also organized geographically in sections on France, Germany and England, Southern and Northern Europe. Excerpts from scores covering the sound examples are integrated into the text; the excerpts and movements on the CD included are meant to be listened to in connection with the text about the issue exemplified.

Generally, the primary sources devote only a small amount of text to vibrato. Therefore, and because some often-quoted passages about vibrato have been interpreted differently by different writers, in the vibrato section a vast majority of the relevant citations from the primary sources are provided. In contrast, the sources devote a considerably larger amount of both text and many more musical examples to the articulation of fast passages, including advice for practicing double-tonguing. A narrower selection of quotations in this area was therefore necessary. Only sections that contribute directly to answering the questions posed in this study have been quoted.

In the cases of flutists who spent most of their career in England or France rather than their native country and had their treatises published there (for instance Teobaldo Monzani, Raphael Dressler, Louis Dorus, Amand Vanderhagen and Giuseppe Maria Cambini), I have included the treatises in the sections about the countries where they were published. In the same way the treatise by Louis Müller is discussed in the section about Sweden. By "Germany" I refer to areas within the borders of today's Germany.

Quotations are provided in the original languages either immediately below the translations or in a footnote to encourage the reader to evaluate the original texts for her/himself. In the quotations, I have replaced spaced-out letters, extra bold type and capitals used for whole words with italics. Punctuation marks such as long hyphens have also been modernized. At the end of the vibrato section a glossary of vibrato terms and a list of symbols are included. The section about fast passages includes a chapter on advice for practicing double-tonguing given in the treatises, and a chapter on vowels.

The primary sources throw some light upon the issue of different pronunciations in different languages and dialects. I refer to Castellani/Durante's *Lingua*<sup>22</sup> for information on phonetics and the physical actions of the tongue. The placement of the tongue in pronouncing *t* or *d* and the articulation of dotted notes are outside the scope of this study. I refer to Ardal Powell's *The Flute* for information on general history of the flute and flute playing.

Biographical information on the authors of the works discussed in the study appears very restrictedly in the text. In Appendix 1, "About the treatises, articles and books discussed in the text and their authors," information such as publication dates, number of pages, brief summaries of content, influences, target group and the type of flute for which the treatise is written is collected, together with biographical notes on the authors (all male) in the form of a small lexicon. The appendix is organized alphabetically for maximum accessibility. The information given is in no way complete. Other appendices include a list of musical pieces for the flute in which vibrato is indicated; an analysis of indicated vibrato in pieces from flute methods; statistics of vibrato indications in the flute sonatas by Raehs; musical pieces in the treatises with double-tonguing notated; and tracklists of the recordings and the program of the recital made for the study.

The pragmatic aspect of research in performance practice has sometimes resulted in texts that, in my opinion, too closely mix an investigation into historical performance practice with advice to today's performers, taking for granted that the latter wish to behave as musicians in the period investigated. This study does not argue for any particular performance style; some decades ago, the discussion on performance styles included an unfortunate mixture of moral judgments such as right/wrong, true/false and artistic qualities measured in good/bad. If scientists seek consensus, art strives to attain diversity, and why should that be different with

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22. Castellani/Durante *Lingua* 9-26.

performance styles? Today, music of so many more genres, styles and periods, performed in any performance style, than could possibly be imagined a century ago is easily available to us, due to technical developments such as recordings, broadcasts and the internet. Discussing whether a certain type of music should be performed this way or that seems, in this context, superfluous.

During the previous century, the early music movement (or historically informed performances as it was later called) succeeded in vitalizing an art scene as conservative as Western classical music by problematizing choices of musical instruments, repertoire, playing styles and techniques, musical direction, dress codes, concert venues and so on. This study is a contribution to the ongoing research in historical performance practice, where the documentation will only ever allow us to disclose fragments of the reality.

## PART 1

# Flute Vibrato

## Definitions

By the term flute vibrato I here refer to something the flutist her/himself would call a vibrato, not all kinds of fluctuations of a sound, although this sometimes becomes problematic when I analyze recordings. The flute player creates a vibrato by making a fluctuation in the pitch, the intensity and/or the timbre of a note. The pitch can be raised or lowered or both.

I use the term finger-vibrato for any kind of vibrato produced by the fingers on the flute.

The term *flattement technique* refers to a finger vibrato with a pitch-change most often smaller than a semitone and in most cases downwards from the main note. The finger either partly covers the next hole down from the already covered holes, or fully or partly covers one of the holes further down on the instrument. It was used to execute the ornament the French writers call *flattement*, but also to execute vibrato in other periods and areas. The *flattement technique* is a technical term that does not imply any particular style. I use it to refer to the technique as

such, and in discussing the situation in times and places where the term *flattement* was not used.

The deviation between the lowest or highest point of the vibrato and the pitch of the unornamented note I call the “pitch-change”.

The holes on the flute are numbered from the headpiece and down: 123 456 7.

The term “multi-keyed” flute refers to a simple-system instrument with several keys. “Ring-keyed flute” refers to the Boehm model from 1832.

A simple-system flute has a fingering system based on the fingering system of the one-keyed flute.

I use the same distinction as Robert Philip, that a slow vibrato is about 4 cycles per second, and a fast about 8 cycles per second.<sup>1</sup>

The articles about vibrato in the methods by James Alexander, Georges Washington Bown, Thomas Lindsay and J. Wragg (the editions from 1818 and on) are all very similar to the description in Charles Nicholson’s first tutor. Therefore, in the section on vibrato, I refer to these books and players as the Nicholson school.

## 1.1 Indications from the 17<sup>th</sup> century

In *Principes de la Flute Traversiere, ou Flute d’Allemagne, De la Flute a bec, ou Flute douce, et du Hautbois* from 1707, Jean Jaques Hotteterre writes about *flattement* as something established and in use. Recorder treatises from the 17<sup>th</sup> century include descriptions of the *flattement technique*: in a Dutch trill fingering chart from 1654<sup>2</sup> there are alternative trill fingerings that result in the *flattement technique*. In the English recorder methods by J. Hudgebut (1679) and H. Salter (1683) there are fingerings for mordents (the term used is *shake*) for the notes d’’ and g’’ on the treble recorder, which create a pitch-change so small that technically speaking it is the *flattement technique*.<sup>3</sup> The wavy line commonly used in the 18<sup>th</sup> and 19<sup>th</sup> century for vibrato also occurs in a collection of *Airs* probably from the 1690’s, by Lully and other composers, for a melody instrument without bass.<sup>4</sup>

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1. Philip *Recordings* 110.

2. *Onderwyzinghe Hoemen alle de Toonen en halve Toonen, die meest gebruyckelyck zyn, op de Hand-Fluyt Zal kunnen t’eenemael zuyver Blaezen* by G. Van Blanckenburgh. Moens-Haenen *Vibrato* 84-87.

3. Moens-Haenen *Vibrato* 88-90.

4. Haynes *Fingervibrato* 483.



The first clear description of the *flattement technique* appears in the anonymously published recorder method *The Complete Flute Master*,<sup>5</sup> which was printed for the first time in 1695.<sup>6</sup> The following sentence in the section about ornaments was probably added in 1699, “An open shake or sweetning is by shaking your finger over the half hole immediately below ye note to be sweetned ending with it off.”<sup>7</sup> In France we find a description of *flattement* in Loulié’s *Methode pour apprendre a jouer de la flute douce* from between 1700 and 1707. Loulié also uses the wavy line to indicate *flattement*.<sup>8</sup>

Since wind players usually mastered more than one instrument, I conclude that flute players probably used the *flattement technique* already in the 17<sup>th</sup> century. There is no documentation of the use of chest vibrato on the flute from the 17<sup>th</sup> century.

## 1.2 Early 18<sup>th</sup> century

The flute methods by Hotteterre and Michel Corrette describe two vibrato techniques: *flattement* and *shaking the flute* (or, in French, *ébranler*). Hotteterre devotes a chapter in his *Principes* to *flattement* and *batement*.<sup>9</sup> About *flattement*, he writes:

The softening, or lesser Shake [*flattement technique*], is made almost like the usual Shake there is this difference that you always end with the finger off, except on D-la-sol re, for the most part they are made on holes more distant, and some on the edge or half the hole only, it participates of a lower Sound, which is contrary to the Shake.

Le Flattement ou Tremblement Mineur, se fait presque comme le Tremblement ordinaire: Il y a cette difference, que l’on releve toujours le Doigt en le finissant, excepté sur le Ré; De plus on le fait sur des trous plus éloignez, & quelques-uns sur le bord ou l’extrémité des trous; Il participe d’un son inferieur ce qui est le contraire du tremblement.<sup>10</sup>

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5. The word flute was in England at this time used for recorder.

6. Haynes *Fingervibrato* 404.

7. *The Complete Flute Master*, quoted in Moens-Haenen *Vibrato* 91.

8. Moens-Haenen *Vibrato* 95-96 and Haynes *Fingervibrato* 402.

9. The French term for mordent.

10. Hotteterre *Principes* 29. For this part of the study I have chosen the English translation printed in *Musick-Master* which was edited by Prelleur in 1730/1731. This quotation is from page 9 in the chapter about the transverse flute.

PART 1

Hotteterre provides fingerings for the *flattement*, which if put together in a chart looks as follows:<sup>11</sup>

The image contains two fingering charts for the *flattement* technique. Each chart consists of a musical staff with notes and a grid of fingerings for seven fingers (1-7).  
 The first chart shows notes: G4, A4, B4, C5, D5, E5, F5, G5, A5, B5, C6. Fingerings include solid dots (covered hole), open circles (open hole), and circles with 'E' or 'F' (edge or full coverage). Wavy lines indicate flattement.  
 The second chart shows notes: D5, E5, F5, G5, A5, B5, C6, D6, E6, F6, G6. Fingerings include solid dots, open circles, and circles with 'E' or 'F'. Wavy lines indicate flattement.

Example 1. Fingering chart for *flattement* compiled from fingerings in Hotteterre's *Principes* 30-32.

- indicates in this chart and in all charts below, that the hole is covered.
- indicates an open hole.

A wavy line indicates, in this chart and in all charts below, the hole on which the *flattement* is made. An E indicates that only the edge of the hole is covered and an F that the hole should be fully covered.

In this chart, the fingerings for d'' and d''' raise the pitch slightly. For d#'' and d#''' only the timbre changes. The other fingerings change the pitch downwards.<sup>12</sup>

Corrette provides fingerings for the *flattement technique* in his *Méthode pour apprendre aisément à jouer de la Flute traversiere* from c.1739/40, which are compiled in the following chart:

11. Hotteterre *Principes* 30-32.

12. On a flute by Martin Skowronek after Hotteterre.

Example 2. Fingering chart constructed after Corrette *Méthode* 30-31. An F over the wavy line indicates that the hole is to be covered completely.

According to Corrette, the second alternative for  $g'$  and the first for  $a'$  are the easier alternatives. In this chart, the fingering for  $d''$  and the alternative for  $c'''$  and  $d\#/eb'''$  raise the pitch, while the fingering for  $d\#''$  creates only a change in timbre<sup>13</sup>. According to Moens-Haenen the fingering for  $d\#/eb'''$  is a printing mistake, and the hole vibrated on should be the fourth. This might well be the case, since vibrating with the third finger creates a pitch-change of close to a semitone upwards, and is the same fingering as Corrette gives for a trill on  $d\#'''$ .<sup>14</sup>

As these charts show, the fingerings by Corrette and Hotteterre are similar. Corrette writes:

The softening is made with a finger which is well extended on the edge, or above the hole under the covered holes. One must observe that the finger does not

13. On a flute by M. Skowroneck after Hotteterre and a flute by Rudolf Tutz after Jean Hyacinth Joesph Rottenburgh.

14. Corrette *Méthode* 26.

cover the hole on which the flattement is made, but that it is lowered softly and held in the air in finishing except on *d* in the second octave.

Le Flattement se fait avec un doigt qu'il faut bien allonger sur le bord, ou aude-  
 sus du trou et aude-sous de ceux qui sont bouchés. Il faut observer que le doigt  
 ne bouche point le trou sur lequel se fait le flattement, mais le baisser doucement  
 et le tenir en l'air en finissant excepté sur le second ré.<sup>15</sup>

Haynes interprets the passage quoted above as a description of a finger-vibrato without the finger touching the flute, a view that is not shared neither by Moens-Haenen<sup>16</sup> nor myself. To make a *flattement* with the fingerings in the chart above without touching the flute results in no change whatsoever of pitch or timbre. In my opinion, Corrette refers to a flexible movement of the finger, avoiding a fast, hard touch.<sup>17</sup>

I conclude that the *flattement* is executed as a trill, but with a lesser pitch-change, and, as Hotteterre points out, generally downwards from the main note. The finger in most cases either partly covers the next hole down from the already covered holes, or fully or partly covers one of the holes further down on the instrument. The *flattement* creates in most cases a pitch and a timbre vibrato; sometimes only the timbre changes. A small number of fingerings, notably the *flattement* on *d''* and *d#''*, instead raise the pitch.

In Germany, Johann Philipp Eisel writes in the section about the flute in his *Musicus Autodidactos, oder der sich selbst informirende Musicus* from 1738:

“But how can one learn to perform the tremolo?” “In the following manner: as one blows, one articulates slightly with the tongue and beats simultaneously various times with the finger, covering the hole only by half. This is done without articulating with the tongue again, and without breathing anew. Eventually one lets the finger lie still on top so that the unadorned tone is produced. It is, in fact, not really possible to determine how often one must beat with the fingers, one decides whether one wants to make the Cadence short or long in accordance to the length of the note.”

“Wie kan man aber das tremuliren erlernen?” “Folgendergestalt: wenn man nehmlich bläset, so stösset man etwas mit der Zungen, und schläget zugleich

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15. Corrette *Méthode* 30 transl. 43 (corrected by the author).

16. Moens-Haenen *Vibrato* 104 and 109.

17. See also sections 1.4.2 and 1.7.3.1.

etlichemal mit dem finger nur halb und halb auf das Loch, ohne mit der Zunge wieder von neuen anzustossen, oder den Athem zurück zu nehmen, endlich lässt man die Finger gar drauf liegen, dass der natürliche Ton heraus komme. Wieviel man aber mit denen Fingern schlagen muss, ist eigentlich nicht zu determiniren, sondern man richtet sich darnach, wieviel die Note gilt, um die Cadence kurtz oder lang zu machen.<sup>18</sup>

I interpret this as a description of the *flattement technique*, which makes it the earliest German description of this technique during the period of my investigation, testifying that it was also used in Germany. The statement suggests that the *flattement technique* was not executed through for the full duration of the note. Hotteterre, Corrette and later Antoine Mahaut in his *Nieuwe Manier om binnen korten tyd op de Dwarsfluit te leeren spelen* from c. 1759,<sup>19</sup> recommend ending the note with the *flattement* with the finger off the instrument, which can be interpreted as suggesting the same thing, that the *flattement* should end before the note ends.

To perform the *flattement technique* with the finger straight as Corrette describes was probably the general practice; it is described by Mahaut and Johann George Tromlitz as well.<sup>20</sup> According to this description, it is not the tip of the finger that touches the instrument, but the part further in. To make the *flattement technique* with a curved finger covering the far edge of the hole is a technique that is not documented in the sources I have had access to.

The fingerings with full holes in the charts by Hotteterre, Corrette and Mahaut<sup>21</sup> result in pitch-changes ranging from no difference to a semitone.<sup>22</sup> In certain cases the pitch-changes are commented on in the accompanying text. Corrette remarks on Hotteterre's fingering for a *flattement* on *c#'* with the full second hole, "The ancients did it on the 2<sup>nd</sup> hole, but it is worthless and lowers the note by a comma."<sup>23</sup> Corrette's fingering with the third hole gives less pitch-change. Mahaut, however,

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18. Eisel *Musicus Autodidaktos* 86.

19. Mahaut *Nieuwe Manier* 20.

20. Mahaut *Nieuwe Manier* 20, quoted below. "Der ausgestreckte und an die Seite des Loches gelegte Finger." Tromlitz *Unterricht* 240.

21. Reproduced in section 1.3.1.

22. On a flute by M. Skowronek after Hotteterre, a flute by Giovanni Tardino after Oberlender (1740's or 1750's) and flutes by Tutz after J. H. Rottenburgh, Godefroid Adrien Rottenburgh (about 1750's) and Jacob Denner (around 1720).

23. "les anciens le faisoient sur le 2e. trou mais il ne vaut rien et baisse le ton d'un Comma." Corrette *Méthode* 31.

provides the same fingering as Hotteterre. Mahaut writes of *flattement* in general that it “produces an interval narrower than a semitone.”<sup>24</sup> In his fingering chart there are, however, a couple of alternative fingerings for *flattement* that produce pitch-changes of a semitone or almost a semitone.<sup>25</sup>

In the third movement (Larghetto) of Johan Helmich Roman’s *Sonata IV* from 1727, bars 16 and 17, I make slow vibratos with the *flattement technique* that go together with the soft siciliano character of the movement. On the *g*'' in bar 16 I make it with the fourth or the fifth finger stretched, covering the hole partly.<sup>26</sup> On the *f*'' in bar 17 I make it with the fifth stretched finger, also here covering the hole partly.<sup>27</sup> The bars covered in the music example below are track 1 on the CD attached to the study; the full movement is track 2.



Example 3. Roman *Sonata IV*, third movement (Larghetto), bars 16-17. This and all other music examples by Roman are reproduced from the facsimile edition by Autographus Musicus, Bandhagen 1987.

On *d*' and *d*#/*e*' *b* (the lowest notes of the one-keyed flute), it is not possible to perform a *flattement* because there is no hole left to cover. Hotteterre writes of *flattement* on *d*' and *d*'/*e*' *b*, “I say it must be done but by artifice because ‘tis ye lowest Note, and you have no finger left unemploy’d to do it with, therefore must be done by shaking the Flute, which imitates a softening.”<sup>28</sup> Corrette agrees, “For low *re*’,

24. “wiens afstandt nog geenen halven toon bedraagt!” “qui ne forme pas un intervalle d’un demi ton;” Mahaut *Nieuwe Manier* 19, transl. 19.

25. For *a*'' and *h*''. On a flute by Tutz after G. A. Rottenburgh, and a flute by Tardino after Oberlender.

26. The note is fingered 1237.

27. The note is fingered 12346.

28. “je diray qu’il ne se peut faire que par artifice. Comme l’on ne peut se servir d’aucun Doigt pour le faire, (puisqu’ils sont tous occupez à boucher les trous,) on ébranle la Flute avec la main d’enbas, ensorte que l’on puisse imiter par ce moyen le flattement ordinaire.” Hotteterre *Principes* 30, transl. 10.



Au reste il seroit difficile d'enseigner á connoître précisément tous les endroits où l'on doit les placer en jouant; ce que l'on peut dire la dessus en général, c'est que les Flattements se sont frequement sur les Notes Longues; comme sur les Rondes, sur les Blanches, sur les Noites pointées C, & c./.../

On ne peut guere donner de Regles plus certaines de la distribution de ces agréments, c'est le goût & la pratique, qui peuvent apprendre à s'en servir à propos, plutôt que la Theorie. Ce que je puis conseiller; c'est de jouer pendant quelque temps sur des Pieces où tous agréments soient marquez, afin de s'accoutumer peu à peu à les faire sur les Notes où ils réussissent le mieux.<sup>30</sup>

The sign I over the e'' in the music example above indicates a *battement*. Hotteterre repeats this recommendation in the preface to the second edition of his first book of suites for flute and bass from 1715, "You will take note that it is necessary to play flattements on almost all of the long notes."<sup>31</sup> Corrette writes that *flattement* is indicated with a wavy line, however rarely.<sup>32</sup> The wavy line is the most documented way to indicate vibrato at this time,<sup>33</sup> and both Hotteterre and Corrette use it in their examples. Corrette also declares that the *flattement* is done to swell and diminish the tone.<sup>34</sup> The same connection between the *flattement technique* and a crescendo and diminuendo on a note, a so-called *messa di voce*, is also made by other 18<sup>th</sup>-century writers.<sup>35</sup>

I make a vibrato with the *flattement technique* on the note with a fermata in the third movement (Larghetto) of Roman's *Sonata XI* the second time. The vibrato is together with a *messa di voce* and is executed with the fifth finger stretched.<sup>36</sup> The movement is track 3 on the CD attached to the study.

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30. Hotteterre *Principes* 32-33. transl. 11.

31. "On observera qu'il faut faire des flattements presque sur toutes les notes longues." Hotteterre *Avertissement*.

32. Corrette *Méthode* 30.

33. Moens-Haenen *Vibrato* 283-285.

34. "Le flattement se fait pour enfler et diminuer le son." Corrette *Méthode* 30.

35. See below sections 1.3.1, 1.4.2 and 1.4.3. A connection is made between violin vibrato and *messa di voce* by ex. Roger North, (*Roger North on Music* 164-165) L. Mozart, Corrette and Quantz.

36. The note is fingered 1237.





Example 4. Roman *Sonata XI*, third movement (Larghetto). The wavy line for vibrato is added by the author.

As will be discussed below, during most of the period investigated for this study, notes with fermatas were often decorated with a vibrato.<sup>37</sup>

By treating *flattement* and *battement* together in the same section, Hotteterre indicates that the close relationship between *flattement* and the mordent, which is suggested by the 17<sup>th</sup> century fingering charts, prevailed into the 18<sup>th</sup> century. Corrette discusses these ornaments in separate sections next to each other.

I share Jane Bowers' view<sup>38</sup> that the wavy lines in bars 1, 7 and 15 of the Double in *Suite no II* by Michel de la Barre, first published in 1702, indicate *battements*, not *flattements*.<sup>39</sup> The notes are too short for effective *flattements*, and another *battement* seems logical after what are in fact written-out *battements*. Pierre Philidor,<sup>40</sup> on the other hand, notates *flattement* with a wavy line in three books of suites that were published in 1717 and 1718,<sup>41</sup> and in an undated publication with trio suites for two melody instruments and bass. Philidor provides no ornament table, but it is clear from the musical context that Philidor's praxis does not diverge from his colleague's.<sup>42</sup>

37. The connection between fermata and vibrato is also evident in general sources, like in Marpurg, *Der Critischen Musicus an der Spree* from 1750, where it says, "The held note in the vibration is called in Italian tenuta, in French tenüe." "Der aushaltende Thon in der Schwebung heißt auf ital. tenuta, fr. tenüe" Moens-Haenen *Vibrato* 240.

38. Bowers *Preface IX*.

39. de la Barre *Pièces* 32-33.

40. French woodwind player and composer (1681-1731) who was in the service of Louis XIV.

41. Some of the suites are composed for a melody instrument (for instance oboe, flute or violin) and basso continuo and some for two flutes.

42. Moens-Haenen *Vibrato* 229-230 and Castellani *Preface Philidor*.

Septième Suite.

Sarabande.

Tres proprement,

47.

Example 5. Philidor *Septième Suite* for two flutes, first movement (*Sarabande*).

Among the viola da gamba players of the 17<sup>th</sup> century, vibrato was associated with a tender, passionate or wailing character.<sup>43</sup> Corrette agrees, writing that *flattement* is “extremely moving in tender pieces on long notes.”<sup>44</sup> In the music example above, *flattement* is indicated with a wavy line on long notes in a piece of the character associated with vibrato. Among the movements without signs for *flattement* in the 18 suites by Philidor,<sup>45</sup> the merry and the dance movements are over-represented. A good example is the *Quatrième Suite*, where there are no *flattements* in the fourth

43. Moens-Haenen *Vibrato* 145. See also Moens-Haenen *Wellenlinien* 180-181.

44. “extremement touchant dans les pieces tendres sur des notes longues” Corrette *Méthode* 30, transl. 43.

45. The first book: First suite: *Tres lentement*, *Rigaudon*, *Courante* and *Fugue* / Second suite: the two *Fugues* / Third suite: *Lentement* / Fourth suite: *Gavotte* and *Paysanne* / Fifth suite: *Allemande* / Sixth suite: *Gavotte*, *Rigaudon* and *Gigue* / The Trio book: Second suite: *Air en Suite* and *Rigaudon* / Third suite: *Allemande*, *Sicilienne* and *Second Ouverture* / Fifth suite: *Echos*.

and sixth movements (Gavotte and Paysanne). However, the *flattement* signs occur approximately as frequently in pieces of moderate speed in Philidor's suites as in the slow movements.

The four books of suites by Philidor contain the most frequently indicated vibrato of the 18<sup>th</sup> century wind repertoire. However, playing these suites on a period flute suggests that *flattement* (like other ornaments) is under-notated in some of the movements. For example, in the *Troisième Suite*, *flattements* are indicated in all movements except the first, which is the kind of tender, slow movement with many long notes that would suggest the use of vibrato. It is difficult to imagine that Philidor wanted this movement to be played without *flattements*.

Moens-Haenen,<sup>46</sup> Bruce Dickey<sup>47</sup> and Bruce Haynes<sup>48</sup> have all examined the suites by Philidor from 1717 and 1718. Moens-Haenen claims that the *flattement* is often used to bring out syncopations and other rhythmically stressed notes, for example in hemiolas. Syncopations form relatively long notes, therefore a more straightforward interpretation would be that Philidor uses *flattement* exactly according to Hotteterre's recommendation from two years earlier—on almost all the long notes.

One note could have more than one ornament. In the suites by Philidor, there are notes with a wavy line and also a sign for *port de voix* (*appoggiatura*) or a *battement*.<sup>49</sup>

In bars 76 and 77 in the Adagio-section of the first movement from Roman's *Sonata II*, reproduced below, I make vibratos with the *flattement technique*. On the first note in the Adagio-section I also do a mordent. On the *g''* in bar 76 the vibrato is made with the fifth finger stretched,<sup>50</sup> partly covering the hole, which gives a smaller pitch-change than the fingerings recommended by Hotteterre, Corrette and Mahaut (the fourth finger partly covering the hole or the fifth finger fully covering the hole). The vibrato on the *g''* is made with the fifth finger stretched;<sup>51</sup> on the *c'''* in bar 77 it is made with the third finger.<sup>52</sup> The Adagio-section of the movement is track 4 on the CD; the full movement is track 5.

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46. Moens-Haenen *Vibrato* 229-232.

47. Dickey *Untersuchungen* 96-97.

48. Haynes *Fingervibrato* 482-483.

49. Philidor *Troisième Oeuvre* 68 and 76.

50. The note is fingered 1237.

51. The note is fingered 1237.

52. The note is fingered 24567.

The image shows a musical score for Example 6, Roman Sonata II first movement (Vivace-Adagio-Vivace) bars 73-81. The score is written in treble and bass clefs. It features a sequence of chords and melodic lines. The tempo is marked 'Adagio'. There are markings for 'tr' (trill) and 'hook' signs. The score ends with 'Da Capo' and 'Vollà'.

Example 6. Roman *Sonata II* first movement (Vivace-Adagio-Vivace) bars 73-81. The signs for vibrato in bars 76, 77 and 79 are added by the author. The “hook” in bar 79 is the sign used by Delusse for *martellement*.<sup>53</sup> The mordent is not indicated.

Philidor does not notate any *flattements* on final notes in his suites, although these are by far the longest notes. This is so consistently carried out that even if *flattement* is somewhat under-notated, there is reason to believe that Philidor intends the final notes to be played without. It is difficult to know whether this reflects a standard practice of the time, or Philidor’s personal taste. Philidor often indicates *flattements* on final notes of phrases that lead on to another phrase or a repetition, as in the third movement (Riguadon en Rondeau) in the *Neufième suite*. This same practice occurs in a collection of *Airs* by different French composers, probably from the 1690’s. Here, *flattement* is used on final notes, but more often on the last note of a phrase, leading to another phrase or a recapitulation.<sup>54</sup> A hand-written version from 1738 of the trio sonatas by Hotteterre, however, contains incidental wavy lines for *flattements*, regularly indicated on final notes.<sup>55</sup>

The terms *tremblement mineur*, *lesser shake* and *shake* that were used for a vibrato performed by the *flattement technique* also show that it was looked upon as a trill with less pitch-change. A *flattement* could also be used instead of a trill on notes where the latter was difficult to execute nicely. After explaining different ways to make a trill on *c''*, Hotteterre writes, “A *flattement* is often done on this

53. See section 1.3.4 below.

54. Haynes *Fingervibrato* 483.

55. Haynes *Fingervibrato* 483.

note instead of a *tremblement*.<sup>56</sup> Indeed, sometimes in the scores by Philidor and Corrette a *flattement* is notated where one could easily imagine a trill, as in the second movement (Air en Musette) from the *Quatrième Suite* by Philidor, where, as Moens-Haenen remarks, *flattement* is used as a programmatic effect.<sup>57</sup> A *flattement* never replaces a cadential trill. The sign above the final note of the first movement (Lentement) of the *Quatrième Suite* by Philidor is in my opinion not a sign for a vibrato, though a *flattement* would be appropriate on this note.

Hotteterre writes, "It is necessary to play them [the *flattements*], as with the trills and *battements*, more slowly or more rapidly, in accordance with the tempo and character of the pieces."<sup>58</sup> A finger-vibrato can technically be performed both slowly and very quickly, and it is easy to change the speed of the vibrato within a note.

In the first movement (Largo) of Roman's *Sonata III*, I make a vibrato with the *flattement technique* with the fifth finger in bar 12.<sup>59</sup> The finger is stretched, covering the hole partly. The vibrato is slow with a grave character. The bars covered in the music example below are track 6 on the CD attached to the study; the full movement is track 7.



Example 7. Roman *Sonata III*, first movement (Largo) bars 9-12. The wavy lines in the music examples above are added by the author.

In the second movement (Larghetto) from Roman's *Sonata VII*, I make fast vibratos with the *flattement technique* with the fourth finger stretched<sup>60</sup> covering the

56. "On fait souvent sur ce Ton un *flattement*, au lieu d'une Cadence." Hotteterre *Principes* 11, transl. 48.

57. Moens-Haenen *Vibrato* 231. We also find this movement as the third movement (Musette) in the *IV.e Suite* in the books with trios (Philidor *Trio* 31), where the *flattements* are notated in the same way as in the *Quatrième Suite*. In other French *Musettes* (e.g. by Rebel) trills are used for this effect.

58. "il les faut faire aussi-bien que les *tremblements* et *battements*, plus lents ou plus précipités, selon le mouvement et le caractère des Pièces." Hotteterre *Avertissement*. Löhlein hints in 1781 that the speed of the vibrato should vary according to the character of the piece. Moens-Haenen *Vibrato* 241.

59. The note is fingered 12346.

60. The note is fingered 1237.

hole partly. The movement has a gayer, more smiling character. The bars covered in the music example below are track 8 on the CD attached to the study; the full movement is track 9.



Example 8. Roman *Sonata VII*, second movement (Larghetto) bars 33-37.

Corrette prints some Preludes and tunes for the student at the end of his method; all of the tunes and six of the Preludes contain wavy lines for *flattement*. The later date of these tunes compared to the pieces by Hotteterre and Philidor is stylistically clearly recognizable, but Corrette indicates *flattements* similarly to his predecessors. The wavy lines occur on long notes, and regularly on final notes. Nine out of the ten pieces with *flattement* signs are joyful dance movements or Fanfares; only one is a Sarabande. However, in the latter, wavy lines are frequent.

Example 9. Corrette *Méthode* 42.<sup>61</sup>

61. Reproduced with kind permission of Georg Olms Verlag.

In Johann Sebastian Bach's fifth *Brandenburg concerto* BWV 1050 (composed before 1721) there is a long wavy line over the two whole notes in the flute part in the first movement (Allegro), bars 95 and 96.

The image displays a musical score for the first movement of J.S. Bach's Brandenburg Concerto No. 5. The score is in G major and 3/4 time. It features a flute part with a long wavy line over two whole notes in bars 95 and 96, marked 'pianissimo'. The score includes staves for flute, violin, viola, cello, and double bass, with a keyboard accompaniment section starting at bar 98.

Example 10. J.S. Bach *Brandenburg concerto no. 5*, first movement (Allegro) bars 94-101.

Since the wavy line was the most common sign for vibrato at this time, and the *flattement technique* the only described vibrato technique for the flute around the time (substituted by *shaking the flute* on certain tones, but not the ones here), this would indicate a vibrato made with the *flattement technique*. After studies and numerous performances of the piece my suggestion is that Bach intended the six bars 95-100 to form a long, big crescendo, not only in volume, but also in sound quality and pitch-changes of the ornaments towards the tutti entrance. Bar 95 is marked pianissimo, a rare indication for the time. F'' is a note with a veiled character on the one-keyed flute; with the *flattement technique* it becomes even more mysterious. Often<sup>62</sup> trills are added to the notes in bars 97-100, with the result that the note with a vibrato made with the *flattement technique* is succeeded by a note with a semitone trill (in bar 97), a note with a whole tone trill (where the flute part makes an interval of a seventh to the violin part)<sup>63</sup> and finally with a trill on g#'', which is a trill of more than a whole tone on the one-keyed flute, fingered according to the charts by Hotteterre and Johann Joachim Quantz.

Moens-Haenen offers the hypothesis that the wavy lines after the trill signs in the third movement (Allegro) in J. S. Bach's *Sonata for flute and harpsichord in A major*, BWV 1032,<sup>64</sup> bars 126-127, 132-133, 136-137, 144-145 and 184-185, indicate vibrato or a trill with *glissando*.<sup>65</sup> However, *t* or *tr* with a wavy line was a common way to indicate trills at this time, which in my opinion is also the intention here, as in the harpsichord part in the corresponding bars 128-129, 140-141 and 146-147.

In general, English as well as German woodwind playing at the beginning of the 18<sup>th</sup> century was strongly influenced by French playing technique. The chapter on the flute in *The Modern Musick-Master*, edited by Peter Prellieur in 1730/1731, is a translation of Hotteterre's *Principes*, including the paragraphs on *flattement*. Considering that flutists often played recorder as well, it may be assumed that the same vibrato techniques were used on both instruments, and it is then worth observing that the recorder method *The Complete Flute Master* which describes the *flattement technique* was reprinted in England up to at least 1765.<sup>66</sup> Thus, my conclusion is that the vibrato technique best known to and used by flutists in art

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62. Like in the Bärenreiter edition from 1987.

63. Bar 98-99.

64. Probably from the early 1730's, Kuijken *Postface* 28.

65. Moens-Haenen *Vibrato* 249.

66. Moens-Haenen *Vibrato* 91.



music in England as well as in France and Germany in the early 18<sup>th</sup> century was the *flattement technique*.

## 1.3 Around the middle of the 18<sup>th</sup> century

### 1.3.1 The *flattement technique* and *shaking the flute*

Quantz does not indicate any vibrato in *Solfeggi pour la lute traversiere avec l'enseignement*, from 1728-41. In *Versuch einer Anweisung die Flöte Traversiere zu spielen*, from 1752, he mentions vibrato twice, both times in the chapter about how to play an Adagio. First he lists it among the French essential graces, using the word *flattement*:

The Adagio may be viewed in two ways with respect to the manner in which it should be played and embellished; that is, it may be viewed in accordance with the French or the Italian style. The first requires a clean and sustained execution of the air, and embellishment with the essential graces, such as appoggiaturas, whole and half shakes, mordents, turns, battements, flattements, &c.

Man kann das Adagio, in Ansehung der Art dasselbe zu spielen, und wie es nöthig ist, mit Manieren auszuzieren, auf zweyerley Art betrachten; entweder im französischen, oder im italiaenischen Geschmacke. Die erste Art erfordert einen netten und aneinander hangenden Vortrag des Gesanges, und eine Auszierung desselben mit den wesentlichen Manieren, als Vorschlägen, ganzen und halben Trillern, Mordanten, Doppelschlägen, battements, flattements, u.d.gl.<sup>67</sup>

A few pages later, Quantz connects vibrato with a *messa di voce*:

If you must hold a long note for either a whole or a half bar, which the Italians call *messa di voce*, you must first tip it gently with the tongue, scarcely exhaling; then you begin *pianissimo*, allow the strength of the tone to swell to the middle of the note, and from there diminish it to the end of the note in the same fashion, making a vibrato with the finger on the nearest open hole. To keep the tone from becoming higher or lower during the crescendo and diminuendo, however (a defect which could originate in the nature of the flute), the rule given in § 22 of Chapter IV must be applied here; the tone will then always remain in tune with the accompanying instruments, whether you blow strongly or weakly.

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<sup>67</sup> Quantz *Versuch* 136, transl. 162.

Hat man eine lange Note entweder von einem halben oder ganzen Tacte zu halten, welches die Italiäner *messa di voce* nennen, so muß man dieselbe vors erste mit der Zunge weich anstoßen, und fast nur hauchen; alsdenn ganz *piano* anfangen, die Stärke des Tones bis in die Mitte der Note wachsen lassen; und von da eben wieder so abnehmen, bis an das Ende der Note: auch neben dem nächsten offenen Loche mit dem Finger eine *Bebung* machen..Damit aber der Ton in währendem Zu- und Abnehmen nicht höher oder tiefer werde, (welcher Fehler aus der Eigenschaft der Flöte entspringen könnte;) so muß man hier die im §22 des IV. Hauptstücks gegebene Regel in Uebung bringen: so wird der Ton mit den begleitenden Instrumenten in beständig gleicher Stimmung erhalten, man blase stark oder schwach.<sup>68</sup>

Though Quantz here uses the word *Bebung*, it is clear from his description of how to execute it that he refers to the *flattement technique*. Quantz does not print a fingering chart for the *flattement technique*, but the passage quoted above suggests that he refers to partly covered holes; by fully covering the nearest open hole, the pitch-change in several fingerings would be that of a whole tone. The preposition “on” in the English translation could be questioned: the German “neben” as well as the French “au” in the meticulous French translation of *Versuch*,<sup>69</sup> issued under the supervision of Quantz,<sup>70</sup> mean “beside.” Quantz does not indicate vibrato in the two Adagios (in the French and Italian styles) that he prints for the student.<sup>71</sup>

The writer of the article “Flûte Allemande ou traversiere” in Diderot and D’Alembert’s *Encyclopédie ou Dictionnaire raisonné*, from 1756, refers to Hotteterre’s *Principes* concerning “flatemens.”<sup>72</sup> Among the Parisian writers, Toussain Bordet does not discuss vibrato in his brief *Méthode Raisonnée* from c. 1755, but Mahaut spends a paragraph on the *flattement* in *Nieuwe Manier*.<sup>73</sup> Mahaut provides fingerings for f’’ - a’’, which are absent in the charts by Hotteterre and Corrette:

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68. Quantz *Versuch* 140, transl. 165-166.

69. In the French translation *Essai d'une methode pour apprendre à jouer de la Flute traversiere* it says, “au trou ouvert le plus proche, flattement avec doigt;” Moens-Haenen *Vibrato* 110.

70. Reilly *Preface* xxxv.

71. Quantz *Versuch* tab. VI fig. 26 and tab. XVII, transl. 97 and 169-172.

72. Quoted in Castellani/Durante *Lingua* 187-188.

73. Mahaut *Nieuwe Manier* 19-20.



Example 11. Mahaut *Nieuwe Manier* 35.

Mahaut writes, “The numbers above [the notes] indicate those holes for which only the edge is covered, and numbers below those holes that are fully covered. Notes with numbers both above and below can be played either way.”<sup>74</sup> Mahaut’s fingerings for *flatterment* are similar to the ones given by Hotteterre and Corrette. The alternativ with the second finger for d’ raises the pitch slightly, and the fingerings for d#’’ and d#’’/e b ’’ create only changes in timbre.<sup>75</sup> Like his predecessors, Mahaut recommends *shaking the flute* for d#’/e b ’ where the *flatterment* is not possible to execute, “The fingered vibrato on d’ sharp and e’ flat can only be produced artificially. You cover all the holes and shake the flute with the right hand.”<sup>76</sup>

Mahaut writes, “The fingered vibrato [the flatterment] is a wavering of the tone which is slower than that of a trill.”<sup>77</sup> Mahaut suggests that the player can change the execution of the vibrato according to the desired effect, “Some players execute the vibrato by extending the finger on a given hole and covering just the edge. Others execute it by covering a full hole or even two at once, according to the

74. “cyfers boven de nooten, zulken beevingen, die op de kanten van de gaaten geschieden, en cyfers ’er onder, beevingen op opene gaaten; maar, dat de nooten, die teffens boven en beneeden cyfers hebben, volgens beide manieren, beevende kunnen worden uitgevoerd.” “les chiffres au dessus marquent ceux qui se battent sur l’ extrémité des trous; & les chiffres au dessous ceux qui se battent sur les trous pleins. Les notes qui ont des chiffres au dessus & au dessous en même tems peuvent se faire de l’ une & l’ autre maniere.” Mahaut *Nieuwe Manier* 20, transl. 19.

75. On flutes by Rudolf Tutz after J. H. J. Rottenburgh and Denner.

76. “De beeving van D kruis en E mol, aan het hoofd staande, vereischt den konstgreep, dat men, alle gaaten gestopt zynde, de Fluit van onderen met den arm beweege.” “Le flatterment du Ré Die-sis & du Mi Bemol d’en bas ne se fait qu’artificiellement: tous les trous étant bouchés on ébranle la Flute avec la main d’en bas.” Mahaut *Nieuwe Manier* 20, transl. 19. Since *flatterment technique* is my own term, which I constructed to be able to write this dissertation, there are some inconsistencies in the text; in this translation, *flatterment (beeving)* is translated to *fingered vibrato*, and in the authorized translation I use of Tromlitz’s *Unterricht*, *Bebung* is translated to *flatterment*. See section 1.4.3.

77. Mahaut transl. 19. “Le flatterment est un battement plus lent que le tremblement.” “De beeving, langsaamer slaagen, dan een triller, bevattende.” Mahaut *Nieuwe Manier* 19.

intensity of expression desired.”<sup>78</sup> As seen in the chart above, Mahaut recommends using two fingers as an alternative on  $g'$ ,  $a'$  and  $b\#/c''$ . Mahaut is the only 18th-century writer who describes the simultaneous use of two fingers.

Mahaut recommends different fingerings for  $f\#$  and  $g\flat$  (in both the first and second octaves) and for  $a\#''$  and  $b\flat''$ . In the chart above, however, he seems to have forgotten this when he uses the same finger to execute the *flattement* for these enharmonic notes. In my opinion, the fingering for the *flattement* in Mahaut's chart belongs to the fingerings for  $f\#$  and  $a\#''$ .<sup>79</sup>

When the pitch-change of the *flattement technique* is considerable, the average pitch of the note is slightly lowered. The different fingerings for the *flattement technique* for  $a\#'$  and  $b\flat'$  in Mahaut's chart do not necessarily create different pitch-changes, however, since the second finger, used for the *flattement technique* on  $a\#'$ , is supposed to cover only the edge of the hole.

On the  $g''$  in bar 76 of the first movement (Vivace-Adagio-Vivace) from Roman's *Sonata II*, the *flattement technique* is executed with the fifth finger stretched,<sup>80</sup> partly covering the hole, which gives a smaller pitch-change than the fingerings recommended by Hotteterre, Corrette and Mahaut (the fourth finger partly covering the hole or the fifth finger fully covering the hole).

Mahaut writes, “This ornament [the *flattement*] is most often used on a long note on which you want to *crescendo* or *decrescendo*.”<sup>81</sup> Moens-Haenen interprets this statement as referring to a *mesa di voce*,<sup>82</sup> which is not my opinion since Mahaut writes “or.”

In bar 28 of the first movement (Cantabile) of Roman's *Sonata IX I* make a vibrato with the *flattement technique* on a  $b\flat''$  with the third finger<sup>83</sup> together with

78. “Sommige slaan het op de kanten van de Fluitgaaten, strekkende den vinger, die het werk doet, verder inwaarts; anderen, slaan het op een open gat, zelfs op twee te gelyk, naar maate van kracht en de uitdrukking, die men 'er aan geeven wil.” “Quelques uns le battent sur l'extrémité ou bord des trous, en allongeant le doigt qui fait le battement, d'autres le battent sur un trou plein & même sur deux à la fois, selon la force & l'expression qu'on veut donner.” Mahaut *Nieuwe Manier* 20, transl. 19.

79. These are also the fingerings chosen by Moens-Haenen in the fingering chart in Moens-Haenen *Vibrato* 106-107.

80. The note is fingered 1237. See section 1.2.

81. “Cet agrément [le *flattement*] se fait le plus souvent sur une note longue quand on enfle ou diminue le son.” “Dit sieraadt [de beeving] gebruikt men doorgaans op lange nooten, als de klank, of aanwassen of afneemen zal.” Mahaut *Nieuwe Manier* 19-20 transl. 19.

82. Moens-Haenen *Vibrato* 108.

83. The note is fingered 124567.

a crescendo. The bars covered in the music example below are track 10 on the CD attached to the study; the full movement is track 11.



Example 12. Roman *Sonata IX*, first movement (Cantabile) bars 24-30. The wavy line for vibrato is added by me.

The flute sources contain no information about the matter of whether the vibrato should start from the beginning of the note or not. In the edition from 1787 of Carl Philip Emanuel Bach's *Versuch über die wahre Art das Clavier zu spielen*<sup>84</sup> and in Johann Friedrich Agricola's *Anleitung zur Singkunst*<sup>85</sup> starting the vibrato after the middle of the note and towards the end of the note, respectively, is recommended.<sup>86</sup> In bar 34 in the fourth movement (La Parisienne) of Philidor's *Douzième Suite* a *flattement* is notated on the second half of the note.<sup>87</sup> To me, starting the vibrato after the middle of the note feels especially natural to do together with a crescendo, as in the example above. A decrescendo together with the *flattement technique* is heard in the second movement (Larghetto), bars 19-22 and 33-37 of Roman's *Sonata VII*.<sup>88</sup>

To combine the *flattement technique* with a crescendo has a practical advantage in flute playing. On the flute, the pitch tends to rise during a crescendo if this is not compensated for; the *flattement technique* can serve as compensation. However, notes with different types of dynamic changes were often adorned with a vibrato, which could also be performed with other techniques than the *flattement technique*. Furthermore, Quantz's statement in the quote above that the note in a *messa di voce* has to be kept in tune with the embouchure or by turning the flute<sup>89</sup> shows that he is not using the *flattement technique* to adjust the rise in pitch.

84. C. Ph. E Bach *Essay on the True Art of Playing Keyboard Instruments* 156.

85. Agricola *Anleitung zur Singkunst* 121, quoted in Moens-Haenen *Vibrato* 240.

86. For advice for the violin and the cello, see Brown *Classical* 550.

87. Philidor *Troisième Oeuvre* 79.

88. Music example in section 1.2 above.

89. The rule given in § 22 of Chapter IV.

This is underlined by both Haynes<sup>90</sup> and Moens-Haenen,<sup>91</sup> who conclude that the average pitch of the note is only very slightly changed by Quantz's *flattement technique*. This, however, does not mean that the pitch-changes necessarily are smaller than the ones described by Hotteterre, Corrette, and Mahaut. According to my practical experience it is necessary to compensate for a change in pitch (with the embouchure or by turning the flute) to play a note with a *messa di voce* in tune on the flute, also if one uses the *flattement technique* with a pitch-change like in the fingering charts of the abovementioned writers. The primary reason to combine a crescendo or a *messa di voce* with a vibrato was not practical but aesthetic, to reinforce the expression.

Morten Raehs<sup>92</sup> notates short wavy lines in all six sonatas in *VI Sonate per il Flauto Traversiere* from 1748,<sup>93</sup> in both slow and fast movements, up to five times in a movement,<sup>94</sup> and on two notes in the first movement (Adagio) of *Sonata No. 5* from *10 Solos a Flauto Traverso & Violoncello*, composed between 1748 and 1776.<sup>95</sup> The signs are typically found over long notes (in this complex style "long" can be a quarter note, eighth note or even sixteenth note in an Adagio) with no other ornaments.



Example 13. Raehs *Sonata No. 2* from *VI Sonate*, first movement (Allegro Moderato) bars 16-18.<sup>96</sup>

Mogens Friis assumes that Raehs got a thorough education in the flute in England during his staying there some years before he went back to his native Denmark in 1726.<sup>97</sup> It is worth noticing that Francesco Geminiani, who lived in London at this

90. Haynes *Fingervibrato* 405-406.

91. Moens-Haenen *Vibrato* 110.

92. Danish flutist and composer 1702-1776.

93. Or possibly 1747, Delius/Friis *Raehs*.

94. See Appendix 4.

95. Mss. Copenhagen.

96. Raehs *Sonatas* 8.

97. Delius/Friis *Raehs*.

time, includes the wavy line as the sign for vibrato in his list of ornament signs.<sup>98</sup> Since a wavy line was anyway the most common way to indicate a vibrato in this period, an assumption is that the wavy lines in Raeh's sonatas refer to vibrato. An alternative interpretation would be that they indicate (short) trills or transient shakes. In the example above, Raehs indicates trills with the common sign +. Composers from this period, however, occasionally used both this sign and short, somewhat sharp-edged wavy lines for trills in the same movement.<sup>99</sup> However, when that happened, the short wavy lines are often indicates on notes where a vibrato seems stylistically out of place and technically awkward or impossible to perform, but where it feels easy and natural to make a trill,<sup>100</sup> such as notes under a legato slur, notes before a final note, or very short notes. None of the 22 notes with wavy lines in the *sonatas* by Raehs is a note where a vibrato is not suitable to perform.

Since the *flattement technique* is the vibrato technique most often described around this time, I assume these wavy lines refer to the *flattement technique*. The note *c'''* is over-represented among the notes with wavy lines. In passages like the example below, Raehs is possibly using the *flattement technique* instead of a trill on *c'''*, as Hotteterre recommends.<sup>101</sup>



Example 14. Raehs *Sonata No. 5* from *VI Sonate*, first movement (*Vivace*) bars 16-21.<sup>102</sup>

98. Geminiani *The Art* 6.

99. For instance the *Gracioso* from *Sonata Seconda* by Dupuits, Dupuits *Sei Sonate* 5, the *Allegro* from *Sonata 1* by Guillemant, Guillemant *Sei Sonate* 1 and some of the duos in the French edition of Mahaut's *Nieuwe Manier*, transl. 36-37, 50-51, and 55. See also Bordet *Méthode* 44 and 57.

100. In the short pieces in Delusse's *L'Art* it is difficult to tell the difference between the short wavy line for a short trill (*tremblement simple*), and a slightly longer line for the *tremblement flexible*.

101. See section 1.2.

102. Raehs *Sonatas* 20.

In the penultimate bar of the first movement (Adagio) of Raehs' *Sonata No. 5* there is a longer wavy line above two quarter notes in succession.



Example 15. Raehs *Sonata No. 5* from *10 Solos*, first movement (Adagio) last bars.<sup>103</sup>  
Nota bene: In the first line a g clef is missing, and in the second a bass clef. At the beginning of both lines one sharp is missing.

The notes under the wavy line are together with the final note the longest notes of the piece. The second note,  $b \flat$ , is harmonically the most stressed (being the minor ninth in a dominant to the dominant chord), and the most expressive note of the movement, which is further brought out by the vibrato. Together with the bars in the fifth *Brandenburg concerto* this is the only place where I have seen vibrato indicated over two notes in succession. In contrast to the bars in the *Brandenburg concerto* I personally could imagine these notes performed with a *glissando* as well.<sup>104</sup>

Geminiani writes in 1747 in the preface to his collection of pieces for violin or flute and continuo, *Rules for playing in a true Taste*, “I have omitted also the Mark of the *Close Shake* which may be made on any Note whatsoever.”<sup>105</sup> The *close shake* is Geminiani’s term for vibrato.<sup>106</sup> Thereafter he directs a paragraph to flutists, which begins, “It is not requisite to say much on the Article of the *German Flute* as what has been said already concerning the *Violin* will serve for the *Flute* also, except

103. Raehs *Sonatas* 53.

104. See the discussion in Moens-Haenen *Vibrato* 242-250.

105. Geminiani *Rules* preface.

106. Geminiani *Good Taste* 3 and *The Art* 8. See section 1.3.2 below.



in the Article of the *close Shake* which must only be made on long notes.<sup>107</sup> In my opinion, Geminiani here recommends a more restricted vibrato-use for the flute than for the violin. There are no indications that Geminiani refers to any specific flute vibrato technique with the term *close shake*.

### 1.3.2 *Tremblement flexible*

Delusse does not mention either *shaking the flute* or the *flattement technique* in his *L'Art de la Flûte Traversiere* from c. 1760. Instead, he describes three other previously undocumented vibrato techniques. One of them is *tremblement flexible*, which is only documented in this book. Delusse writes in the article headed “Du Tremblement flexible” that it is “produced by rolling the body of the flute with the left thumb, increasing gradually the speed, without losing the embouchure.”<sup>108</sup> In this way, a pitch-, intensity- and timbre-vibrato is created.<sup>109</sup> In contrast to the *flattement technique*, the pitch changes as much upwards as downwards, which makes the *tremblement flexible* sound more like a violin vibrato. In my experience it is not convenient to make *tremblement flexible* on short notes. It can be executed slowly or relatively slowly, but in trying to perform a very fast *tremblement flexible*, one ends up *shaking the flute*. It is worth noticing, however, that Delusse describes an accelerating *tremblement flexible*. Both Dickey<sup>110</sup> and C. Brown<sup>111</sup> suggest that Delusse recommends *tremblement flexible* instead of the *flattement technique* common in France in his time because of the impossibility of performing the latter as often as a conventional violin vibrato. But I do not find it easier to vibrate often and on shorter notes with the *tremblement flexible* than with the *flattement technique*, even when taking into consideration that I have practiced *tremblement flexible* less. *Tremblement flexible* seems to be the “normal” vibrato for Delusse. He notates it with a wavy line:

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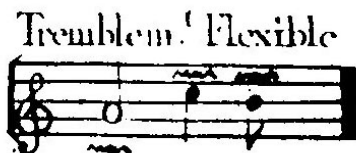
107. Geminiani *Rules* preface.

108. “Pour l'exécuter, il faut que le pouce gauche agisse par gradation de vitesse, en roulant le corps de la Flûte, sans perdre l'embouchure.” Delusse *L'Art* 9, transl. Lasocki *Preface* ii.

109. To turn the flute inwards or outwards is a way to influence the pitch on the flute. See e.g. Quantz *Versuch* 50.

110. Dickey *Untersuchungen* 98.

111. Brown *Classical* 524.



Example 16. Delusse *L'Art*, illustration section, 9.

In the ornament chart, *tremblement flexible* is notated above a half note, a quarter note and an eighth note, as if Delusse wants to point out that it can be used on shorter notes as well. Delusse writes:

When this ornament is continued, gradually swelling the sound and finishing with force, it expresses gravity, fright. Making it shorter, softer, it expresses affliction, languor. And when it is made on short notes it contributes to rendering the melody more agreeable and tender. You must put it to use as often as possible. For this reason it is never marked in the music; taste alone inspires it.

Lorsque ce Tremblement est continué en enfant **graduellement le son & finissant avec force**, il exprime la gravité, la frayeur; le faisant plus court, plus doux, il exprime l'affliction, la langueur; & lorsqu'il se fait sur des notes breves, il contribue à rendre la mélodie plus agréable & plus tendre. On doit le mettre en usage le plus souvent qu'il est possible; c'est par cette raison qu'il n'est jamais marqué dans la Musique, le goût seul l'inspire.<sup>112</sup>

Delusse's *L'Art* is strongly influenced by Geminiani's *The Art of Playing on the Violin* from 1751, which was translated to French, and printed in Paris in 1752.<sup>113</sup> The quotation above is basically a translation of Geminiani, writing about the *close shake* in *The Art* and in *A Treatise of Good Taste in the Art of Musick* from 1749. In both these books, Geminiani writes:

when it [the *close shake*] is long continued swelling the Sound by Degrees, drawing the Bow nearer to the Bridge, and ending it very strong it may express Majesty, Dignity &c. But making it shorter, lower and softer, it may denote Affliction, Fear, &c. and when it is made on short Notes, it only contributes to make their Sound more agreeable and for this Reason it should be made use of as often as possible.<sup>114</sup>

112. Delusse *L'Art* 9, transl. Lasocki *Preface* ii.

113. Moens-Haenen *Introduction* IV-V.

114. Geminiani *The Art* page 8 in the preface and *Good Taste* 3.

In these citations, vibrato is seen as one of the means by which a player can express or enhance different emotions or characters. The same aesthetic was previously expressed by Hotteterre and Mahaut;<sup>115</sup> however, Delusse and Geminiani explain it more specifically and elaborately. I use vibratos to enhance the affect of sudden anxiety and drama in the Adagio-section of the first movement from Roman's *Sonata II*, bars 76 and 77.<sup>116</sup> The bars are track 4 on the CD attached to the study; the full movement is on track 5.

Delusse is the only writer from the 18<sup>th</sup> and 19<sup>th</sup> centuries to recommend vibrato on the flute on short notes and "as often as possible." His statement is the last written representation of the use of flute vibrato from the richly ornamented performing style of the middle of the 18<sup>th</sup> century. It is worth remembering that Delusse here writes about the *tremblement flexible*.

In *L'Art*, Delusse includes several short pieces and twelve *Caprices* with *tremblement flexible* occasionally indicated on long, sustained notes. Considering Delusse's statement that *tremblement flexible* should be used as often as possible, it seems under-notated in these pieces.<sup>117</sup> Of the seven wavy lines for *tremblement flexible* in *L'Art*, five appear on notes with fermatas.<sup>118</sup>

I used *tremblement flexible* on some notes when I practiced the musical pieces for the recordings and concerts for this study, but replaced it with the *flattement technique* in the concerts because for me it was easier to handle and sounded better to my ears.

### 1.3.3 Chest vibrato

Delusse also describes chest vibrato:

There is yet another kind of Tremblement flexible, called Tremolo by the Italians, which, when used properly, adds a great deal to the melody. It is done only by "blowing" the syllables Hou, hou, hou, etc. actively with the lungs.

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115. Quoted in sections 1.2 and 1.3.1 above.

116. See the music example in section 1.2 above.

117. In "Caprice V" it is indicated once and in "Caprice X" twice, Delusse *L'Art* 31 and 36. In two of the short pieces *tremblement flexible* is notated twice (in "Piece XIX" in bars 12 and 13, and in "Piece XX" in bars 24 and 27). Delusse *L'Art* 20.

118. Delusse *L'Art* 20 "Piece XX" bars 24 and 27, p.31 and 36 (twice).

Il est encore une autre sorte de Tremblement flexible que les Italiens nomment Tremolo, qui prête beaucoup à la melodie, lorsqu'on l'emploie à propos. Il ne se fait que par un mouvement actif des poumons en soufflant ces syllabes Hou, hou, hou, hou, &c.<sup>119</sup>

This kind of successive pushing of air from the chest without a tongue stroke sounds the same and is executed in the same way as a kind of articulation used at the time. In the chapter “Of the Use of the tongue in Blowing upon the Flute” in *Versuch*, Quantz describes how to execute a tie, or a tie and dots over consecutive notes of the same pitch:

If a slur is found above notes which are repeated (see Fig. 8), they must be expressed by exhalation, with chest action. If, however, dots also stand above such notes (see Fig. 9), the notes must be expressed much more sharply, and, so to speak, articulated from the chest.



Wenn über Noten die auf einerley Tone stehen, ein Bogen befindlich ist, Fig. 8; so müssen selbige durch das Hauchen, mit Bewegung der Brust, ausgedrückt werden.

Stehen aber über solchen Noten zugleich Punkte, Fig. 9; so müssen diese Noten viel schärfer ausgedrückt, und so zu sagen mit der Brust gestoßen werden.<sup>120</sup>

After using these techniques both in practicing and concerts, I have come to the opinion that in the softer manner without dots, the notes are not separated, which makes the same effect as the vibrato described by Delusse.<sup>121</sup> Toussain Bordet describes the same articulation, however indicated with dots, in his *Méthode Raisonnée Suivi d' un recueil d' airs* from 1755.

119. Delusse *L'Art* 9.

120. Quantz *Versuch* 65 transl. 75. Antonio Lorenzoni expresses it similarly in *Saggio per ben Sonare il Flauto Traverso* (1779), 57.

121. Moens-Haenen *Vibrato* 137. An example for the flute is in the aria “Zerfließe mein Herz” from J. S. Bach's *St. John's Passion* from 1727.



Example 17. Bordet *Méthode* 6.

Bordet writes, “Only the volume of each dotted note included under this sign should be increased; they should not be detached at all.”<sup>122</sup>

I conclude that before chest vibrato was discussed in the flute methods, flute players used an identical technique, albeit for another purpose. However, the chest vibrato as described by Delusse and the 19<sup>th</sup> century writers below is an ornament, added by the player on single notes.

A passage from Quantz’s *Versuch* has sometimes been interpreted as the earliest 18<sup>th</sup> century recommendation of chest vibrato on wind instruments:

You can also considerably improve the tone quality through the action of your chest. You must not use a violent, that is, a trembling action, however, but a calm one. Otherwise the tone will become too loud.

Mit Bewegung der Brust kann man dem Tone in der Flöte auch viel helfen. Sie muß aber nicht mit einer Heftigkeit, nämlich zitternd; sondern mit Gelaßenheit geschehen. Thäte man das Gegentheil, so würde der Ton zu rauschend werden.<sup>123</sup>

This can—at a first glance—look like a recommendation to use chest vibrato for the benefit of sound quality. This quotation is from the second-to-last paragraph in the chapter on *embouchure*, and not from the sections about ornament or musical taste. The three preceding paragraphs deal with intonation, as does the subsequent paragraph. In the contemporary French edition the passage begins, “The movement of the chest also contributes significantly to a good intonation on the flute.”<sup>124</sup>

122. “Il faut seulement augmenter le son sur chaque note pointée comprises sous ce signe et ne les point détacher.” Bordet *Méthode* 6.

123. Quantz *Versuch* 51, transl. 59.

124. “Le mouvement de la poitrine contribue aussi beaucoup à la bonne intonation sur la Flute;” Quantz *Essai d’une methode pour apprendre à jouer de la Flute traversiere* 52, quoted in Moens-Haenen *Vibrato* 112.

With “intonation” instead of “Tone” the meaning of the sentence is fundamentally different. Moens-Haenen has satisfactorily compared this quote with other passages in *Versuch* and the French and Dutch translations as well as the similar passage in the flute method by Friedrich Anton Schlegel from 1788.<sup>125</sup> I agree with her conclusion that the passage is referring not to a vibrato, but to breath support.

As a special effect, flute players in the 18<sup>th</sup> century were sometimes asked to imitate the organ *tremolo* with a continuous chest vibrato. The third movement (Adagio) of Corrette’s *Sonata for flute and basso continuo* Op. 13 No. 5, composed c. 1735,<sup>126</sup> bears the comment, “This piece should be played in the style of the foundation stops of the organ, imitating a soft organ tremolo.”<sup>127</sup> Two other examples of this effect are found in a book with flute duets by Bordet. One of the duets has the title “Imitation du tremblant doux de l’Orgue, par Bordet,” an other “La Lanterne magique du même.” Next to the second duet the following recommendation is found:

To play this piece in the correct style, /.../you may also play it like the soft organ tremolo, as in the previous piece. This is accomplished by causing the air to pulsate as it leaves the chest and passes through the throat, creating an effect similar to that of an organ pallet.

Pour jouer cette pièce dans son gout, /.../Elle peut aussi se jouer en tréblant doux d’Orgue, comme la précédente; ce qui se fait par la palpitation du vent en sortant de la poitrine pr passer par le gosier, qui forme l’effet de la soupape de l’Orgue<sup>128</sup>



125. Moens-Haenen *Vibrato* 112-113.

126. Castellani *Preface Corrette*.

127. “Cette pièce se doit jouer dans le goût des fonds D’orgue en imitant le tremblant doux” Corrette *Sonates* 24. French organs at this time had two different tremolos: *tremblant doux*, which was the most common, and *tremblant fort*.

128. Bordet *Méthode* Appendix 30.



Example 18. Bordet *Méthode* 30.

Bordet comments on these pieces, “The airs on pages 30, 31, 42 and 80, being of a very special type, have been included in this collection solely for the amusement of the player, and to demonstrate what the flute is capable of.”<sup>129</sup>

Since this piece contains eighth notes, and the effect is supposed to be continuous through the piece, in practice one must use a faster chest vibrato technique than the one described by Delusse. I assume that this was a vibrato technique involving the vocal cords because I find a continuous chest vibrato easiest to perform with the vocal cords.

Delusse uses this effect (“imitation du tremblant doux de l’orgue”) in a duo for two flutes from c. 1751.<sup>130</sup>

### 1.3.4 *Martellement*

Delusse describes a vibrato technique that he calls *martellement* in a paragraph of its own, separately from his “vibrato” paragraph headed *tremblement flexible*.<sup>131</sup> He writes, “Martellement is understood as a continuous finger movement on a hole, which produces almost the same effect as the vibrato which is customary on the violin.”<sup>132</sup> Delusse indicates *martellement* with a hook, and includes it in his ornament chart.<sup>133</sup>

Delusse provides a fingering chart for *martellement* for most notes from d’ and higher, reprinted below.

129. “Les airs des pages 30, 31, 42, et 80, étant d’un genre singulier, n’ont été mis dans ce recueil que par curiosité, et pour faire connoître de quoi la flûte est capable.” Castellani *Preface Bordet*.

130. Delusse, “Six sonates pour la flûte traversière avec une tabulature des sons harmoniques.” 31. Quoted in Castellani *Preface Bordet*.

131. The terminology is confusing. Mahaut uses the word *martellement* for a mordent starting from the note under the main note. Mahaut *Nieuwe Manier* 18.

132. “Du Martellement. Ce qu’on entend par Martellement est un mouvement de doigt continu sur un trou qui produit à peu près le même effet que celui qu’on met en usage sur le violon.” Delusse *L’Art* 10, transl. the author.

133. Delusse *L’Art*, illustration section, 9.

12

GAMME  
Des Martellemens

The image displays three systems of musical notation for a flute exercise. Each system includes a musical staff with notes and accidentals, and a corresponding diagram of a flute with fingerings and a hook indicating the hole for the martellement. The first system shows notes G4, A4, B4, C5, D5, E5. The second system shows notes F#4, G4, A4, B4, C5, D5. The third system shows notes E4, F#4, G4, A4, B4, C5. Vertical dashed lines connect the notes on the staff to the corresponding fingerings and hooks on the flute diagrams.

Example 19. Delusse *L'Art* 12. The hook indicates the hole on which the *martellement* is made.



One difference between this fingering chart and from the fingering charts for the *flattement technique* is that more fingerings open a hole than cover one, another is that when holes are covered, they are always fully covered. Moens-Haenen writes<sup>134</sup> that four of Delusse's fingerings for *martellement*<sup>135</sup> slightly lower the pitch, and one (on b b') raises the pitch slightly, whereas the remaining ones affect only the timbre. When I tried out these fingerings on five copies of period flutes, the result was slightly different.<sup>136</sup> Only one or two of the fingerings lowered the pitch, between seven and ten raised it, and between five and eight of the fingerings resulted in no significant pitch-change. Thus, the most significant difference between the *martellement* and the *flattement technique* is that with the former the pitch-change can be slightly downwards, but mostly upwards or none at all, whereas with the latter it is mostly downwards. This difference is clearly audible.

With a *tremblement flexible* and chest vibrato the pitch-change is, as with the violin vibrato, as much upwards as downwards. Delusse writes of the *martellement* (which is the one of his three techniques that technically most resembles the *flattement technique*) that it produces almost the same effect as the violin vibrato. My conclusion is that Delusse was experimenting with different techniques, trying to imitate the violin vibrato.

Delusse writes about the *martellement*, "it must only be employed on isolated notes which do not incline to any other [ornament]."<sup>137</sup> This is different from the way Philidor sometimes combines a *flattement* with other ornaments like the *battement* or a *port de voix*. Delusse indicates *martellement* on one note with a fermata in the second *Caprice*<sup>138</sup> and on four eighth notes in one of his short pieces,<sup>139</sup>

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134. Moens-Haenen *Vibrato* 120.

135. The fingerings for f#', g', g#'' and a'.

136. On a flute by Roderick Cameron after August Grenser (about 1760) 7 fingerings caused a slight rise of the pitch, two lowered the pitch slightly, and 8 resulted in no significant pitch change. On a flute by Alain Weemaels after A. Grenser 10 fingerings caused a slight rise of the pitch, two lowered the pitch slightly and five fingerings resulted in no significant pitch change. On a flute by Tutz after G. A. Rottenburgh, seven fingerings gave a slight rise of the pitch, one lowered the pitch slightly, and nine resulted in no significant pitch change. On a flute by Tardino after Oberlender, eight fingerings caused a slight rise of the pitch, one lowered the pitch, and eight resulted in no significant pitch change. On a flute by Tutz after the Grenser workshop (around 1790), eight fingerings caused a slight raise of pitch, one lowered the pitch slightly, and 8 resulted in no or almost no pitch change.

137. "il ne doit être employé que sur des notes isolées qui n'inclinent sur aucune autre." Delusse *L'Art* 10, transl. Lasocki *Preface* ii.

138. *Caprice II* Delusse *L'Art* 28.

139. No. XXVIII. Delusse *L'Art* 24.

which is *far too little material to draw definite conclusions about its use. Somewhat ironically, three of these five notes with a martellement indicated are d''*, which is the only note with the same fingering for the *martellement* and for the *flattement* in the charts by Hotteterre, Corrette and Mahaut. Delusse does not notate *tremblement flexible* or *martellement* on any final notes.

In the first movement (Vivace-Adagio-Vivace) of Roman's *Sonata II* I perform a *martellement* on an e'' with the first finger.<sup>140</sup>

### 1.3.5 Lip vibrato

Quantz writes, "The forward and backward motion of the lips makes the tone true and pleasing."<sup>141</sup> This sentence has sometimes been interpreted as a description of lip vibrato. However, Moens-Haenen thoroughly analyses it,<sup>142</sup> and shows with the help of, among other things, the contemporary French text, that Quantz is not referring to a lip vibrato. However, it might be that Jacob Wilhelm Lustig, who made the Dutch translation in 1754, interpreted the sentence as a description of vibrato, hesitated to recommend it as such, and therefore changed the text slightly. Lustig warns against trembling with the lips in a way that would make the sound unpleasant and "wavering."<sup>143</sup> Personally, I find it very difficult to perform a lip vibrato on the transverse flute.

## 1.4 The late 18<sup>th</sup> century

In the late 18<sup>th</sup> century, there was a reaction against what was seen as an overuse of vibrato as well as of other ornaments.<sup>144</sup> This corresponds well with a general aesthetic change towards more simplicity and "naturalness," also in the musical taste.<sup>145</sup> Apart from the musical examples in Edward Miller's *The New Flute Instructor* from c. 1799, I have not found any scores of flute music with vibrato notated from this period.

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140. The note is fingered 12345. The music example is in section 1.2 above.

141. "Das Hin- und wiederziehen der Lippen machet den Ton zugleich schwebend und annehmlich." Quantz *Versuch* 51, transl. 59.

142. Moens-Haenen *Vibrato* 111-113.

143. Moens-Haenen *Vibrato* 111-113.

144. Brown *Classical* 525 and 528.

145. Brown *Classical* 526.

### 1.4.1 France

The decreasing use of vibrato and other ornaments during the second half of the 18th century is most clearly noticeable in the French flute sources. Neither Devienne's *Nouvelle Méthode pour la Flute* from c. 1792,<sup>146</sup> Cambini's *Méthode Pour la flûte traversière* from c. 1796 nor Vanderhagen's *Nouvelle Méthode de Flûte* from c. 1799 discuss vibrato. The wavy lines under the whole notes in the exercises on how to beat time in Vanderhagen's *Nouvelle Méthode* are signs for *simile*.<sup>147</sup>

Although vibrato apparently was not an issue the French flutists of this time considered worth discussing, its occasional use cannot be ruled out. These French flute methods are the first to emphasize technical development, with an abundance<sup>148</sup> of practicing material and etudes, at the cost of detailed texts.

### 1.4.2 England

Luke Heron writes in his *A Treatise on the German Flute* from 1771:

A fine swell, with a shake arising in it, gradually increasing to its utmost extent of tone, then slowly decreasing into almost total softness, in the most striking parts of some airs, will have the most beautiful effect, and abundantly compensate for the loss of time.<sup>149</sup>

Since, as far as I know, a trill was never recommended to “arise” in a *messa di voce*, and since the word “shake” was used referring to the *flattement technique* in several treatises,<sup>150</sup> I interpret the passage by Heron as a description of a fermata introduced by the player with a *messa di voce* and a vibrato executed with the *flattement technique*.

In two other of the more important English 18<sup>th</sup> century flute methods, Lewis Christian Austin Granom's *Plain and Easy Instructions for Playing on the German*

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146. See Appendix 1 concerning this year.

147. Vanderhagen *Méthode* 27.

148. About half of the pages in each book.

149. Heron *Treatise* 43-44.

150. *The Complete Flute Master* from 1695/1699, Nicholson's *School*, Alexander's *Preceptor* and Bown's *Preceptor*. Moens-Haenen *Vibrato* 91, Nicholson *School* 71, Alexander *Preceptor* 30, Alexander *New ed.* 34 and Bown *Preceptor* 59.

*Flute* (1766),<sup>151</sup> and Samuel Arnold's *Dr Arnold's New Instructions for the German flute* (1787), any discussion about vibrato is absent. Neither do the editions from 1792 up to and including April 1818 of the widely spread *The Flute Preceptor* by J. Wragg contain any information about vibrato.<sup>152</sup> In 1793, John Gunn describes the change in taste that had taken place regarding ornaments in general and the *flattement technique* in particular, in *The Art of Playing the German Flute*:

The Modern refinements in the performance of music, however multifarious and complicated they might be thought, have certainly not increased the number of what may be called *graces*, but on the contrary, have considerably reduced their number, and greatly simplified them. The performers of the *old school* had much more of what may be called *the graces of the finger*, than the modern, which cultivates more expression and powers of the *bow*, and management of *tone*. There was formerly in use a numerous list of graces, some with and others without characters to represent them, and for the most part discontinued. Among these was the dumb shake, on stringed instruments, corresponding to what the French call *Flattement*, on the flute, and in our language, I think, called *Sweetenings*, made by approaching the finger to the first or second open hole, below the proper note that is sounded, and moving it up and down over the hole, approaching it very near each time, but never entirely upon it; thus occasioning an alternate flattering and sharpening of the note, like the dumb shake, producing a trembling palsied expression, inconsistent with just intonation, and not unlike that extravagant trembling of the voice which the French call *chevrotter*, to make a goat-like noise; for which the singers of the Opera at Paris have so often been ridiculed.<sup>153</sup>

Apparently, Gunn considers *flattement* one of the-old fashioned ornaments that no longer were in use; he is even uncertain about the English name for it. The term *chevrotter* refers to a trill or fast vibrato executed (sometimes badly) by singers.<sup>154</sup>

Dickey thinks that according to Gunn's description of the finger moving over the hole, "never entirely upon it," the finger actually does not touch the instrument. He points out, however, that this technique causes only a tiny – if any – pitch-change.<sup>155</sup> Moens-Haenen doubts whether Gunn means that the finger does not

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151. Moens-Haenen *Vibrato* 175.

152. Spell *Nicholson* 74.

153. Gunn *The Art* 18.

154. See e.g. Moens-Haenen *Vibrato* 32-34.

155. Dickey *Untersuchungen* 93.

touch the instrument, because a minimal pitch-change does not correspond very well with the likening of the vibrato to the *chevrotter*.<sup>156</sup> After much practical experimentation with this, I am of the opinion, that Gunn describes a smooth way of touching the instrument, like Corrette before him.<sup>157</sup>

Miller writes in *Instructor* that the *close shake* is made “by either beating the finger immediately below on the *side* of the Hole; or a distant Finger on a distant *full* Hole.”<sup>158</sup> Miller provides only four fingerings for the *close shake*, but writes that the *close shake* may be used “to most of the Notes.”<sup>159</sup> Of his fingerings, two open a hole (for d'' and e''), thus raising the pitch, and two partly cover a hole (for g'' and d'''), thus lowering the pitch. I identify this as the *flattement technique*. Miller strongly connects it with *messa di voce*, notating a whole note with a sign for *messa di voce*, the word “swell” and the comment, “begin soft, increase, then diminish the Tone, the close Shake may generally be added.”<sup>160</sup> Below he writes, “The close Shake and Swell to a long Note has a beautiful effect on the Flute, it answers to what was called *Giardini's* close shake on the Violin, /.../I believe this *grace* has not been mentioned or explained before in any modern Book of Instructions for the German Flute.”<sup>161</sup> To Miller, a “modern” flute treatise would have been Wragg's *The Flute Preceptor*, Gunn's *The Art*, and Arnold's *Instructions*, and possibly also Heron's *Treatise*. Probably, with “this grace,” Miller means the combination of *flattement technique* and *messa di voce*, which Heron describes, but not Gunn.

Miller includes *Airs* and *Preludes* in his method, where three of the *Airs* and three of the *Preludes* have a wavy line for vibrato each. Two of the wavy lines in the *Preludes* are together with an indicated *messa di voce*. In all three *Airs* the wavy line occurs together with a fermata, towards the end but never on a final note. None of the *Airs* with a wavy line are particularly slow and tender in character. In one of the *Airs* which is reproduced below there is a note with a fermata, a wavy line, and a sign for a swell (*messa di voce*).

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156. Moens-Haenen *Vibrato* 109.

157. Corrette *Méthode* 30, quoted in section 1.2. See also section 1.7.3.1.

158. Miller *Instructor* 11.

159. Miller *Instructor* 11.

160. Miller *Instructor* 11.

161. Miller *Instructor* 11.



Example 20. Miller *Instructions* 39.

I conclude that Miller treats the *flattement technique* as something in use, and strongly connects it with fermatas and *messa di voce*.

### 1.4.3 Germany

Johann Justus Heinrich Ribock describes a vibrato technique that he calls *Schwebungen* in *Bemerkungen über die Flöte* from 1782. He includes a fingering chart intended for a flute with five keys (for B  $\flat$  — G $\sharp$ , F—E  $\flat$ , D $\sharp$ ).

FLUTE VIBRATO

1  
2  
BRt  
3  
Gtr Kl  
4  
5  
F Kl  
6  
Co Kl  
Dis Kl

1  
2  
BRt  
3  
Gtr Kl  
4  
5  
F Kl  
6  
Co Kl  
Dis Kl

PART 1

Example 21. Ribock *Bemerkungen* Tab. II and III. The wavy line denotes the hole on which the vibration is made.

The chart above is the earliest fingering chart for finger-vibrato for a multi-keyed flute. It is not similar to the earlier charts for the *flattement technique*, but resembles Delusses' chart for *martellement* in the following respects:



1. Vibrato is as often made by opening a hole as by covering one.
2. When holes are covered, they are always fully covered.

A test of the fingerings above on a flute by Tutz after Grenser from about 1790 provided with these keys apart from the E ♭ key gave the following result: out of 47 fingerings, 14 made the pitch considerably higher, 20 made it slightly higher, 11 resulted in no noteworthy change of pitch and two in a slight flattening of the pitch. Ribock points out that it is possible to make use of this slight rise of pitch for an easier intonation in a diminuendo:

Regarding the *Schwebungen*, it seems almost superfluous to mention expressly that, by opening the key that has to make the *Schwebung* in a sustained pianissimo or Smorzando, the proper pitch of the tone can often be rather comfortably retained. The E becomes clearer in this way anyway, and this clarity can, aided by the *Schwebung*, often be maintained even during a forte without insulting the ear with the high pitch; because a good embouchure can keep it almost low enough, even without the effect of the *Schwebung*.

Was die Schwebungen anbetrifft, so scheint es fast überflüssig ausdrücklich zu bemerken, dass durch Oefnung der Klappe, die die Schwebung machen soll, dem Tone die meistenmahle gar bequem seine richtige Höhe im haltenden Pianissimo oder Smorzando erhalten werden könne. Das E gewinnt ohnedem noch dadurch an Klarheit, welche selbst oftmahls, durch Hülfe der Schwebung, im Forte demselben erhalten werden kann, ohne dass die Höhe das Ohr eben beleidiget; denn ein guter Ansatz kann es, auch ohne die Illusion der Schwebung, fast tief genug halten.<sup>162</sup>

I conclude that Ribock's *Schwebungen* is a finger-vibrato that raises the pitch rather than lowers it, and that it is the same technique that Delusse calls *martellement*.<sup>163</sup> There are, however, no indications that Ribock had read Delusses' *L'Art*,<sup>164</sup> or in any other way was influenced by Delusse. I find no indications that the use of keys had any impact on Ribock's vibrato technique.

Tromlitz uses the term *Bebung* for vibrato in general in *Unterricht*. He counts it among the *wesentlichen Manieren*, which is, the fixed (to use his term, essential) ornaments such as trills, appoggiaturas and the like. Tromlitz writes:

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162. Ribock *Bemerkungen* 20.

163. See section 1.3.4 above.

164. Which was not widely spread, see Appendix 1.

On the flute it [the flattement] is produced by repeatedly partially or halfway closing and opening the next hole down from the long note with the finger, or [by alternately closing and opening] another hole completely, according to the demands of the circumstances.

Sie [die *Bebung*] entsteht auf der Flöte, wenn man mit dem Finger das der langen Note zunächst darunter liegende Loch ein wenig oder halb, oder auch ein ander Loch ganz, nach Erforderniß der Umstände, wechselweise bedeckt und öffnet.<sup>165</sup>

Tromlitz prints a fingering chart for the *flattement technique*, and writes, “Although not every note is used for flattements, I have put them all down here so that you can use them if they come up.”<sup>166</sup>

Example 22. Tromlitz *Unterricht* 239. The number under the note indicates the hole the vibrato should be made on. More than one number indicates alternative holes.

165. Tromlitz *Unterricht* 239, transl. 213-214.

166. “Obgleich eben nicht alle Töne zu *Bebungen* gebraucht werden, so habe ich sie doch hieher gesetzt, um sich bey vorfallender Belegenheit helfen zu können.” Tromlitz *Unterricht* 240, transl. 214.

Below is a chart made of Tromlitz' fingerings and his fingering-chart for the *Bebung* reprinted above.

The image displays three fingering charts for the flattement technique, each corresponding to a different range of notes on the flute. Each chart consists of a musical staff with notes and a corresponding grid of fingerings for eight fingers (1-8) and two keys (e<sup>b</sup> and d<sup>b</sup>).

- Chart 1 (Top):** Notes range from G<sub>4</sub> to G<sub>5</sub>. Fingerings are shown for notes: G<sub>4</sub>, A<sub>4</sub>, B<sub>4</sub>, C<sub>5</sub>, D<sub>5</sub>, E<sub>5</sub>, F<sub>5</sub>, G<sub>5</sub>. Fingerings include solid dots (covered) and open circles (uncovered). Some notes have a wavy line (vibrato) or an 'F' with a wavy line (flattement).
- Chart 2 (Middle):** Notes range from G<sub>4</sub> to G<sub>5</sub>. Fingerings are shown for notes: G<sub>4</sub>, A<sub>4</sub>, B<sub>4</sub>, C<sub>5</sub>, D<sub>5</sub>, E<sub>5</sub>, F<sub>5</sub>, G<sub>5</sub>. Fingerings include solid dots, open circles, and wavy lines. Some notes have an 'F' with a wavy line or the word 'or' below it.
- Chart 3 (Bottom):** Notes range from G<sub>4</sub> to G<sub>5</sub>. Fingerings are shown for notes: G<sub>4</sub>, A<sub>4</sub>, B<sub>4</sub>, C<sub>5</sub>, D<sub>5</sub>, E<sub>5</sub>, F<sub>5</sub>, G<sub>5</sub>. Fingerings include solid dots, open circles, and wavy lines. Some notes have an 'F' with a wavy line.

Example 23. Fingering chart for the *flattement technique* according to Tromlitz.

Tromlitz writes that of the holes that should not be fully covered, a quarter, half,

or three quarters should be covered.<sup>167</sup> It is not possible to give a definite measurement for how much the finger should cover the hole, but the ear will easily be able to decide upon the matter.<sup>168</sup> Among Tromlitz's fingerings, the one for d'' raises the pitch. Tromlitz's description above how to make a vibrato shows, together with his fingerings, that he is writing about the *flattement technique*. As seen above, he recommends mostly partly covered holes, but in nine out of 47 fingerings the hole is fully covered. Some of Tromlitz's fingerings result in no pitch-change, while others creates pitch-changes of up to a quartertone or more, notably those for b b' and b#'.<sup>169</sup> In general, the pitch-changes are similar to the ones created by the fingerings recommended by Hotteterre, Corrette and Mahaut.

Tromlitz writes that the *flattement technique* can be performed slowly or fast.<sup>170</sup> Further on, however, he writes, "A very fast flattement is in my opinion a bad ornament."<sup>171</sup>

Tromlitz does not print any examples or pieces with vibrato indicated; he claims that "examples of this technique do not lend themselves to being written down."<sup>172</sup> However, he connects vibrato with the fermata, writing that *Bebung* can be used "on held notes, fermatas, and on the note before a cadenza."<sup>173</sup> Tromlitz also writes that vibrato can be made together with a *messa di voce*.<sup>174</sup>

Tromlitz's vibrato-use on fermatas and held notes is less frequent compared to the way Philidor and Raehs indicate vibrato on longer notes within a phrase. Tromlitz also advises against a too-frequent use of vibrato, "It is not advisable to use this ornament frequently."<sup>175</sup> On the following page he stresses this point once more, "I also remind you again to use this ornament only seldom, so that it will

167. Tromlitz *Unterricht* 240.

168. Tromlitz *Unterricht* 240.

169. On a flute by Tutz after Grenser.

170. "welche langsam, oder geschwinde/.../seyn kann." Tromlitz *Unterricht* 239.

171. "Sehr geschwinde Bebungen sind meines Erachtens, eine schlechte Zierde." Tromlitz *Unterricht* 239, transl. 214.

172. "Biespiele dieser Art lassen sich nicht wohl zu Pappiere [sic] bringen." Tromlitz *Unterricht* 239, transl. 214.

173. "Auf haltenden Noten, Fermaten, und auf der vor der Cadenz stehenden Note," Tromlitz *Unterricht* 239, transl. 214. Observe that the words "long notes" in the translation do not correspond exactly with "haltenden Noten" of the original text. It is here worth noticing that in *Abhandlung* Tromlitz describes a *fermata* introduced by the player as one of the ornaments that should be sparingly used. Tromlitz *Abhandlung* 14.

174. "Die Bebung /.../welche/.../einförmig oder wachsend und abnehmend seyn kann." Tromlitz *Unterricht* 239.

175. Tromlitz *Unterricht* 239, transl. 214.

not fail to have its good effect, whereas on the contrary it will certainly arouse disgust if it appears too often.”<sup>176</sup> Contemporary writers on violin playing such as Leopold Mozart, Georg Simon Löhlein and Johann Adam Hiller warn similarly against too frequent use of vibrato.<sup>177</sup> In a letter to his father Wolfgang Amadeus Mozart writes:

The human voice quivers already by itself – but in a way – [and] to such a degree, that it is beautiful – that is the nature of the voice. One imitates this [effect] not only on the wind-instruments, but also in the violin instruments and even on the clavichord – but if one exceeds the limits, it ceases to be beautiful – because it is against nature. Then it sounds to me just like an organ with a bumping below.

die Menschenstimme zittert schon selbst - aber so - in einem solchen grade, dass es schön ist - dass ist die Natur der Stimme. Man macht ihrs auch nicht allein auf den blas-instrumenten, sondern auch auf den geigen instrumenten nach - ja so gar auf den Claviern - so bald man aber über den schranken geht, so ist es nicht mehr schön - weil es wieder die Natur ist. da kömts mir just vor wie auf der orgl, wenn der blasbalk stost.<sup>178</sup>

L. Mozart also writes that vibrato should be applied in such places where nature itself would create it.<sup>179</sup> His son seems to agree – a continuous vibrato is against Nature and not beautiful.

Tromlitz advises against the use of chest vibrato:

It [the vibrato] is not done with the breath on the flute: this does not have a good effect, but makes a wailing sound; and anyone who does it spoils his chest and ruins his playing altogether, for he loses its firmness, and then cannot keep a firm and pure tone; everything wobbles out from the chest.

Mit dem Athem macht man sie [die *Bebung*] auf der Flöte nicht, es macht keine gute Wirkung, es heult; und wer es thut, verwöhnt sich die Brust, und verderbet

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176. “Auch erinnere ich noch einmal, diese Auszierung nur selten zu gebrauchen, so wird sie ihre gute Wirkung nicht verfehlen, da sie hingegen gewiß Ekel erregen wird, wenn sie zu oft erscheint.” Tromlitz *Unterricht* 240, transl. 215.

177. Brown *Classical* 526.

178. Moens-Haenen *Vibrato* 23.

179. “Man muss den Tremolo nur an solchen Orten anbringen, wo ihn die natur selbst hervor bringen würde.” L. Mozart *Violinschule* 244.

sein ganzes Spiel, denn er verliehret die Festigkeit, und dann alsdenn keinen festen und reinen Ton halten; er zittert alles mit der Brust heraus.<sup>180</sup>

On the following page, Tromlitz explains this again:

I remind you once again that on the flute the flattement may not be made with the chest, because if it is one can very easily get into the habit of wobbling, which results in a miserable execution./.../ A chief beauty of the flute is a firm, clean-cut and even tone; although it is difficult to bring about on this instrument, and is therefore rare, one must still try to achieve it, and in the attempt make the chest firm and strong so that it positively does not shake.

Ich erinnere noch einmahl, daß man auf der Flöte die Bebung nicht mit der Brust machen möge, weil man sich sonst sehr leicht zum Zittern gewöhnen könne, woraus ein elender Vortrag entstehet./.../Eine vorzügliche Schönheit auf der Flöte, ist ein fester, körnichter und gleicher Ton; ob er gleich schwer aus diesem Instrument zu bringen, und also selten ist, so muß man sich doch bemühen, ihn zu erlangen, und dabey die Brust feste und stark gewöhnen, daß sie durchaus nicht zittere.<sup>181</sup>

To react against it, Tromlitz must have heard chest vibrato used. He writes about combining the *flattement technique* and a chest vibrato:

If however, one wished to use the chest as an aid, it would have to be done simultaneously with the finger's movement, strengthening the wind a little when the finger was raised and weakening it when lowered, and thus the flattement would become rather stronger and clearer.

Wollte man aber doch die Brust zu Hülfe nehmen, so müßte es mit der Bewegung des Fingers zugleich geschehen, indem man bey dem Aufheben des Fingers den Wind ein wenig verstärkte, und bey dem Niederlegen nachließ, so würde die Bebung etwas stärker und deutlicher.<sup>182</sup>

The effect when I execute the *flattement technique* and the chest vibrato simultaneously in this way on period flutes is that of a strengthened *flattement technique*.

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180. Tromlitz *Unterricht* 239, transl. 214.

181. Tromlitz *Unterricht* 240, transl. 215.

182. Tromlitz *Unterricht* 240, transl. 215.

As Dickey concludes,<sup>183</sup> the *flattement technique* in this case must have been executed slowly, since it is technically hardly possible to coordinate the two techniques quickly performed. To sum up, Tromlitz recommends first and foremost the *flattement technique* to execute a vibrato, and accepts a slow and controlled chest vibrato performed together with the *flattement technique*.

In 1801 Andreas Dauscher borrows heavily from *Unterricht in Kleines Handbuch der Musiklehre und vorzüglich der Querflöte*. Dauscher writes about a finger-vibrato and uses the term *Bebung*.<sup>184</sup> Like Tromlitz, Dauscher writes that it should be used “on held notes, and on the note before a cadenza.”<sup>185</sup>

## 1.5 Southern Europe in the 18<sup>th</sup> century

As seen above,<sup>186</sup> Delusse writes that the Italians call the slow, controlled chest vibrato *tremolo*, which appears to be a report of Italian players using slow, controlled chest vibrato. A different use of vibrato in Italy than in France during especially the first half of the century is possible, considering that Italian flute music from this period differs stylistically from the French.

The documented activity in matters concerning the flute is considerably less in southern Europe than in, for instance, France. I have only had access to one flute treatise from this period, Antonio Lorenzoni’s *Saggio per ben Sonare il Flauto Traverso*, which was published in Venice in 1779. It echoes Quantz’s *Versuch* on some subjects, but does not discuss vibrato. Quantz’s *Versuch* was, however, translated into Italian as well as Corrette’s *Méthode*. A Spanish flute method, *Reglas y Advertencias Generales*, by Minguet y Yrol, published in Madrid in 1754, was not accessible to me.

The wavy line over four eighth notes in bar 12 of the first movement of *Sonata III* from *Sonates for flute, violin and Basso continuo* Op. 1 by the Tuscan flutist Niccolò Döthel<sup>187</sup> I consider an indicated articulation, since it is above several notes.

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183. Dickey *Untersuchungen* 94.

184. Parsons Smith *Characteristics* 92.

185. “auf haltenden Noten, und auf der vor der Kadenz stehenden Note.” Dickey *Untersuchungen* 99. Similar views were expressed also for other instruments at this time. Löhlein writes about *Bebung* in “Anweisung zum Violinspielen” from 1781, “Sie gehört über lange haltende oder Schluss-Noten.” Moens-Haenen *Vibrato* 82.

186. Section 1.3.3.

187. Döthel *Sonates* 6. Döthel was a Tuscan court virtuoso, dates unknown.

## 1.6 Northern Europe in the 18<sup>th</sup> century

Mahaut's *Nieuwe Manier* was written in both Dutch and French and published in Amsterdam and in Paris; reprints were made in both languages.<sup>188</sup> Hotteterre's *Principes* was published in Amsterdam from 1708 and on, and a Dutch translation was published in 1728.<sup>189</sup> A Dutch translation of Quantz's *Versuch* was first published in 1754. I assume that, like in France and Germany, the *flattement technique* was the most used vibrato technique in Holland in the 18<sup>th</sup> century.

Johann Daniel Berlin's *Musicaliske Elementer* was published in Trondheim, Norway in 1744 and includes a section on the flute, but does not contain any information on vibrato. The Swedish translation of Quantz's *Versuch* from 1783, however, includes the paragraphs about vibrato. Without more specific documentation, a way to proceed would be to look at general influences in flute playing, and if active flutists immigrated from abroad or had been trained abroad. Of the 13 flutists listed in Karle's *Hovkapellet 1772-1818* as active in the *Royal Chapel* in Stockholm during the second half of the 18<sup>th</sup> century,<sup>190</sup> six were probably born and trained in Germany.<sup>191</sup> The flute music produced in Scandinavia does not differ from music from the European continent or England.

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188. Hadidian *Preface* vii.

189. See Appendix 1.

190. Karle *Hovkapellet 1772-1818* 475-476.

191. Johann Franz Brendler, Johan Fredrik Grenser, Anton and Franz Thurner, Johann Gottlieb Adam and Johan Georg Menges. Karle *Hovkapellet 1772-1818* 455, 204, 393, 317-318, 149.



## First half of the 19<sup>th</sup> century

During the latter half of the 18<sup>th</sup> century national differences in flute playing evolved that were to persist until the middle of the 20<sup>th</sup> century.<sup>192</sup> Playing styles in France, Germany and England developed separately in the course of the 19<sup>th</sup> century, and did not affect each other very much. Different types of instruments were favoured, and different sound ideals promoted.<sup>193</sup> As will be seen below, vibrato was also used differently.

### 1.7 England, first half of the 19<sup>th</sup> century

In England Charles Nicholson made the vibrato a popular ornament again during the first decades of the 19<sup>th</sup> century. In fact, he based his great fame partly on his use of the vibrato.<sup>194</sup>

Nicholson and his followers use the term *vibration* for vibrato in general. As seen below, both chest vibrato and the *flattement technique* were used, as well as *shaking the flute* as a complement to chest vibrato. An article in the *Quarterly Musical Magazine* from 1823 credits Nicholson with the introduction of both the *vibration* and the *glide* (portamento):

we must not pass over two new effects on the instrument, which he was the first to introduce - we mean that species of *vibration* which is particularly observable in the musical glasses, and which, judiciously used, has a very beautiful effect; and the still more important accomplishment of *Gliding*.<sup>195</sup>

Though the *flattement technique* was less used in England around the turn of the century than earlier, it is clear from Miller's *Instructions* from 1799 (quoted above) that it was still known in England. Needless to say, there were also contacts between England and Germany, where the use of both the *flattement technique* and chest vibrato in this period is documented. Although no English writer before Nicholson describes the chest vibrato, it was most probably known. Nevertheless, even if

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192. Powell *Flute* 241-242, 269. Bailey *Schwedler* 153-154.

193. Bailey *Schwedler* 25-26, 47-48 and 162-172.

194. Grenser *Flötenspieler* 101.

195. "Compositions for the Flute." from *The Quarterly Musical Magazine and Review* 5:86.

vibrato was not introduced nor invented by Nicholson, he used it much more than his immediate predecessors, and “sold” it effectively to his audience.

A *Complete Guide to the Art of Playing the German Flute* by Beale from 1813 does not mention any vibrato, whereas three years later, the front page of *Nicholson’s Complete Preceptor for the German Flute* announces “Instructions for the management of tone, articulation, double tonguing, gliding, vibration & other graces.” Nicholson writes, “This Expression [vibration] on the German Flute is calculated to produce the finishing Grace or Embellishment on this favorite [sic] and highly esteemed Instrument.”<sup>196</sup> As a consequence of Nicholson’s discussion of the vibrato in *Complete*, the second 1818 edition and all further editions of Wragg’s *Improved Flute Preceptor* include an added paragraph about *vibration*,<sup>197</sup> and the front page of James Alexander’s *Alexander’s Complete Preceptor for the Flute* from 1821 declares that the book includes a “complete scale of the vibrations.”<sup>198</sup> Alexander’s paragraph about *vibration* also seems to have been added after the main text was completed, for the purpose of explaining these fashionable manners.

In his introduction to *C. Nicholson’s Preceptive Lessons for the Flute* from 1821, Nicholson declares that, “The Author’s chief object will therefore be to elucidate its [the flute’s] *Peculiarities* in regard to Tone, Fingering, Articulation, Gliding, Vibration, and Harmonics.”<sup>199</sup> On the front page of George Washington Bown’s *The Flauto Instructive Companion or Preceptor for the Flute* from 1825, it is announced on a separate line that the book includes, “The modern method of Single & Double tonguing, Gliding, Vibration & c,”<sup>200</sup> and in *A School for the Flute* from 1836, Nicholson writes that vibration is “an Embellishment deserving the utmost attention of all those who are anxious to become finished performers on the Flute,”<sup>201</sup> and argues that the flute model with large holes is better, partly because “The vibrations are more obvious from the decided improvement in the tone.”<sup>202</sup> That the *vibration* was a characteristic feature of the playing style of the Nicholson school is further indicated by non-English writers. Carl Grenser writes in 1828 in the *Allgemeine Musikalische Zeitung*, that vibrato is foremost used by

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196. Nicholson *Complete* 22.

197. Spell *Nicholson* 74-75.

198. Alexander *Preceptor* front page.

199. Nicholson *Lessons* 1.

200. Bown *Preceptor* 1.

201. Nicholson *School* 71.

202. Nicholson *School* 6.

the English flutists,<sup>203</sup> and Karl Franz Emil von Schafhautl writes in 1882<sup>204</sup> about Nicholson that, “his adagio was characterised by a peculiar vibrato in sustained tones, something like the fine tremolo in singing.”<sup>205</sup> Louis Drouet’s *Drouet’s Method of Flute Playing* was published in London in 1830.<sup>206</sup> In the chapter entitled “On Style and Taste” he states:

I must recommend the pupil to be sparing in the use of embellishments, vibrations, glidings, &c. for they should be seldom or never used - Recourse should not be had to these tricks, for a pure style disallows them, because they vitiate rather than improve, good, compositions - He who attempts to improve *Haydn* with an embellishment, *Mozart* with a vibration, and *Beethoven* with a glide, injures these distinguished masters. In trifling music on the repetition of a phrase, an embellishment may find its place, a vibration may be used, and a gliding produce a pretty effect; but the frequent employment of those charlatanisms, are redundancies, which destroy the sense of a melody and make a caricature of it.<sup>207</sup>

I assume that Drouet uses the term *vibration* for any kind of vibrato, just as the English flutists do at this time. The passage above (like others in the book) can be interpreted as polemics directed at the playing style of Nicholson. Drouet’s statement that a *vibration* might be used in “trifling music” might refer to the “Scottish” pieces popular among the English flutists.

Among the English methods published after Nicholson’s *Complete*, only Raphael Dressler does not mention vibrato in his *Instructions for the Flute* from 1828. As an active flutist and flute teacher in London in the 1820’s, Dressler was certainly acquainted with the *vibration*. Perhaps he just forgot to discuss it. To sum up, the *vibration* was held to be important by the flutists of the Nicholson school.

The players of the Nicholson school do not express any preferences for either the *flattement technique* or the chest vibrato in their methods, but most often discuss them with equal attention. Nicholson’s *Lessons* does not mention chest vibrato, which Spell interprets to mean that Nicholson had a strong preference for the

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203. Grener *Flotenspieler* 101.

204. Powell *Flute* 317.

205. Welch *History* 406.

206. Concerning the nationality and career of Drouet, see Appendix 1.

207. Drouet *Method* 18.

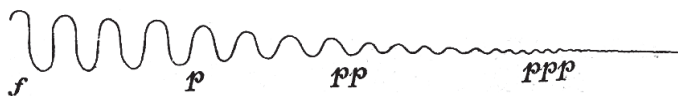
*flattement technique*.<sup>208</sup> However, *Lessons* is written for the advanced player, who presumably knew about the chest vibrato technique, and in his two other methods Nicholson discusses both techniques. Charles N. Weiss discusses *flattement technique* as the only vibrato technique in his *A new Methodical Instruction Book for the Flute* from c. 1824. My estimation is that *flattement technique* and chest vibrato were used about equally.

### 1.7.1 Imitating a bell

William Nelson James uses the same likening of the vibration to a musical glass as the writer in *Quarterly Musical Magazine* quoted above when he writes in his book *A Word or Two on the Flute* from 1826, “No bell, no musical glass, can exceed the clearness or correctness of its [Nicholson’s tone’s] vibration.”<sup>209</sup>

Nicholson also imitated a bell in a more precise way. As Spell points out, both the bell and musical glasses produce vibrations through out-of-tune overtones, a gentle beating that accelerates while it dies away with the sound.<sup>210</sup> Nicholson writes in *Lessons*:

Vibration on the flute ought to resemble that of a Bell or a Glass, the beats or pulsations of which are never rapid at first, but are governed by the strength of the Tone; for example, if your Tone is full and strong, the beat should be slow, but gradually increased in proportion as you diminish the Tone \_ thus



Example 24. Nicholson *Lessons* 5.<sup>211</sup>

208. Spell Nicholson 71.

209. James *Word* 99-100. Grenser translates this to "Ist die Flöte in den Händen eines Meisters, so kann keine Glocke, keine Glasharmonika die Deutlichkeit oder Richtigkeit ihrer Tonschwingungen übertreffen" Grenser *Flötenspieler* 101. The likening of vibrato to a bell is documented throughout the 18th century as well, the earliest example is found in writings by North. Moens-Haenen

*Vibrato* 172.

210. Spell Nicholson 76-77.

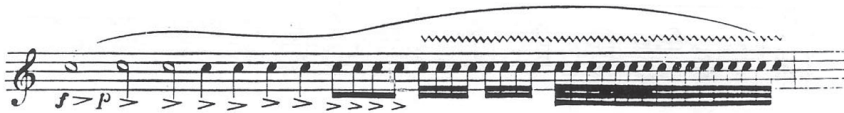
211. © British Library Board. All rights Reserved. British Library shelfmark: h.223.(2).

Lindsay gives a very similar description:

The beats, or rather pulsations, should be comparatively slow, when the tone is full, but should increase in quickness as it is gradually diminished, until, at last, the vibration ceases, as if from extreme exhaustion, and the sound faintly expires on the ear.<sup>212</sup>

Nicholson writes in *A School*:

it [the vibration] ought to resemble the beats, or pulsations of a Bell, or Glass, which will be found to be slow at first, and as the sound gradually diminishes, so will the Vibrations increase in rapidity./.../If [the vibration is produced] by the breath; the moment the note is forced, subdue the tone, and on each succeeding pulsation, let the tone be less vigorous. When the Vibration becomes too rapid to continue the effect with the breath, a tremulous motion must be given to the Flute with the right hand, the lips being perfectly relaxed, and the tone subdued to a mere whisper. The following is an Example where the Vibration is produced by the breath. At the commencement of the semi quavers, the tremulous motion of the Flute will be requisite.<sup>213</sup>



Example 25. Nicholson *School* 71.

In *Lessons* Nicholson only describes the *flattement technique*. The figure from *School* depicts the same phenomenon as the figure in *Lessons*, but, as Nicholson writes, produced with the chest vibrato. Considering Nicholson's enormous influence on the matter of vibrato, I believe this shape was used generally in England during the period, both with the *flattement technique* and chest vibrato.

212. Lindsay *Elements* 30-31.

213. Nicholson *School* 71.

I identify the “tremulous motion” described in the quote above as *shaking the flute*. Apparently Nicholson did not use a fast chest vibrato, but replaced it with *shaking the flute* when the tempo in an accelerating vibrato got too fast. It is worth noticing that chest vibrato is replaced already on sixteenth notes in the example above.

### 1.7.2 Chest vibrato

Nicholson writes in *Complete*, “The effect of Vibration is produced two ways, first by a regular swell and modulation of the breath, bearing some similitude to a state of exhaustion or panting, with a regular decrease or diminution of the Tone.”<sup>214</sup> Nicholson’s formulation which conforms with the imitation of a bell described in the section above became a standard way of expressing it; Alexander writes about “its [the *vibration*’s] faltering accent, as it were, imitative of a state of exhaustion” and that it is produced “first, by a tremulous or panting motion of the breath.”<sup>215</sup> According to Hartmut Gerhold, Wragg similarly compares *vibration* to panting.<sup>216</sup> Bown writes, “Its [the *vibration*’s] fault’ring accent is not in aptly [sic] compared to a seeming exhaustion, it is produced by a tremulous or panting motion of the breath.”<sup>217</sup> Lindsay joins the choir when he writes in *The Elements of Flute-Playing* from 1828 about *vibration* as “a tremulous impulse given to any particular note, imitating a state of palpitation, or exhaustion,” and that it may be produced “first, by a tremulous or panting motion of the breath.”<sup>218</sup> Dickey suggests that the fact that Nicholson and Lindsay are likening the chest vibrato to panting tells us that it was slow.<sup>219</sup>

According to Gärtner,<sup>220</sup> there is an upper limit for chest vibrato produced with the bigger muscle groups such as the diaphragm, abdominal and thorax muscles involved of about approximately 5,5 to 6 Hz. A faster vibrato can only be produced mainly with the vocal cords. For the slower vibrato, the involvement of the vocal cords is not necessary. A vibrato technique that did not make use of the vocal chords would explain Nicholson’s technique of replacing the chest vibrato with

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214. Nicholson *Complete* 22.

215. Alexander *Preceptor* 30.

216. Gerhold *Wragg* 147.

217. Bown *Preceptor* 59.

218. Lindsay *Elements* 30.

219. Dickey *Untersuchungen* 109.

220. Gärtner *Vibrato* 79-83.

shaking the flute when the tempo got too fast.

### 1.7.3 The flattement technique

In *Complete*, Nicholson describes the *flattement technique*, and prints a fingering chart for it.

#### VIBRATION SCALE.

Six Keyed Flute.

Example 26. Nicholson *Complete* 22.<sup>221</sup> The wavy lines indicate the hole that the vibration is made on, and a half-black circle signals that the hole should be only half covered. In this chart and the following, squares denote a key.

221. © British Library Board. All rights Reserved. British Library shelfmark: h.1155.a.(2).

In the fingering chart in Nicholson's *Complete* there are two fingerings for opening a hole (d'' and c''), six that cover about half of a hole, two that cover a full hole, and three that make use of a key. With the two fingerings that open a hole the pitch is raised.<sup>222</sup>

The editions of *Wragg's Improved Flute Preceptor* printed after 1818 also include a fingering chart for *vibration*.<sup>223</sup>

In *Lessons*, instead of a fingering chart, Nicholson marks the number of the finger that is to perform the vibrato above the note in the musical pieces. The notes with vibrato signs range from f to a#''. The fingerings in *Lessons* sometimes differ slightly from those in *Complete*.

Alexander also describes the *flattement technique*, and prints a fingering chart for it:

SCALE OF VIBRATIONS.

	F	F#	G	G#	A	B	B#	C	C#	D	D#	E	F	F#
Left.	●	●	●	●	●	●	●	○	○	○	○	○	○	○
B♭ Key.	●	●	●	●	●	●	●	○	○	○	○	○	○	○
G# Key.	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Right.	○	○	○	○	○	○	○	○	○	○	○	○	○	○
F# Key.	○	○	○	○	○	○	○	○	○	○	○	○	○	○
D# Key.	○	○	○	○	○	○	○	○	○	○	○	○	○	○
C# Key.	○	○	○	○	○	○	○	○	○	○	○	○	○	○
C Key.	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Example 27. Alexander *Preceptor* 44. The sign signifies that the vibrating finger is only to cover half of the hole, as opposed to

The chart in Alexander's *Preceptor* includes a printing mistake: the wavy line for the first finger on c#'' is placed on the fingering for c' natural, which thus gets two wavy lines, and the fingering for c#'' none.<sup>224</sup> In this chart only half-covered hole are used. Alexander writes that *vibration* could be produced "carefully observing

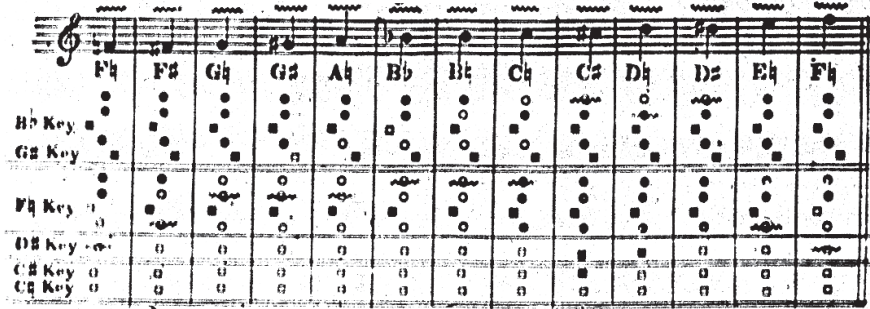
222. In the absence of a flute of the Nicholson type I tried the fingering charts and techniques in this section on a flute by Tutz after Heinrich Grenser with g keys, a flute by Tutz after Liebel with 10 keys and an original Martin Fres, Paris. I also used a ring-keyed flute stamped J. M. Bürger (Strassburg) in order to try the *flattement technique* on a flute with big holes.

223. Gerhold *Wragg* 147.

224. Compare the fingering chart from Alexander's *Improved* below.



that the shaking finger covers only the half of the hole.<sup>225</sup> Two fingerings use a key (the D# key). The fingerings for c'' and d'' open the hole, and raise the pitch. *Alexander's Improved Preceptor for the Flute* from c. 1830 includes a similar fingering chart for the *flattement technique*.



Example 28. *Alexander Improved* 37.<sup>226</sup>

In this chart, it seems that the fingering for a' has the sign for fully covered hole. The printing mistake from *Preceptor* is corrected here.

Weiss' *Instruction Book* includes fingerings for the *flattement technique* for more notes.

225. *Alexander Preceptor* 30 and *Improved*. 34.

226. © British Library Board. All rights Reserved. British Library shelfmark: f. 572.

Example 29. Weiss *Instruction Book* 61.<sup>227</sup>

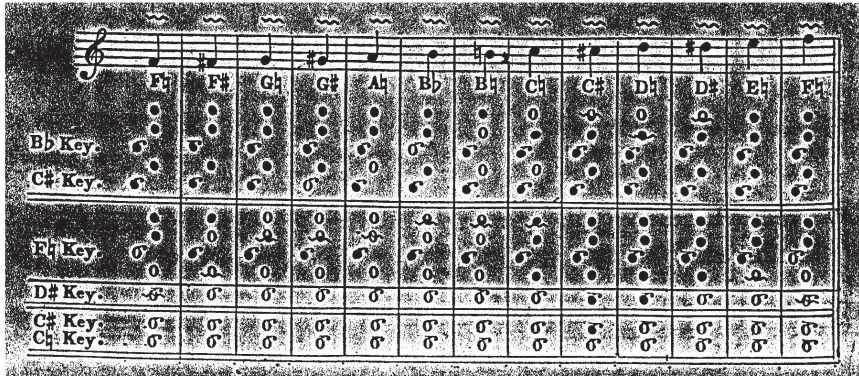
Weiss writes, “Finger is to cover only half the hole.” This chart also includes a printing mistake: the sixth hole in the fingering for  $e'$  should not be covered.<sup>228</sup> The fingering for  $f\#$  does not correlate to any of Weiss’ fingerings either, if the sixth hole is to be covered for the unadorned note. I look upon the two wavy lines on the

227. © British Library Board. All rights Reserved. British Library shelfmark: h.2139.(1).

228. Weiss *Instruction Book* 4.

fingerings for d#''' as alternatives. Four fingerings make use of a key (the D# key); three fingerings (for e', e'' and one alternative for d#') raise the pitch.

Bown also prints a fingering chart for the *flattement technique*:



Example 30. Bown *Preceptor* 59.229 The mark  $\sim\sim\sim$  indicates that the hole should only be half covered.

Bown's chart shows the same fingerings as Alexander's in *Improved*. Bown remarks, "Vibration may be performed on any Note an octave higher, Fingered as in the above Scale except the last F natural."<sup>230</sup>

Lindsay writes that one way to produce a *vibration* is, "by shaking the finger on the said hole, but, in some instances, only half covering the hole."<sup>231</sup>



Example 31. Lindsay *Elements* 31.<sup>232</sup> The numbers under the notes denote the hole the vibrato is made on. Lindsay's fingerings are the same as Nicholson's in the chart in *Complete* reproduced above, apart from the fingering for d#', which has the first hole covered.<sup>233</sup> "Key" refers to the d# key.

229. © British Library Board. All rights Reserved. British Library shelfmark: h.3212.b.(2).

230. Bown *Preceptor* 59.

231. Lindsay *Elements* 30.

232. © British Library Board. All rights Reserved. British Library shelfmark: h.2104.

233. Lindsay *Elements* 16.

Though covering the same notes, Lindsay's chart is not identical to Nicholson's in *Complete*, nor to Alexander's or Bown's. The fingerings for  $c''$ ,  $c\#''$  and  $d\#''$  open a hole. The fingering for  $c''$  raises the pitch; the fingerings for  $c\#''$  and  $d''$  make no pitch differences.

In *School* Nicholson prints a new chart with the comment:

The succeeding Scale of notes, is one in which Vibration is the most effective, although by the aid of the breath and tremulous motion of the Flute, almost every note of the Instrument may be similarly influenced. It will be perceived in the marks of fingering, that to some of the Vibrations it is only requisite in the Shake to cover half the hole, and to others, a much less portion, bringing the finger in contact with the edge only; but this must be regulated by the Ear.<sup>234</sup>

The image shows a musical staff with a treble clef and a key signature of one sharp (F#). The scale consists of the following notes: C4, D4, E4, F#4, G4, A4, B4, C5, D5, E5, F#5, G5, A5, B5, C6. Below the staff is a fingering chart with six rows of circles and symbols. Each circle represents a finger (1-5) or a thumb (T). Some circles are filled, some are empty, and some have a diagonal line through them, indicating different fingerings for each note. The chart is organized into groups corresponding to the notes on the staff.

Example 32. Nicholson *School* 71.

The fingerings in the chart in *School* differ slightly from all the previous fingerings. The first alternative fingering on  $c''$  raises the pitch.

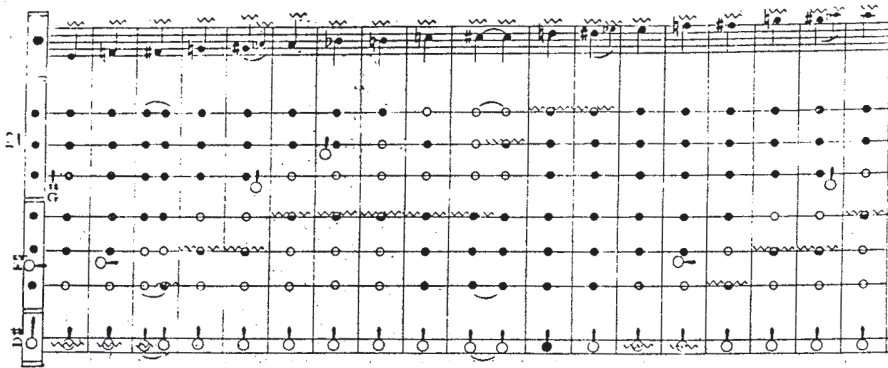
Nicholson's comment indicates that he did not use the *flattement technique* in the third octave. In the pieces with vibrato signs included in the English early 19<sup>th</sup> century methods, the tessitura is low, but it is nevertheless significant that the signs for vibrato are found mainly on notes in the first and second octaves.<sup>235</sup> I conclude that the Nicholson school preferred the first and second octave for the *flattement technique*, and maybe for vibrato in general.

In Bernard Lee's *New Flute Tutor. Bernhard Lee's Edition of Wragg Improved* from 1840, there are fingerings from  $e'$  to  $a''$ ,<sup>236</sup> which also differ slightly from the other fingering charts.

234. Nicholson *School* 71.

235. See Appendix 3.

236. Reproduced below.



Example 33. Lee *Improved*.<sup>237</sup> A semi-covered circle indicates that the hole is to be half covered, and a black circle that the finger is to vibrate over the hole.<sup>238</sup>

The fingerings for  $c''$  and the first alternative on  $c\#''$  raise the pitch. I conclude that among all the given fingering charts, though similar, only the charts in Bown's *Preceptor* and Alexander's *Improved* are identical, which indicates that the writers knew the technique personally and practically. The flutists of the Nicholson school mostly used partly covered holes. The *flattement technique* was also used on multi-keyed flutes. Ironically, the  $D\#$  key that is used for the *flattement technique* on some notes in these charts is the only key that also existed on the (old) one-keyed flute. The fingerings for the *flattement technique* for some of the notes, notably  $c''$ , most often raise the pitch.

The notes  $g$ ,  $a$ , and  $b$  in the first and second octaves have the same fingerings on one-keyed and multi-keyed flutes. The fingerings for the *flattement technique* on these notes provided by Hotteterre, Corrette, Mahaut and Tromlitz are similar to each other,<sup>239</sup> but differ from the fingerings recommended by the Nicholson school. The former group of writers uses fingers closer to the holes already covered, where the latter group uses holes further away. The latter technique results in smaller pitch-changes. In general, my practical examination of the fingerings for the *flattement technique* printed by Nicholson, Alexander, Weiss, Bown, and Lindsay resulted in only small pitch-changes or none at all. I conclude that the pitch-

237. © British Library Board. All rights Reserved. British Library shelfmark or manuscript number: F 241 h.

238. See section 1.7.3.1. below.

239. Possibly the *pitch changes* intended in Corrette's *Méthode* are slightly smaller than the others.

changes in the *flattement technique* used by the players of the Nicholson's school were smaller than in the previous century. This is supported by Spell, who had the opportunity to use flutes by Nicholson,<sup>240</sup> and writes that Nicholson's *vibration* was timbral rather than pitch-related, with little or no pitch-change.<sup>241</sup>

Like in the previous century, the writers of the Nicholson school compared the vibrato to a softer or "smaller" trill. J. Wragg describes *vibration* as being similar to a trill but "of a more tender and delicate character."<sup>242</sup> Bown writes, "it [the *vibration*] is characteristic of a shake, but is infinitely more tender and delicate."<sup>243</sup> Alexander expresses himself similarly, "In its nature it [the vibration] is nearly allied to the shake, but being of a more tender and delicate character."<sup>244</sup> Lindsay says that *vibration* is, "in effect, a sort of false, or imperfect shake."<sup>245</sup>

### 1.7.3.1 The finger above the hole?

The flutists of the Nicholson school and also Richard Carte in *A Complete Course of Instructions for the Boehm Flute* from 1845<sup>246</sup> seem to describe a way of executing the *flattement technique* where the finger is not touching the flute. Nicholson writes in *Complete*:

the other way by which the same effect [the vibration] is produced, is by a tremulous motion of the finger immediately over the Hole, without coming into contact with the Flute by the same motion, and in some instances with the finger covering about one half of the Hole.<sup>247</sup>

Alexander writes that "Vibration is produced in three different ways/.../ secondly, by shaking the finger immediately over the hole without actually touching the

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240. Spell *Nicholson* 12-27.

241. Spell *Nicholson* 77-78.

242. Gerhold *Wragg* 147.

243. Bown *Preceptor* 59.

244. Alexander *Preceptor* 30.

245. Lindsay *Elements* 30.

246. See section 1.10.

247. Nicholson *Complete* 22. C. Grenser translates this passage: "oder, was denselben Effect hervorbringt, durch eine zitternde Bewegung des Fingers, unmittelbar über dem Tonloche, ohne dass man in Berührung mit der Flöte durch diese Bewegung kommt, und indem man bey einigen Gelegenheiten nur ohngefähr eine Hälfte des Tonloches bedeckt." Grenser *Flötenspieler* 101.

Instrument.”<sup>248</sup> Lindsay writes in 1828 that “*Vibration* may be produced in three different ways/.../ secondly, by shaking the finger immediately *over* the first or second open hole below the note sounded, without actually touching the instrument.”<sup>249</sup> Wragg writes about moving the finger over the hole, without touching the instrument,<sup>250</sup> and Lee writes that “[the *vibrations*] are produced by a tremulous motion with the finger over the hole.”<sup>251</sup> Alexander, Wragg and Lindsay express themselves so similarly to Nicholson in this matter that their texts can hardly be treated as independent sources.

To execute the *flattement technique* with the finger not touching the instrument is the only vibrato technique I encountered during this study that did not create any change in either pitch, timbre nor intensity, whether the flute had big holes or small. A vibrato technique that does not produce any change in the note at all seems strangely superfluous.

Lee writes that the black circle in his fingering chart indicates that the finger should vibrate over the hole.<sup>252</sup> The black circle is, however, applied to only two fingerings, *c''* and *c#''*, which are the only cases when the vibrato is made by opening a hole. It is possible to open a hole and then not touch the instrument in the vibrato, however, the pitch or timbre then does not change, and the idea that “over the hole” would refer to opened holes is contradicted by Lindsay’s statement above.

Bown’s article about *vibration* also clearly shows the author’s knowledge of Nicholson’s *Complete* and Alexander’s *Preceptor*. A single word in his text sheds some light on the problem:

Shaking the Finger immediately over the Hole scarcely touching the Instrument, will likewise produce it [the *vibration*], so will also, a regular shake on the Note vibrated, with a special observance however, that only half of the Hole be covered by the Finger shaking.<sup>253</sup>

I believe that this is what Nicholson also means –the finger is scarcely touching

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248. Alexander *Preceptor* 30.

249. Lindsay *Elements* 30.

250. Gerhold *Wragg* 147.

251. Lee *Improved* 58.

252. See section 1.7.3.1 above.

253. Bown *Preceptor* 59.

the instrument. In *Complete* Nicholson expresses himself inexactly, and Alexander, Lindsay and Wragg copy him uncritically. Bown formulates himself more adequately.

In my practical experiments, there was a significant difference when I tried to move the finger as much “over” the instrument as possible, rather than directly covering a full hole. In the first case the finger touched the flute very gently and softly, and created a smoother fluctuation in the pitch, similar to the vibrato created by covering holes partly. In the second case the pitch changed more clearly and bluntly; the sound was more like a trill with a smaller pitch-change. As stated above, the fingering charts for the *flattement technique* in the Nicholson school show mostly fingerings with semi-covered holes. It is reasonable to believe that a vibrato made by a finger over the hole should sound similar to the vibrato created by using semi-covered holes.

Thus the manner of executing the *flattement technique* with the finger over the (full) hole should be interpreted as making it with the finger *scarcely* and very gently touching the instrument.

#### 1.7.4 The use of the *vibration*

Nicholson, Alexander, Bown, Lindsay, and Lee all include tunes for the student with *vibration* indicated.<sup>254</sup> In comparison with the suites by Philidor, the tunes in these treatises contain considerably fewer vibrato indications. The article from *The Quarterly Musical magazine* quoted above says that vibration should be used judiciously. James writes, “I have spoken of vibrations on the flute, and think, when introduced judiciously and sparingly, they have an exceeding fine effect.”<sup>255</sup> Lindsay writes that “It [*vibration*] should, however, be sparingly employed,”<sup>256</sup> and Wragg expresses the same view.<sup>257</sup> On the other hand, the English tunes show a freer and more generous application of vibrato compared to Anton Bernard Fürstenau’s even more restricted use.<sup>258</sup> Below is an example of a “Scottish” tune from Nicholson’s *Lessons* with vibrato indicated. Above the wavy line for vibrato sometimes the finger (or, in this case, the key) the vibrato is made with is indicated.

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254. An analysis of the vibrato signs in these tunes is found in Appendix 3.

255. James *Word* 100.

256. Lindsay *Elements* 30.

257. Gerhold *Wragg* 147.

258. See section 1.8.4.



**"SHEPHERDS, I HAVE LOST MY LOVE"**

ADAGIO

Example 34. Nicholson *Lessons 77*.<sup>259</sup>

Although the texts in the English treatises do not specifically mention that *vibrato* is used on long notes, their musical material confirms that this was still the case.<sup>260</sup> Generally, almost all of the wavy lines for *vibrato* are on long notes.

That vibrato is still connected with slow movements is suggested by several statements; Nicholson writes in *Complete*, "The effect of this Expression [the *vibrato*] in Adagios and other slow movements when the Pupil has become familiarized with it, is inconceivably delicate and sweet, and as such worthy every attention."<sup>261</sup> Alexander writes, "A *Vibration*/.../ is generally introduced in Adagios and other slow movements/.../should only be introduced in such pieces as are intended to be played with much pathos and feeling, and here if well managed the effect is sweet and expressive."<sup>262</sup> Wragg also recommends using *vibrato* in slow movements that need "much pathos and feeling."<sup>263</sup> Weiss writes, "On some notes of the Scale they

259. © British Library Board. All rights Reserved. British Library shelfmark or manuscript number: h.223.(2).

260. See Appendix 3.

261. Nicholson *Complete* 22.

262. Alexander *Preceptor* 30.

263. Gerhold *Wragg* 147.

[Vibrations] have an expressive effect in slow Movements.”<sup>264</sup> Bown writes that vibrato is “for the most part introduced into Adagio or slow movements,” and that it is “applicable to pieces where full scope is intended to be given to feeling and pathos.”<sup>265</sup> Lindsay calls the vibration “another means of infusing tenderness and pathos into a performance.” He writes that it is “of an extremely delicate character,” and should therefore “only be applied to passages of great fervour and sensibility; but when so introduced, the effect is truly sweet and beautifully expressive.”<sup>266</sup> Lee writes, “Vibrations have a beautiful effect in slow movements, particularly in plaintive Airs.”<sup>267</sup> However, among the pieces in the flute methods, only those in the books by Lindsay and Lee show a clear connection between slow, sad and/or *affettuoso* pieces and signs for *vibration*.<sup>268</sup> I conclude that at least in written discussions, *vibration* was considered most effective in slow pieces where much pathos and feeling were wanted.

A popular habit of English 19<sup>th</sup> century flute virtuosi was to play folksy tunes (often called “Scottish,” even when they were not) in concert, often together with the player’s own variations. According to a report of 1828, Nicholson was “famed for performing slow national melodies in a highly interesting and expressive manner.”<sup>269</sup> Among the pieces in Nicholson’s *Lessons*, Lindsay’s *Elements* and Lee’s *Improved*, vibrato is more frequently indicated in the folksy tunes.<sup>270</sup> The increased use of vibrato (and the glide) seems to be connected with the custom of performing “Scottish” tunes. Though there is no information in the texts on a connection between indicated vibrato and fermatas, the pieces in the methods by Lindsay and Alexander, at least, confirm such a connection.<sup>271</sup>

In the melodies in Nicholson *Lessons*, *vibration* is sometimes notated on a note that also has an appoggiatura and/or a glide.<sup>272</sup> *Messa di voce* is rarely indicated even in the pieces for students; however, Alexander combines fermata, the wavy line for *vibration* and a *messa di voce*-sign four times in the Preludes in his *Preceptor*,

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264. Weiss *Instruction Book* 61.

265. Bown *Preceptor* 59.

266. Lindsay *Elements* 30.

267. Lee *Improved* 58.

268. See Appendix 3.

269. *Athenaeum*, June 1828:506, quoted in David William Eagle *A Constant Passion* 93, quoted in Powell *Flute* 134.

270. See Appendix 3.

271. See Appendix 3.

272. Nicholson *Lessons* e.g. 48, 57, 65 and 77, 79.

and Lindsay has the same combination in several of the tunes in *Elements*, which supports a connection between *messa di voce* and vibrato.<sup>273</sup>

Weiss' statement above indicates that some notes were considered more suitable than others for vibrato. In some of the treatises (Lee's *Improved*, Lindsay's *Elements*, Nicholson's *Lessons* and Nicholson's *Complete*), vibrato occurs more commonly on certain notes, notably *c''*. The fingering charts indicate that vibration was mainly used in the lower ranges of the instrument, which is confirmed by the musical material in the treatises. Even considering the generally low *tessitura* of these pieces, vibrato is used on relatively low notes; that means in the first and second octaves.

Weiss and Lee write that *vibration* is done in imitation of violin players.<sup>274</sup> Bown agrees, *vibration* "is precisely the effect of what is termed the close shake on the Violin."<sup>275</sup> James states, "The beat of a violin is justly considered one of its chief beauties; and the vibration of the flute, particularly in its lower tones, is very similar."<sup>276</sup> Apparently, the violinists also provided a source of inspiration and reference point for the flutists' vibrato.

In all English 19<sup>th</sup>-century flute treatises that I have investigated vibration is discussed in proximity to the *glide*, except in Lee's *Improved*, where the *glide* is not mentioned.

## 1.8 Germany, first half of the 19<sup>th</sup> century

Heinrich Christoph Koch's *Musikalisches Lexikon* from 1802 describes vibrato as a "fairly outdated manner of playing which is mainly used on stringed instruments and the clavier."<sup>277</sup> Fürstenau does not mention vibrato in his first flute method *Flötenschule* from 1826,<sup>278</sup> and neither does Heinrich Soussmann in *Grosse praktische Flötenschule* from c. 1840. However, that Fürstenau not only discusses both chest vibrato and the *flattement technique* at length in his substantial *Die Kunst des Flötenspiels* from 1844, but definitely used them himself is evident from a review of *Kunst* in *Allgemeine Musikalische Zeitung* from 1844, which comments

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273. See Appendix 3.

274. Weiss *Instruction Book* 61, Lee *Improved* 58.

275. Bown *Preceptor* 59.

276. James *Word* 100.

277. "eine ziemlich verjäherte Spielmanier, deren man sich vorzüglich auf den Bogeninstrumenten und auf dem Claviere bedient." Koch *Lexikon* 229, transl. Philip *Recordings* 212.

278. Delius *Einführung* XXIV.

on Fürstenau's playing, "Vibrato, [*Bebungen, Klopfen*], *portamento*, in general, everything that he treats in his school, is in every moment fully in his compass."<sup>279</sup>

### 1.8.1 Slow and controlled chest vibrato

Justin Heinrich Knecht writes in *Allgemeiner musikalischer Katechismus* from 1803:<sup>280</sup>

What is the *Bebung* [vibrato]?

A slow trembling motion on one and the same note which is produced by the breath in singing and wind playing, by the tip of the finger on strings. One indicates the same by as many dots or *Düpschen*, which are set over a long note, as movements should be made.



*Was ist die Bebung?*

Eine langsam zitternde Bewegung auf einem und eben demselben Tone, welche im Singen und Blasen mittelst des Athems, bey den Saiten aber mittelst der Fingerspitze hervorgebracht wird. Man zeigt diesselbe durch so viele Punkte oder Züpfchen an, welche über eine lange Note gesetzt werden, als Bewegungen gemacht werden sollen, wie z.B.<sup>281</sup>

This is the same kind of very slow, counted vibrato-waves on a long note that is earlier described by Delusse.<sup>282</sup>

August Eberhard Müller counts vibrato among the essential ornaments (*wesentliche Verzierungen*) in his *Elementarbuch für Flötenspieler*, published in 1817. He writes:

279. "Bebungen, Klopfen, Ueberziehen der Töne, überhaupt Alles, was er in seiner Schule dargestellt, steht ihm jeden Augenblick vollendet zu Gebote." *Allgemeine Musikalische Zeitung* XLVI (1844): 718-719.

280. Publication year according to Loewenberg/Rönnau *Knecht*.

281. Knecht *Katechismus* 53, transl. Brown *Classical* 547, corrected by the translator of this study.

282. Notating vibrato with dots or dots and a slur was done also by Koch and C. Ph. E. Bach. Koch *Lexikon* 229 and C. Ph. E. Bach *Clavier* 126, Tab. VI Fig. IV a.

The *Bebung*/.../ is indicated either by the Italian term *tremolo* (trem.), or through more or fewer dots above one note, according to whether this ornament has to be played more slowly or faster; for instance:



On the flute, this ornament can be produced only through a moderate increasing or decreasing of the air pressure that would have to be notated as the following:



Die *Bebung* wird entweder durch das italienische Wort: Tremolo (trem.), oder durch mehrere oder weniger Punkte über Einer Note, je nachdem diese Manier langsamer oder schneller ausgeführt werden soll, angedeutet; z.B.

Auf der Flöte kann diese Verzierung nur durch einen mässig zu- und abnehmenden Druck des Windes hervorgebracht werden, der in der Notenschrift so angedeutet werden müsste; z.B. <sup>283</sup>

Four waves on a half note is a slow vibrato, and if more dots were indicated over a long note, it would still be a controlled and slow vibrato. Margaret Lichtmann is of the opinion that Müller adopted the chest vibrato of the Nicholson school,<sup>284</sup> but this seems unlikely, since Nicholson was born in 1795, twentyeight years after Müller, and published *Complete* in 1816.<sup>285</sup> Müller probably followed continental practice with a chest vibrato as documented by Delusse and Knecht. Müller was also an accomplished organist, and as such familiar with the *Bebung* on the clavichord.

Fürstenau writes in *Kunst* that chest vibrato is produced by quick, successive pushes from the lungs,<sup>286</sup> and that it should be limited to three or four pulsations,

283. Lichtmann *Müller* 111-112.

284. Lichtmann *Müller* 298.

285. For a discussion on when Müller wrote *Elementarbuch*, see Appendix 1.

286. "durch schnell auf einanderfolgende Lungendrucke" Fürstenau *Kunst* 79.

also because a longer continuation of vibrato can be done only with difficulty.<sup>287</sup> Three or four pulsations on a long note can be considered as quick pushes from the lungs, but it is still a slow and controlled vibrato. Such a slow vibrato does not necessarily involve the vocal chords; a vibrato technique that did not make use of the vocal chords would explain Fürstenau's statement that it is difficult to make more than three or four pulsations on a note.

As Dickey observes, there are references to the chest or the lungs rather than the diaphragm in the writings about chest vibrato from the 18<sup>th</sup> and 19<sup>th</sup> centuries<sup>288</sup>. Quantz describes a high breathing technique in *Versuch*,<sup>289</sup> as does Fürstenau in *Kunst*.<sup>290</sup> A high breathing technique indicates that the air stream and therefore the chest vibrato were regulated (if not with the vocal chords) with the thoracic rather than the abdominal muscles. However, it is technically fully possible to perform a slow chest vibrato controlled exclusively from the abdominal muscles, which would create what Gärtner calls a pure abdominal *martellato*. A mixed breathing and support technique would result in a thorax/abdominal vibrato/*martellato*.<sup>291</sup>

I make slow chest vibratos in bar 178 of Friedrich Kuhlau's *Introduzione* and *Rondo* Op. 98 from 1828, and in bars 8 and 39 of the second movement (*Andante con moto*) of Kuhlau's *Duo Brillante* in D major Op. 110 from 1829. The bars covered in Example 35 are track 12 on the CD attached to the study; the full *Introduzione* and *Rondo* is track 13. The second movement of Kuhlau's *Duo Brillante* is track 14 on the CD, and the bars covered in Example 37 are track 15.

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287. Fürstenau *Kunst* 79.

288. Dickey *Untersuchungen* 113.

289. Quantz *Versuch* 75.

290. Fürstenau *Kunst* 10

291. Gärtner *Vibrato* 73-75.

Kuhlau, Op.98.

Flute

Piano

*poco agitato*

*p* *cres.* *f* *p*

Fl.

Pno.

*cres.*

Example 35. Kuhlau *Introduzione* and *Rondo* Op. 98, bars 175-181.

Kuhlau, Op.110.

Flute

Piano

*p* *espressivo.*

*legato.* *p*

Fl.

Pno.

*f*

Fl.

Pno.

*dimin.* *p*

Example 36. Kuhlau *Duo Brillante no. 1* in D major Op. 110, second movement (*Andante con moto*) bars 1-10.

Kuhlau, Op.110.

Flute

Piano

Fl.

Pno.

Example 37. Kuhlau *Duo Brillante no. 1*, second movement (*Andante con moto*) bars 37-42.

### 1.8.2 The *flattement* technique

In 1828 Grenser presents an annotated translation of parts of *A Word or Two on the Flute* by James in a series of articles in the *Allgemeine Musikalische Zeitung*. Grenser translates James' term *vibration* as *Bebung*. Because James does not describe how the *vibration* is supposed to be made, Grenser adds the section about *vibration* from Nicholson's *Complete*<sup>292</sup> as well as the fingering chart for the *flattement technique*.<sup>293</sup> Underneath he writes, "I just want to add for further clarity, that the *Bebung* consists in a slower or faster alternation of a bright and a muted sound of the same pitch, or very similar pitches."<sup>294</sup> This seems like a description of a similar vibrato as the kind of *flattement technique* with very small pitch-change that is described by the Nicholson school. Grenser also comments on the situation in Germany:

292. Quoted in sections 1.7, 1.7.2 and 1.7.3.1 above.

293. Grenser *Flötenspieler* 101-102.

294. "Ich will nur noch zu mehrer Deutlichkeit hinzufügen, dass die *Bebung* durch die langsamere oder schnellere Abwechslung eines hellen und gedämpften Klanges von gleicher Tonhöhe, oder sich doch möglichst nahe liegenden Tonhöhen, besteht." Grenser *Flötenspieler* 101.



Besides, some will remember having already heard and seen this embellishment also from German flute players, sometimes good and sometimes bad; but nobody apart from Nicholson and James has, according to my knowledge, mentioned it in writing, after Tromlitz described it in his flute tutor.

Uebrigens wird sich Mancher erinnern, diese Zierde theils gut, theils schlecht auch an teutschen Flötenspielern schon gesehen und gehört zu haben; nur hat dieselbe, seit Tromlitz sie in seiner Flötenschule beschrieb, Niemand meines Wissens, ausser Nicholson und James wieder schriftlich erwähnt.<sup>295</sup>

Here Grenser probably likewise refers to the *flattement technique*, because it seems unlikely that he, as a well-educated man,<sup>296</sup> did not know about the descriptions of chest vibrato in Knecht's *Katechismus* and in Müller's (his predecessor in the *Gewandhaus Orchestra*) *Elementarbuch*.

A formulation in the bassoon tutor by Carl Almenraeder from 1843<sup>297</sup> suggests that finger-vibrato was used by players of all woodwind instruments in Germany.<sup>298</sup> Fürstenau writes in *Kunst*:

The *Klopfen* with a finger (which does not participate in the production of the tone currently played) on a hole (which takes also no part), where one lets the finger drop onto the hole repeatedly, as quickly as possible and flexibly, to create a vibration of the tone, imitates the vibration of a bell that was struck hard, and sometimes can have a beautiful effect.

Das Klopfen mit einem - bei Hervorbringung des grade zu spielenden Tons nicht beschäftigten - Finger auf ein - ebenfalls dabei nicht betheiligt - Tonloch, wobei man den Finger mehrere Male hinter einander möglichst schnell und elastisch auf das Tonloch niederfallen lässt, so dass ein Vibrieren des Tons entsteht, ist eine gewissermassen die Schwingungen einer stark angeschlagenen Glocke nachahmende Manier, welche in manchen Fällen von schöner Wirkung sein kann.<sup>299</sup>

The metaphor with the bell had previously been used not only by Nicholson and

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295. Grenser *Flötenspieler* 101-102.

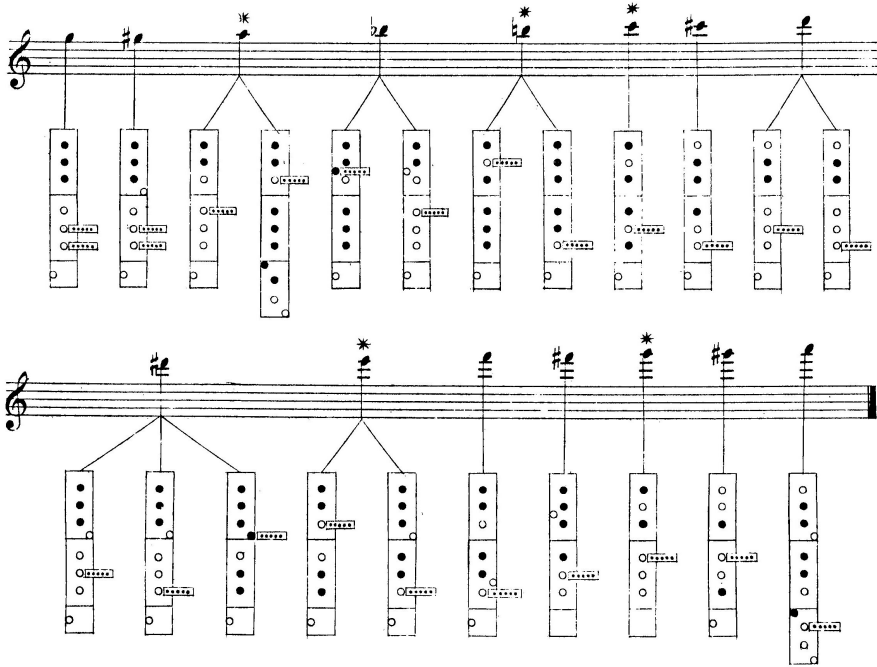
296. Goldberg *Biographieen* 178 and Rockstro *Flute* 606 (probably the same source).

297. Langwill *Almenraeder*.

298. Charlton *Woodwind* 417.

299. Fürstenau *Kunst* 81.

James,<sup>300</sup> but also by the violinists Giuseppe Tartini,<sup>301</sup> Leopold Mozart<sup>302</sup> and Louis Spohr.<sup>303</sup> Fürstenau also prints a fingering chart for *Klopfen*:



Example 38. Fürstenau *Kunst* 82. The squares with dots in them indicate the hole or key on which the *flattement* technique is made; a star above the note indicates that the hole is to be only half covered. The chart is for a multi-keyed flute, therefore the holes apart from the six in a straight line from above are covered with keys.

300. Quoted in section 1.71.

301. Moens-Haenen *Vibrato* 80.

302. L. Mozart *Violinschule* 243.

303. R. Brown *Early Flute* 112

Three fingerings in Fürstenau's chart use a key.<sup>304</sup> Two fingerings open a hole, thus raising the pitch.<sup>305</sup> Twelve out of 24 fingerings in this chart use full holes, and two fingerings<sup>306</sup> involve two fingers simultaneously. I conclude that with "Klopfen" Fürstenau refers to the *flattement technique*. Among the fingerings that use full holes there are several that create large pitch-changes —up to a semitone. Overall Fürstenau's fingerings give very audible pitch-changes,<sup>307</sup> compared to the fingerings given by the Nicholson school. Another difference from the fingering charts of the Nicholson school is that this chart covers the range between  $g''$  and  $a'''$ , whereas a majority of the charts by the writers of the Nicholson school covers the range from  $f'$  to  $f''$ .

### 1.8.3 Jaw vibrato

A. E. Müller writes, "Through a little motion of the chin, the execution of this ornament [*Bebung*] is made easy."<sup>308</sup> In other words, he recommends the use of the jaw to support a chest vibrato. Fürstenau describes jaw vibrato ("putting the chinbone in motion during playing."<sup>309</sup>) as a less good alternative to chest vibrato. I find the jaw vibrato possible to use, both together with chest vibrato and alone, as long as one does not press the flute too strongly against the chin. Jaw vibrato is according to my practical experiments related to *shaking the flute*; in both cases the vibration is caused by a disturbance of the air stream. With the jaw vibrato, the flute moves vertically.

### 1.8.4 Where and how vibrato was used

Fürstenau writes about the *flattement technique*:

Chiefly, it [the *Klopfen*] is applicable on long notes /.../ especially if these rise gradually from piano to forte, or in reverse, begin on a forte and gradually die

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304. The first alternative on  $b\ b''$ , the third alternative on  $d\#\''''$  and  $a'''$ .

305. The first alternative on  $b\ b''$  and the third alternative on  $d\#\''''$ .

306. For  $g''$  and  $g\#\''$ .

307. On a flute by Tutz after H. Grenser with nine keys and a flute by Tutz after Liebel.

308. "Durch eine kleine Bewegung des Kinns wird der Vortrag dieser Manier [*Bebung*] leicht" *Müller Elementarbuch* 31, transl. Lichtmann Müller 112.

309. "daß man während des Blasens die Kinnlade in eine zitternde Bewegung versetzt." Fürstenau *Kunst* 79, transl. Bailey Schwedler 175.

away, or finally, if they are to be played with *crescendo* and *decrecendo*. In the first case, one begins by beating slowly, gradually increasing the speed in relationship to the intensity of the tone, in the second case one starts quickly and slows down gradually, and finally, in the third case, one first increases and then decreases the speed of the beats.

Hauptsächlich ist sie [das Klopfen] bei lange auszuhaltenden Tönen /.../ anwendbar, namentlich wenn solche vom *piano* allmähig zum *forte* anschwellen, oder umgekehrt *forte* beginnen und allmähig wieder verhallen, oder endlich mit *crescendo* oder *decrecendo* gespielt werden sollen, wo man dann das Klopfen im ersten Falle mit langsam aufeinander folgenden Schlägen beginnt, und im Verhältniss zur zunehmenden Stärke des Tons zu immer schnelleren Bewegungen steigert, im zweiten selbiges mit schnell auf einander folgenden Schlägen beginnen und nach und nach langsamer werden, im dritten endlich das Klopfen erst allmähig schneller und dann wieder langsamer werden lässt.<sup>310</sup>

The preposition “oder” (“or”) after *crescendo* in the third line is in all probability a misprint; the correct word would be “und” (“and”). Fürstenau here speaks about a *mesa di voce*. Both L. Mozart and Spohr describe a vibrato that is accelerating in a *crescendo* in their violin methods.<sup>311</sup> Fürstenau joins this tradition; the tempo of the *flattement technique* increases during a *crescendo* and decreases during a *diminuendo*. The quote above also modifies Fürstenau’s statement that the *flattement technique* was performed as quickly as possible.<sup>312</sup>

Fürstenau writes that vibrato is not indicated by the composers, but its application is completely up to the player.<sup>313</sup> He prints examples of where to use both chest vibrato and the *flattement technique*; below are his suggestions for the *flattement technique*.

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310. Fürstenau *Kunst* 81.

311. L. Mozart *Violinschule* 246-247 and Spohr *Violinschule* 163, quoted in Brown *Early Flute* 112.

312. See section 1.8.2 above.

313. Fürstenau *Kunst* 78-79.

Beispiele für das Klopfen.

Adagio.

Fantasie über Themas aus Oberon. *p* *mf* *accelerando* *cresc.* *f* *rallent.*

Adagio. *p* *f* *p* *mf* *veloce* *p* *ritard.* *pp*

Andante.

Divertissement. Op. 82. *p* *f* *p*

All<sup>o</sup> mod<sup>o</sup>

H moll Concert. Op. 100. *dolce* *Cantabile.*

*cresc.* *tr* *im Adagio.* *pp*

*tr* *cresc.* *f* *p*

Adagio.

B dur Concert. Op. 127. *dolce.* *tr* *tr* *tr*

*f*

Adagio.

A dur Concert. Op. 33. *dolce* *p* *mf* *rallent.*

Adagio.

Adagio zu Variationen über ein Thema aus Figaro. *cresc.* *p* *cresc.* *f* *p*

*mf* *p* *f* *pp*

Example 39. Fürstenau *Kunst* 83. The sign \*\*\*\*\* indicates the note to vibrate on.

All the indications of the *flattement technique* in the examples above are on notes with a crescendo, a diminuendo or a *messa di voce*. C. Brown points out that in 19<sup>th</sup>-century violin music the “swell” sign for *messa di voce* is often as well an indication of a vibrato.<sup>314</sup> In general, Fürstenau indicates the *flattement technique* on long notes, fermatas and the note before a cadenza, which conforms with Almenraeder’s opinion that finger-vibrato is used on long, held notes.<sup>315</sup>

Fürstenau regards the *flattement technique* as applicable mainly in the upper octaves.<sup>316</sup> In the examples above, the *flattement technique* is used on notes between  $b\flat''$  and  $a'''$ . In *Übungen für Flöte* published together with *Kunst* there are symbols for both chest vibrato and the *flattement technique*. All four indications of the *flattement technique* appear on notes in the third octave ( $f'''$  -  $a'''$ ). Fürstenau seems to have the same opinion about the chest vibrato, although he does not say so explicitly in the text. In the examples, chest vibrato is used six out of ten times on notes in the third octave, and the five indications of chest vibrato in *Übungen für Flöte* occur on notes in the third octave ( $f'''$  and  $g'''$ ).

I make a vibrato with the *flattement technique* on the first note of Kuhlau’s *Introduzione* and *Rondo* Op. 98, a  $c\sharp'''$ . The vibrato is made with the fifth finger stretched, covering the hole partly (about half).<sup>317</sup> The note has a fermata, and a sign for *messa di voce* and it is the first note of a cadenza. I tried to make the vibrato accelerate with the crescendo and slow down with the diminuendo on the note. The vibrato does not start immediately; the acceleration is heard as is the *messa di voce* and the slowing down. The *Introduzione* and *Rondo* is track 13 on the CD attached to the study.

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314. Brown *Bowing* 118-119 and Brown *Classical* 552.

315. Brown/Sadie *Performance* 416.

316. “Hauptsächlich ist sie [das Klopfen sic!] bei lange auszuhaltenden Tönen vorzugsweise den in der *höheren* Octave anwendbar.” Fürstenau *Kunst* 81.

317. The note is fingered 467.

The image shows a musical score for Flute and Piano. The Flute part is in the upper staff, marked 'Maestoso' and 'a tempo'. It features a long note with a wavy line underneath it, labeled 'ad libit.', indicating a vibrato effect. The Piano part is in the lower staff, marked 'Piano' and 'pp'. It features a complex rhythmic pattern with triplets and a wavy line underneath it, also labeled 'ad libit.', indicating a vibrato effect. The score is in G major and 3/4 time.

Example 40. Kuhlau *Introduzione* and *Rondo* Op. 98, bars 1-3. The vibrato is indicated by me.

In the section about chest vibrato Fürstenau writes:

Letting a note shake or shiver is an imitation of the expression of this type in the human voice when singing, since as the revelation of a passionate inner emotion and excitement it is often natural and therefore of gripping effect on the listener./.../ But true, deep feeling felt by the performer must be connected with it, if this ornament is to achieve its goal, and it must not appear as mere external imitation; otherwise it becomes ridiculous, since anyway the true charm of the human voice in such a regard can always only be approximately achieved by an instrument; /.../therefore vibrato must, if it is to be completely certain of its aesthetic success, limit itself every time to one single note: the one which contains the culmination of passionate feeling,/.../ and where, according to the context, its effectiveness is significantly increased by an accompanying *crescendo* or *sforzato*.

Das Beben oder Erzitternlassen eines Tons ist die Nachahmung eines derartigen Ausdrucks der menschlichen Stimme beim Gesange, wie er als Offenbarung einer leidenschaftlichen inneren Bewegung und Aufregung oft natürlich und deshalb von ergreifender Wirkung auf den Zuhörer ist./.../ Es muss aber, soll diese Manier ihrem Zweck entsprechen, wahrhaftes, selbstempfundenes, tieferes Gefühl damit verbunden sein, und sie darf nicht als blosse äusserliche Nachahmung erscheinen, widrigenfalls sie lächerlich wird, da ohnehin der eigentliche Reiz der menschlichen Stimme in solchen Beziehungen immer nur annähernd von einem Instrumente erreicht werden kann;/.../ dabei muss die Bebung endlich, soll sie des ästhetischen Erfolgs ganz gewiss sein, sich jedesmal auf einen einzigen Ton, und zwar denjenigen, in welchem der Culminationspunkt des leidenschaftlichen Gefühls enthalten,/.../wo dann ein, je nach den Umständen, damit verbundenes *crescendo* oder *sforzato* die Wirkung noch bedeutend erhöht.<sup>318</sup>

318. Fürstenau *Kunst* 79, transl. Bailey *Schwedler* 175-176, corrected by the present writer. There is another English translation in Brown *Classical* 530.

Here I sense a transformation in the view of the vibrato. Although it is still an ornament, on the whole of less importance than for instance trills,<sup>319</sup> the emphasis on its expressive qualities is much stronger. Instead of expressing certain affects with the vibrato, as described by Delusse and Geminiani, Fürstenau speaks about passionate (inner) emotion and expression in general.<sup>320</sup> This reflects a general difference between the musical aesthetics of the 18<sup>th</sup> and the 19<sup>th</sup> centuries. C. Brown writes about vibrato in the early 19<sup>th</sup> century, “it was introduced more for its expressive qualities than as one among a host of ornaments with which an individual note could be enlivened.”<sup>321</sup>

Fürstenau repeatedly warns against a too frequent use of vibrato; he writes about the three “willkürliche” ornaments (chest vibrato, vibrato executed with the *flattement technique* and portamento):

Because these [*Manieren*], if they are not used after a careful selection of the appropriate places and very sparingly, result to a much higher degree in misuse, or a bad sound (since this is anyway a result of a frequent use of embellishments), one must use them with utter care. Anyone who is not aided by a natural sentiment and a just taste should be completely and unconditionally advised against their application, rather than being encouraged, with the danger of seducing him into playing in a mannered and affected way. For this reason also, I like to encourage the player only with reservations to familiarize himself with the *Manieren* that are now more closely discussed, namely: the *Beben*, the *Klopfen* and the portamento.

Da aber selbige, wenn sie nicht mit ganz besonderer Auswahl der dazu geeigneten Stellen und höchst sparsam gebraucht werden, weit eher in Missbrauch ausarten, ja Übelklang erzeugen (da dies schon überhaupt die Folge eines häufigen Gebrauchs der Verzierungen ist), so hat man mit möglichster Vorsicht dabei zu verfahren, ihre Anwendung ist Demjenigen, dem nicht natürliches Gefühl und ein richtiger Geschmack zur Seite stehen, eher gänzlich und unbedingt zu widerathen, als auf die Gefahr hin, ihn zu einem manierirten, affectirt klingenden Spiel zu verleiten, anzuempfehlen. Aus dem Grunde mag ich auch nur bedingungsweise den Spieler veranlassen, sich mit den jetzt näher zu besprechenden Manieren, nämlich: des *Bebens*, des *Klopfens* und des *Überziehens* der Töne, vertraut zu machen.<sup>322</sup>

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319. Fürstenau *Kunst* 78.

320. For comparisons to for instance L. Mozart, see Brown *Classical* 529.

321. Brown *Classical* 529.

322. Fürstenau *Kunst* 79.



Later he writes, “But also with this *Manier* [the *Klopfen*], which greatly helps to enliven the tone and the playing when applied sparingly, one must warn against an overly frequent use, which causes tedious monotony.”<sup>323</sup> Furthermore, about chest vibrato:

even in a piece of music where there frequently occur passages of passionate emotion, not everywhere by any means, but only where this emotion is expressed most strongly, and when there are similar passages which are immediately repeated it might be used, for example only the first or only the second time, since only too easily the excess of this ornament comes off as sick oversensitivity; its constant use becomes a pathetic whine which naturally is of the most disastrous effect.

selbst in einem Musikstücke, wo häufig Stellen leidenschaftlicher Bewegung vorkommen, bei Weitem nicht überall, sondern nur da, wo jene Bewegung am stärksten sich ausspricht, und bei sich unmittelbar wiederholenden Stellen derselben Art, etwa nur das erste oder Zweite Mal angewandt werden, da nur zu leicht die Häufung dieser Manier wie krankhafte Empfindelheit sich ausnimmt, der fortwährende Gebrauch derselben aber gar zu einem kläglichen Gewinn wird, welches natürlich von höchst widerlicher Wirkung ist.<sup>324</sup>

Fürstenau gives examples of where and how to use the chest vibrato, indicated with a wavy line:

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323. “Doch muss auch bei dieser Manier [Klopfen], welche sparsam angewandt, sehr zur Belebung des Tons und Spiels beiträgt, vor dem zu häufigen Gebrauch gewarnt werden, wodurch langweilende Monotonie entsteht.” Fürstenau *Kunst* 81.

324. Fürstenau *Kunst* 79, transl. Bailey *Schwedler* 175, corrected by the present writer. There is another English translation in Brown *Classical* 530.

Beispiele für die Bebung.

All<sup>o</sup> moderato.  
Cis moll Concert. Op. 31. *p con anima*

in Adagio.  
As dur Concert. Op. 32. *f ma dolce*

All<sup>o</sup> mod<sup>o</sup> dolce.  
A dur Concert. Op. 103. *p*

Allegretto.  
A dur Concert. Op. 103. *p*

All<sup>o</sup> mod<sup>o</sup> dolce.  
G dur Concert. Op. 119. *p*

in Rondo. *p Allegretto.*

All<sup>o</sup> moderato.

B dur Concert.  
Op. 127.

*p nobile*

*tr.*

entweder hier

oder hier

*cresc.*

*f*

*p*

All<sup>o</sup> moderato.  
im Rondo.  
con molto portamento

*f ma dolce*

Example 41. Fürstenau *Kunst* 80-81.

In general, the examples above reflect a praxis that differs from Fürstenau's predecessors. The chest vibrato is applied at the emotional peak of a phrase. It is used on expressive, long notes, which are preceded by a crescendo, and followed by a diminuendo. These notes are also often the highest notes of the phrase. In this way, the player uses chest vibrato to help shape the phrases. My experiences from the concerts made for this study also support the affinity between a long note preceded by a crescendo<sup>325</sup> and chest vibrato in music from this period. An example is heard in Kuhlau's *Duo Brillante* no. 1, first movement (Allegro vivace con energia) bar 75. The bars covered in the music example below are track 17 on the CD attached to the study.

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325. Indicated or not.

Flute

Piano

Fl.

Pno.

Fl.

Pno.

Example 42. Kuhlau *Duo Brillante* no. 1, first movement (Allegro vivace con energia)  
bars 67-77.

Spoehr prints examples in his *Violinschule* where he indicates vibrato in a similar way as Fürstenau above, though more frequent.<sup>326</sup> Furthermore, Grenser writes that vibrato is used more and with greater success on string instruments than on wind instruments.<sup>327</sup> Fürstenau agrees; vibrato is “especially common on string instruments and suited to them.”<sup>328</sup>

326. Gärtner *Vibrato* 31-32.

327. Grenser *Flötenspieler* 115.

328. “Besonders bei Streichinstrumenten üblich und dafür geeignet, lässt sich diese Manier [die Bebung] auch mit Vortheil beim Flötenspiel anwenden.” Fürstenau *Kunst* 79, transl. Bailey *Schwedler* 175.

In the second movement (Andante con moto) of Kuhlau's *Duo Brillante*, a slow chest vibrato is used approximately as frequent as in Fürstenau's examples, although slightly more sparingly. The movement is track 14 on the CD attached to the study.

Fürstenau's statement that the effectiveness of the chest vibrato is significantly increased by a *sforzato* indicates a connection between the chest vibrato and an expressive accent. According to C. Brown there was a general connection between vibrato and both metrical and expressive accents in the 19<sup>th</sup> century.<sup>329</sup> In the second example above, chest vibrato is indicated together with an accent (*fz*). In my work with the German flute repertoire from this period a chest vibrato often seemed appropriate on a note with an expressive accent. The sources do not contain any information on or examples of *flattement technique* combined with an accent.

I make a chest vibrato on a note with an expressive accent in the first movement (Allegro vivace con energia) of Kuhlau's *Duo Brillante* no. 1, bar 209. The bars covered in the music example below are track 16 on the CD attached to the study

The image displays two systems of musical notation. The first system, labeled 'Flute' and 'Piano', covers bars 201-210. The Flute part features a melodic line with a *crescendo* marking and a *p* dynamic. The Piano part includes a triplet of eighth notes and a *dimin.* marking. The second system, labeled 'Fl.' and 'Pno.', covers bars 209-210. The Flute part shows a note with a wavy line indicating vibrato. The Piano part features a *f risoluto* marking and a *loço.* marking.

Example 43. Kuhlau *Duo Brillante* no. 1, first movement (Allegro vivace con energia) bars 201- 210.

329. Brown *Classical* 519.

Chest vibrato and the *flattement technique* seem a bit under-notated compared to the examples above, but the notation follows the same principles as in the examples: the chest vibrato is indicated on climaxes of a phrase or a section, and is always preceded by a crescendo; the *flattement technique* is often indicated on final notes, and in three out of four cases on notes with fermatas. The fourth sign for the *flattement technique* is on a very long note; here, a fermata would make no difference. On two occasions the sign for the *flattement technique* is combined with a *messa di voce*.

No German writer from this period specifically connects vibrato with slow or tender movements. In my opinion, the fact that most of Fürstenau's examples for chest vibrato are from fast movements and the examples for the *flattement technique* from slow is not significant.

Fürstenau writes:

The orchestra playing for flutists differs from the playing of concerts in that the player is not independent but subordinate; /.../ The player must in this situation therefore refrain from adding trills, turns, appoggiaturas and the like, in short from everything that belongs to the *embellishment* of solo playing.

Das Orchesterspiel des Flötisten unterscheidet sich vom Concertspiel am wesentlichsten dadurch, dass der Spieler bei jenem nicht selbständig sondern untergeordnet ist; /.../ Der Spieler hat sich daher aller Zusätze von Trillern, Doppelschlägen, Vorschlägen und dergleichen, kurz alles dessen, was zur *Ausschmückung* des Solospiels gehört, hier zu enthalten.<sup>330</sup>

As any kind of vibrato would count as an embellishment, this quote suggests that Fürstenau does not recommend vibrato in orchestral performance.

## 1.9 France, first half of the 19<sup>th</sup> century

The lack of vibrato-related information in the French flute methods from the late 18<sup>th</sup> century persists in the 19<sup>th</sup> century. The treatises by Mathieu Peraut (between 1800 and 1803), Antoine Hugo and Jean Georges Wunderlich (1804), Antoine Tranquille Berbiguier (c. 1818), Drouët (the French/German method from 1827), Eugene Walckiers (1829), Jean Louis Tulou (1835), Paul Hippolyte Camus (1839)

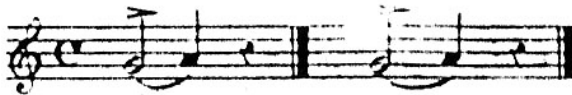
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330. Fürstenau *Kunst* 90.

and Louis Dorus (c. 1840) are all completely silent on this matter. These well-written methods (many of them used at the Paris Conservatory) had a huge influence on French flute playing and reflect the praxis of their time.<sup>331</sup>

Victor Coche includes a paragraph about vibrato in his substantial *Méthode pour servir à l'enseignement de la nouvelle Flûte* from 1838. Coche describes a slow chest vibrato:

That which is called vibration of the voice in the art of singing, is equally practised on instruments. It is the action of producing the first sound with force, and the second much more sweetly. This kind of accent is recognizable in musical notation by the chevron > placed above or below the note which one is supposed to vibrate strongly.



Ce que l'on appelle vibration de la voix, dans l'art du chant, se pratique également sur les instruments. C'est l'action de produire le premier son avec force et le second beaucoup plus doucement. Cette sorte d'accent se reconnaît dans l'écriture musicale au chevron > placé au dessus ou au dessous de la note qu'on doit faire vibrer fortement.<sup>332</sup>

The heading of this section is "Du Chevron," which is the word for the sign for an expressive accent >. It is also worth noticing that Coche describes a vibrato on a note with a diminuendo. Coche continues:

When the chevron is placed upon a single note, one must practise the same gradation of intensity as upon the two notes of the preceding example.<sup>333</sup>



331. Some of the French violin methods from the first half of the century did not mention vibrato, while others did. See Brown *Classical* 529-530.

332. Coche *Méthode* 82, transl. Byrne *Tooters* 182-183. The figure is photographed from Library of Congress, Prints and Photographs Division, item number 131.

333. "Quand le chevron est placé sur une note seule, on doit pratiquer la même gradation d'intensité que sur les deux notes de l'exemple précédent." Coche *Méthode* 82, transl. Byrne *Tooters* 183.

On the whole, vibrato seems a perfectly normal thing to Coche. He prints a musical example with vibrato indicated:



Example 44. Coche *Méthode* 82.<sup>334</sup> The sign > indicates vibrato.

In this example, vibrato is indicated much more frequently than in Fürstenau's examples in *Kunst*.<sup>335</sup> The idea that every accent mark is as well an indication of vibrato is, however, contradicted in the subsequent pages of *Méthode*.

I have not found any indications of the use of finger-vibrato in any French flute method after Delusse's *L' Art*.<sup>336</sup>

In the chapter about respiration Coche writes about, "to maintain – even in pianissimos – a pure tone and a vibration that is always distinct,"<sup>337</sup> which can seem like a reference to chest vibrato used the way it became used in the 20<sup>th</sup> century. Later in his method Coche writes:

The most effective means of obtaining an excellent tone quality and natural way of playing is to breathe in a manner that does not interrupt the direction of the phrases, no matter how long they may be, and always to have the energy to make the instrument vibrate suitably, as intended.

Le moyen le plus puissant pour obtenir une belle qualité de son et un jeu facile, c' est de respirer à propos afin de ne pas couper le sens des phrases, quelque

334. The figure is photographed from Library of Congress, Prints and Photographs Division, item number 131.

335. See section 1.8.4 above.

336. The bassoon tutor by Eugène Jancourt (1847), however, provides a description of finger-vibrato, Charlton *Woodwind* 416.

337. "conserver, même dans les *pianissimo*, un son plein, une vibration toujours distincte." Coche *Méthode* 36.



longues qu'elles soient, et de trouver en toute occasion la force de faire vibrer l'instrument avec l'intention convenable.<sup>338</sup>

The word *vibration* was, however, also used about a quality of the sound. Tulou writes, "The flute should possess a mellow tone for piano and vibrant and sonorous tone for forte,"<sup>339</sup> and Altès writes about the "bad imitation of the vibrant sounds of the oboe."<sup>340</sup> Berbiguier also writes about *vibration* in this sense of the word.<sup>341</sup> In my opinion, Coche is referring here to a vibrant or vibratory sound, not a vibrato.

I have not found any scores with French flute music with vibrato indicated from this period. There is a wavy line with dots over four eighth notes in the fifth bar in the first movement (*Allegro non tanto*) of Peraut's *Sonata 1*,<sup>342</sup> and the same marking over three eighth notes in *Romance No. 3* by Peraut,<sup>343</sup> that I consider indications for articulation, since they are over several notes, not one.

## 1.10 England, second half of the 19<sup>th</sup> century

Carte discusses the *vibration* as the last of his "chief ornaments" in *Instructions*.<sup>344</sup> He describes the same three techniques as the earlier English writers, namely chest vibrato, *shaking the flute* and the *flattement technique*. However, in his terminology he separates them, calling the two first techniques *tremolo*:

The Tremolo is a grace that consists in the wavering of a note. It is produced on the Flute either by giving a tremulous impulse to the breath, or by tremulously holding the Instrument. It is used in passages of pathos, and is indicated by the word tremolo, or is introduced at the fancy of the Performer.<sup>345</sup>

The *flattement technique* he calls *vibration*:

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338. Coche *Méthode* 85.

339. Tulou *Method* 1.

340. "une mauvaise imitation des sons *vibrants* du Hautbois" Altès *Méthode* 205, transl. Brown *Early Flute* 46

341. Berbiguier *Méthode* 64.

342. Peraut *Méthode* 52.

343. Peraut *Méthode* 33.

344. Carte *Instructions* 22.

345. Carte *Instructions* 23.

This ornament consists also in the wavering of a note, but differs from the tremolo by its greater delicacy, and its being produced on the Flute by waving or shaking the finger over certain of its holes. It gives a beautiful effect to sustained notes. /.../ This grace is generally introduced at the discretion of the Performer, but it is sometimes directed by the Composer, and is indicated by the same sign as that for the transient shake *w*. The performer is enabled to distinguish a vibration from a transient shake by the nature of the passage; the transient shake being generally introduced in rapid passages, and the vibration on sustained notes.<sup>346</sup>

This advice is similar to Fürstenau's recommendations: the *flattement technique* is supposed to be used on sustained notes, and the chest vibrato "in passages of pathos." "Tremulously holding the instrument" I identify as *shaking the flute*. Carte's occupation with the way vibrato is indicated possibly reflects an increasing tendency to indicate ornaments generally in this period.

Like Nicholson in *Lessons*, John Clinton describes the *flattement technique* in *A School or Practical Instruction Book for the Boehm Flute* from 1846, and as an alternative *shaking the flute*, but is silent about chest vibrato. Clinton uses the term *vibration*, and writes that it is notated with a wavy line, which "implies that a pulsation or tremulous effect is to be produced by the action of the finger upon certain holes. When judiciously employed it considerably heightens the effect."<sup>347</sup>

Clinton provides a fingering chart for the ring-keyed flute (the Boehm flute from 1832).

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<sup>346</sup>. Carte *Instructions* 24.

<sup>347</sup>. Clinton *School* 72.



without closing the 7<sup>th</sup> hole completely. For f#<sup>'''</sup>, he gives similar advice. I find the technique with stretched finger very helpful in this, but it would still be easier to cover the hole completely, which would create a bigger pitch difference. My conclusion is that trouble is taken to achieve a small pitch-change.

Both Carte and Clinton describe the bell-shaped note with a diminuendo and an accelerating vibrato executed with the *flattement technique*. Carte writes in the paragraph about *vibration* [the *flattement technique*], “When the note is loud the waving should be slow, and as the sound diminishes it should become more rapid.”<sup>351</sup> Clinton writes:

The beats (which are made with the finger in a similar manner to the movement in the shake) may be commenced slowly, but with firmness (or even, force) then gradually increased in rapidity, and the force (or strength) of the beats gradually lessened, producing an effect in sound, somewhat resembling the following figure.<sup>352</sup>



Clinton’s description clarifies why the pitch-change of the beats can appear to lessen although it is small from the beginning. The *flattement technique* performed with firmness in the beginning and then loosening create together with a diminuendo a shape that resembles the figure above; furthermore, a quickly shifting interval sounds smaller to the ear. I believe that this shape was made also with the chest vibrato.

Clinton writes:

For the first four notes, the Vibration (if required) can only be produced by a tremulous action of the Flute, at the Embouchure, which however cannot be recommended for the lowest notes, it however may be applied to the middle and upper notes with good effect, if skilfully managed.<sup>353</sup>

Thus, Clinton is willing to recommend replacing the *flattement technique* with *shaking the flute* on the middle and upper notes, if well performed, however not, as his predecessors did, for the lowest notes on the instrument. In the musical pieces

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351. Carte *Instructions* 24.

352. Clinton *School* 72.

353. Clinton *School* 72.

included in the methods by Carte and Clinton, vibrato is less frequently indicated than in the earlier English methods. Out of 32 tunes in Carte's *Instructions* (mostly folksy tunes or opera-arias) there is one with four wavy lines for vibrato. In Clinton's *Instructions* one etude has wavy lines on two notes; one of them is together with a fermata.<sup>354</sup>

Robert Sydney Pratten does not discuss vibrato in his *Flute Tutor* from c. 1860, and, not surprisingly, Walter Redmond does not discuss it either in his undated, short and elementary little book *Sixpenny Flute and Piccolo Tutor*. According to R. Brown, Carte is more cautious about the use of vibrato in the 1878 edition of his *Instructions* than in the first edition.<sup>355</sup> Neither does Richard Shepherd Rockstro discuss vibrato in his *The Flute* from 1890. Rockstro quotes from the article in *Quarterly Musical Magazine* that praises Nicholson's playing including the passage about Nicholson's *vibration*, but without commenting upon it.<sup>356</sup>

An article in *Grove I* (1879-89) says of vibrato on wind instruments that "it is sometimes heard on the flute and cornet."<sup>357</sup> This comment is reprinted unchanged in *Grove II* (1904-10).<sup>358</sup> According to Nancy Toff, J. Harrington Young recommends only a vibrato produced by finger movement in 1892. Young writes that vibrato

should only be used in very pathetic movements – such as Adagios, Andantes &c. where great pathos is desired. If too frequently used, this effect becomes vulgarized and unpleasant. Some players produce the effect by a tremulous motion of the breath, which is inadvisable, as by its frequent use it endangers the production of a steady tone, which is far more desirable than any artificial effect.<sup>359</sup>

Thus, Young rejects the chest vibrato for the same reason as Tromlitz. It is worth remembering that the adjective "pathetic" was not negative at the time, it just referred to an *affettuoso* character (with pathos).

The English flutists Eli Hudson (1877-1919) and Albert Fransella (1865-1935) can be heard on recordings from 1908 and 1911 respectively. They both use no or almost no vibrato.<sup>360</sup>

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354. See Appendix 3.

355. Brown *Early Flute* 12.

356. Rockstro *Flute* 609. The article is quoted in section 1.7.1.

357. Article by H. C. Deacon, IV, 260, quoted in Philip *Recordings* 110.

358. Philip *Recordings* 110.

359. Young *Modern Method for Students of the Flute* 28, quoted in Toff *Flute* 111.

360. *The Flute on Record* track 2 and 9.

## 1.11 Germany, second half of the 19<sup>th</sup> century

The article about sound in *Chrysander's Jahrbuch für musikalische Wissenschaft* from 1863 states that “a vibrated wind note is as impossible as a vibrated harmonic, and thus the wind instruments lose a means of expression, that the string instruments violin, viola and violoncello alone share with the voice.”<sup>361</sup> In the revised edition of Koch's *Lexikon* from 1865, the article on vibrato (the entry is “Bebung, Tremolo”) seems to argue against this. Vibrato is:

A performing or playing manner [eine Vortrags- oder Spielmanier] that is used on string and some wind instruments as well as in singing./.../ On many wind instruments, such as the oboe and flute, vibrato cannot merely be performed very well, it makes also a very good impression; hence the opposite claim of a recent essay on sound is based on an error, and it must at least be reduced to [the assertion] that on wind instruments it [the *Bebung*] is used only restrictedly, compared to earlier.<sup>362</sup>

Von Schafhäutl writes about Nicholson's “peculiar vibrato,” as if vibrato was not a common effect to him. Vibrato is not mentioned either in Wilhelm Barge's *Flötenschule* from 1880, or in the short section on flute playing in Boehm's *Die Flöte und das Flötenspiel* from 1871. However, at bar 97 of the *Intermezzo* in the *Undine sonata* from c. 1885 by Carl Reinecke<sup>363</sup> there is an instruction, “without any vibration of the tone.”<sup>364</sup> The instruction indicates that, without it, the player would have used some kind of vibrato. The section is marked *Piú lento, quasi andante* and *p e misterioso*. If the player followed the praxis described in Fürstenau's *Kunst*, some of the long notes in this 34 bar long section would achieve a vibrato.

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361. “Ein Bebender Blaston ist so unmöglich wie ein bebender Flagoletton, und in diesem Sinne geht eben den Blasinstrumenten ein Ausdrucksmittel ab, das die Seiteninstrumente, Violin, Viola und Violoncell, allein mit der Singstimme gemein haben.” Hauptmann *Klang* 22.

362. “Bebung, Tremolo a) Eine Vortrags- oder Spielmanier, deren man auf Bogen- und einigen Blasinstrumenten sowie im Gesange sich bedient: /.../ Auf manchen Blasinstrumenten, z.B. Oboe und Flöte, ist die Bebung nicht nur sehr gut ausführbar, sondern auch von sehr guter Wirkung, daher die in einer neueren Abhandlung über den Klang aufgestellte entgegen gesetzte Behauptung auf einem Irrthum beruht und mindesten darauf zu reduciren ist, dass man auf Blasinstrumenten nur noch einem gegen früher eingeschränkten Gebrauch von der Bebung zu manchen pflegt.” Koch *Revised Lexikon*, entry “Bebung.”

363. According to Bailey and R. Brown dedicated to Barge, according to Powell to de Vroye. Bailey *Schwedler* 103, Powell *Flute* 160, and Brown *Early Flute* 114.

364. “ohne jegliches Beben des Tones” Reinecke *Undine Sonata* 15.

A flutist that, however, is closer to Reinecke than Fürsteanu is, is Maximilian Schwedler, whose *Katechismus der Flöte und des Flötenspiels* was published in 1897. Schwedler discusses vibrato at length, not together with the ornaments, but between the chapters about practicing scales and the incorrect use of the vocal cords. Schwedler gives the earliest technical description of the vocal cord vibrato, writing, “The wind player, like the singer, however, produces vibrato through a bodily organ which is much more refined [than the fingers used by string instrumentalists and guitar players] and which furthers the development of a more satisfying beauty of sound, namely the vocal cords.”<sup>365</sup> He continues, “indeed vibrato should be nothing other than an imperceptible bleating.”<sup>366</sup> The likening of the vibrato to bleating and the use of the vocal chords point to a faster vibrato than the one described by earlier writers. Schwedler is remarkably forward-looking in his description of how the vocal chord vibrato is made physically. He also goes into detail about how to practice vibrato, something that earlier writers never did:

one puts the flute firmly to his mouth, and while blowing a note, for example,



one holds it using the “bleating” vocal cord vibration. From the bleating there results a rapid narrowing and widening of the glottis and hence an interruption of the tone not unlike the tongue-stroke and executed almost like it. This exercise, which in this rough form is initially not beautiful and is tiring, will, the more easily and softly (more imperceptibly) one learns to execute the vocal cord vibration, resemble more and more the vibrato used by the well-trained vocal artist and, brought to full flowering with time, will be able to fulfil the same purpose.

Man setze die Flöte fest an, und indem man einen Ton, z.B. anbläst, halte man diesen unter Anwendung der „meckernden“ Stimmbandbewegung aus. Es entsteht durch das Meckern ein rasches Verengen und Erweitern der Stimmritze und dadurch ein dem Zungenstoße nicht unähnliches und fast wie diesem [sic]

365. “Der Bläser wie der Sänger erzeugen die Bebung aber durch ein viel vornehmeres, die Entfaltung gesättigter Tonschönheit mehr förderndes körperliches Organ, nämlich durch die Stimmbänder.” Schwedler *Flötenspiel* 89, transl. 393.

366. “tatsächlich soll die Tonbebung auch nichts anderes sein als ein *unhörbares*,.../Meckern” Schwedler *Flötenspiel* 90, transl. 394.

ausgeführtes Absetzen des Tones. Die in dieser rohen Gestalt anfänglich unschön wirkende und auch anstrengende Übung wird, je leichter und leiser (unhörbarer) man die Stimmbandbewegung ausführen lernt, sich auch mehr und mehr der vom wohlgebildeten Gesangskünstler verwendeten Tonbebung nähern und, mit der Zeit zu voller Blüte gebracht, auch denselben Zweck erfüllen können.<sup>367</sup>

Schwedler does not, however, guarantee a successful result, “Mastring the vibrato is not easy for the wind player; at least I have often observed that there are wind players who, with all their other competence, do not have the ability to execute vocal cord vibrato.”<sup>368</sup>

Also new is Schwedler’s opinion that vibrato contributes to the sound quality and quantity, which is addressed in the following quotation:

Without it, the performance then shows not only a certain dryness, but the sound itself does not achieve the beauty, warmth and power that can be obtained with vibrato. The light pressing together of the vocal cords required for vibrato and the slight narrowing of the glottis creates sufficient tension to exert pressure on the air column coming from the lungs, making it firmer, more compact, and thereby enabling the strength of tone to become greater, showing more inner power.

Der Vortrag ohne diese zeigt dann nicht nur eine gewisse Trockenheit, auch der Klang selbst erreicht nicht die Schönheit, Wärme und Stärke, die mit der Tonbebung gemeinschaftlich zutage treten kann. Das zur Bebung erforderliche, wenn auch nur leichte Zusammendrücken der Stimmbänder und geringe verengen der Stimmritze schafft Hemmnis genug, um auf die aus den Lungen hervortretende Luftsäule eine Pressung auszuüben, sie gewissermaßen zu einer festeren und dichterem zu gestalten und dadurch zu ermöglichen, dass die Tonstärke zu einer größeren, mehr innere Gewalt zeigenden wird.<sup>369</sup>

However, concerning the musical function of vibrato, Schwedler displays a similar view as his predecessors; like Fürstenau, he is of the opinion that “Vibrato is the means of the highest and most personal expression of feeling in musical performance. It

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367. Schwedler *Flötenspiel* 90, transl. 394.

368. “Die Aneignung der Tonbebung ist für den Bläser nicht leicht, wenigstens habe ich mehrfach die Wahrnehmung gemacht, dass es Bläser gibt, denen bei aller sonstigen Tüchtigkeit doch die Fähigkeit abgeht, die Stimmbandtonbebung auszuführen.” Schwedler *Flötenspiel* 89, transl. 393.

369. Schwedler *Flötenspiel* 89, transl. 393.



is indispensable for intensity of expressive playing,<sup>370</sup> and vibrato is supposed to be used “only where true, unforced passion is to be expressed.”<sup>371</sup> Schwedler also agrees with Fürstenau about in which register vibrato is suitable, “On the flute, the notes of the middle and high octave are best suited to vibrato.”<sup>372</sup> Vibrato has a very unpleasant effect in bold and powerful pieces. In pieces of a graceful and delicate (*grazioso*) character, it is not out of the question, and, if intended only as a means of making the tone more beautiful, quite usable.<sup>373</sup> In comic, ridiculous and devilish (*infernale*) pieces vibrato is not appropriate, while a light vibrato is used in tender (*dolce*) pieces. For the majestic, solemn (grave) character, one needs a full, powerful tone with limited vibrato. In a piece of passionate character, series of rising notes can be played with vibrato.<sup>374</sup> Generally, Schwedler recommends a restrictive use of vibrato, “its use must always be limited, since excessive use gives a flaccid character to the performance, and instead of expressing the soul and true sensitivity, it expresses whiny over-sensitivity. The listener considers it to be unnatural and feels repulsed.”<sup>375</sup> On the next page he warns the reader once again against “frequent, unlimited and inappropriate use of vibrato.”<sup>376</sup> Schwedler’s vibrato can be heard on recordings. On an undated recording of the Minuet from *Divertimento* by W. A. Mozart (K. 334),<sup>377</sup> he makes a fast vibrato on several of the longer notes, but many notes sound very straight, also because he is not phrasing them off. The vibrato is far from integrated in his sound.

Swedler does not mention finger-vibrato specifically in *Flötenspiel*, but writes, “I remark that I myself have always only executed the type of vibrato described here and do not consider any other methods described in older pedagogical

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370. “Die Tonbebung ist das Mittel des höchsten und innigsten Gefühlsausdruckes im musikalischen Vortrag. Sie ist zur Steigerung ausdrucksvollen Spieles nicht zu entbehren.” Schwedler *Flötenspiel* 89, transl. 303.

371. “und nur dort ihren Gebrauch empfehle, wo wahre, naturfrische Leidenschaft zum Ausdrücke kommen soll” Schwedler *Flötenspiel* 90, transl. 394.

372. “Auf der Flöte eignen sich die Töne der mittleren und hohen Octave am besten zur Bebung.” Schwedler *Flötenspiel* 90, transl. 394.

373. Schwedler *Flötenspiel* 115–116.

374. Schwedler *Flötenspiel* 116–117.

375. “ihr Gebrauch muss aber stets beschränkt bleiben, da übermäßige Anwendung dem Vortrage ein weichliches Gepräge gibt und, statt Seele und wahre Empfindung auszudrücken, in weinerliche Empfinderei ausartet. Der Zuhörer hält eine solche einfach für unnatürliche Ziererei und fühlt sich abgestoßen.” Schwedler *Flötenspiel* 89, transl. 393.

376. „häufiger, unbegrenzter und am unrichtigen Ort angewendeter Tonbebung” Schwedler *Flötenspiel* 90, transl. 394.

377. *The Flute on Record* track 8.

methods to be suitable.”<sup>378</sup> By “any other methods” Schwedler might refer to both the *flattement technique* and the slow, controlled chest vibrato. Since no German writer mentions the *flattement technique* after Fürstenau, I assume it went out of use. The reason is probably that musical tastes changed. The *flattement technique* is flexible and versatile, appropriate for an ornament, but the chest vibrato might be more in accordance with the singer’s vibrato, and suitable for the “highest and most personal expression of feeling in musical performance.”<sup>379</sup>

According to Ardal Powell, Emil Prill was vehemently opposed to the use of vibrato, though his recordings betray traces of it.<sup>380</sup> Prill writes in the second edition of his *Schule für die Boehmflöte/Method for the Boehm Flute* from 1927<sup>381</sup> about to “give life to the execution by playing with warmth and depth of expression, with feeling and emotion. Any exaggeration in this respect has an unpleasant effect, and the bad habit of constantly employing the tremolo is to be discarded.”<sup>382</sup> This passage suggests that Prill opposes a continuous vibrato. In a recording from 1924 of an Allegro from *Concerto no. 3* in C minor by Frederick the Great, Prill plays on an old-fashioned flute and in a different style from his recordings of 20<sup>th</sup> century music.<sup>383</sup> Prill’s use of vibrato is similar to Schwedler’s in the Minuet discussed above; the sound is straight, with a vocal chord vibrato on several of the long notes.<sup>384</sup> Neither Schwedler nor Prill use vibrato on the note of the emotional peak of a phrase, as Fürstenau describes, on these recordings. The conclusion that Schwedler was more in favor of a frequent use of vibrato than Prill cannot be drawn from my material. Recordings of 18 flutists from 9 countries, recorded between 1902 and 1940,<sup>385</sup> all display a fast or medium fast chest vibrato, which corresponds well to Schwedler’s technical description.

In the 1930’s Schwedler had an animated discussion in *Die Musik-Woche* with Gustav Scheck, who was of the opinion that the vibrato was produced by

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378. “nich selbst nur immer die hier beschriebene Art von Tonbebung ausgeführt habe und alle anderen, in älteren Schulwerken angegebenen Ausführungen für nicht zweckentsprechend halte.” Schwedler *Flötenspiel* 90, transl. 395.

379. Schwedler *Flötenspiel* 89, quoted above.

380. Powell *Flute* 195.

381. First edition from c. 1898-1903.

382. Prill *Schule* 18.

383. Nelson *Booklet* 5.

384. *The Flute on Record*, track 11.

385. *The Flute on Record*.

the diaphragm.<sup>386</sup> This discussion continued more or less through the whole 20<sup>th</sup> century. As Jochen Gärtner shows in 1974, the vocal cords are involved to some degree in the flute vibrato he is using. Most often, the abdominal muscles, thoracic muscles or diaphragm are also active.<sup>387</sup>

Players used different types of simple-system flutes, ring-keyed flutes and cylindrical Boehm flutes during this period. I have not found any connections, however, between the type of flute used by a certain player and the vibrato-technique or frequency of vibrato recommended.

## 1.12 France, second half of the 19<sup>th</sup> century

None of the methods by Ph. Gattermann (c. 1850)<sup>388</sup>, V. Bretonnier (n.d.), J. Duverges (c. 1870)<sup>389</sup> and Henry Altès (1880) include a discussion of vibrato. According to his student Georges Barrère, Paul Taffanel reputedly rejected “endless vibrato.”<sup>390</sup> However, Adolphe Hennebains, another pupil, reports:

When he [Taffanel] spoke to us of notes with vibrato or expression, he told us with a mysterious air that these notes, forte or piano, seemed to come from within himself. One had the impression that they came directly from the heart or soul.<sup>391</sup>

Another statement that shows this new attitude to vibrato is by another student of Taffanel, Louis Fleury, who writes about “the search for tone, and the use, for this purpose, of a light, almost imperceptible *vibrato*.”<sup>392</sup>

Taffanel did not make any recordings, but several of his students did. Philippe Gaubert and Hennebains display almost constant vibrato integrated in their sound on recordings from 1908 and 1919, respectively.<sup>393</sup> Robert Philip, who analyzed

386. Bailey *Schwedler* 173–178.

387. Gärtner *Vibrato* 59–83 and 126.

388. Brown *Early Flute* 12.

389. Brown *Early Flute* 12.

390. Byrne *Tooters* 314.

391. Moysé “The Unsolvable Problem: Considerations on Flute Vibrato” *Woodwind Magazine* 7 (1950), quoted in Toff *Flute* 111.

392. “La recherche du timbre, l'utilisation, dans ce but, d'un léger, presque imperceptible *vibrato*, relèvent bien plus d'un intelligent empirisme que de règles précises.” Fleury “Flûte” in A. Lavignac (ed.) *Encyclopédie de la musique et dictionnaire du Conservatoire*, 2<sup>nd</sup> part, vol. 3, (1927), 1552, quoted in Gärtner *Vibrato* 40. Transl. Philip *Recordings* 111.

393. *The Flute on Record* tracks 5 and 10.

recordings of Taffanel's students, also concludes that none of them plays strictly without any vibrato, with some using an almost constant vibrato.<sup>394</sup>

Unlike Schwedler, the French school of the early 20<sup>th</sup> century had an aversion to discussing any technical aspects of vibrato production.<sup>395</sup> However, the vocal chord vibrato described by Schwedler fits well with the descriptions given and the sound on the recordings.

In *Méthode Complète de Flûte* (ed. 1923), Taffanel and Gaubert write in connection with a discussion about the second movement (Largo e dolce) of the *Sonata in B minor* by J. S. Bach, BWV 1030, for flute and harpsichord:

With Bach as with all the great classical composers, the player must maintain the greatest simplicity. There should be no vibrato or any form of quaver, an artifice used by inferior instrumentalists and musicians. /.../ Vibrato distorts the natural character of the instrument and spoils the interpretation fatiguing quickly the sensitive ear. It is a serious error and shows unpardonable lack of taste to use these vulgar methods to interpret the great composers. The rules for their interpretation are strict: it is only by purity of line, by charm, deep feeling and heartfelt sincerity that the greatest heights of style may be reached. All true artists should work toward this supreme ideal.<sup>396</sup>

About the flute solo from the *Dance of the Blessed Spirits* by Ch. W. Gluck, Taffanel and Gaubert write, "The piece must be played with restraint, without emphasis or vibrato."<sup>397</sup> Sometimes the first quote above has been interpreted as criticism of vibrato-use in general; however, in my opinion it just refers to the "classics."<sup>398</sup>

In many cases, Taffanel's students did not adopt the advice to use vibrato more restrictedly in the classics. In a comparison made by Philip<sup>399</sup> of recordings by Gaubert, Barrère, René le Roy and Marcel Moyse playing Debussy, Chopin, Gluck and W.A Mozart, there is no difference in their use of vibrato in the pieces by Gluck and Mozart, on one hand, and Debussy and Chopin, on the other. Hennebains vibrates in a recording from 1905 of the *Badinerie* from *Suite No.2 in B minor*,

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394. Philip *Recordings* 112–113.

395. Bailey *Schwedler* 179.

396. Taffanel and Gaubert *Méthode* 186.

397. Taffanel and Gaubert *Méthode* 187.

398. The opinion that vibrato should not be used in the "classics," or at least very sparingly, is also expressed by the violinist J. Winram in "Violin Playing and Violin Adjustment" from 1908. Brown *Classical* 533.

399. Philip *Recordings* 113.

BWV 1067 by J. S. Bach,<sup>400</sup> and Georges Laurent vibrates almost continuously in a recording from 1934 of precisely the slow second movement of J. S. Bach's *Sonata in B minor*, though he has a tendency to end a note that he performs with a diminuendo without vibrato.<sup>401</sup> According to Toff, Gaubert's recording of J. S. Bach's fifth *Brandenburg Concerto* has a shallow, fairly rapid vibrato.<sup>402</sup>

There are no traces of the *flattement technique* from this period. The *flattement technique* is impossible to use as an integrated part of the sound.

The big differences between the various national schools of flute playing persisted well into the twentieth century. This was certainly true regarding the use of vibrato. The Germans only unwillingly adopted the French (more or less constant) vibrato. Even in France the matter was not uncontroversial. Moyses remembers a hostile reaction against flutists using vibrato in the early years of the century, "Vibrato? It was worse than cholera. Young vibrato partisans were referred to as criminals. Judgements were final with no appeal. It was ruthless."<sup>403</sup>

To sum up, a flute vibrato which is seen as a quality of sound rather than as an ornament, has its roots in the Taffanel school of playing.<sup>404</sup> With the French players as forerunners, vibrato in the 20<sup>th</sup> century became an integrated part of the sound, rather than something that the player added to a note.<sup>405</sup>

## 1.13 Northern Europe in the 19<sup>th</sup> century

Fürstenau's *Flötenschule* was translated to Swedish in a shortened version in 1841.<sup>406</sup> The only Swedish flute method from the period, *Flöjt-skola* by Louis Müller, which was published before 1876,<sup>407</sup> does not discuss vibrato. The first flute teacher of the Conservatory in Stockholm was of Dutch-French origin, and had studied with Dorus,<sup>408</sup> however, at least three flutists in *Hovkapellet* in Stockholm listed in the

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400. *The Flute on Record* track 4.

401. *The Flute on Record* track 19.

402. Toff *Flute* 111.

403. Moyses *How I stayed in shape* 6, quoted in Toff *Flute* 112. For an account of the spreading of the vibrato-use of Taffanel and his students I refer to Philip *Recordings* 109-118, Bailey *Schwedler* 83-186 and Powell *Flute* 219-224, 235-236 as well as early 20<sup>th</sup> century recordings.

404. Toff *Flute* 111-112, Philip *Recordings* 111-112 and Gärtner *Vibrato* 39-40. See also Bailey *Schwedler* 179-188.

405. Compare for instance track 8 (Schwedler) and track 10 (Gaubert) on *The Flute on Record*.

406. By J. P. Cronhamn. Walin *Cronhamn*.

407. See Appendix 1.

408. Gustav Sauvlét, see sections 2.15.1-2.15.2.

first half of the 19<sup>th</sup> century were of German birth and training.<sup>409</sup> In Denmark, though the German influence was considerable, a second improved edition of *Nye kort og fuldtstaendig Flöite-skole efter Berbiguier's og Hugot's store Flöiteskoler* from 1842<sup>410</sup> shows that there were also French influences. Flutists in Russia were often German or German-trained.<sup>411</sup>

## 1.14 Southern Europe in the 19<sup>th</sup> century

Unfortunately, I have not had access to any of the seven flute methods with Italian titles from the 19<sup>th</sup> century.<sup>412</sup> Berbiguier's *Méthode* was enlarged and translated to Italian by Giuseppe Rabboni,<sup>413</sup> and Drouët's *Méthode* was also translated to Italian.<sup>414</sup> I refer to Powell's *Flute* concerning general information on flute playing in Italy during this period.<sup>415</sup>

## 1.15 Northern America in the 19<sup>th</sup> century

There are about twenty flute methods published in America in the 19<sup>th</sup> century,<sup>416</sup>

409. Johan Christopher Daniel Dille, Carl Fredrik Bock and Carl Ludvig Heinrich Winckler, *Karle Hovkapellet 1772-1818* 455, *Karle Hovkapellet 1818-61* 285 and 258.

410. Det Kongelige Biblioteks katalog.

411. Bailey *Schwedler* 41-42.

412. Krakamp (Milan) 1847, Ciardi (Milan) c. 1860, Onerati (Milan) c. 1860, Galli (Milan) prob. 1870, Michelis (Milan) 1874, Franceschini (Milan) c. 1880, Pieroni (Florence) 1880 and Piazza (Milan) c. 1890. Krakamp and Galli were noted Italian flutists. Piazza was also a flute maker. Ciardi (1818-1877) was born in Italy, but worked as solo flutist of the Imperial Opera in St. Petersburg as well as professor at the conservatory there. He was extremely well respected as a soloist; he was well received in London, and also renowned as a composer. He played a boxwood simple-system flute by Koch. Fairley *Flutes* 27, 47, 69 and 96.

413. This could be the method that is listed as *Gran Metodo*, Paris 1820 in Brown *Early Flute* 148. The British Library's Integrated Catalogue lists a *Gran Metodo per flauto...Edizione riveduta e corretta* with the date [1860?].

414. Dockendorff Boland *Introduction* i.

415. Powell *Flute* 192-193.

416. The authors and publication years of these methods are, in chronological order: Riley (probably 1811), Hastings (1822), Robinson (1826), Firth & Hall (between 1832 and 1847), Patterson (1836), Chapin (c. 1840), Howe (four methods between 1843 and 1872 and one 1892), Clinton (c. 1860), Jewett (1850), Warren (1853), Winner (several methods from 1854 and on), Haslam (1868), Schuman (1870), Ryan (1872), Prendiville (1881), Van Santvoord (1898). Howe, Riley and Firth were flute makers, but none of the other authors seem to have left other traces in the music history apart from their flute methods. Powell's *Bibliography*, Fairley *Flutes* 41 and 63, Powell *Flute* 204 and 286.

none of which have been available to me. Alexander's *Preceptor*, Nicholson's *Lessons and School* and Dressler's *Instructions* were published in America in the same or almost the same year as in London. Clinton's last method was written for the American market and published there in 1860. Regarding flute playing generally in America in the 19<sup>th</sup> and early 20<sup>th</sup> century I refer to John Robert Bailey's "Maximilian Schwedler's Flute and Flute-playing: Translation and Study of Late Nineteenth-century German Performance Practice" 43-47 and Powell's *The Flute*.

The American flutist Frank Badollet (1870-1934) made recordings with his flute trio from 1899. One of these recordings from 1902 depicts no or almost no vibrato.<sup>417</sup>

## 1.16 Symbols



The wavy line is the most common sign for vibrato.<sup>418</sup> It is used in all musical pieces listed in Appendix 2, and by Hotteterre in *Principes*, Corrette in *Méthode*, Nicholson in *School*, Carte in *Instructions* and Young in *Modern Method for Students of the Flute*.<sup>419</sup> In Fürstenau's *Kunst* the wavy line refers to chest vibrato. In the methods by Nicholson, Lindsay, Alexander, Bown and Wragg it refers a vibrato of any sort, in Delusse's *L'Art* it refers to *tremblement flexible* or chest vibrato and in the other methods, to the *flattement technique* or *shaking the flute*.



is used by Fürstenau in *Kunst* for the *flattement technique* (*Klopfen*).



is used by Knecht to indicate chest vibrato.



is used by A.E Müller to indicate chest vibrato.

<sup>417</sup> *The Flute on Record* track 3.

<sup>418</sup> This symbol was used to indicate vibrato for several other instruments, for example, the viola da gamba and the violin.

<sup>419</sup> Toff *Flute* 111.

*trem.* is used by A.E Müller to indicate chest vibrato. Carte writes that *tremolo* (chest vibrato or *shaking the flute*) could be indicated by the word *tremolo*.<sup>420</sup>

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is used by Delusse for *martellement* .

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is used by Coche for chest vibrato.

## 1.17 Glossary

**Bebung** (German) is used by Quantz for vibrato performed with the *flattement technique*, Tromlitz for vibrato, Dauscher for vibrato (performed with the *flattement technique*), Koch for vibrato, A.E Müller for chest vibrato possibly with the aid of the jaw, Knecht for chest vibrato, Carl Grenser for vibrato, Fürstenau for chest or jaw vibrato and Schwedler for chest vibrato.

**Close shake** is used by Geminiani for vibrato on the flute as well as on the violin, and by Miller for a vibrato performed with the *flattement technique*.

**Flattement** (French) is used by Hotteterre, Corrette, Mahaut, Quantz and Gunn.

**Klopfen** (German) is used by Fürstenau for the *flattement technique*.

**Lesser shake** is used in the English translation of Hotteterre's text printed in Prelleur's *Musick-Master* for a vibrato performed with the *flattement technique*.

**Martellement** (French) is used by Delusse.

**Schwebungen** (German) is used by Ribock.

**Shake** is used by Heron for a vibrato performed with the *flattement technique*.

**Softening** is used in the English translation of Hotteterre's text printed in Prelleur's *Musick-Master* for *flattement*.

**Sweetening** is used by Gunn and in the recorder method *The Complete Flute Master* referring to the *flattement technique*.

**Tremblement flexible** (French, literally "flexible trill") is used by Delusse.

**Tremblement mineur** (French, literally "little (small) trill"), is used by Hotteterre, meaning *flattement*.

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<sup>420</sup>. Carte *Instructions* 23.



*Tremolieren, tremuliren* is used by Prill for chest vibrato and Eisel for a vibrato performed with the *flattement technique*.

*Tremolo* is used by Carte for chest vibrato or *shaking the flute*, and by Prill for chest vibrato. Delusse writes that it is the Italian name for chest vibrato.

*Vibration* is used by Nicholson, Alexander, Wragg, Drouët, Bown, Lee and Lindsay for vibrato. It is also used by Carte, Clinton and Lee for a vibrato performed with the *flattement technique*.

*Vibrato* (German) is used by Schwedler for chest vibrato.

## 1.18 Conclusions on flute vibrato in the 18<sup>th</sup> and 19<sup>th</sup> centuries

This section discusses the documented flute vibrato techniques used in Western classical music the 18<sup>th</sup> and 19<sup>th</sup> centuries. Six techniques were used to execute vibrato on the flute; the *flattement technique*, chest vibrato, *shaking the flute*, *martellement/Schwebungen*, *tremblement flexible* and jaw vibrato.

Two of these techniques are finger vibratos (*flattement technique* and *martellement/Schwebungen*); in the chest vibrato the speed of the air stream is changed; and in the three remaining techniques the vibrato is made by changing the angle between the airstream and the embouchure hole. Two of the techniques (*shaking the flute* and jaw vibrato) were only used together with or as a substitute for another vibrato technique. The *flattement technique* and the chest vibrato were much more used than the other techniques.

The *flattement technique* is executed as a trill, in most cases downwards from the main note. The pitch-change created is, however, smaller than in a trill. The finger either partly covers the next hole down from the already covered holes, or fully or partly covers one, or occasionally two of the holes further down on the instrument. In most of the preserved fingerings, it is made by partly covering a hole, and the pitch-change thus to a great extent is regulated by the player. Trying out the 14 fingering charts for the *flattement technique* reproduced in this study on period flutes reveals that sometimes there is no pitch-change at all, and in many charts a few fingerings (typically for d'' and d#'', and, in the charts of the Nicholson school, for c'') raise the pitch. Corrette, Mahaut and Tromlitz write that the *flattement technique* is performed with a straight finger. When methods state that the *flattement technique* was performed "with the finger over the hole," it probably

means that the finger slightly and flexibly touches the instrument. There are no suggestions in my material that different fingerings for the *flattement technique* were used to differ between enharmonic notes.

The chest vibrato that is recommended during most of the period of investigation is slow and controlled, typically four waves on a long note, and therefore does not necessarily involve the vocal chords. *Shaking the flute* is executed by moving the flute horizontally with the right hand and was used as a substitute for the *flattement technique* on notes where the latter was impossible or inconvenient to perform. In England in the 19<sup>th</sup> century it was used to replace chest vibrato in an accelerating vibrato. *Martellement* and *Schwebungen* are the same technique, which can be seen in the fingering charts by Delusse and Ribock respectively. The main difference from the *flattement technique* is that holes are mostly opened, which in most cases creates either pitch-changes slightly upwards from the main note or no perceptible pitch-changes. *Tremblement flexible* is performed by rolling the flute with the left thumb. The pitch-changes created are both upwards and downwards from the main note. Jaw vibrato could be used simultaneously with a slow and controlled chest vibrato, or replace it. Lip vibrato is not documented in my material.

During the whole 18<sup>th</sup> century, the *flattement technique* is the most documented flute vibrato technique. It was as well used by 17<sup>th</sup> century woodwind players, most probably including flutists. In early 18<sup>th</sup> century France, *flattement* was used on almost all long notes, and the description of it in Eisel's *Musicus Autodidactos* shows that it was also known in Germany. The wavy lines in the flute sonatas by Raehs are signs for vibrato, probably executed with the *flattement technique*. Quantz, in *Versuch*, mentions vibrato twice in the chapter about how to play an Adagio. The first time he calls it *flattement* and lists it among the French essential graces and a few pages later he writes that a *Bebung* is made on a long note with a *messa di voce*. Quantz provides a description of how to execute the *Bebung* that is in accordance with the *flattement technique*.

The *flattement technique* is not, however, mentioned by Delusse, who instead describes three other previously undocumented vibrato techniques: *tremblement flexible*, *martellement* and chest vibrato. With the techniques Delusse describes, the pitch changes as much upwards as downwards, as in the violin vibrato, which is a characteristic difference between these techniques and the *flattement technique*. Probably Delusse is looking for a technique that resembles the violin vibrato. *Tremblement flexible* is not described by any other writer. Delusse is the only 18<sup>th</sup>-century writer who describes chest vibrato with a positive attitude. There are no re-

commendations of the *flattement technique* in French flute methods after Mahaut.

Like other ornaments during the 18<sup>th</sup> century, vibrato was used to express a certain emotion, to reinforce the character of the particular moment. Hotteterre, Mahaut and Delusse write about situations in which the player is supposed to adjust the way vibrato is executed in accordance with the character of the music. As the musical examples in this study show, this can be done by changing the speed of the vibrato. Vibrato was generally associated with slow movements and tender and passionate characters. However, in printed music and music examples alike it is likewise indicated in fast and merry pieces. Belonging to the essential graces, vibrato was more often used in periods when those flourished, as in early 18<sup>th</sup> century France and the galant style of the middle of the 18<sup>th</sup> century, but less frequently towards the end of the 18<sup>th</sup> century. Tromlitz advises against using vibrato too often, and writes that it can be used on held notes, fermatas and the note before a cadenza.

In the first half of the 19<sup>th</sup> century chest vibrato coexisted on equal terms with the *flattement technique* as techniques to execute the ornament vibrato. The English flutist Nicholson made *vibration* one of the trademarks of his personal style. After the publication of Nicholson's *Complete*, most English flute methods have a paragraph about *vibration*, which was made by the chest vibrato and the *flattement technique* alike. Vibrato was still associated with slow and pathetic movements, especially folksy tunes. During the course of the 18<sup>th</sup> century, there is a tendency to use less fingerings covering full holes in the *flattement technique*. The Nicholson school describe a *flattement technique* with very small pitch-change, often only a timbral vibrato. Nicholson, Lindsay, Carte and Clinton describe an accelerating vibrato, performed with the *flattement technique* or chest vibrato, in the latter case replaced with *shaking the flute* when the tempo became too fast, on a note with a diminuendo. Fürstenu, on the contrary, describes a vibrato made with the *flattement technique* that accelerates in a crescendo and gets slower in a diminuendo.

Fürstenu's recommendations about where to use the *flattement technique* are similar to Tromlitz's; his view on the chest vibrato, however, indicates a new "romantic" aesthetic where it is used to create or enhance expressiveness and pathos, rather than being able to express different emotions. It is typically applied to a note at the emotional peak of a musical phrase, which was preceded by a crescendo and followed by a diminuendo. There is a connection between expressive accent and chest vibrato. In 19<sup>th</sup> century flute methods, vibrato is almost always treated next to the *portamento*.

Strikingly little information about vibrato appears in French flute methods from the late 18<sup>th</sup> century and most of the 19<sup>th</sup> century. This group includes very influential treatises used at the Paris Conservatory. However, Coche writes in 1838 about chest vibrato as something in use among flutists.

A chest vibrato involving the vocal chords, which can therefore be fast, is first described in Schwedler's *Flötenspiel* from 1897. Schwedler writes that it is good for sound quality and quantity and does not treat it as an ornament. However, on some aspects of its use and purpose, Schwedler expresses a view similar to Fürstenau's. In a recording of a Minuet by Mozart Schwedler vibrates on a few long notes. The continuous vibrato, integrated in the sound that became universally adopted in the course of the 20<sup>th</sup> century originates in the Taffanel school of playing. The treatise by Taffanel and Gaubert, however, advises against using vibrato in the classics.

Throughout the period studied, vibrato is rarely indicated except in pieces for students. When notated, the wavy line is by far the most common sign. At least during the 18<sup>th</sup> century and the first half of the 19<sup>th</sup> century, vibrato was often made on notes with a crescendo, a diminuendo or both, a *mesa di voce*, and on notes with a fermata (indicated or added by the performer).

Technically a continuous vocal chord vibrato is more effective and suitable on a flute of the types used in the late 19<sup>th</sup> and 20<sup>th</sup> centuries than on an earlier model; likewise, the *flattement technique* is more expressive on a flute with not too many keys. However, on multi-keyed flutes, the keys were also used for the *flattement technique*, and Clinton prints a fingering chart for the *flattement technique* for the ring-keyed flute. Despite occasional indications of connections between a flute model and a vibrato technique (like Nicholson's preference for flutes with big holes partly because the *flattement technique* is more efficient on them), changes in vibrato techniques and use followed changes in musical taste and style rather than in the instrument.





PART 2

# Articulation of Fast Passages

As I am now drawing near the conclusion of this little Treatise, and am unwilling to conceal any thing, which may render this admirable instrument one of the most perfect, I shall here lay open the great Secret of double Tongue, which with much pains, Assiduity, and Labour, took me up four years to accomplish, which I now as frequently teach, in less than so many hours.

*Lewis Christian Austin Granom, 1766*

## Definitions

For this study, I use the following definitions:

### 1. Articulation

Articulation refers to the beginning of the tone (attack) and/or note length.

### 2. Double-tonguing

Double-tonguing is when a player alternates between two different articulation syllables to be able to play faster and/or to avoid tiring the tongue.

### 3. Single-tonguing

Single tonguing is when the player repeats the same consonant.

### 4. Double-tonguing with *d-g/t-k*

In double-tonguing with *d-g/t-k* the player alternates between a syllable with a dental consonant (*t* or *d*), and a plosive (*g* or *k*) as reaction (backstroke). The *k* can also be spelled *c*, *ch* or *q*.

### 5. Double-tonguing with *d-r/t-d*

In double-tonguing with *d-r/t-d* the player alternates between a harder dental consonant (*t* or *d*) and a softer (*r* or *d*). The *r* is pronounced without rolling, that is through only one movement of the tongue.

### 6. Double-tonguing with *d-l/t-tl*

*D-l/t-tl* consists of a syllable starting with *d* or *t* and the reaction (backstroke) *l*, *dl*, or *tl* where the tip of the tongue springs back to the palate and is left firmly there; the airstream is expelled at the sides of the tongue. The *l* thus acts instead of a vowel. To produce a second *d* or *t*, the tip of the tongue just springs down again.



## 2.1 The period 1700-1760

### 2.1.1 *t* or *d* alternating with *r*

In an often-cited paragraph in *Principes de la Flute Traversiere, ou Flute d'Allemagne, De la Flute a bec, ou Flute douce, et du Hautboi* from 1707, Jacques Hotteterre demonstrates how to vary the articulation:

To render playing more agreeable, and to avoid too much uniformity in the tongue strokes, you may vary them in several ways. For example, two principal articulations namely *tu* and *ru* are used./.../When they [eighth notes] ascend or descend by steps you also use *tu*, but you always intermix it with *ru*,/.../When the number is odd, you pronounce *tu ru* in succession, as in the first example. When it is even, you pronounce *tu* on the first two quavers, then alternate *ru* with it, as you see in the second example.

The image contains two musical staves. The first staff shows an ascending sequence of eighth notes with the articulation 'Tu ru tu ru tu ru tu ru tu ru tu ru tu ru tu ru tu.' The second staff shows a descending sequence of eighth notes with the articulation 'Tu ru ru tu tu ru ru tu tu tu.'

Pour rendre le jeu plus agréable, & pour éviter trop d'uniformité dans les coups de Langue, on les varie en plusieurs manieres; Par exemple on se sert de deux articulations principales; Scavoir, Tu & Ru./.../Lorsqu'elles montent ou descendent par degrez conjoints, on se sert aussi du Tu, mais on l'entremêle toujours avec le Ru,/.../Quand le nombre est impair on prononce *tu ru*, tout de suite comme l'on voit au premier exemple. Quand il est pair on prononce *tu*, sur les deux premières Croches, ensuite *ru* alternativement, comme l'on voit dans le deuxième exemple.<sup>1</sup>

1. Hotteterre *Principes* 22, transl. 59-60.







The word *did'll* which is articulated in it [double-tongue] should consist of two syllables. In the second, however, no vowel is present; hence it must be pronounced *did'll* rather than *didel* or *dili*, suppressing the vowel which should appear in the second syllable. But the *d'll* must not be articulated with the tip of the tongue like the *di*. /.../ To articulate *did'll*, first say *di*, and while the tip of the tongue springs forward to the palate, quickly draw the middle portion of the tongue downward a little on both sides, away from the palate, so that the wind is expelled on both sides obliquely between the teeth. This withdrawal of the tongue will then produce the stroke of the second syllable *d'll*; but it can never be articulated without the preceding *di*. If you pronounce *did'll* quickly several times in a row, you will hear how it should sound better than I can express it in writing.

Das Wörtchen *did'll*, welches man dabey [in Doppelzunge] ausspricht, sollte aus zwei Sylben bestehen. In der zweyten ist aber kein Selbstlauter: also kann sie weder *didel* noch *dili*, sondern nur *did'll* genennet werden; wobey man den Selbstlauter, der in der zweyten Sylbe stehen sollte, verbeisset. Dieses *d'll* aber kann mit der Spitze der Zunge nicht ausgesprochen werden, wie das *di*. /.../ Will man nun das *did'll* aussprechen; so sage man erstlich *di*: und indem die Spitze der Zunge vorn an den Gaumen springt, so ziehe man geschwind die Mitte der Zunge, auf beyden Seiten, ein wenig vom Gaumen niederwärts ab: damit der Wind, auf beyden Seiten, die Quere zwischen den Zähnen heraus gehe. Dieses Wegziehen wird also den Stoss der zweyten Sylbe *d'll* geben; welche man aber, ohne das vorhergehende *di*, niemals allein auszusprechen vermag. Man spreche hierauf diese *did'll* etlichemal geschwind hinter einander aus; so wird man besser hören, wie es klingen soll, als ich es schriftlich ausdrücken kann.<sup>16</sup>

The accent is on the first syllable, which consequently is placed on the note on the downbeat.<sup>17</sup>

In “Hrn. Johann Joachim Quantzens Antwort auf des Herrn von Moldenit” included in Friedrich Wilhelm Marpurg’s *Historisch-Kritische Beyträge zur Aufnahme der Musik* Quantz states that his teacher Pierre Gabriel Buffardin (c. 1690-1768) did not use double tonguing with *d-l/t-tl*.<sup>18</sup> However, Quantz nowhere claims to be the first to use it; on the contrary, he rhetorically asks:

But am I really the first inventor of the use of the tongue for the flute and almost all the other wind instruments? Is it not rather so that nature itself has already

16. Quantz *Versuch* 68-69, transl.79.

17. “so fällt derselbe [der Accent] bey *did'll* auf die erste, und kömmt allezeit auf die Note im Niederschlage, oder auf die sogenannte gute Note.” Quantz *Versuch* 69.

18. Quantz *Antwort* 173, quoted below.

shown the double tongue to the old players of the recorder and the bassoon? Are there not those who even tried to use it on the oboe, albeit without too much success?

Und bin ich denn etwa der erste Erfinder des Gebrauchs der Zunge bey der Flöte und fast allen blasenden Instrumenten? Hat nicht die Natur schon die alten Spieler auf der Flöte a bec und dem Basson auf die Doppelzunge geführt? Haben sie nicht einige so gar auf der hoboë, doch auf diesem Instrument mit nicht gar zu gutem Erfolge, anbringen wollen?<sup>19</sup>

In Quantz's writings, the term "Doppelzunge" only refers to double-tonguing with *d-l/t-tl*. Tonguing syllables with *l* were used by wind players in the 17<sup>th</sup> century, and documented by among others Bartolomeo Bismantova for the recorder in *Compendio Musicale* from 1677/94.<sup>20</sup> The various spellings and nuances documented in the 18<sup>th</sup> and 19<sup>th</sup> centuries of double-tonguing with *d-l/t-tl*, and above all my practical experiments on renaissance and baroque flutes as well as recorders, have convinced me that Quantz's double-tonguing is the same technique that was used in the previous century. Quantz was educated in the milieu of town musicians and probably picked up the technique among wind and/or brass players there. Johann George Tromlitz writes in *Ausführlicher und gründlicher Unterricht die Flöte zu spielen* from 1791, "Although Quantz was the first to introduce this articulation [double-tonguing with *d-l/t-tl*] generally, I do not think he was the first, at least not the only one, to discover it,"<sup>21</sup> and Johann Heinrich Liebeskind writes in an article titled "Ueber die Doppelzunge" in the *Allgemeine Musikalische Zeitung*, "[that] Quantz [is] its inventor cannot be assumed for the simple reason that Quantz, who did not forget to mention the year in which he invented the d-sharp key, made no claim to the invention of the double tongue."<sup>22</sup>

Quantz requests nuances of articulation also in fast passages; there are examples

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19. Quantz *Antwort* 172-173.

20. Castellani/Durante *Lingua* 124 and 140-141 and Grave-Müller *Tungens figur* 48, 52-55.

21. "Obgleich Quantz der erste war, der diese Sprache öffentlich bekannt machte, so glaube ich doch nicht, dass er der Erste, wenigstens nicht alleine, gewesen ist, der sie erfunden hat." Tromlitz *Unterricht* 216, transl. 195. See also Tromlitz *Abhandlung* 16.

22. "[dass] Quantz ihr Erfinder sey, lässt sich schon darum nicht annehmen, weil Quantz, der nicht vergass, das Jahr anzuführen, wo er die Dis-Klappe erfand, selbst keinen Anspruch auf die Erfindung der Doppelzunge macht." Liebeskind *Doppelzunge* 665-666.

in *Solfeggi* where he indicates *ti dl ti dl*<sup>23</sup> or *ti tl ti tl*<sup>24</sup> for leaps, which conforms to his articulation in slower tempi where leaps are articulated with the sharper *t* and small intervals with the softer *d*.<sup>25</sup>



Example 50. Quantz *Solfeggi* 22. In this example as in all following examples where a clef has been left outside the fragment a treble clef is indicated in a previous fragment or at the beginning of the line. In this example two flats are indicated in the beginning of the line.

In *Solfeggi* Quantz frequently indicates the succession *ti ri dl*,<sup>26</sup> for example:



Example 51. Quantz *Solfeggi* 86. Two sharps are indicated in the beginning of the line.

In *Versuch* there are no examples with *dl* combined with *r*, which I believe is simply because Quantz discusses *d-l/t-tl* in one section and *t-r* in another, not because his practice had changed.

In both *Solfeggi* and *Versuch*, Quantz mixes *d-dl/t-tl* with *t* or *d*.<sup>27</sup> He writes in *Versuch*, "If the first two notes are the same, the first three must be tipped with *ti*. If the last two are the same, the third is tipped with *di*, and the fourth with *ti*."<sup>28</sup> This is demonstrated in Fig. 9 and 10, below.

23. Quantz *Solfeggi* 11.

24. Quantz *Solfeggi* 22.

25. Quantz *Versuch* 64.

26. Quantz *Solfeggi* pp. 5, 11, 12, 16, 33, 34, 36, 38, 39, 40, 42, 43, 44, 45, 47, 52, 53, 55, 57, 60, 62, 63, 64, 66, 71, 78, 83, 84, 86, 88.

27. Quantz *Solfeggi* 11, 39, 46, 60.

28. "Stehen die zwei ersten Noten auf einem Orte; so werden die drey erstern mit *ti* gestossen. Sind es aber die zwei letztern; so wird die dritte mit *di*, und die vierte mit *ti* gestossen." Quantz *Versuch* 70, transl. 81.

Example 52. Quantz *Versuch*, Tab IV. There are no accidentals in the tables in *Versuch* reprinted in this study.

Quantz comments on Fig. 11, above, “If the last note [of four] makes an ascending leap, it can also be tipped with *ti*.”<sup>29</sup>

Quantz prints more examples of how to apply double-tonguing in leaps:

Example 53. Quantz *Versuch*, Tab IV.

It is sometimes difficult to get a good and clear sound on the second syllable in

29. “Machet die letzte Note einen Sprung in die Höhe; so kann dieselbe auch mit *ti* gestossen werden.” Quantz *Versuch* 70, transl. 81.



leaps with *d-l/t-tl*, especially upwards, compared to notes in stepwise motion or on the same pitch. However, as seen in the examples above, Quantz does not hesitate to indicate *d-l/t-tl* on notes in leaps.<sup>30</sup> In the example below the difficulty is increased by the fact that the note with the *dl* is an *f''*, which is a problematic note on a one-keyed flute.<sup>31</sup> The unusual indication of *r* after a leap in the note preceding the *f''* also adds to the difficulty, because less strength and attack can be used on that note.



Example 54. Quantz *Solfeggi* 39.

To sum up, Quantz requests a varied, diversified and technically demanding articulation also in fast passages. In my opinion, the reason for Quantz's articulation is musical, a way to enhance the different intervals.

I use the practice of using *d-l/t-tl* alternated with notes that are single-tongued in leaps in the second repeat of the second movement (*Allegretto*) in Morten Raehs' *Sonata No. 3* from *VI Sonate* in C minor. The bars covered in the music example below are track 20 on the CD attached to the study, the full movement is track 21.

30. Also in Quantz *Solfeggi* 4, 5, 10, 11, 22, 33, 34, 35, 37, 39, 40, 42, 51, 52, 55, 66, 76, 78, 85 and *Versuch* Tab. V.

31. Tromlitz claims that Quantz never played above *e''*, Tromlitz *Unterricht*, transl. 49

This image shows a page of handwritten musical notation, labeled "PART 2". The score is organized into ten systems, each consisting of a treble clef staff and a bass clef staff. The music is written in a style that includes various note values, rests, and fingerings. Above the first system, there are two groups of "dl" markings. The notation includes many slurs, ties, and dynamic markings. The bass clef staves often feature complex rhythmic patterns, including sixteenth and thirty-second notes. The treble clef staves contain more melodic lines with various intervals and ornaments. The page concludes with a double bar line and a fermata over the final note of the last system.

The image displays a musical score for Example 55, consisting of ten staves. The notation includes various rhythmic values, accidentals, and articulation markings. Above the first staff, there are two 'dl' markings. Above the second staff, there are several 'dl' and 'al' markings. Above the third staff, there are 'dl' and 'al' markings. Above the fourth staff, there are 'dl' and 'al' markings. Above the fifth staff, there are 'dl' and 'al' markings. Above the sixth staff, there are 'dl' and 'al' markings. Above the seventh staff, there are 'dl' and 'al' markings. Above the eighth staff, there are 'dl' and 'al' markings. Above the ninth staff, there are 'dl' and 'al' markings. Above the tenth staff, there are 'dl' and 'al' markings. The score also features square brackets around certain notes, indicating legato slurs. The music is written in a key signature of one flat and a 2/4 time signature.

Example 55. Raehs *Sonata No. 3* from *VI Sonate*, second movement (Allegretto), bars 25-60. The indicated articulation, including the legato slurs in square brackets, is added by the present author. In this and the following examples I make no distinction between the nuances *l*, *dl* and *tl*; all syllables with *l* are notated as *dl*.

Quantz writes, “The double tongue is used for the very quickest passage-work.”<sup>32</sup> In another chapter he writes that “no more than eight very fast notes can be executed well in the time of a pulse beat, either with double-tonguing or with bowing.”<sup>33</sup> Quantz counts eighty pulse beats to a minute,<sup>34</sup> which means that he considers the fastest speed for a well-performed double-tonguing sixteenth notes in  $\text{♩} = 160$ .

Quantz writes in *Versuch*:

If the first of the quick notes is tied to a long note preceding it, or if a dot is substituted for it, you must express it with a breath from the chest, saying *hi* instead of *di*. You can also tip the two notes after the dot with *ti*.

Wenn die erste der geschwinden Noten an eine vorhergehende lange gebunden ist, oder wenn an deren Stelle ein Punct steht, so muss man dieselbe mit der Brust hauchen, und anstatt *di*, *hi* sagen. /.../Man kann aber auch die beyden Noten nach dem Puncte mit *ti* anstossen.<sup>35</sup>



Example 56. Quantz *Versuch*, Tab IV.

The first way Quantz describes here is also indicated in *Solfeggi*;<sup>36</sup> I find it useful in fast tempi. The *h* makes it possible to “start” on *di* after the longer note. (In reality the first syllable is the syllable of the the long note.) I use this in several places in Roman’s *Sonatas*, for example in the second movement (Allegro) of the *Sonata VIII*, and the second movement (Allegro) of the *Sonata VI*, bars 29-36. The bars covered in the music example below are track 22 on the CD attached to the study; the full movement is track 23.

32. “Die Doppelzunge wird nur zu den allerschwindesten Passagen gebraucht” Quantz *Versuch* 68, transl. 79.

33. “Weil man nun mehr als acht ganz geschwinde Noten, nicht wohl, es sey mit der Doppelzunge, oder mit dem Bogenstriche, in der Zeit eines Pulsschlages ausüben kann.” Quantz *Versuch* 264, transl. 285, corrected by the author.

34. Quantz *Versuch* 267.

35. Quantz *Versuch* 70, transl. 82.

36. Quantz *Solfeggi* 51.



Example 57. Roman *Sonata VI*, second movement (Allegro), bars 29-36. The indicated articulation is added by the present author.

In the first bar of the second movement (Allegro) of the *Sonata VI*, I start with *dl* after a break. This is possible because in the fast tempo, the tongue stroke of the note before the break serves as the stroke of the first syllable. The movement is track 23 on the CD attached to the study.



Example 58. Roman *Sonata VI*, second movement (Allegro), bars 1-2. The indicated articulation is added by the present author.

In *Solfeggi*, Quantz several times indicates *t r dl* after a break.<sup>37</sup> The combination *t r dl* is yet another possibility that makes a smoother start after a tied-over note than *t d dl*.

There were, however, distinguished flutists who did not use double-tonguing. In a reply to Joachim von Moldenit<sup>38</sup> in 1759, Quantz writes about Buffardin and Michel Blavet (1700-1768):

Mr von Moldenit says that Buffardin and Blavet made little [use] of tongue work. They use tonguing with *ti* and *tiri* and with *di* and *diri* just as much as I do. They do not, it is true, use double tongue; but do they play as many quick notes, or play them as distinctly as someone who uses the double tongue correctly? Anyone who has heard both can answer this question for me.

37. Quantz *Solfeggi* 71 four times, and two times on page 86. See the examples from page 86 above.

38. Danish amateur flutist and composer. See Powell *Flute* 101.

Der Hr. von Moldenit sagt /.../ Buffardin und Blavet machten vom Zungenwerke wenig. Den Gebrauch mit dem *ti* und *tiri* und dem *di* und *diri* haben sie eben so gut als ich. Die Doppelzunge brauchen sie nicht, es ist wahr: spielen sie aber auch so viele geschwinde Noten, und diese so deutlich, als einer der die Doppelzunge recht braucht? Wer beyde gehöret hat, beantworte mir diese Frage.<sup>39</sup>

As stated above, Quantz refers to double-tonguing with *d-l/t-tl* with “double tongue”. The quote above is contradicted by Quantz himself, who writes in his autobiography that Buffardin’s strength was to play quick pieces.<sup>40</sup> Quantz (and Moldenit) met Blavet in 1726-27; there is no indication that they met again later. It seems that Quantz is not familiar with the preserved flute concerto by Blavet, which contains many quick notes. Unfortunately, no statements from either Blavet or Buffardin have come down to us that might throw some light upon how they articulated fast passages.

Toussain Bordet recommends double-tonguing (or as an alternative, vibrato) for a programmatic effect in a book with flute duets, composed before 1755. The book contains an Air by Bordet with the title “La Lanterne magique.”<sup>41</sup> Bordet writes a continuous wavy line over the notes, and comments, “To play this piece in the correct style, you must slur virtually all the notes and use double-tonguing.”<sup>42</sup> The piece is played by repeating the notes, which creates a connected (“slurred”) effect.

Charles Delusse writes in *L’Art de la flûte traversière* from c. 1760:

About Double-tonguing

This is executed by pressing the lips together against the teeth, & always keeping the tongue in the mouth, moving forcefully back and forth at extreme speed against the palate, articulating the syllable *loul*. It is indicated by wavy lines above the notes.

Du double coup de langue.

Il se fait en resserrant les levres sur les dents, & conservant toujours la langue dans la bouche, en forte qu’allant & venant avec une rapidité extrême sur le

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39. Quantz *Antwort* 173, transl. in Powell *Flute* 101.

40. Quantz *Lebenslauf* 209.

41. Reprinted in section 1.3.3.

42. “Pour jouer cette pièce dans son gout, il faut couler presque toutes les notes et se servir du double coup de langue.” Bordet *Méthode* Appendix 30.

palais, elle articule la syllable *loul*. Il est désigné par des lignes brisées au dessus des notes.<sup>43</sup>

*DOUBLES COUPS DE LANGUE*



Example 59. Delusse *L'Art* Planche 10.

According to my practical experiments, the tongue performs similar movements when playing with *loul loul* in a fast tempo and with *d-l/t-tl* (*-ul* being the reaction of the tongue towards the palate). As Tromlitz and others explain, the consonant in the first syllable of the pair drops out in continued fast movement.<sup>44</sup> The difference between Quantz's and Delusse's double-tonguing is the nuance: *d/dl* is softer than *t/tl*, but *l-l* is even more relaxed, which fits with Delusse's and Bordet's way of using double tongue. Delusse continues, "This kind of articulation is only found in Caprices, or in pieces characterizing winds and storms."<sup>45</sup> In a musical example Delusse indicates double-tonguing in a way that illustrates the winds well:



Example 60. Delusse *L'Art* 24 Example XXVII.

43. Delusse *L'Art* 4.

44. See section 2.2.1.

45. "Ce coup de langue n'a lieu que dans des passages de Caprice, ou dans ceux qui caractérisent les Vents, la Tempête." Delusse *L'Art* 4.

In both these examples Delusse indicates double-tonguing similarly to Bordet, on repeated notes, and with a continuous wavy line. His comment indicates that, for him, double-tonguing was not used for all kinds of fast passages. Bordet does not describe any double-tonguing technique in his flute method from 1755, but one may assume that Bordet refers to the same technique as Delusse. Delusse's technical description and individual spelling that results in a softer nuance, the way he and Bordet indicate it, and their usage of the technique exclusively on repeated notes all point to the likelihood that they are describing a phenomenon they had encountered in performance, maybe a fashion at the time in Paris.

A review of Antoine Mahaut's method *Nieuwe Manier om binnen korten tyd op de Dwarsfluit te leeren speelen/Nouvelle Méthode pour apprendre en peu de tems a jouer de la Flute* from 1759 in *Mercure de France* from 1759 states, somewhat exaggeratedly, that "this work includes an extensive discussion on /.../single and double-tonguing."<sup>46</sup> In fact, Mahaut limits his discussion on the latter to, "Many people rely on what is called double tonguing; it is used in very rapid passages and articulated with the two syllables *DiDel*."<sup>47</sup>



Example 61. Mahaut *Nieuwe Manier* 31.

It seems to me that Mahaut did not use this articulation himself, but that he knew about other flutists (either French or not) who did. My impression is that although Bordet, Mahaut and Delusse all describe the same double-tonguing technique, Mahaut describes a way of using it that is similar to Quantz's, but not necessarily employed by Mahaut himself, and not necessarily by French flutists, while Bordet and Delusse describe a phenomenon used for special effects by themselves or at least in the milieu around them.

46. "cet ouvrage contient une dissertation très étendue sur/.../simples et doubles coups de langue." Hadidian *Preface* vii.

47. "Zommigen bedienen zich von eenen dubbelen tongslag; reegende by zeer vlugge pasjagien en wordende uitgedrukt door de Lettergreepen Di del." "Plusieurs sont cas du double coup de langue, il sert dans le passages de grande vitesse; et s'exprime pas les deux syllables di Del." Mahaut *Nieuwe Manier* 31 transl. 21.



### 2.1.3 Double-tonguing with *d-g/t-k*

I have not found any documentation of tonguing with *d-g/t-k* from this period.

### 2.1.4 Single-tonguing

Michel Corrette writes in *Méthode pour apprendre aisément à jouer de la Flute traversiere* from 1739/40, “Previously, the two syllables *tu* and *ru* were used as tongue strokes: but, today virtuosi no longer use *tu* and *ru*, and consider them absurdities serving no other purpose than to embarrass the student.”<sup>48</sup> Since Corrette does not describe any double-tonguing technique, the remaining alternatives are single-tonguing and/or with legato. Mahaut agrees with Corrette:

Formerly tongued articulation used the syllables *tu* and *ru*, which were sufficient for the music of earlier times, when notes were almost always grouped in pairs. It is no longer the same with modern music, which requires different kinds of articulation to express slurred and detached notes.

Voor dezen drukte men de tongslaagen uit door de beide lettergreepen *tu* en *ru*; dit was voldoende tot de muziek dier tyden; of men hechtete byna altoos de nooten twee en twee aanéén, doch, de hedendaagsche muziek vereischt, ter uitdrukking van gebondene en losse nooten, verscheide soorten van tonschlagen.<sup>49</sup>

Mahaut writes, “Notes marked with vertical dashes or dots should not only be tongued separately, but each tongue stroke must be crisp and precise.”<sup>50</sup>



Example 62. Mahaut *Nieuwe Manier* 35.

48. “Autre-fois on se servoit des deux syllables *tu*, *ru*, pour exprimer les coups de langues: mais les virtuose d’a present ne les montrent plus par *tu*, *ru*, et regardent cela comme une chose absurde qui ne sert qu’a embarrasser l’ Ecolier.” Corrette *Méthode* 20.

49. Mahaut *Nieuwe Manier* 21, transl. 21.

50. “Nooten, door een streepje of door een stip getekent, vereischen niet alleen ieder eenen byzonderen, maar ook eenen korten en fraaien tongslag.” “Les notes marquées par un petit trait ou par un point, doivent non seulement avoir chacune leur coup de langue, mais ce coup de langue doit être sec & net!” Mahaut *Nieuwe Manier* 21, transl. 21.

Technically it is not easy to execute triplets crisply and precisely using double-tonguing with *d-l/t-tl*, which is structured in pairs and without compensation creates a smoother articulation than single-tonguing. The notes in the example above are not as fast as the thirty-second notes on which Mahaut demonstrates double-tonguing. I believe they are meant to be single-tongued. We find examples of fast passages with triplets and staccato dots in an exercise for different articulations in *Nieuwe Manier*,<sup>51</sup> and also in Mahaut's *VI Sonate a Flauto Traversiere Solo col Basso continuo*.



Example 63. Mahaut *Sonata 1*, first movement (Vivace) bars 33-35.

In Ch. Delusse's *L'Art de la flûte traversière* from c. 1760 tonguing with *r* is not mentioned. I conclude that in mid 18<sup>th</sup>-century France, moderately fast, and usually also fast passages, were articulated with single-tonguing and/or legato.

Quantz, however, writes in *Versuch*, "In quick passage-work the single tongue does not have a good effect, since it makes all the notes alike, and to conform with good taste they must be a little unequal."<sup>52</sup> In a few places in *Solfeggi*, Quantz indicates single-tonguing on shorter passages with broken chords,<sup>53</sup> which I do not consider as contradicting this statement.



Example 64. Quantz *Solfeggi 12*.

51. Mahaut *Nieuwe Manier* 30-31.

52. "Bey geschwinden Passagien thut die einfache Zunge keine gute Wirkung, weil die Note dadurch alle einander gleich werden; welche doch, dem guten Geschmacke gemäss, etwas ungleich seyn müssen." Quantz *Versuch* 64, transl. 74.

53. Quantz *Solfeggi* 12 (W. F. Bach), 63, 71, 76, 80, 87 (W. F. Bach).

In *Solfeggi* there are very few notes with strokes or dots over them. When both strokes and syllables are indicated, the syllable is *ti*:



Example 65. Quantz *Solfeggi* 2.

In conclusion, there are indications of a connection between dots or strokes and single-tonguing.

### 2.1.5 Legato-playing and relating to indicated articulation

In some of the musical scores by Hotteterre and Pierre Philidor, legato-slurs are carefully indicated.<sup>54</sup> The fastest notes are usually slurred, which indicates a practice of playing very fast notes legato.

Quantz writes:

You must avoid slurring notes that ought to be articulated, and articulating those that ought to be slurred. /.../ The tonguing on wind instruments, and the bowing on bowed instruments, must always be used in conformity with the aims of the composer, in accordance with his indications of slurs and strokes; this puts life into the notes.

Man muss sich hüten, die Noten zu schleifen, welche gestossen werden sollen; und die zu stossen, welche man schleifen soll. /.../ Den Zungenstoss auf Blasinstrumenten, and den Bogenstrich auf Bogeninstrumenten, muss man jederzeit, der Absicht, und der vermittelt der Bogen und Striche geschehenen Anweisung des Componisten gemäss, brauchen: denn hierdurch bekommen die Noten ihre Lebhaftigkeit.<sup>55</sup>

Later in the book he writes, “Slurred notes must be played as they are indicated, since a particular expression is often sought through them. On the other hand,

54. Hotteterre *Premier Livre* and *Deuxième Livre*. Philidor *Premier Oeuvre*, *Deuxième Oeuvre* and *Troisième Oeuvre*.

55. Quantz *Versuch* 104, transl. 122.

those that require tonguing also must not be slurred.<sup>56</sup> This does not necessarily mean that Quantz wants all notes without any indicated articulation to be tongued; in *Solfeggi* he occasionally indicates syllables that create a legato on notes without slurs.<sup>57</sup>



Example 66. Quantz *Solfeggi* 35. One flat is indicated at the beginning of this line.

Furthermore, in *Versuch*, Quantz writes:

If the passage-work must be played more quickly than *diri* can be articulated, you must slur either the third and fourth notes, or the first and second. The latter way, where the first and fourth notes have *ti*, and the third has *ri*, is most strongly recommended, since you can use it in various kinds of passage-work in both leaps and stepwise notes. In slurring the second note the tongue rests, and hence can continue for a longer period without tiring, while it soon becomes tired when *diri* is constantly used, and quickness is impeded.

Würde erfordert dass die Passagien geschwinder gespielt werden müssten, als man das *diri* aussprechen kann: so muss man entweder die dritte und vierte, oder die erste und zweyte schleifen, Die letztere Art, wo die erste und vierte Note *ti*, die dritte aber *ri* hat, ist am meisten anzupreisen: weil man dieselbe bey verschiedenen Arten der Passagien, sowohl in springenden als gehenden Noten brauchen kann. Durch das Schleifen der zweyten Note erholet sich auch die Zunge; und kann, ohne sich zu ermüden, desto länger ausdauern: da sie hingegen bey der Art, wo man das *diri* beständig fortsetzet, bald müde, und an der Geschwindigkeit verhindert wird.<sup>58</sup>

56. "Schleifende Noten müssen so gespielt werden wie sie angedeutet sind: weil öfters darunter ein besonderer Ausdruck gesucht wird. Hingegen müssen auch die, so den Zungenstoss verlangen, nicht geschleifet werden." Quantz *Versuch* 115, transl. 133.

57. Quantz *Solfeggi* 35, 40, 41. Occasionally, like on page 11, he writes "ohne Zunge" for some figures.

58. Quantz *Versuch* 67, transl. 78.



Example 67. Quantz *Versuch*, Tab. III.

It is worth noticing that Quantz always indicates *r* on the note after a slur of the two first notes. Even if this was primarily a technique for players that had not mastered double-tonguing, I believe it could be used also as an alternative to double-tonguing.

## 2.2 Germany, second half of the 18<sup>th</sup> century

### 2.2.1 Double-tonguing with *d-l/t-tl*

Quantz's influence on the generation after him was immense, not least concerning the double tongue. However, far from all flutists mastered the technique. One of these was Moldenit, who severely criticized it in the introduction to his *Sei Sonate da Flauto traverso*, published in 1753.<sup>59</sup> Johann Justus Heinrich Ribock writes in his article "Ueber Musik, an Flötenliebhaber insonderheit" in *Magazin der Musik*, 1783, "Thus I can scarcely remember two [players] who could make the Did'll tongue agreeably and beautifully, usually it is simply not there at all."<sup>60</sup> Ribock even suggests that far from all of Quantz's own disciples possessed double tongue, "I have heard various Quantzians, four among these were called virtuosos/.../ not one mastered the double tongue/.../ [however] all believed they did master/.../[it] which they truly did not."<sup>61</sup> Tromlitz confirms in *Abhandlung* that double-tonguing with *d-l/t-tl* was not generally adopted,<sup>62</sup> and in *Unterricht* he writes:

59. Quoted in Castellani/Durante *Lingua* 186.

60. "So erinnere ich mich z.B. kaum ihrer zwey gehört zu haben, die die Did'llzunge nett und schön machten, sie fehlt gewöhnlich ganz." Ribock *Über Musik* 717.

61. "Verschiedene Quantzianer habe ich gehört, darunter sich viere befanden, die Virtuosen hies- sen,/.../keiner hatte Doppelzunge;/.../Alle glaubten Doppelzunge zu haben, aber wahrlich keiner hatten sie." Ribock *Über Musik* 714-715.

62. Tromlitz *Abhandlung* 12-13.

There has been much disagreement about this method [the double tongue] of articulation on the flute: some accept it, and others reject it, though certainly without sufficient understanding or reason. Those who accept it say: it is not possible to execute fast passages clearly and roundly without this articulation; the others, however, maintain the opposite./.../very few people have learned to use his [Quantz's] manner of articulation, and to apply it properly, most people have rejected it as superfluous - though certainly prematurely - and made shift as best they could without it.<sup>63</sup>

Ueber diese Art der Sprache auf der Flöte, ist schon viel Streitens gewesen, einige nehmen sie an, andere verwerfen sie, aber gewiss ohne genugsame Einsicht und Gründe. Die ersten sagen: man könne ohne diese Sprache keine geschwinden passagen deutlich und rund hervorbringen; die andern aber behaupten das Gegenteil./.../da aber die wenigsten nach seiner Anwendung diese Sprache haben lernen, und die alsdenn gehörig anwenden können, so haben sie dieselbe als ein überflüssig Ding, aber gewiss zu voreilig, verworfen, und sich ohne sie, so gut sie gekonnt, beholfen.

One obstacle seems to have been the effort needed to learn the technique. Tromlitz describes in *Unterricht* how he first experimented on his own, trying to find suitable syllables for double-tonguing. He writes:

As far as the use of the tongue was concerned I was groping around in the dark for a long time; though I would have been happy to be enlightened, I could find nobody to help me and put me on the right path;/.../At that time Quantz and his book were not yet well known.<sup>64</sup>

Ich bin in Ansehung des gebrauchs der Zunge lange im Finstern herumgetappet; so gerne ich darinnen zur Gewissheit gewesen ware, so konnte ich doch keinen Menschen finden, der mir geholfen, und mich auf den rechten Weg gebracht hätte;/.../Damals was Quantz mit seinem Buche noch nicht ans Licht getreten.

Though the pedagogical advice in *Versuch* must have been helpful when it became available, a quote by Ribock suggests that studying from a book did not always provide enough instruction:

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63. Tromlitz *Unterricht* 216, transl. 195.

64. Tromlitz *Unterricht* 216-217, transl. 195-196.

For a long period I have tried to learn it alone according to Quantz's instructions until, by chance, I had the opportunity to hear it by someone else, whereupon I achieved in one hour what I had not been able to learn in such a long time.

Lange habe ich es vergeblich nach Quanzens Anleitung allein versucht, bis ich zufällig gelegenheit hatte, es von jemanden zu hören, da ich denn in einer Stunde das weg hatte, was ich in so langer Zeit nicht hatte erstudiren können.<sup>65</sup>

Some flutists, however, fully possessed the technique. Tromlitz writes in *Unterricht* that he had heard no one execute it better than Friedrich Ludwig Dulon, whom he met and played with in Leipzig in 1784.<sup>66</sup> In 1805 Tromlitz himself is remembered in the *Allgemeine Musikalische Zeitung* as the first influential representative of the bravura- and concert-style of flute playing that was by then commonly practiced, with the frequent and artistic use of double-tonguing.<sup>67</sup>

In *Unterricht* Tromlitz gives a technical description of *d-l/t-l* that is similar to Quantz's,<sup>68</sup> together with an elucidation of how to proceed when several notes occur in succession:

Now we will consider how four equal notes must be treated. Quantz says to repeat the word *did'll* here, that is, *did'lldid'll*; but that would be difficult if not quite impossible, particularly in very fast passages. /.../the tongue soon gets stiff and lame, and stutters. /.../when you wish to use this tonguing on long and fast

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65. Ribock *Über Musik* 717.

66. Tromlitz *Unterricht* 219. Dulon (1769-1826) grew up near Berlin, and was taught by his father. According to a report from 1784 he played "in Quantz's style." Rice *Dülon* 29. It is reasonable to assume, that his father knew Quantz's *Versuch*.

67. *Allgemeine Musikalische Zeitung* VII (1805): 337.

68. "When you have said *ta*, and while the *ta* is still sounding (for it must continue to sound until the second syllable is pronounced), place the tip of the tongue, which must be made a little bent, on the palate, and while saying *d'll* press the wind, held back by the bent tongue placed on the palate, out on both sides while the tongue remains on the palate; this produces the second note. The tongue must be placed firmly, however, so that the wind comes out and into the instrument, otherwise it will not sound." "Wenn man *ta* gesaget hat, so setze man, indem das *ta* noch klinget, (denn dieses muss so lange fort klingen, biss man die zweyte Sylbe spricht,) die Spitze der Zunge, die etwas krumm gemacht seyn muss, an den Gaumen, und drücke, indem man *d'll* spricht, den Wind, welcher durch die an den Gaumen angesetzte und krumm gemachte Zunge aufgehallen wurde, und indem die Spitze der Zunge an dem Gaumen stehen bleibet, auf beyden Seiten hervor; dieses giebt die zweyte Note. Der Druck muss aber Kraft haben, damit der Win vor und ins instrument kömmt, sonst klinget es nicht, und man höret nur das *ta* klingen, und das *d'll* nicht." Tromlitz *Unterricht* 219-220, transl. 199.

passages, leave off the *d* on the second and tie the *a* to the following *l*, so that instead of repeating the whole word, *tad'lldad'll*, the word *tad'll'ad'll* is formed for four equal notes; but the sound must be sustained all the time, and may not be cut off after the first *tad'll*.

Nun wollen wir betrachten, wie mit vier gleichen Noten verfahren werden müsse. Quantz lässt hier das Wort *did'll* wiederholen, nemlich *did'lldid'll*; das soll aber einem jeden schwer, wo nicht gar unmöglich werden, besonders in sehr geschwinden Passagen./.../die Zunge bald steif und lahm wird und stottert./.../wenn man diese Sprache bey längern und geschwindern Passagen anwenden will, so lasse man, an statt, dass man das Wort ganz wiederholet, als *tad'lldad'll*, bey zweyten, als bey der Wiederholung, das *d* weg, und binde das *a* an das vorhergangene *l*, so entstehet nun zu vier gleichen Noten das Wort *tad'llad'll*; der Ton muss aber dabey stets unterhalten, und darf nicht nach dem ersten *tad'll* abgesetzt werden.<sup>69</sup>

I find this information enlightening in the learning process; in the beginning or when playing slowly the flutist might try to make a new *d* after the *d'll*, when in fact the tongue is already placed firmly on the palate and only needs to be withdrawn.

In all his examples, Tromlitz carefully indicates *t* on the first note and continues with *d*, which gives a sharper attack on the first note.<sup>70</sup>



Example 68. Tromlitz *Unterricht* 221. There are no accidentals at the beginning of this line.

As Quantz does in *Solfeggi*, Tromlitz frequently indicates *d'll* after *r*.<sup>71</sup>

69. Tromlitz *Unterricht* 221, transl. 199-200.

70. Tromlitz *Unterricht* 220-235.

71. Tromlitz *Unterricht* 224-225, 228-232. As in *Solfeggi*, the syllable with *r* falls on a stronger beat.



7)

ta\_d'llda\_da\_ra\_d'llad'll\_ad'll\_ad'lladadarad'll\_a\_d'lldada\_rad'll\_ad'll

8)

dadarad'll\_adara\_d'll\_a ta\_da\_ra\_d'll\_a\_d'llidada\_ra\_dara\_d'll\_a\_d'llidada\_rada\_ra\_d'lla\_d'lldada\_\_ra.

Example 69. Tromlitz *Unterricht* 225. The first line has one sharp indicated in the beginning of the line.

When I play the examples above,<sup>72</sup> the effect with *tadarad'll* is more differentiated than a continuous *tad'llad'll*, and rounder and fuller than with *tadadad'll*, which creates a less smooth, more stumbling execution.

For larger leaps, Tromlitz describes the same way of mixing *d-l/t-tl* with *d* as Quantz. However, he recommends that the student also practice keeping the *d-l/t-tl* throughout, and decide afterwards what sounds best.<sup>73</sup>

Ribock writes that double-tonguing with *d-l/t-tl* “must roll gently like a brook over smooth pebbles.”<sup>74</sup> Heinrich Christoph Koch writes in *Musikalisches Lexikon* from 1802 that double-tonguing is well suited to round and brilliant execution of passages, rolling passages and fast notes executed with roundness.<sup>75</sup> Tromlitz’s model for executing fast passages is the melisma of the virtuoso singer.<sup>76</sup> He writes

72. On a copy of a Grenser one-keyed flute from c. 1790 by R. Tutz.

73. Tromlitz *Unterricht* 225-226, transl. 203.

74. “muss sanft rollend seyn, wie ein Bach über glatte Kiesel!” Ribock *Über Musik* 717.

75. Koch *Lexikon* 476 and 1765-1766.

76. Tromlitz *Abhandlung* 13 and *Unterricht* 217.

in *Abhandlung* about “equal, flowing and rolling passages”<sup>77</sup> and in *Unterricht* that double-tonguing is a technique for producing fast and very fast passages roundly, clearly and in a rolling manner.<sup>78</sup> Technically, syllable combinations such as *tadarad’ll* and *tad’llad’ll* create a smoother, less staccato articulation. In Tromlitz’s musical examples, there are never dots or strokes on notes that are double-tongued. All this suggests that a fluent, round articulation was considered desirable in tongued passages.

### 2.2.1.1 Triplets

All of the writers who describe double-tonguing with *d-l/t-tl* for fast passages during the period of my investigation, and recommend an application for triplets, recommend a pattern with *l* on the second note of the triplets, and a syllable with *d* or *t* on the first and third notes, thus *d-l-d d-l-d* (with various spellings).<sup>79</sup> As an alternative, Quantz adds, “If, however, the second note makes a very large leap downward, the first must be given *di*, and the last two *did’ll*.”<sup>80</sup>



Example 70. Quantz *Versuch* Tab. V.

Technically, a disadvantage with the common method is that the *d* is repeated. Tromlitz describes the problem and suggests a solution:

77. “gleichlaufenden, fließenden und rollenden passagen,” Tromlitz *Abhandlung* 16.

78. Tromlitz *Unterricht* 218-219.

79. Quantz *Versuch* 70, Granom *Instructions* 14, Heron *Treatise* 33, Arnold *Instructions* 32, Tromlitz *Unterricht* 226-227, Wragg *Improved* 14, Miller *Instructor* 13, Beale *Complete* 16, Alexander *Preceptor* 32, Nicholson *Complete* 19, Nicholson *Lessons* 33, Dressler *Instructions* 50, Lindsay *Elements* 111, Nicholson *School* 67, Lee *Improved* 26, Redmond *Tutor* 20, and Schwedler *Flötenspiel* 63.

80. “Machet aber die zweyte Note einen sehr grossen Sprung in die Tiefe; so muss man der ersten: *di*, und den zwo leztern: *did’ll* geben,” Quantz *Versuch* 70.

c)  
Presto

*dad'lldadad'lldadad'llda\_dad'llda\_dad'llda\_dad'llda\_dad'llda\_dad'llda*

*\_dad'llda\_dad'llda\_dad'llda\_dad'llda*

Example 71. Tromlitz *Unterricht* 227.

Here too you will notice that repeating the same word when several such figures come in succession will give rise to many difficulties, and more than with four equal notes, because the third note of the foregoing triplet (or similar figure) and the first of the subsequent one always get *da*; so there are two *das* in a row. This tires the tongue very soon, makes the delivery stuttering and stumbling, and thereby spoils the rolling, running and flowing of such passages. /.../ But if you have got the *r* under your belt from the foregoing exercises, so that you can pronounce the *ra* clearly and fluently, you will be able to play the passages just cited far more distinctly and consistently, and without nearly so much effort, and produce long passages without tiring the tongue. If you say *ra* in place of the second *da*, which is what tires the tongue so easily, so that instead of the repeated word *tad'llda*, *rad'llda* is formed, and *tad'lldarad'llda* etc. when combined, you will find that it permits the tongue to work much more easily, fluently and continuously; and this kind of tonguing is retained even if ever so many similar figures occur in succession, unless a very large leap calls for a change.

Auch hier wird man bemerken, dass die Wiederholung des nehmlichen Wortes bey der Folge mehrerer solcher Figuren, viele und noch mehrere Schwierigkeiten als bey vier gleichen Noten verursachen würde, weil immer die dritte Note der vorhergehenden, und die erste der folgenden Triole, oder ähnlichen Figur, *da* bekommen; also zweymal *da* hinter einander. Dieses würde die Zunge sehr bald ermüden, den Vortrag stotternd und holprich machen, und dadurch das rollende, laufende und fließende in dergleichen Passagen hindern. /.../ Wenn man aber bey den vorhergehenden Uebungen sich das *r* zu eigen gemacht, dass man das *ra* deutlich und geläufig sprechen kann, so kann man jetzt erwähnte Passagen weit deutlicher und fließender, und mit weit weniger Mühe, und lange Pas-

sagen ohne Ermüdung der Zunge hervorbringen. Wenn man nun *as* statt des zweyten *da*, welches eben die Zunge so leicht ermüdet, *ra* spricht, dass durch diese Veränderung an statt des wiederholten Wortes: *tad'llda*, nunmehr *rad'llda* un in der Zusammensetzung *tad'lldarad'llda* u.s.f. entsteht, so wird man finden, dass es die Zunge viel leichter, geläufiger und anhaltender zu sprechen vermag; und diese Sprache wird behalten, wenn auch noch so viele dergleichen Figuren auf einander folgen sollten, es müsste denn ein sehr grosser Sprung eine Veränderung nöthig machen.<sup>81</sup>

f)

Presto.

tad'llda\_rad'llda\_rad'llda\_rad'llda\_rad'llda\_rad'llda\_rad'llda\_rad'llda\_rad'lldarad'llda\_

\_rad'llda\_rad'llda\_rad'llda\_\_rad'llda\_rad'llda\_rad'llda

Example 72. Tromlitz *Unterricht* 228.

Tromlitz continues:

With leaping triplets the articulation is usually varied, but I think what I said above about four equal notes is applicable here too, that is: one should continue with the tonguing of the first figure, changing its *da* into *ra* on all the others, even leaping triplets.

Bey springenden Triolen verändert man gewöhnlich die Sprache, aber ich glaube, dass sich eben das, was ich oben bey vier gleichen Noten erinnert habe, auch hier anwenden lässt, nemlich man fährt mit der Sprache der ersten Figur fort, indem man *da* in *ra* verwandelt, alle übrige, auch springende Triolen zu machen.<sup>82</sup>

81. Tromlitz *Unterricht* 226-228, transl. 204-205.

82. Tromlitz *Unterricht* 229, transl. 205-206.

b)  
All. affai.

tad'llda\_rad'lldarad'llda\_rad'llda\_dad'lldadadad'll\_dad'llda\_rad'lldarad'llda

\_rad'llda\_dadad'll\_da\_tad'lldadadad'll\_dadad'll\_dad'llda\_dadad'll\_dadad'll

\_dad'llda\_rad'llda\_rad'llda\_rad'llda\_rad'llda\_rad'llda\_rad'llda\_rad'llda\_rad'lldarad'llda

\_radad'll\_dadad'lldadad'll\_dadad'll\_dadad'lldadad'll\_dadad'll\_dad'llda\_da

Example 73. Tromlitz *Unterricht* 229-230.

Later in the text Tromlitz declares that what he is talking about here is “very fast, running and rolling passages,” which is also evident from the tempo indications in the examples. Personally I find it very hard, despite much practicing, to execute the syllables indicated in the last example above in that kind of tempo.

In the second movement (Allegro) of the *Sonata* in D-major by Johann Adolph Scheibe bars 4, 24, 37, 39-40, 60 and 72, I use the articulation pattern commonly documented for *d-g/t-k*,<sup>83</sup> which for me is easier in a very fast tempo. The bars covered in the music example below are track 24 on the CD attached to the study; the full movement is on track 25.

83. See sections 2.7.1.2 and 2.8.2.

Example 74. Scheibe *Sonata* in D-major second movement (Allegro), bars 72-74. The indicated articulation is added by the present author.

The triplets in the fourth movement (Allegro Assai) of Roman's *Sonata XII*, the fourth movement (Allegro) of *Sonata VIII* and the fifth movement of *Sonata IV* are in a moderato tempo, where the pattern *d-l-d d-l-d* creates no technical problem. The same is true for the third movement (Allegro) of *Sonata No. 3* from *VI Sonate* by Raehs, bars 4, 5, 34, 36, 37, 38 and 43. The bars covered in the music example below is track 26 on the CD included in the study, the full movement is track 27.

Example 75. Raehs *Sonata No. 3* from *VI Sonate*, third movement (Allegro), bars 34-38. The indicated articulation is added by the present author.

### 2.2.2 Tonguing with *r*

Johann Samuel Petri describes the same alternation as Quantz between *t/d* and *r* for moderate speed in his *Anleitung zur praktischen Musik* from 1782.<sup>84</sup> As seen below, tonguing with *r* is frequently used, although in a different way, in the style of articulation described in Tromlitz's *Unterricht*.<sup>85</sup> For players who has a burr and therefore cannot produce the letter *r* Tromlitz advises using *d* in its place, trying to express it as gently as possible so that it gets the same effect as an *r*.<sup>86</sup> However, "Therefore he is lacking a great advantage, without which his playing will always stay incomplete."<sup>87</sup> There are however no indications that double-tonguing with *d-r/t-d* was used except John Gunn's statement that he heard it "on the continent," not specifying where.<sup>88</sup>

### 2.2.3 Legato-playing and relating to indicated articulation

The continuation of Ribock's statement quoted in section 2.2.1 about the "Quantzians" who did not command the technique of double-tonguing suggests that for such flutists, paired slurs could be an alternative for fast passages:

Instead one [player] slurred everything two and two, accentuating the first [note] so violently that every time his upper lip thrust out in a pantomime of spitting; another one did almost the same but with less spitting/.../finally a fourth [player] also slurred two and two together.

Der eine schleifte dafür immer zwey und zwey, wobey er die erste so heftig stieß, dass die Oberlippe stets mit vorflog, und die Pantomime des Spuckens machte; ein Anderer auch ungefähr so, nur dass er weniger spuckte,/.../ und endlich ein vierter, der auch zwey und zwey zusammen hängte.<sup>89</sup>

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84. Smith *Characteristics* 41.

85. Tromlitz *Unterricht* 165-214, transl. 158-193.

86. Tromlitz *Unterricht* 218, transl. 197. He also writes this on pp. 163 (transl. 158), and 167 (transl. 159).

87. "Da fehlet ihm aber ein grosser Vortheil, ohne welchen sein Spielen immer mangelhaft bleiben wird." Tromlitz *Unterricht* 190.

88. See section 2.3.2.

89. Ribock *Über Musik* 714-715.

Tromlitz describes in *Abhandlung* different articulation patterns used for fast passages around him, “to slur two and articulate two, or to slur three and articulate one in the present fashion may be good, but it is nonetheless not always suitable, and is also not what the good singer does.”<sup>90</sup> Here Tromlitz points out that to alternate between tipping and slurring is not similar to a singers’ melisma, which is what the flutist should imitate. This quote is the only reference in my material to the articulation pattern of three slurred notes and one tipped being applied by players. This articulation pattern is commonly indicated in musical scores of this period and earlier.

I apply paired slurs on the last four sixteenth notes in bars 28 and 109 in the fourth movement (Vivace) of Scheibe’s *Sonata II* in b-minor,<sup>91</sup> because they did not sound light and easy enough when double-tongued. I find paired slurs a choice close to hand in the example below, since it occurs in the harpsichord part three bars later. The bars covered in the music example below are track 28 on the CD attached to the studv: the full movement is track 29.

The image shows a musical score for Example 76, consisting of two systems of staves. The first system covers bars 25 to 31, and the second system covers bars 32 to 33. The music is in treble and bass clefs with a key signature of one flat. Bar 28 is highlighted with a dotted line and the letters 'dl' and 'sl' above it, indicating double-tonguing and slurring. The score includes a harpsichord part and a flute part.

Example 76. Scheibe *Sonata II* in b minor, fourth movement (Vivace) bars 25-33. The articulation in bar 28 is indicated by me.

90. “zweye zu binden, und zweye zu stossen, oder dreye zu binden, und eine zu stossen, wie es jezo Mode ist, ist zwar gut, aber es findet nicht überall statt, ist auch das nicht, was der gute Sängler machet.” Tromlitz *Abhandlung* 13. The word “stattfinden” is not the same as in modern German, where this sentence would mean “it does not happen everywhere.” In its older sense it means something between “statthaft sein”=“being appropriate” and “statt finden”=“happen”.

91. Composed probably between 1740 and 1760, Koudal *Flute Sonatas* 6.



Concerning articulation indicated by the composer, Tromlitz agrees with Quantz, "If the composer himself has placed slurs, dots and strokes over the notes, then the player is bound to play it thus if he wishes to chime with the ideas of the composer."<sup>92</sup> In his final example in which articulation is indicated, however, Tromlitz occasionally disobeys this rule, and indicates articulation with *ra* or *d'll* on notes under a slur.<sup>93</sup>

Tromlitz writes in *Unterricht*, "but if there is nothing [written] over them [the notes], it is an indication that the composer wishes to have it played according to the rule."<sup>94</sup> Tromlitz gives a number of rules on how to articulate in slow and moderate tempi where no articulation is indicated.<sup>95</sup> The result of his recommendations is that notes usually are slurred in pairs:

When two notes of equal value are written on different lines or spaces so that the first is the good note and the second is bad, they will be expressed clearly if the first is articulated with 'ta' and the second with 'a' as in the word 'tāā'.../ This connection is generally called slurring.

Wenn zwey Noten von gleicher Geltung, da nemlich die erste die gute, und die zweyte die schlechte ist, auf verschiedenen Stufen zusammen kommen, so werden sie deutlich hervorgebracht, wenn man auf die erste *ta*, und auf die zweyte, *a*, also das Wort *tāā* spricht;/.../man nennet gemeinlich diese Verbindung: schleifen.<sup>96</sup>

The consonant *d* or *t* is alternated with *r*:<sup>97</sup>



Example 77. Tromlitz *Unterricht* 164.

92. "Hat der Componist schon selbst Bogen, Punkte und Striche über die noten gesetzt, so ist der Spieler verbunden, es so zu spielen, wenn er des Setzers Gedanken treffen will." Tromlitz *Unterricht* 196, transl. 181.

93. Tromlitz *Unterricht* 231-235, transl. 208-209.

94. "steht aber nichts darüber, so ist es ein Zeichen, dass er der Componist nach der Regel gespielt haben will." Tromlitz *Unterricht* 196, transl. 181.

95. Tromlitz *Unterricht* 162-170, 173-178, 184-189, transl. 156-162, 164-168, 172-175.

96. Tromlitz *Unterricht* 162-163, transl. 156.

97. Tromlitz *Unterricht* 163, transl. 157.

This articulation (or the reverse *raadaa*) is then indicated in numerous examples in passages at moderate speed.<sup>98</sup>

da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a

\_da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a

\_da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a da\_a\_ra\_a

Example 78. Tromlitz *Unterricht* 186.

The player is, however, recommended to vary her/his articulation in accordance with the character of the passage;<sup>99</sup> one alternative is two slurred and two tipped notes. Tromlitz prints an example with stepwise motion where the tipped notes have dots; the first of them is articulated with *r*.<sup>100</sup> In the following examples this figure occurs with the first tipped note articulated with *r* in stepwise motion,<sup>101</sup> and with *d* in leaps.<sup>102</sup>

98. Tromlitz *Unterricht* 164, 169-170, 178-189, 197-202, 208-214. transl. 158, 161, 162, 170, 172-175, 181-184, 189-192.

99. Tromlitz *Unterricht* 191-212.

100. Tromlitz *Unterricht* 193.

101. Tromlitz *Unterricht* 199, 212, transl. 182, 191.

102. Tromlitz *Unterricht* 198, transl. 182.

Example 79. Tromlitz *Unterricht* 199.Example 80. Tromlitz *Unterricht* 198.

It is difficult to estimate how common this playing style – in which paired slurs dominated, but were alternated with other patterns for the sake of variation – was among other players. According to Catherine Parsons Smith, Andreas Dauscher copies this section by Tromlitz in a slightly abbreviated form in his *Kleines Handbuch der Musiklehre* from 1801.<sup>103</sup>

The idea to imitate the singer's melisma by using legato throughout is strongly rejected by Tromlitz, who writes in *Abhandlung*, "If one wants to let the passages run on without the use of the tongue, that is, without pronunciation, they [the notes] become glued together, they are not distinct from each other and make a bad impression, and it sounds, as Quantz says: like bagpipes."<sup>104</sup> In *Unterricht* he express a similar opinion:

But spare me if you wish to assert that all fast passages can be done without proper and correct movements of the tongue, that is, without articulation; there is really nothing clever in playing fast passages without tonguing or using articulation; arpeggiated or stepwise running passages can indeed be done easily without articulation, but they sound correspondingly poor.

Aber damit verschone man mich, wenn man behaupten wollte, man könnte alle geschwinde Passagen, ohne gehörige und richtige Bewegung der Zunge, neh-

103. Smith *Characteristics* 41.

104. "Will man sie [die passagen] ohne Bewegung der Zunge, nemlich ohne Aussprache, alle so hinlaufen lassen, so kleben sie zusammen, unterscheiden sich nicht, und machen eine schlechte Wirkung, und es klingt, wie Quantz saget: wie eine Sakpfeife;" Tromlitz *Abhandlung* 13.

lich ohne Sprache, machen; geschwinde Passagen ohne Zunge oder ohne Sprache zu machen, ist warlich eine schlechte Kunst; Harfenähnliche oder stufenweis laufende Passagen lassen sich zwar ohne Sprache leichte machen, aber sie klingen auch darnach.<sup>105</sup>

## 2.2.4 Double-tonguing with *d-g/t-k*

I have not found any documentation of double tonguing with *d-g/t-k* from this period.

## 2.2.5 Single-tonguing

A German report on a flutist successfully using single-tonguing is found in Christian Friedrich Daniel Schubart's *Deutsche Chronik* from the year 1774. Schubart writes:

Here in Augsburg, at Music Director Graf's, we recently had the pleasure of hearing the flutist Weiss, born in Mühlhausen. He traveled from London and will return there. I believe that he is at the peak of his art/.../Here one hears none of the unpleasant *Didli Didli* or *Diri Diri* of the Quantz school, but rather the natural sound of the flute, inspired [lit. breathed on, angehaucht] by the living breath of a genius.

Kürzlich hatten wir hier in *Augsburg* bey Herrn Musikdirektorn *Graf* das Vergnügen, den berühmten Flötenspieler *Weiß*, aus Mühlhausen gebürtig, zu hören. Er kam von *London*, und geht wieder dahin zurücke. Ich glaube, er steht auf dem Gipfel seiner Kunst./.../ Hier hört man nicht das unangenehme *Didli Didli* oder *Diri Diri* der *Quanzischen* Schule, sondern es ist der natürliche Ton der Flöte, von lebendigem Odem des Genies angehaucht.<sup>106</sup>

The word “natural” is also used by Anton Bernhard Fürstenau to argue for single-versus double-tonguing. Instead of “*Diri*”, and, in my opinion, also “*Didli*,” the flutist appearing in Augsburg most likely used single-tonguing, which makes this the earliest German source to report in favour of single-tonguing. “Weiss” was mostly likely Karl Weiss,<sup>107</sup> who, however, according to Fairley, was born in Mühlhausen

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<sup>105</sup>. Tromlitz *Unterricht* 236, transl. 210.

<sup>106</sup>. Schubart *Deutsche Chronik* 439-440.

<sup>107</sup>. (1738-1795).

(Mulhouse) in Alsace, not Mühlhausen in Thüringen, which would explain his French style of articulation. Weiss worked in London from 1770.<sup>108</sup>

Ribock claims that one virtuoso he had heard was “stumbling on with single tongue.”<sup>109</sup>

Tromlitz writes in *Abhandlung*, “To tip, as one usually says, all [notes of a passage], is impossible and sounds much too irregular [höckerig].”<sup>110</sup> In my opinion, Tromlitz here refers to single-tonguing, which means that he advises against single-tonguing in fast passages not only because it is according to him not possible, but also because he does not like the effect. I conclude that both Ribock and Tromlitz heard players (at least in Ribock’s case German or German-influenced) using single tongue in fast passages, but in their opinion with a poor result.

On some occasions, Tromlitz suggests single-tonguing, but only for a few notes at a time, “Two equal notes/.../can be separated if the situation calls for it by tonguing ‘tata,’ ‘dada,’ or ‘tatat,’ as though they had strokes or dots over them.”<sup>111</sup> In the musical examples in *Unterricht* there are very few, short fast passages with dots or strokes; when they occur they are all indicated with *t* or *d*.<sup>112</sup>



Example 81. Tromlitz *Unterricht* 211.

It is my impression that for Tromlitz, successive notes with strokes or dots are to be single tongued.

108. Fairley *Flutes* 132.

109. “noch einer stolperte mit der einfachen Zunge herum.” Ribock *Über Musik* 714.

110. “alle [Noten einer Passage], wie man gemeiniglich saget, anzustossen, ist nicht möglich, und klinget höckerig;” Tromlitz *Abhandlung* 13.

111. Tromlitz *Unterricht* 192, transl. 178.

112. Tromlitz *Unterricht* 195, 198, 211, and 212, transl. 180, 182, 190, 191, 192.

## 2.3 England in the 18<sup>th</sup> century

### 2.3.1 Double-tonguing with *d-l/t-tl*

Lewis Christian Austin Granom writes in *Plain and Easy Instructions for Playing on the German Flute*, published in 1766:

I shall here lay open the great secret of the double tongue, which with much pains, assiduity, and labour, took me up four years to accomplish, which I now as frequently teach, in less than so many hours. The double tongue is of that importance to a performer on the German flute, that no one can be a finish'd player without it: It gives spirit and fire to the allegros, awakens the attention of the hearer in the largos, and renders all difficult passages, in music, easy, and is attended with such an amazing articulated execution, as surpasses all imagination. The method of arriving at this great point, is by the action and reaction of the tongue against the roof of the mouth, pronouncing the word, toot-tle, toot-tle, toot-tle, to yourself,<sup>113</sup>

At least a part of this paragraph is copied in the anonymous *The Complete Tutor* from 1770.<sup>114</sup> In 1769, Edward Miller writes in the second edition of his *Six Solos for a German flute*:

On Double tonguing

As it would be very difficult to execute some quick passages, with the rapidity and distinctness they require, by the common method of tonguing: an [invent] ion has been found out of sounding two notes with the tip of the tongue, which the French call le double coup de langue, or double tonguing. The [method] of doing it is as follows: The tongue is always to be kept in the mouth, to express the syllables tut-tle; that is, after having tipped the first note with the tongue, the second is done by keeping tongue on the roof of the mouth, and pushing the wind a little, which produces such a sound as tle.<sup>115</sup>

Miller's technical description fits with *d-l/t-tl*. The "common method" of tonguing refers to single tonguing with only *t* or *d*. On the same page Miller quotes from the French text of *Nieuwe Manier* by Mahaut, which explains his use of the French term *double coup de langue*.

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113. Granom *Instructions* 13.

114. Smith *Characteristics* 44-45.

115. Miller *Remarks*.

In 1771, Luke Heron writes in his *A Treatise on the German Flute*:

There is a method of increasing the rapidity of this instrument, beyond what was formerly known, and which when well executed has really a surprizing effect; this is called the double tonguing, and certainly, in respect to an articulate expression of swiftness, makes it exceed the power of any other instrument. /.../ This is performed by the action and re-action of the tongue; the tongue in coming back, as well as going forward, articulating the note; the manner of executing it, is by the pronunciation of the syllables Tit-tle Tit-tle, or Toót-tle toot-tle; articulating them as swiftly and distinctly as you can, a syllable to each note, taking care to make each syllable equally distinct.<sup>116</sup>

### Of Double tonguing .



Example 82. Heron *Treatise* 33.

The anonymously written methods *New Instructions* and *Thompson's New Instructions for the German Flute*, printed in London about 1780 and about 1780-1810 respectively, also recommend double-tonguing with the syllables *too-tle*.<sup>117</sup> Samuel Arnold devotes two pages to double tonguing in *Dr. Arnold's New Instructions for the German Flute* from 1787. He writes, "Address in Double Tonguing is of the utmost importance to a performer; and it is attained by a proper management of the action and reaction of the Tongue against the Roof of the mouth, while the pupil pronounces to himself the words, tootle, tootle, tootle."<sup>118</sup> J. Wragg's *The Flute Preceptor* from 1792 announces on its front page "an easy method of acquiring the

<sup>116</sup>. Heron *Treatise* 36.

<sup>117</sup>. Spell *Nicholson* 162.

<sup>118</sup>. Arnold *Instructions* 31.

Double tongue.<sup>119</sup> In his second method Wragg's *Improved Flute Preceptor* from 1806 Wragg writes:

The Double Tongue

The chief difficulty in acquiring this is in the Action and Re-Action of the Tongue against the roof of the Mouth, pronouncing at the same time the words Tootle Tootle to yourself, and carefully observing to sound the Notes clearly and distinctly.<sup>120</sup>

Gunn writes in *The Art of Playing the German Flute* from c. 1793:

Of Double Tonguing.

To give a brilliancy and articulation to rapid divisions, the usual method of tonguing has been found inadequate; as it would be impossible to pronounce the letters t or d, with such rapidity as these passages require, a substitute has been found, in a motion of the tongue, consisting of action and reaction, by pronouncing very distinctly the syllables diddle, the first syllable of which articulates one note, and the second is articulated, but in a less distinct manner, by the reaction of the tongue, in pronouncing the second syllable.<sup>121</sup>

In his treatise *The New Flute Instructor* from 1799 Miller writes:

Double Tongueing in those passages proper for it, gives great spirit and brilliance in the execution, and renders perfectly easy what otherwise would be very difficult, if not impracticable, to perform by the common method of tonguing. It is performed by the action and reaction of the tongue against the roof of the mouth, pronouncing, at the same time distinctly the syllables Tootle, Tootle.<sup>122</sup>

In the introduction, Miller writes that his book is intended entirely for beginners, and that it provides them with the necessary techniques such as double-tonguing.<sup>123</sup> Apparently he does not consider double-tonguing difficult or advanced. Double-tonguing with *d-l/t-tl* is relatively easily achieved for English speakers, which might explain the massive support for it. In *Instructor* Miller claims that “the first prin-

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119. Gerhold *Wragg* 138.

120. Wragg *Improved* 14.

121. Gunn *The Art* 14.

122. Miller *Instructions* 13.

123. Miller *Instructions* iv.



ted Instructions for Double-Tonguing the German Flute, were given by me in a book of Solos, I composed many years since.”<sup>124</sup> As seen above, this statement is incorrect, even if limited to English publications; Granom described the technique before Miller.

Granom indicates *toot-tle* as well in leaps in his examples.<sup>125</sup> Miller, on the contrary, writes in *Remarks*, “It must be observed, that double tonguing should not be used, when the notes proceed regular leaps or large intervals.”<sup>126</sup> Miller prints one example with consecutive sixteenth notes and with *d-l/t-tl* indicated, one with sixteenth notes in stepwise movement with *d-l/t-tl* indicated, and the following example without any indicated articulation:



Example 83. Miller *Remarks*.<sup>127</sup>

Miller does not communicate what he prefers instead of double-tonguing in this passage; to me it sounds clearer when executed with single tongue than with *d-l/t-tl*, especially combined with short legato slurs. Miller indicates double-tonguing in a few places in both *Six Solos for a German Flute* and *Instructions*; one of them consists of broken chords (triads).<sup>128</sup> One Air included in *Instructions*<sup>129</sup> bears the comment, “Air, in which smooth playing or slurring, and double tonguing are contrasted.” In my opinion the thirty-second notes in stepwise movement in the fifth system in this piece are intended to be double-tongued.

Granom requests double-tonguing in all triplets, whether they are quarter notes, eighth notes or sixteenth notes,<sup>130</sup> and Arnold recommends double-tonguing for eighth notes in Giges.<sup>131</sup> This suggests a use of double-tonguing in moderate tempi as well as in fast ones.

124. Miller *Instructions* i.

125. Granom *Instructions* 14-15.

126. Miller *Remarks*.

127. © British Library Board. All rights Reserved. British Library shelfmark or manuscript number: d.150.e.

128. Miller *Instructions* 54.

129. Miller *Instructions* 39, reproduced in section 1.4.2.

130. Granom *Instructions* 14-15.

131. Arnold *Instructions* 32.

Gunn reports on a criticism of *d-l/t-tl*, namely, that the reaction is not as perfect as the action.<sup>132</sup>

### 2.3.2 Double-tonguing with *d-r/t-d*

Gunn writes:

*Of the New, or Staccato Tonguing.*

This has never before been published; I learned it, or rather stole it, from an *amateur* on the Continent several years ago, but never heard of any other that possessed it. It is not liable to the objection made to the common double tonguing, [*d-l/t-tl*] that the *reaction* is not equally perfect with the action; for it is impossible to distinguish any difference in effect. The two syllables that are by one action and reaction to articulate two notes, are *teddy* or *tiddy*, which, when produced for some time very distinctly, and afterwards softening the consonants as much as possible, will acquire a volubility as great as the other double tongue, but infinitely more articulate and distinct. It must at first be practised slowly, in the following manner: a portion of air is expelled while the first syllable, *ted*, is pronouncing; which syllable ends by the tongue returning to the palate, where it is to adhere until, by its reaction *dy*, it expel another portion of air, and give an equal articulation to the second note:<sup>133</sup>

Example 84. Gunn *The Art* p. 6 in the part with examples.<sup>134</sup>

The fact that Gunn calls this articulation “staccato tonguing” suggests that he considers it more suitable for staccato passages than *d-l/t-tl*. Gunn believes that it might originate in Quantz’s way of articulating dotted notes:

The inventor of this new method of tonguing rapid passages, seems to have been led to it from Quantz’s manner of tonguing long accented notes, which follow

132. Quoted below.

133. Gunn *The Art* 14

134. Reproduced with kind permission of Janice Dockendorff Boland.

very short unaccented notes, in a very quick succession, as in the second bar of No. 18,



Example 85. Gunn *The Art* p. 6 in the part with examples, Example No. 18, second bar.<sup>135</sup>

where we have made use of the syllables *tedee*, for the unaccented, and accented notes;.../ We have adopted these syllables, as introductory to the new staccato tonguing, instead of Quantz's *ri*, *tiri*, which he pronounced *ree*, *tiree*; and it is plain, that by changing the accent to the first of the two syllables, which will make *tirry*, *tirry*, in our pronunciation; and turning *r* into a soft pronunciation of *d*, it will produce this new tonguing, which is attended with more difficulty in making the tone clear and good, than in acquiring the articulations and volubility; and the former will be greatly promoted by making the strokes of the latter as softly as possible against the palate.<sup>136</sup>

I have not found any indications that this passage by Gunn influenced his countrymen, or any other players.

### 2.3.3 Double-tonguing with *d-g/t-k* and single tongue

I have not found any documentation of double tonguing with *d-g/t-k* or single tonguing used for fast passages from this period.

### 2.3.4 Legato-playing and relating to indicated articulation

Granom writes, "and whoever does not articulate distinctly every Note of an Allegro, or quick movement, but slurs and slobbers them over, cannot be looked upon as a Player."<sup>137</sup> Heron expresses a similar opinion, but more elaborately:

135. Reproduced with kind permission of Janice Dockendorff Boland.

136. Gunn *The Art* 14. The word "amateur" during this period was not condescending; on the contrary, working for pay was demeaning.

137. Granom *Instructions* 16.

I would by no means have you fall into a custom of slurring; there is not the least difficulty in acquiring that particular, the danger is the suffering it to become too much a custom; the articulate tip with the tongue, is what should be always practised, till you have made yourself master of it; then, indeed, and not till then, according to the tenderness or delicacy you mean to express, may slurring be introduced; and, might a general rule be prescribed (which indeed can not, nor should not, where the performer, who ought to give scope to his imagination, is the director) I think it is a better way of slurring, than that alternate tonguing and slurring, which is generally met with; and, which by its frequent repeated sameness, rather tires the ear: this manner has a more liquid flow, and does not run that hazard; however, that must entirely be regulated by the ideas at the time presenting themselves.<sup>138</sup>

The phrase “alternate tonguing and slurring” probably refers to articulation patterns such as paired slurs and slurring two, tipping two. Heron seems to prefer a more varied, individual and extempore use. The cite by Granom above I interpret not as a condemnation of all cases of introducini legato, but of a sloppy and routine use.

Miller prints a tune, “Fischer’s Minuet,” which begins:



Example 86. Miller *Instructions* 47.<sup>139</sup>

The sign \* above the g' in the last bar of the second line refers to Miller’s comment, “In this and similar passages instead of tipping every note with the tongue express hu tu hu tu &c.”<sup>140</sup> Playing that way creates legato two by two across the beat. Probably that is what Miller requests, which makes this an example of a recommendation to add slurs despite the indicated articulation.

138. Heron *Treatise* 34.

139. © British Library Board. All rights Reserved. British Library shelfmark: b.118.

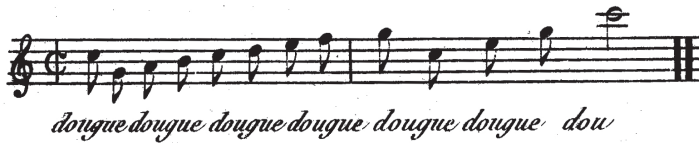
140. Miller *Instructions* 47.

## 2.4 France, late 18<sup>th</sup> century and the beginning of the 19<sup>th</sup> century (neoclassicism)

### 2.4.1 Double-tonguing with *d-g/t-k* and *d-r/t-d*

François Devienne writes in the preface of *Nouvelle Méthode pour la Flute* from c. 1792 that he finds himself obliged to confront certain manners, among them double-tonguing.<sup>141</sup> In the section about articulation he says:

Double tongue



It may also be pronounced “Tourou” or “Turu”; but no matter how it is pronounced, it is no less faulty, in that it only sounds like a disagreeable rolling to the ear. It is impossible to have clarity of execution; it prevents those who use it from giving nuances to the runs and from having any expression. Besides, why use unnatural means? What other instrument uses this kind of articulation? Does the clarinet, the bassoon, the oboe, or the horn make use of it? I pose these questions only to lovers of this stammering sound.

Double-coups de Langue

On le prononce aussi *Tourou* ou *Turu* mais de quelque maniere qu’il soit prononcé il n’en est pas moins défectueux en ce qu’il ne représente à l’oreille qu’un rouli désagréable; qu’il est impossible d’avoir de la nêteté dans la l’exécution et qu’il contraint celui qui l’employe à ne pouvoir nuancer ses traits ni donner aucune expression d’ailleurs pourquoi employer des moyens sur-naturels? est-il quelqu’autre instrument où l’on emploie cette articulation? la Clarinette, le Basson le Hautbois et le Cor s’en servent-ils? je ne fais ces questions qu’aux amateurs de ce bredouillage.<sup>142</sup>

141. “Je me trouverai peut être obligé de fronder quelques usages, tels que les doubles coups de Langue.” Devienne *Méthode* 1.

142. Devienne *Méthode* 9.

Mathieu Peraut agrees in *Méthode pour la Flûte* from 1800-1803:

Many people believed and still believe, that there is double-tonguing on the flute; nothing could be more erroneous: I can only attribute this error to their inexperience, because it suffices to consult one's common sense to be persuaded that double-tonguing cannot produce the effect of two tongue strokes at the same time. To do so it would be necessary to have two tongues, and no one can prove to me that there can be double-tonguing on the flute as long as they cannot prove that one equals two.

Beaucoup de personnes ont crû et croyent encore, qu'il existe sur la Flûte un double coup de Langue, rien n'est si faux: je ne puis attribuer cette erreur qu'à leur inexpérience, car il ne s'agit que de consulter le bon sens, pour être persuadé qu'un double coup ne peut produire son effet qu'en frappant deux coups à fois, et pour que cela fut possible, il faudrait avoir deux langues, ainsi l'on me prouvera pas plus qu'il existe un double coup de langue sur la Flûte, que l'on me prouvera qu'un fait deux.<sup>143</sup>

Peraut continues, "I have already said, and I repeat: there is no such thing as double-tonguing on this instrument. The *Dougue Dougue Dougue* is nothing but a sticky mess and the *Tourou Tourou* or *TuruTuru* a miserable charlatanism."<sup>144</sup>

To make these flutists so upset, double-tonguing with *du-gue* and also with *d-r/t-d* must have been used in France at this time; the latter is in accord with Gunn's statement that he had heard a flutist "on the continent" using *d-r/t-d* for double-tonguing.<sup>145</sup> Devienne's complaint above is the earliest report on double-tonguing with *d-g/t-k* during the period of my investigation.<sup>146</sup> Drouët writes in *Drouët's Method of Flute Playing* from 1830, "in France, they have for the last 40 years used Dou-gue with which method I never heard thirty notes played well."<sup>147</sup>

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143. Peraut *Méthode* 4.

144. "Je l'ai déjà dit, et je le répète, il n'existe point de double Coup de Langue sur cet Instrument. Le *Dougue Dougue Dougue*, n'est qu'un barbouillage empâté. Le *Tourou Tourou* ou *TuruTuru* qu'un miserable Charlatanisme." Peraut *Méthode* 23.

145. Gunn *The Art* 14, quoted in section 2.3.2.

146. The technique is documented for wind instruments in the 16<sup>th</sup> and 17<sup>th</sup> centuries.

147. Drouët *Method* 14-15.

### 2.4.2 Double-tonguing with *d-l/t-tl*

Amand Vanderhagen writes in *Méthode nouvelle et raisonnée pour la flute* from c. 1788:

The latter [double-tonguing] is difficult to explain in writing, it should be demonstrated well by a teacher. Several authors have tried to explain it in writing pronouncing Tu Le Tu Le, another pronouncing Di Del Di Del, but in spite of all these attempts, the student wastes time trying. Personally, I am convinced that double-tonguing cannot be precisely demonstrated in writing.

ce [le double coup de langue] dernier ne peut être bien expliqué par écrit il faut qu'il soit bien démontré par un Maître. Plusieurs Auteurs ont cherché à le démontrer par écrit en faisant prononcer Tu Le Tu Le, un autre fait prononcer Di Del Di Del, et malgré tous ces moyens, l'écopier perd son temps à le chercher. Pour moi je suis persuadé que le double coup de langue ne peut être démontré exactement par écrit.<sup>148</sup>

That Vanderhagen seems to have encountered the technique only through writing suggests that it might not have been used by or around him. His use of the spelling *Di Del* indicates that he had acquainted it in Mahaut's *Nieuwe Manier*. Devienne writes, "There is another tonguing which has a great effect, equivalent to the 'détaché' bowing of the violin, and which one is able to use in all possible runs at rapid tempi. It is done by striking the tongue against the palate."<sup>149</sup> Although Devienne does not give any syllables for the last articulation he describes, "striking the tongue against the palate" suggests *d-l/t-tl*. Devienne's treatment of double-tonguing with *d-l/t-tl* is contradictory. On one hand he includes it in the section about double-tonguing, which he condemns; on the other hand he is positive towards it. The impression given is that he knows about it, but does not use it himself.

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148. Vanderhagen *Méthode nouvelle et raisonnée pour la flute*, quoted in Castellani/Durante *Lingua* 213.

149. "Il est un autre coup de Langue qui est d'un grand effet, qui équivaut le coup d'archet détaché du Violon et que l'on peut employer dans tous les traits possibles en vitesse. Il se fait en frappant de la Langue au palais." Devienne *Méthode* 9, transl. Montgomery *Devienne* 60.

### 2.4.3 Single tongue

Vanderhagen,<sup>150</sup> Devienne<sup>151</sup> and Cambini<sup>152</sup> print music examples with eighth notes to be articulated with single tongue. There is no documentation of a praxis of alternating with *r* from this period.

That single-tonguing was also used for fast passages is indicated by Peraut, who writes, “one [tongue] stroke can only strike after another, and it should always strike on the upper palate; this requires a great deal of practice to be executed at both fast and slow tempi: this is the true secret of the effects of tonguing,”<sup>153</sup> and, “It should be noted that in reality we are talking about the speed of détaché strokes, but no matter how fast one manages to move the tongue, the strokes can only come one after the other.”<sup>154</sup>

Antoine Hugot and Georges Wunderlich write about a tonguing that is “executed by striking the tongue lightly against the palate above the upper teeth and pulling the tongue back to pronounce the syllable *du*,”<sup>155</sup> and which “is already used by several distinguished artists for speed and lightness, and becomes indispensable for détaché.”<sup>156</sup> Above the example below they write, “All notes detached. This articulation, which is the most difficult and most brilliant of all, should be performed by tonguing each note and pronouncing the syllable *du*. It requires a great deal of practice to master all the different tempi.”<sup>157</sup>

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150. Vanderhagen *Méthode nouvelle et raisonnée* 10, quoted in Castellani/Durante *Lingua* 212 and Vanderhagen *Nouvelle Méthode* 36.

151. Devienne *Méthode* 8.

152. Cambini *Méthode* 5.

153. “un coup ne peut être frappé qu'après l'autre et c'est toujours au palais que la langue doit frapper; un grand exercice pour le plus ou moins de vitesse, voilà le véritable secret des effets du Coup de langue.” Peraut *Méthode* 23.

154. “C'est vraisemblablement (sic) de la vitesse des coups détachés qu'il ont voulu parler, mais tel vite qu'on fasse aller la Langue, un coup ne vient jamais qu'après l'autre.” Peraut *Méthode* 4.

155. “se fait en portant la langue légèrement au palais au dessus des dents supérieures et en la retirant pour prononcer la syllabe *du*.” Hugot and Wunderlich *Méthode* 6.

156. “qui est déjà pratiqué par plusieurs artistes distingués, sert à la vitesse, à la légèreté et devient indispensable pour le détaché.” Hugot and Wunderlich *Méthode* 6-7.

157. “Toutes les notes détachées. Cette articulation qui est la plus difficile et la plus brillante de toutes, doit se faire en donnant le coup de langue sur chaque note et en prononçant la syllabe *du*. Il faut l'exercer beaucoup pour acquérir tous les degrés de vitesse.” Hugot and Wunderlich *Méthode* 12.





Example 87. Hugot and Wunderlich *Méthode* 7.

I conclude that Hugot and Wunderlich consider single-tonguing a brilliant and useful articulation for fast passages. That they suggest *d* for fast passages instead of *t*, which they recommend for eighth notes and longer note values, indicates that they want smooth and more fluent passages than would be the case with the more spitting *t*.

#### 2.4.4 Legato-playing and relating to indicated articulation

Devienne writes, “where the passage is not articulated in any way by the author, the performer can use the articulation which is most familiar to him.”<sup>158</sup> All the methods from this period that I have had access to<sup>159</sup> include tables of examples showing combinations of tongued and slurred notes. Two pages in Devienne’s *Méthode* shows articulation patterns with sixteenth notes in a section called “Examples of different articulations which certain passages necessarily require, and which are often left out in the copy or in the gravure.”<sup>160</sup> In Hugot and Wunderlich’s *Méthode* there is a corresponding section of four pages named “Examples of different

158. “lorsq’un trait n’est articulé d’aucune maniere par l’Auteur, l’exécuteur peut employer l’articulation qui lui est la plus familiere.” Devienne *Méthode* 8.

159. Devienne’s *Méthode*, Cambini’s *Méthode*, Vanderhagen’s *Méthode nouvelle et raisonnée* and *Nouvelle Méthode*, Peraut’s *Méthode* and Hugot and Wunderlich’s *Méthode*.

160. “Exemples d’Articulations différentes que certain traits exigent de nécessité et qui souvent sont oubliés dans la Copie ou la Gravure.” Devienne *Méthode* 10.

articulations, and the way to use them in case they are not indicated.<sup>161</sup> Devienne as well as Hugot and Wunderlich print examples without indicated articulation that are to be articulated freely (“à volonté”) by the student.<sup>162</sup> I conclude that the player is supposed to be able to apply legato slurs where no articulation is indicated. Hugot and Wunderlich write:

This choice [of articulation] is related to tempo and the character of the piece as well as to the type of passages. Although one cannot prescribe strict rules concerning this subject, one can nevertheless say that one should generally employ the slur in slow, gracious pieces and detached notes in fast pieces.

Ce choix [de l'articulation] est relatif au mouvement et au caractère du morceau ainsi qu'au genre des traits; et quoiqu'on ne puisse pas prescrire de règles invariables sur cet objet, on peut dire néan moins qu'il faut employer généralement le coulé dans les morceaux lents ou d'un genre gracieux, et le détaché dans les morceaux vifs.<sup>163</sup>

The études in Hugot and Wunderlich's *Méthode* include many legato slurs, whereas the articulation in the *Sonates* included in the method to a great extent has been left to the performer's discretion.

Vanderhagen writes in *Nouvelle Méthode de Flute* from 1799:

When you find a passage like the following one, where there are no markings, neither slurs nor dashes, which happens quite often, one should, if the movement is not too fast, slur the first two and tip the two last. But if the piece is too fast to do this, they should be slurred two by two or even all eight together.

Lorsqu'on trouvera un passage comme celui ci-après ou il n'y a aucun signe du coulé ni du piqué ce qui arrive très souvent, il faudra si le mouvement n'est pas trop vif, couler les deux 1es et piquer les deux dernières, mais si le morceau alloit trop vite il faudra les couler deux par deux ou bien tous les huit ensemble.<sup>164</sup>

In *Méthode nouvelle et raisonnée* Vanderhagen expresses himself similarly.<sup>165</sup> Van-

161. "Exemples des différens coups de langue, et manière don't il faut les employer lorsqu'on n'en a pas indiqué." Hugot and Wunderlich *Méthode* 9.

162. Devienne *Méthode* 11 and 14, Hugot and Wunderlich *Méthode* 12-13.

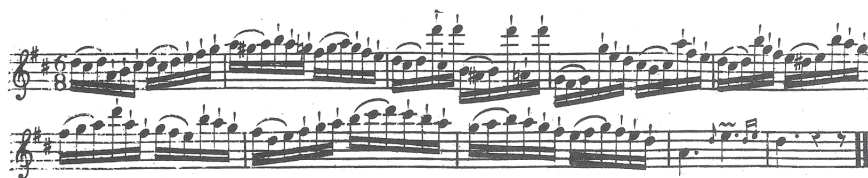
163. Hugot and Wunderlich *Méthode* 9.

164. Vanderhagen *Nouvelle Méthode* 37.

165. Vanderhagen *Méthode nouvelle et raisonnée*, quoted in Castellani/Durante *Lingua* 213.

derhagen considers the articulation pattern two slurred, two tipped more useful and more beautiful than single-tonguing.<sup>166</sup> Devienne also likes it, “This [two slurred, two tipped] is one of the most brilliant tongue strokes when one has mastered it perfectly.”<sup>167</sup> For Hugot and Wunderlich, on the other hand, the pattern with two slurred, two tipped is less preferable than single-tonguing, being “much slower and less pronounced.”<sup>168</sup> Hugot and Wunderlich consider single-tonguing and two slurred, two tipped to be the two main choices for fast passages,<sup>169</sup> which is further emphasized by two examples with sixteenth notes, articulated in these two ways and placed at the end of the section with different articulation patterns with eighth notes.<sup>170</sup>

Devienne writes that articulating with paired slurs “is very easy and very useful,”<sup>171</sup> and Hugot and Wunderlich are of the opinion that “this articulation has a very good effect, but it must not be abused, it suits especially passages where the notes move in leaps.”<sup>172</sup> According to Devienne, chromatic scales in sixteenth notes are generally slurred, or articulated two by two.<sup>173</sup> Hugot and Wunderlich write that a chromatic scale is usually slurred two by two.<sup>174</sup>



Example 88. Devienne *Méthode* 14.

Devienne writes under the example reproduced above, “Generally passages of sixteenth notes with the time signature 6/8 or 3/8 should be articulated two by two, if

166. Vanderhagen *Méthode nouvelle et raisonnée*, quoted in Castellani/Durante *Lingua* 212.

167. “C’est un des Coups de langue le plus brillant quand on le possède avec perfection” Devienne *Méthode* 8.

168. Hugo and Wunderlich *Méthode* 6–7.

169. Hugo and Wunderlich *Méthode* 6.

170. Hugo and Wunderlich *Méthode* 9.

171. “ce coup de Langue est un des plus aise et des plus essentiel” Devienne *Méthode* 8.

172. Hugot and Wunderlich *Méthode* 14.

173. “En général les traits ou games Chromatiques en Doubles-Croches se lient ou s’articulent de deux en deux.” Devienne *Méthode* 14.

174. Hugot and Wunderlich *Méthode* 9.

you do not have a tongue vivid enough to articulate as above”<sup>175</sup> I conclude that in this period, two slurred, two tipped was a favoured articulation pattern, although paired slurs was considered easiest and most useful for fast passages.

Hugot and Wunderlich also present another type of paired slurs:



Example 89. Hugot and Wunderlich *Méthode* 10.

Hugot and Wunderlich write that the articulation above is more brilliant than the common type of paired slurs, and very effective in certain passages.<sup>176</sup>

### 2.4.5 Triplets

Devienne suggests different articulation patterns for triplets; all including slurs.<sup>177</sup> Vanderhagen writes that two slurred, one tipped is more useful than all single tongued.<sup>178</sup> Hugot and Wunderlich prefer slurring two, tipping one over slurring three and three, because it is easier and more useful.<sup>179</sup> About playing triplets with all notes detached, Hugot and Wunderlich write, “This articulation is brilliant, but it should be used with discretion, since repeated or over-prolonged use would render the execution monotonous.”<sup>180</sup> Though all the examples with triplets are with eighth notes, I believe the articulation patterns described were used for fast passages as well as moderately fast passages.

175. “En général les traits en double Croches dans la mesure en Six huit ou en trois huit doivent être articulés de deux en deux à moins qu'on n'ait la Langue assez vive pour les articuler suivant l'exemple ci dessus.” Devienne *Méthode* 14.

176. “Cette articulation est plus brillants que la précédente [‘normal’ slurs two by two] et produit beaucoup d’effet dans certain traits.” Hugot and Wunderlich *Méthode* 10.

177. Devienne *Méthode* 12-14.

178. Vanderhagen *Méthode* 37.

179. Hugot and Wunderlich *Méthode* 13.

180. “Cette articulation est brillante, mais il faut l’employer avec réserve, car souvent répétée ou trop prolongée elle répandrait beaucoup de monotonie sur l’execution.” Hugot and Wunderlich *Méthode* 14.

## 2.5 Northern Europe in the 18<sup>th</sup> century

Since the source material concerning flute playing from Northern Europe is considerably less than from the areas discussed above, it is difficult to draw conclusions about praxis. As in the corresponding section on vibrato (1.6), I have looked at general influences as well as translations and the spreading of flute methods.

Johann Daniel Berlin's *Musicalische Elementer*, printed in Trondheim in 1744, does not include information on double-tonguing or tonguing with *r*.<sup>181</sup> A Swedish handwritten translation of Quantz's *Versuch* from 1783, however, includes the sections about tonguing with *r*, double-tonguing and applying legato. It is reasonable to assume that an accomplished flutist such as Raehs knew and used double-tonguing with *d-l/t-tl* and possibly also tonguing with *r* from his stay in England in the 1720's.

## 2.6 Southern Europe in the 18<sup>th</sup> century

Concerning Italy, on one hand, double-tonguing with *d-l/t-tl* and tonguing with *t-r* on sixteenth notes are described for recorder and cornetto in Bismantova's *Compendio Musicale* in 1677/94.<sup>182</sup> On the other, since double-tonguing with *d-l/t-tl* was not universally used in France, and tonguing with *r* in moderately fast passages went out of fashion there before the middle of the 18<sup>th</sup> century, a flutist from the middle or latter part of the century, influenced by French playing, might not have used either or. Ribock writes in 1783 about a flutist who, as an excuse for not mastering double-tonguing with *d-l/t-tl*, claimed that it was not well done anymore in France and Italy.<sup>183</sup> In Antonio Lorenzoni's *Saggio per ben Sonare il Flauto Traverso* from 1779, the section about articulation is derived from Quantz's *Versuch*, but considerably shorter. Neither double-tonguing nor the application of legato is described, and alternating with *r* is described only for dotted notes.<sup>184</sup> There is, however, a complete Italian translation of Quantz's *Versuch*.<sup>185</sup>

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181. Grave-Müller *Tungens figur* 168.

182. Bismantova *Compendio musicale*, quoted in Castellani/Durante *Lingua* 140, 142.

183. Ribock *Über Musik* 714.

184. Lorenzoni *Saggio* 56-57.

185. Reilly *Bibliography* 347.

Ribock castigates the playing of Niccolò Dôthel, whose style, according to Ribock, is mannered, and whose articulation is characterized by among other things, “A complete lack of tongue or rather, its inappropriateness.”<sup>186</sup> Ernst Ludwig Gerber slightly alters this information in his *Historisch-biographisches Lexicon der Tonkünstler* from 1790 to, “Dôthel has, so to speak, a manner to play the flute which is contrary to that of Quantz, where he does not use the tongue at all,”<sup>187</sup> creating a myth that Dôthel did not use the tongue at all.<sup>188</sup>

## 2.7 France c. 1810-1850

### 2.7.1 Double-tonguing with *d-g/t-k*

Antoine Tranquille Berbiguier writes in his *Méthode Pour la Flûte* from 1818:

It remains to contest Devienne’s opinion about double-tonguing. “Why, he says, should we use this unnatural means of playing? (1) The oboe, the horn, the bassoon, etc. do they use this extraordinary means?” To which we respond that each instrument has its particular character and the means that work, for example, on the horn, cannot of course be transmitted to the bassoon and the clarinet and others. If their embouchure is different, why should their means of articulation be the same? We are no fonder than Devienne of the disagreeable rolling sounds and the noise, but the difficulty one encounters in pronunciation of this or that articulation does not seem to be a sufficient reason to refuse to study it.

(1) There is nothing unnatural in this case, because it is always the tongue that is the principal actor.

Il nous reste à combattre l’opinion de *Devienne* sur le *double coup de langue*. “Pourquoi, dit-il, avoir recours à des moyens surnaturels? (1) le Hautbois, le Cor, le Basson, &c. se servent-ils de moyens extraordinaires?” à cela nous répondons que chaque instrument a son génie particulier, et que tel moyen qui serait bon, par exemple: sur le cor, pourrait fort bien ne pas convenir au *basson*, à la *clarinette*, et autres. Puisque leur embouchure est différente, pourquoi la manière d’articuler devrait-elle être la même? Nous n’aimons pas plus que *Devienne* ce

186. “gänzlicher Mangel an Zunge, oder lieber Unstatthaftigkeit derselben;” Ribock *Über Musik* 719-720.

187. “Dothel hat in gewissermaszen ein entgegengesetzte Manier von Quantzen, die Flöte zu blasen, indem er die Zunge gar nicht braucht;” Gerber *Historisch-biographisches Lexicon der Tonkünstler*, quoted in Vester *Music* 132.

188. See Powell *Flute* 308.

*roulis desagreable* et ce *bredouillage*: mais la difficulté que l'on peut rencontrer à prononcer telle ou telle autre articulation, ne nous paraît pas une raison suffisante pour renoncer à l'étudier.

(1) Il n'y a rien de surnaturel, ici, puisque c'est toujours la langue qui est l'agent principal.<sup>189</sup>

In his chapter on double-tonguing Berbiguier gives practicing advice and examples on its application. In all his examples and exercises Berbiguier indicates *dou-gue*. He writes that it can also be pronounced *Dougou* or *Dug*.<sup>190</sup> This makes Berbiguier's *Méthode* the first flute treatise to recommend double-tonguing with *d-g/t-k*. Berbiguier devotes in all ten pages to double-tonguing with *d-g/t-k*.<sup>191</sup>

Eugene Walckiers writes in *Méthode de Flûte*, first published in 1829, "There is another type of articulation which is called double-tonguing: nothing equals its brilliant rapidity. Although very few persons have mastered it, it is possible for anyone to learn, all that is needed is a little perseverance."<sup>192</sup> Later he says:

Double-tonguing is executed with two different articulation syllables alternately repeated, which gives the tongue great flexibility. A number of syllables can be used: *Dou Gue, Dou Gou, De Gue, Deu Gue, Te Que, Tu Te, Tu Tel, Ti Tel, Tut Le* (pronounced as the English), *De Re, Deu Reu, Dou Rou, Du Ru* (1) */.../* the French [often use] the *Dou Gue, Dou Gou, De Gue./.../* Among all these syllables we choose *De Gue* for double-tonguing.

Le Double Coup de Langue se forme de deux articulations différentes qu'on répète alternativement qui donne à la langue une grande agilité. Plusieurs syllabes servent à son exécution: *Dou Gue, Dou Gou, De Gue, Deu Gue, Te Que, Tu Te, Tu Tel, Ti Tel, Tut Le* (prononcé à l'anglaise), *De Re, Deu Reu, Dou Rou, Du Ru /.../* les François [servent beaucoup] de *Dou Gue, Dou Gou, De Gue./.../* Parmi toutes ces syllabes, nous choisirons *De Gue*, pour établir le *Double coup de langue*.<sup>193</sup>

189. Berbiguier *Méthode* 6.

190. "On peut prononcer aussi Dougou ou Dug." Berbiguier *Méthode* 242.

191. Berbiguier *Méthode* 6, 242-259 (études 252-259).

192. "Il existe une autre manière d'articuler le coup de langue qu'on nomme Double coup de langue: rien n'égale sa brillante rapidité. Peu de personnes le possèdent, et cependant toutes peuvent y prétendre, il ne faut pour cela qu'un peu de persévérance." Walckiers *Méthode* 40.

193. Walckiers *Méthode* 154.

Jean-Louis Tulou writes in his flute method from 1835:

The double tongue is produced by pronouncing *tu que* (tu on the first note, *que* on the second). A variety of tonguing syllables may be used to produce the double tongue. I don't claim that my system is the best, but since my students have used it successfully and without much difficulty, I believe I am entitled to show preference for it.<sup>194</sup>

Tulou was working professionally in Paris already in 1802; I find no reason to believe that he did not use double-tonguing with *d-g/t-k* also early in his career.

Coche writes in *Méthode pour servir à l'enseignement de la nouvelle Flûte* from 1838:

the same choice [of syllables] cannot serve as a rule for everyone, because every individual's tongue is different, and while trying to get an idea about double tongue, by articulating several syllables, each person will find which ones are more or less easy for them to pronounce./.../ we generally work on the following syllables; *du ru, dou rou, tu te, tu tel, ti tel, tu le, du gue, ti cle, tu du, tu ru, tu gue, tug tug, te ke, gou gue, de gue, deu reu, deu geu, dou gou, te gue, de re, /.../* and the French [use] the *de gue, dou gue, dou gou. /.../* The following are the two principal articulations I have used as described above: *te que* (or *de re*.)

le choix qu'on a fait [des syllabes] ne saurait servir de règle pour tout le monde, puisqu'il faut tenir compte des différences de l'organe dans chaque individu, et qu'en essayant de donner une idée du double coup de langue par l'articulation de quelques syllabes, les unes deviennent plus ou moins faciles à prononcer./.../ nous engageons à travailler les syllabes suivantes. *du ru, dou rou, tu te, tu tel, ti tel, tu le, du gue, ti cle, tu du, tu ru, tu gue, tug tug, te ke, gou gue, de gue, deu reu, deu geu, dou gou, te gue, de re, /.../* et les Français [se servent] *de de gue, dou gue, dou gou. /.../* Voici les deux articulations principales dont je me suis servi dans le sens expliqué plus haut. *te que, (ou de re.)*<sup>195</sup>

Coche indicates all his exercises and examples with *te-que*, and under that *de-re*.

Dorus writes in *L'Etude de la Nouvelle Flûte* from c. 1840, "The two last études in the Method were expressly composed to practice the particular articulation known as double-tonguing. This double articulation is achieved by a double movement of

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194. Tulou *Method* 8.

195. Coche *Méthode* 130.



the tongue, as if pronouncing te-ke, teke.”<sup>196</sup>

Reports from outside France agree with the French sources. Thomas Lindsay writes in *The Elements of Flute-Playing* from 1828, “In France, previously to the appearance of M. Drouet’s work, /.../ *double-tonguing* had usually been taught by repeating the two syllables Dou-gue.”<sup>197</sup> The article “Zunge oder Zungenstoss” in *Universallexikon der Tonkunst* (1835-38), edited by Gustav Schilling, reports that *dougue dougue* is used by the French.<sup>198</sup> A review of Drouët’s *Méthode Pour la Flûte* in *Allgemeine Musikalische Zeitung* refers to *dou-gue* as the syllables used for double-tonguing in France.<sup>199</sup> Richard Carte writes in *A Complete Course of Instructions for the Boehm Flute* from 1845 that “*diggadigga*, or, what is nearly the same, *tukkatukka*, is much used in France.”<sup>200</sup> Richard Rockstro reports in *The Flute* from 1890:

During the last century, the syllables dou’-gou, deu’-gue, te’-que (all with French pronunciation), and others of similar effect, came into vogue in France. I am unable to give the date of their introduction or the name of him who first used them, but from the time of Wunderlich (1755-1819) they have been generally adopted by the French players.<sup>201</sup>

Some, however, criticised the use of these syllables; Drouët writes in *Méthode* from 1827:

I do not know by what fatality people are led to imagine, in France, that the syllables best adapted for Double-Tonguing are *Dou-gue*. Certainly nothing can be less calculated to elicit a clear note from the Flute, than this guttural sound *gue*, especially in Rapid Passages, which are properly those in which the Double-Tongue should be employed. Try, for instance, to sound the lower D five or six times successively, by pronouncing the syllable *gue*, and you will judge for yourself whether anything better could have been invented to lead the pupil into error. It is true that I have heard Double-Tonguing performed after this fashion; but then *how* was it done?

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196. “Les deux dernières études de la Méthode sont expressément composées pour s’exercer à une articulation particulière connue sous le nom double coup de langue. Cette double articulation s’obtient par un double mouvement de la langue, comme si l’on prononçait te-ke, teke.” Dorus *Etude* 17. The etude is on page 101.

197. Lindsay *Elements* 97. “Drouet’s work” refers to the method from 1827, quoted below.

198. Schilling *Universallexikon* 921.

199. *Allgemeine Musikalische Zeitung* XXXII (1830): 500.

200. Carte *Instructions* 26.

201. Rockstro *Flute* 510.

Je ne sais par quelle fatalité on s'est imaginé en France, que les Syllabes qui conviennent le mieux à ce qu'on y nomme Double Coup de Langue étaient: *Dou Gue*. Certes, rien de plus ingrat pour tirer un Son de la Flûte que ce Son guttural *Gue*, et surtout dans les traits rapides qui sont tout justement ceux où l'on emploie le Double Coup de Langue. Essayez de faire sortir avec rapidité cinq ou six fois de suite par exemple le *Ré* d'en bas, en prononçant *Gue*, et vous jugerez vous meme, si l'on pouvait inventer quelque chose de plus propre à induire les Elèves en erreur. Il est vrai que j'ai entendu faire le Double Coup de Langue en prononçant *Dou Gue*; mais comment était-il fait!<sup>202</sup>

On the next page he writes:

I ought not to conclude this article without again cautioning learners never to employ *Dou-gue, dou-gue*, for nothing can be more pernicious to the throat and chest, than the use of this same syllable *Gue*, in sounding the Instrument. Amateurs should, in fact, hold this illfated agent of articulation in horror, for it has already had but too many unsuccessful followers.

Je ne dois pas terminer cet Article sans engager les Elèves à ne jamais se servir de *Dou Gue*. Rien de plus pernicieux pour la Gorge et pour la Poitrine que cette Syllabe *Gue* en faisant résonner la Flûte. Les Amateurs de cet Instrument doivent avoir en horreur cette Articulation funeste qui a fait souvent des Victimes.<sup>203</sup>

Coche writes, "The articulation *dou gue* should be rejected because it is guttural. Mr. Drouet shares my opinion."<sup>204</sup> Finally, V. Bretonnier writes in his undated *Méthode complète, Théorique et Pratique pour La Flute*:

I do not know how the misunderstanding arose in France, that the syllables best suited to what is called double-tonguing, are *dou gue*. There is hardly a more thankless articulation, as Mr. Drouet has said so well in his method – this guttural *Gue* would be better suited to teach students what is wrong than to help them do it correctly.../ there is nothing more harmful for the throat and chest than this catastrophic articulation, which often reaps victims.

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202. Drouët *Méthode* 67, translated in Lindsay *Elements* 99. I chose to discuss Drouët's *Méthode* among the French sources because it was first printed in Paris in 1827 in French, and because Drouët refers to it as his "French Instruction Book." Drouët *Method* 14.

203. Drouët *Méthode* 68, translated in Lindsay *Elements* 99.

204. "Quant à l'articulation *dou gou*, elle doit être rejetée parcequ'elle est gutturale. Mr. Drouet est de mon avis." Coche *Méthode* 130.

je ne sais par quelle fatalité on s'est imaginé en France, que les syllabes qui conviennent le mieux à ce qu'on y nomme double coup de langue étaient *dou gue* certes rien de plus ingrat que cette articulation; comme le dit fort bien Mr. Drouet dans sa méthode, que ce son guttural *gue* était plus propre à induire les élèves en erreur qu'à les faciliter.<sup>205</sup> /.../rien de plus pernicieux pour la gorge et pour la poitrine que cette articulation funeste qui a fait souvent des victimes.<sup>206</sup>

As seen above, Coche recommends *te-que* or *de-re* instead of *dou gue*. The consonant *g* is not only less sharp than *k*, it is also produced further back in the mouth with the tongue in a lower position. Furthermore, the combination *ue* is in French pronounced further back after *g* than after *k*. With *de-re* the tongue is placed even further forwards in the mouth. The criticism of the syllables *dou-gue* can therefore be a response to the risk of getting the backstroke too far back in the mouth.

Although there is to my knowledge no documentation from this period of using the harder and softer consonants in *d-g/t-k* as nuances or for musical expression, I think it is reasonable to believe that fast passages were executed with sharper or less sharp tongue strokes.

Walckiers and Coche write that double-tonguing should sound like single-tonguing played very fast,<sup>207</sup> which suggests a sharper ideal than the rounder articulation recommended by the late 18<sup>th</sup> century German flutists.

### 2.7.1.1 Only fast?

The advantage of double-tonguing is that it makes fast tonguing of extended passages possible. Berbiguier writes, "With the aid of double-tonguing/.../ it is possible to articulate 10, 20, 30 or more bars if you deem it appropriate, but they should be at a fast tempo."<sup>208</sup> "The detached chromatic scales produce a brilliant effect, but they should be fast. We think that only with the help of double-tonguing can one

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205. Bretonnierre *Méthode* 52.

206. Bretonnierre *Méthode* 52.

207. Walckiers *Méthode* 155 and Coche *Méthode* 131.

208. "Avec le secours de Double coup d langue,/.../ on peut détacher 10. 20. 30. mesures et plus si on le juge à propos, mais il faut que ce soit dans un mouvement précipité." Berbiguier *Méthode* 59.

obtain this."<sup>209</sup> Furthermore he writes, "In an allegro of ordinary tempo, it is very bad to use double-tonguing, it should be reserved for rapid contexts, where its brilliance will shine."<sup>210</sup> However, Berbiguier prints exercises with leaps, and writes, "It may be useful to note that speed, essential for the use of double-tonguing, is not necessary in passages like the two above. The same goes for the next one. It can be used in both fast and slow tempi."<sup>211</sup>

The next example is:



Example 90. Berbiguier *Méthode* 246.<sup>212</sup>

The alternative for Berbiguier here is paired slurs, not single-tonguing. I conclude that, generally speaking, Berbiguier recommends double-tonguing only for very fast tempi, but in repeated leaps the speed can be slower.

### 2.7.1.2 Triplets

Notably, Berbiguier does not discuss double-tonguing for triplets or sextolets. Walckiers and Coche write that triplets are a bit more difficult than figures with even numbers of notes, because the first note of the triplet every second time gets *d* and every second time *g*, thus *d-g-d g-d-g*. Walckiers writes that the disadvantage with this is that it somewhat destroys the character of the figure, and confuses it with groups in pairs or sextolets. Both Walkiers and Coche suggest as a second alternative *d-g-d d-g-d*, however, this way has less agility because of the repeated *d*'s; the first way can be executed faster.<sup>213</sup>

209. "Les gammes chromatiques détachées, produisent un effet très brillant; mais il faut que ce soit dans la vitesse: Nous pensons que ce n'est qu'à l'aide de Double coup de langue qu'on peut parfaitement obtenir cet effet." Berbiguier *Méthode* 56.

210. "dans un allegro ordinaire, l'emploi du double-coup de langue serait très defectueux, il faut le réserver pour la vitesse, c'est la qu'il brille de tout son éclat." Berbiguier *Méthode* 246.

211. "Il n'est pas inutile d'observer que la vitesse, essentielle pour tirer parti du double-coup de langue, n'est pas nécessaire dans les traits comme les deux ci-dessus, de même que pour celui qui suit: on peut s'en servir dans un mouvement précipité, comme dans un mouvement large." Berbiguier *Méthode* 245.

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213. Walckiers *Méthode* 160 and Coche *Méthode* 136.

### 2.7.1.3 Reversed double-tonguing

Berbiguier devotes three pages to examples of passages where it according to him is better to reverse the *d-g*, so that the backstroke is on the good note. He recommends this technique for repeated leaps of octaves or tenths, dotted notes and passages that start with a rest.<sup>214</sup>



Example 91. Berbiguier *Méthode* 249.<sup>215</sup>



Example 92. Berbiguier *Méthode* 250.<sup>216</sup>

A passage with a scale that starts with a leap can either be played with a slur over the two first notes, or with reversed double-tonguing as below:



Example 93. Berbiguier *Méthode* 251.<sup>217</sup>

In my opinion the reason for this technique is to have the *d* on the high notes in the leaps, which creates a clearer sound; a *g* on the high notes is disadvantageous for the sound. In scales starting after a short rest it is hard to start by repeating two *d*'s; it is easy to stumble, especially in the low register. Starting with *d-g* enables the player to use more wind, which makes it easier.

214. Berbiguier *Méthode* 249-250.

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Other flutists are less convinced, however; Walckiers writes that double-tongue should never be reversed, the first syllable is always on the strong part of the beat, the second on the weaker.<sup>218</sup> Thus, Walckiers indicates *d d g d g* on a scale that starts after a short rest.<sup>219</sup> Coche agrees, “To preserve the rhythmical movement which is basic to double-tonguing, start it on the second note in a passage which begins with an uneven number of notes.”<sup>220</sup>

### 2.7.2 Double-tonguing with *d-r/t-d*

Drouët describes in *Méthode* how he developed his own way of double-tonguing:

I had also been taught another mode of Double-Tonguing;--a very different one, indeed, for instead of *Dou-gue*, it was effected by the syllables *Tu-tel*. I soon discovered that it was next to impossible to produce a note by articulating the syllable *Tel*, with exactly the same clearness, or neatness of effect, as when articulated simply by *Te*. I therefore left out the L, and consequently practised with *Tu-te*. I preserved the *Te*, instead of twice pronouncing the *Tu*, because in practising to ascertain what should be the best articulation to apply to the Double-tongue I had remarked, that it was much easier to pronounce two different syllables several times in rapid succession, than only one. It then only remained to discover two syllables, easy to pronounce, and which would produce two sounds perfectly equal. After having tried all the articulations imaginable, I adopted, and for several years have adhered to the syllables *Deu-reu*, pronouncing the letter *R* without rattling (*sans roulement*,) that is to say, by a single movement of the tongue. In short, this articulation must be pronounced according to the most approved French pronunciation, without thickness, (*sans grosseyement*,) for if pronounced as in England, Italy, or Germany, it produces a mewing effect really not to be endured./.../I therefore recommend Amateurs of *Double-Tonguing* to pronounce *Deu-reu*, *Dou-rou*, or *De-re*; and to those who are not already Amateurs of it, to learn it, convinced that every Flute-Player ought to cultivate its acquaintance.

On m'avait aussi enseigné un Double coup de Langue, mais c'était tout autre chose que *Dou-gue*, c'était *Tu-tel*. Je m'aperçus bientôt qu'il était à peu près

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218. Walckiers *Méthode* 159.

219. Walckiers *Méthode* 159.

220. "Pour conserver le mouvement rythmique qui constitue essentiellement le double coup de langue, on ne le commence que sur la seconde note dans les traits qui débutent par une note impaire." Coche *Méthode* 136.

impossible de donner à une Note, en articulant la Syllabe *Tel*, exactement la même nuance que lorsqu'on articulait tout simplement *Te*. Je laissai donc l'L et je travaillai par conséquent *Tu-te*. Je conservai le *Te* au lieu de prononcer deux fois *Tu* parce qu'en travaillant à chercher quelle pouvait être la meilleure articulation pour faire le Double Coup de Langue, j'avais remarqué: qu'il est plus facile de prononcer très vite plusieurs fois de suite deux Syllabes qu'une seule. Il ne s'agissait plus que de trouver deux Syllabes différentes, faciles à prononcer, et qui produiraient deux Sons parfaitement égaux. Après avoir essayé toutes les articulation imaginables, je m'arrêtai pendant quelques années sur les Syllabes *Deu-reu*, en prononçant la Lettre R sans roulement, c'est à dire: par un seul mouvement de Langue. Cette articulation *Deu-reu* doit être prononcée à la Française, et comme on le pense bien, sans grassement. Prononcée à l'Anglaise, à l'Italienne on à l'Allemande, elle produirait un miaulement insupportable./.../ Ainsi je conseille aux Amateurs de Double Coup de Langue de prononcer *Deu Reu*, *Dou Rou*, ou *De Re*, et à ceux qui n'en sont pas Amateurs, de l'apprendre, vu que c'est toujours une bonne chose à savoir.<sup>221</sup>

It is worth noticing that Drouët, who came to Paris in 1811, does not refer to the double-tonguing with *d-r/t-d* used in France according to Devienne and Peraut. The only references to double-tonguing with *d-/t-d r* after Peraut are to Drouët's articulation, both in and outside France. *D-r/t-d* is the double-tonguing technique that is closest to single-tonguing, because the two syllables are more similar to each other than is the case with the other techniques. Berbiguier writes, somewhat confusingly, in *Méthode*:

Anyone who has heard the skill with which Mr. *Drouet* plays the fastest passages, will find it difficult to conceive of how it is possible to cease seeking a means by which to master this articulation, without the aid of which, as Mr. *Wunderlich* put it so well in his latest Method, it will never be possible to achieve the speed of articulation of which we are all allowed to dream.

Les personnes qui ont entendu avec quelle netteté, Mr. *Drouet* passe les traits les plus rapides, auront de la peine à concevoir, comment on peut ne pas chercher les moyens de parvenir à posséder cette articulation, sans le secours de laquelle, comme le dit fort bien Mr. *Wunderlich* dans sa dernière Méthode, on n'atteindra jamais ce degré de rapidité d'articulation, au quel il est permis à chacun d'aspirer.<sup>222</sup>

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221. Drouët *Méthode* 67-68, translated in Lindsay *Elements* 99.

222. Berbiguier *Méthode* 6.

Wunderlich recommends single tongue for fast passages.<sup>223</sup> It seems that Berbiguier believes that Drouët uses single tongue.

After Drouët's *Méthode* was published, his tonguing technique was known, but as seen above, not generally adopted. Walckiers writes, "Mr. Drouët uses Deu Reu./.../ Deu Reu, De Re, Dou Rou, don't fit at all persons who speak with a burr."<sup>224</sup> Among the French players, only Bretonnier seems entirely positive:

Mr. Drouet is, to our knowledge, the first to have used it [double-tonguing] to advantage, he executes the fastest runs with perfect skill and evenness; those who have heard this excellent artist are able to judge the effects produced by using it./.../ So I advise amateurs and students alike to pronounce *deu, reu* and never to use *dou gue*.

Mr Drouet est le premier à notre connaissance qui l'ait [double coup de langue] employé avec avantage, il passe les traits les plus rapides avec une netteté et une égalité parfaite; les personnes qui ont entendu cet excellent Artiste peuvent juger de l'effet qu'il peut produire en l'employant./.../ Ainsi je conseille aux amateurs et élèves de prononcer *deu, reu* et à ne jamais se servir de *dou gue*.<sup>225</sup>



Example 94. Bretonnier *Méthode* 53.<sup>226</sup>

Bretonnier includes sections of repeated 64<sup>th</sup> notes in two of his etudes. He comments on the first etude, "This etude is impossible without help of double-tonguing."<sup>227</sup>

223. Hugot and Wunderlich *Méthode* 6-7, and 12, see section 2.4.3.

224. "Mr. Drouet emploie Deu Reu./.../ Deu Reu, De Re, Dou Rou, ne conviennent point aux personnes qui grassaient" Walckiers *Méthode* 154.

225. Bretonnier *Méthode* 52.

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227. Bretonnier *Méthode* 170.



As seen above, Coche suggests *de-re* as a second choice.<sup>228</sup> If the syllables *tu te*, which are also suggested by Coche, are pronounced quickly, it becomes technically similar to *tu re*, and can in that way function as a double tongue.

### 2.7.2.1 Reversed double-tonguing

Drouët writes in *Méthode*:

Some persons [Berbiguiet?] maintain that the Double-Tongue may be applied in certain cases of Counter Time, but learners only wanted to be impressed with this whimsical notion to induce the loss of much valuable time, on the one hand, and to injure their lungs on the other. Double Tonguing should never be applied to Counter Time; the first syllable *Deu*, ought always to fall upon the strong part of the measure, and *Reu* on the feeble.

Il y a des Personnes qui se figurent, que le double Coup de Langue doit se faire dans de certain cas à contre Tems, Il ne manquait plus que cette nouvelle bizarrerie pour faire perdre beaucoup de tems aux Elèves, et ruiner leur Poitrine. Le Double Coup de Langue ne doit jamais se faire à contre Tems; *Deu* doit toujours tomber sur un tems Fort de la Mesure, et *reu* sur un tems Faible.<sup>229</sup>

Technically it works as well to play Berbiguiet's examples for reversed double-tonguing with *d-r/t-d* as with *d-g/t-k*. For me, the difference between reversing the syllables or not is less with *d-r/t-d*, because the difference between the syllables is smaller. Possibly, for a flutist with Drouët's excellent articulation there would be no reason to reverse the syllables.

### 2.7.2.2 Triplets

For triplets Drouët suggests *d-r-d d-r-d*.<sup>230</sup> For fast tempi, Coche recommends *d-r-d r-d-r*, which is similar to his suggestion of *t-k-t k-t-k*. For moderately fast tempi he suggests *t-k-t t-k-t*, and notably *d-r-d r-d-r*.<sup>231</sup> I have not found a technical reason for this latter suggestion.

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228. See section 2.7.1.

229. Drouët *Méthode* 68, translation from Lindsay *Elements* 99.

230. Drouët *Method* 27.

231. Coche *Méthode* 136.

### 2.7.3 Double-tonguing with *d-l/t-tl*

Bretonnier mentions *die dle* and *tu tel*,<sup>232</sup> Walckiers *Tu Tel, Ti Tel*, and *Tut Le*,<sup>233</sup> and Coche *tu tel, ti tel*, and *tu le*<sup>234</sup> as syllables used for double-tonguing. It is, however, possible that Bretonnier and Walckiers refer to non-French flutists; only Coche writes that he practiced those syllables himself. Schilling's *Universalexikon* states that the French are not capable of learning the true double-tonguing [*d-l/t-tl*].<sup>235</sup> I conclude that *d-l/t-tl* was known but not much used among French flute players.

### 2.7.4 Single-tonguing

Berbiguier writes that he rarely encounters players who are good at single tongue, and even for those that are, passages are duller and heavier compared to the same passage played with double-tonguing.<sup>236</sup> To play a passage with single tongue results in a heaviness that does not make the execution pleasant. Therefore single tongue is rarely used;<sup>237</sup> it is necessary to alternate with legato.<sup>238</sup> My single tongue on the recordings from the recitals made for this study occasionally sounds dull and heavy; however, I believe some additional practicing would have helped. Drouët claims that his extended practicing of double-tonguing had made him able to play a passage as quickly with single tongue.<sup>239</sup> Tulou prints one short and one substantial etude for single tongue in his method. At the beginning of the short etude he writes, "It is important to review this etude frequently. I can not recommend it strongly enough."<sup>240</sup>

For shorter figures, Berbiguier writes that single tongue can be used, "Facing isolated groups of 6 notes, it is wise to tongue them. When the tongue has only 6 articulated notes, the execution will be clearer and better."<sup>241</sup>

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232. Bretonnier *Méthode* 52.

233. Walckiers *Méthode* 154.

234. Coche *Méthode* 130, quoted in section 2.7.1.

235. Schilling *Universalexikon* 921.

236. Berbiguier *Méthode* 6.

237. Berbiguier *Méthode* 63.

238. Berbiguier *Méthode* 251.

239. Drouët *Méthode* 68.

240. Tulou *Method* 21.

241. "Lorsque l'on rencontre des groupes séparés de 6 notes, il est avantageux de les détacher. La langue n'ayant que 6 notes à articuler, l'exécution en sera plus nette et plus satisfaisante." Berbiguier *Méthode* 63.



Example 95. Berbiguier *Méthode* 63.<sup>242</sup>

In shorter passages, the tongue does not get tired. However, Berbiguier writes, “At extreme speed, single-tonguing is no longer sufficient to detach passages in 6/8, one slurs entirely.”<sup>243</sup> Another type of passage where single tongue could be suitable was triplets. Berbiguier, who, as stated above, does not recommend double-tonguing for triplets, writes about triplets of detached eighth notes, “This articulation is brilliant, but it takes great experience to master it. It is most commonly applied in the case of descending or ascending scales.”<sup>244</sup>



Example 96. Berbiguier *Méthode* 60.<sup>245</sup>

However, Berbiguier’s preferred method of articulating triplets is two slurred and one tipped.<sup>246</sup> Bretonnier copies Berbiguier’s example with detached notes above, (slightly altering only the pitches of the notes).

To sum up, none of the French methods from this period recommend single tongue as the first choice for extended fast passages.

## 2.7.5 Legato-playing and relating to indicated articulation

Berbiguier writes:

242. © British Library Board. All rights Reserved. British Library shelfmark: h. 220.a.

243. “Dans l’extrême vitesse, le simple coup de langue ne pouvant suffire pour detacher les traits à 6/8, on coulera entièrement.” Berbiguier *Méthode* 62

244. “Cette articulation est brillante, mais il faut une grande habitude pour la posseder parfaitement. Le cas où l’emploi plus communement, c’est dans les gammes ascendentes ou descendentes.” Berbiguier *Méthode* 60

245. © British Library Board. All rights Reserved. British Library shelfmark: h. 220.a.

246. See section 2.7.5.1. below.

The great art consists in knowing when properly to apply the various articulations, and to be capable of choosing that particular mode of tonguing, which shall be best calculated to define such or such a passage with most effect: but this depends, in a great degree, upon the taste of the executionist. The staccato tip, which is the most brilliant, and the slurred manner, which is the most easy, are generally attractive to beginners, and one or other of them is often used indiscriminately; but both these extremes are reprehensible, and should be avoided; for the excellence of execution neither consists in staccatoing a piece of music throughout, nor in slurring it from beginning to end, however well either may be managed: it consists in judiciously mixing the different articulations, so that the one may contrast with, and relieve the other, and thereby prevent that monotony which must always result from too great an uniformity of manner.

Le grand art consiste de savoir s'en servir à propos, et de savoir choisir les différents coups de langue applicables à un tel trait de préférence à tel autre; mais tout ceci dépend en grande partie du goût de l'exécutant. Les détachés (très brillants du reste) ont beaucoup d'attraits pour les commençans: c'est aussi leur manie général, comme leur défaut ordinaire est de couler toutes les notes, lorsque la langue ne peut leur suffire, ces deux extrêmes sont blâmables, et il faut éviter de s'y laisser entraîner; car l'excellence de l'exécution ne consiste pas entièrement à détacher tout un trait d'un bout à l'autre, ni à le lier, même avec la perfection: elle consiste à mélanger adroitement les différentes articulations, pour prévenir la monotonie qui résulterait nécessairement d'une trop grande uniformité.<sup>247</sup>

Berbiguier devotes 13 pages in his method to examples of articulation patterns,<sup>248</sup> and also publishes *A complete system of articulation for the Flute* with a total of 88 exercises with different articulation patterns.<sup>249</sup> Bretonnier copies Devienne's section on "Examples of different articulations which certain passages of necessity require, and which are often left out in the manuscript or in the print."<sup>250</sup> As well the methods by Drouët, Walckiers and Tulou include tables of articulation patterns. Coche devotes eleven pages to examples of articulation, where both the musical figures and the articulations are more varied and less systematic than the examples of his predecessors. Coche writes:

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247. Berbiguier *Méthode* 64-65, translated in Lindsay *Elements* 39.

248. Berbiguier *Méthode* pp. 51- 58 and 60-65.

249. Spell *Nicholson* 141.

250. Berbiguier names it "Des articulations différentes que certains traits exigent de nécessité et qui souvent sont oubliées dans la copie ou la gravure" Bretonnier *Méthode* 51.

The taste of the person playing will suggest a multitude of nuances where these two articulations [slurred and tongued] can be used in the most varied manner. /.../In tonguing all the notes to achieve more brilliant playing, one deprives oneself of the combination of these two types of articulation which give plenty of variation to the performance./.../the examples given/.../ must not be used without consideration: [otherwise] the result would be that everyone who studied the same piece would articulate the music identically. If the student has understood the character of the phrases he will find the most suitable articulation.

Le goût des exécutans leur suggère une foule de nuances où ces deux articulations [le coulé et le détaché] sont employées sous les formes les plus variées. /.../ En détachant toutes les notes pour obtenir un jeu plus brillant on se prive de l'union des deux genres d'articulations qui répand beaucoup de variété dans l'exécution./.../ les exemples donnés,/.../ ne doivent pas être employés inconsidérément: il s'en suivrait que tous ceux qui auraient étudié avec le même ouvrage articuleraient la musique d'une manière uniforme. Si l'élève est bien pénétré du sens des phrases, il trouvera l'articulation la plus convenable.<sup>251</sup>

In conclusion, these treatises strongly emphasize the importance of developing an individual skill of applying articulation. A player could be criticized for using too much legato; Drouët writes both in *Méthode* and in *Method*, “To connect all the notes, is the most easy method. It is commonly the mode adopted by Amateurs, especially by those, who are averse to labour, and those on whom nature has not bestowed sufficient talents, to elicit from the Flute all the beauties of which it is capable.”<sup>252</sup> William Nelson James writes in *A Word or Two on the Flute* from 1826 about Tulou, “If there was any deficiency in his performance, it was the want of distinct articulation, almost all his passages were slurred, and seldom staccatoed. This conveyed to the ear, in hearing him often, a degree of sameness approaching to mannerism and monotony.”<sup>253</sup>

The title of Devienne’s (and therefore Bretonnier’s) section suggests that the art of applying articulation was studied primarily for its use in passages without indicated articulation. However, it is reasonable to believe, judging from the reports on performances of the most celebrated soloists, that they felt free to change the

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251. Coche *Méthode* 118.

252. Drouët *Method* 28.

253. James *Word* 187.

indicated articulations. Occasionally, Walckiers and Berbiguier suggest alternative articulations for passages with notated articulation.<sup>254</sup>

### 2.7.5.1 Articulation patterns

Berbiguier suggests different approaches for pieces in different keys:

In the *flat keys*, for example, the *slur* is generally preferable, because the sounds being naturally dull, less clear, and less resonant, (naturellement sourds,) /.../the modes in which the tongue may be most advantageously employed, are those of D major, and its relative, b minor; G major, and its relative, e minor; C major, and its relative, a minor; and that of A major. When we arrive at E major, (four sharps,) the gamut becomes more difficult, and the slur appears to us to be preferable for scale passages, but many passages of another description in this key, may be staccatoed with very brilliant effect.

Par exemple, dans les tons bémolisés, assez sourds par leur nature, les coulés sont préférables, /.../Les modes où la langue peut se déployer avec tous ses avantages, sont ceux de ré majeur et son relatif si mineur; sol majeur et son relatif mi mineur; ut majeur et son relatif la mineur; ainsi que celui de la majeur. (Quatre dièzes) le coulé nous paraît préférable pour les gammes seulement, car le détaché, dans les traits d'un autre genre ne laisse pas d'être très brillant.<sup>255</sup>

Passages in the first octave should be slurred for the same reason, "The arpeggiated passages in the lower register of the instrument should always be slurred, if one wants to achieve a good quality of sound."<sup>256</sup>

Trying to find out whether the articulation patterns that were recommended during the previous decades (two slurred, two tipped and slurring two by two) remained so, I note that both Berbiguier's and Walckier's first example of legato patterns for fast tempi is two slurred, two tipped. Berbiguier calls it an "Articulation very brilliant and much used in fast tempi,"<sup>257</sup> and Walckiers, "A very brilliant and often used articulation."<sup>258</sup> Drouët writes in both *Méthode* and in *Method* that "the

254. For instance, Walckiers *Méthode* 158 and Berbiguier *Méthode* 251.

255. Berbiguier *Méthode* 64-65, translated in Lindsay *Elements* 39.

256. "Les Batteries, dans le bas de l'instrument, doivent toujours être coulées, si l'on veut obtenir une belle qualité de son." Berbiguier *Méthode* 55.

257. "Articulation très brillante et très usitée dans la vitesse." Berbiguier *Méthode* 51.

258. "Articulation très brillante et très usitée." Walckiers *Méthode* 41.

most common [articulation] is two connected and two detached.”<sup>259</sup>

Berbiguier calls the articulation pattern with paired slurs a very brilliant and easy articulation,<sup>260</sup> and Walckiers writes that it is “a brilliant and easy articulation. In a fast tempo, it substitutes very well for the previous [two slurred, two tipped].”<sup>261</sup> Coche considers it “A brilliant and easy articulation, especially in fast tempi.”<sup>262</sup> Among Berbiguier’s examples of articulation, the patterns two slurred, two tipped and paired slurs are overrepresented.<sup>263</sup> Berbiguier also prints one example where the alternative to double-tonguing is paired slurs, and one where the alternative to double-tonguing is two slurred, two tipped.<sup>264</sup> I conclude that just as during the previous decades, two slurred, two tipped and paired slurs were favoured articulation patterns. Paired slurs was considered easier. For some figures, these articulation patterns were specifically recommended. Walckiers prints the following music example:



Example 97. Walckiers *Méthode* 159.

Walckiers writes, “This type of passage is more effective if one slurs the two first notes of each group.”<sup>265</sup> Coche prints a similar example with the articulation pattern two slurred, two tipped indicated and the comment, “Ordinary articulation in this kind of passage, and preferable at a fast tempo.”<sup>266</sup> Berbiguier calls the articulation in the example below “the ordinary articulation in this kind of passage.”<sup>267</sup>



259. Drouët *Method* 28.

260. Berbiguier *Méthode* 51.

261. “Articulation brillante et facile. Dans la rapidité, elle se substitue assez bien à la précédente.” Walckiers *Méthode* 41.

262. “Articulation brillante et facile, surtout dans la vitesse” Coche *Méthode* 120.

263. Berbiguier *Méthode* 51- 58.

264. Berbiguier *Méthode* 245-246.

265. “Ce genre de trait est d’un meilleur effet, quand on coule les deux premières notes de chaque groupe.” Walckiers *Méthode* 159.

266. “Articulation ordinaire dans ces sortes de traits, et favorable dans la vitesse.” Coche *Méthode* 122.

267. “Articulation ordinaire dans ces sortes de traits.” Berbiguier *Méthode* 51.

However, Berbiguier agrees with Hugot and Wunderlich that the articulation below is much more advantageous than “ordinary” paired slurs.<sup>268</sup>



Example 98. Berbiguier *Méthode* 51.<sup>269</sup>

Walckiers writes about a passage of the type reproduced above:

This type of passage is so much better with double tonguing, because it can be executed as well in *Moderato* as in *Presto*. Quite usually, it is indicated with slurs two by two, but one can happily substitute for it exclusively detached notes, which has more neatness and brilliance.

Ce genre des trait est d'autant plus favorable au *Double coup de langue*, qu'il peut s'exécuter aussi bien *Moderato* que *Presto*. Assez communément, il est indiqué coulé de deux en deux, mais on peut heureusement lui substituer le tout détaché, qui a bien plus de netteté et de brillant.<sup>270</sup>

In a passage of a similar type in *Introduzione* and *Rondo* by Friedrich Kuhlau Op. 98 bars 45 and 47 I apply slurs like in the music example below. The bars covered in the music example are track 30 on the CD attached to the study; the full movement is track 13.

268. Berbiguier *Méthode* 51.

269. © British Library Board. All rights Reserved. British Library shelfmark: h. 220.a.

270. Walckiers *Méthode* 158.



Kuhlau, Op.98

Flute

Piano *fp*

Fl.

Pno. *fp*

Example 99. Kuhlau *Introduzione* and *Rondo* Op. 98, bars 44-48. All the slurs except those in the first bar are added by the author.

Coche considers paired slurs to be the ordinary articulation for a passage of the following type:

*p*

Example 100. Coche *Méthode* 120.<sup>271</sup>

271. The figure is photographed from Library of Congress, Prints and Photographs Division, item number 131.

For Berbiguier and Walckiers, the articulation pattern two slurred, two tipped in sixteenth notes can be executed with double tongue on the tipped notes:<sup>272</sup>



Example 101. Berbiguier *Méthode* 248.<sup>273</sup>

For a chromatic scale, Berbiguier recommends paired slurs, or preferably and more usefully, all slurred.<sup>274</sup>

Berbiguier writes that for triplets, the articulation pattern two slurred and one tipped is more useful than three slurred, and indisputably more advantageous. It can be used in very fast tempi. It is the pattern of choice in passages where no articulation is indicated.<sup>275</sup> Another way of articulating triplets that is quite elegant, but should not be overused, is slurring three, tipping three.<sup>276</sup> Walckiers prints an example of triplets in which legato is combined with double-tonguing:



Example 102. Walckiers *Méthode* 160.

Generally, when I listen to the music from the concerts made for this study, I believe that I could have achieved more variation in the application of slurs if I had studied these examples and etudes from the methods at an earlier stage.

## 2.8 Germany, first half of the 19<sup>th</sup> century

### 2.8.1 Double-tonguing with *d-l/t-tl*

Koch's *Lexikon* reports on Quantz's *did'll* and Tromlitz's *tad'll*; however, the term

272. Berbiguier *Méthode* 248 and Walckiers *Méthode* 158.

273. © British Library Board. All rights Reserved. British Library shelfmark: h. 220.a.

274. If not detached, see section 2.7.1.1 above. Berbiguier *Méthode* 56.

275. Berbiguier *Méthode* 60.

276. Berbiguier *Méthode* 60.

“Doppelzunge” is misunderstood to mean *did'lldid'll* or *tad'lltad'll*.<sup>277</sup> Liebeskind writes:

The double tongue is in fact a specific pronunciation /.../ so that one, in sixteenths and thirty-seconds etc., always expresses the first or strong note of a pair with a 'd' and the second or weak one in the following manner, by quickly retracting the tongue, from the position in which it was put for pronouncing the good note, towards the palate, just as if one would say the letter 'l'. /.../The advantage of using the double tongue when playing the flute is the following: that it enables one to play with surprising speed and lightness and with a clarity that leaves nothing to be desired.

Die Doppelzunge ist nämlich eine gewisse Aussprache,/.../ das man bey 16teln, 32steln u.s.w. immer von zwey Noten die erste oder gute mit dem Buchstaben d, und die zweyte oder schlechte dadurch zur Aussprache bringt, dass man die Zunge gerade so, als wollte man den Buchstaben l aussprechen, rasch aus der Lage, in die sie durch die Aussprache der guten Note gebracht worden ist, an den Gaumen zurückzieht./.../ Der Vortheil, der sich aus dem Gebrauche der Doppelzunge beym Flötenspielen ziehen lässt, besteht darin: dass man vermittelt derselben mit einer überraschenden Geschwindigkeit und Leichtigkeit, und mit einer Deutlichkeit, die nichts zu wünschen übrig lässt,/.../spielen kann.<sup>278</sup>

August Eberhard Müller writes in *Elementarbuch für Flötenspieler*, edited in 1817.<sup>279</sup>

This tongue motion [double-tonguing] is definitely indispensable for the performance of fast runs and passages and only through its proper application can those passages be performed clearly and in a rolling fashion. In order to make this motion of the tongue as even as possible, one should hold a note and while holding it, pronounce the word *tad'll* or *dad'll* into the flute. One should /.../ during the pronunciation of the second syllable press the tip of the tongue somewhat curved to the roof of the mouth.

Diese Zungenbewegung [Doppelzunge] is zum Vortrage schneller Läufer und Passagen ganz unentbehrlich, und nur durch ihre richtige Anwendung können diese deutlich und rollend vorgetragen werden. Um nun diese Bewegung der Zunge mit möglichster Gleichförmigkeit zu machen, so halte man einen Ton aus

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<sup>277</sup>. Koch *Lexikon* 1765–1766.

<sup>278</sup>. Liebeskind *Doppelzunge* 667.

<sup>279</sup>. For a dating of the text in *Elementarbuch* see Appendix 1.

und spreche während dem Forthalten desselben das Wort *tad'll* oder *dad'll* in die Flöte. /.../Man drücke daher bey der Aussprache der zweyten Sylbe die Zungenspitze etwas gekrümmt an den Gaumen.<sup>280</sup>

Fürstenau writes in *Die Kunst des Flötenspiels*:

A very old technique [orig.: Methode, literally ‘manner of doing’] (originating from Quantz) of moving the tongue by using a few syllables, the so-called double tongue, is a manner that for a long period formed a very refined aspect of flute playing, /.../which, however has declined in more recent times and which I have never used. This in spite of the fact that /.../my father and teacher C. Fürstenau possessed the double tongue to a high degree of perfection.

Eine sehr alte Methode, (von Quantz herstammend), durch ein paar Silben die Zunge in Bewegung zu setzen, die sogenannte Doppelzunge, ist eine Manier, welche lange Zeit einen sehr kultivirten Theil des Flötenspiels ausmachte, /.../ in neuerer Zeit aber immer mehr in Abnahme gekommen, un vor mir niemals in Anwendung gebracht worden ist. Obgleich /.../mein Vater und Lehrer, C. Fürstenau, die Doppelzunge in hohem Grade der Vollkommenhet besass.<sup>281</sup>

Since Fürstenau writes that the so-called double-tonguing originates from Quantz, I assume that *d-l/t-tl* is meant in the quote above, and conclude that Anton Bernhard’s father Caspar Fürstenau (1772-1819) used *d-l/t-tl*.

In 1828, Gottfried Weber discusses the three double-tonguing techniques *d-g/t-k*, *d-l/t-tl* and *d-r/t-d*, and writes that *d-l/t-tl* is the most common in his article “Einiges über die Doppelzunge und überhaupt über Articulation auf Blasinstrumenten” in *Caecilia*.<sup>282</sup> The *Universalexikon* states:

The objective of [the *Doppelzunge*] is a quick staccato, which otherwise only the bowed instruments can produce, and which gives utter clarity and a special charm to the passages./.../ It is produced when the tongue, which for the single tongue says *tu tu tu*, instead says *dudel dudel* very rapidly.

Der Zweck desselben [Doppelzunge] ist ein schnelles Staccato, dergleichen sonst

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280. Müller *Elementarbuch*, quoted in Lichtmann *Müller* 213, translation Lichtmann *Müller* 214.

281. Fürstenau *Kunst* 38.

282. “Unter den erwähnten drei Arten von Doppelzungen ist die mit *t-tl* oder *t-dl* oder *d-dl*/.../die gemeinüblichste.” Weber *Doppelzunge* 110.

nur die Bogeninstrumente hervorbringen können, und welches den Läufen eine ausnehmende Deutlichkeit und einen besonderen Reiz ertheilt,/.../ Das Mittel derselben besteht darin, dass die Zunge, welche beim einfachen Zungenstoß *tu tu tu* sagt, statt dessen *dudel dudel* sehr schnell sagt.<sup>283</sup>

Non-German flutists also report on Germans using *d-l/t-tl*: Walckiers and Coche write that the Germans use *ti tel*,<sup>284</sup> and Drouët writes in *Method*, “In Germany/.../ some pronounce the word *Tatel* (as sounded in the preposition *at*) some *Tetel*, some *Titel*, some *Totel*, some *Tutel*, some use the same syllable, but instead of the *t* a *d*, as for instance *Dadel*, *Dedel* &c. &c.”<sup>285</sup> Carte writes that *tootle tootle* is still used by some performers, especially in Germany.<sup>286</sup>

### 2.8.1.1 Where and how it was used

*Universallexikon* states, “Its [double-tonguing (with *d-l/t-tl*)] most important application is, however, in passages where four or more thirty-seconds follow each other on one pitch: here it is indispensable.”<sup>287</sup> Although his ordinary double-tonguing is with *d-g/t-k*, Heinrich Soussmann uses double-tonguing with *d-l/t-tl* on consecutive notes of the same pitch in an etude in *Grosse praktische Flötenschule* from c. 1840. The etude has a middle section of 64th notes, which Soussmann wants to be played with the “dide” tongue. (In the French parallel text the spelling is “did’l”).<sup>288</sup> The tempo indication is *Andante* ♩ = 84.

Liebeskind notes that Quantz and Tromlitz recommend double-tonguing only for very fast passages, and Tromlitz where single-tonguing is no longer possible. Liebeskind continues, “In both situations [the double-tongue] is certainly especially useful: but one can even use it favourably in all such songs which one, in a happy mood, would hum or tootle, and in which there are about eighth notes

283. Schilling *Universallexikon* 920-921.

284. “Les Allemandes se servent beaucoup de *Ti Tel*, [for double tonguing],” Walckiers *Méthode* 154. “les Allemandes [se servent] de *ti tel*,” Coche *Méthode* 130.

285. Drouët *Method* 14.

286. Carte *Instructions* 26.

287. “seinen wesentlichsten Nutzen aber hat in solchen Passagen, wo 4 oder mehr 32stel in einem Tone auf einander folgen: hier ist sie unerlässlich.” Schilling *Universallexikon* 920-921.

288. Soussmann *Flötenschule* 4:40, etude No. 20.

to the second.”<sup>289</sup> In other words, sixteenth notes in a tempo of  $\text{♩}=120$ . In several movements recorded for this study, for example in the second movement (Allegro) of Roman’s *Sonata XII* and the second movement (Allegro) of *Sonata VIII* use *d-l/t-tl* in the tempo Liebeskind describes in this passage. In the fourth movement (Allegro) of Roman’s *Sonata VIII* and the second movement (Allegretto) bars 1, 3, 4, 5, 7 and 16-40 of Raehs’ *Sonata No. 3* from *VI Sonate*<sup>290</sup> the tempo is even slower.

Müller indicates a continuous repetition of *tad’ll tad’ll* or *tad’ll ad’ll* without mixing with single tongue in his practice material (also in leaps).

Müller writes, “In order to facilitate the pronunciation of the word *tad’ll* while repeating and especially during very fast playing, one can omit the *t*.”<sup>291</sup> This is the same advice that Tromlitz gives in *Unterricht*. Liebeskind, however, does not fancy this idea. He writes that it “seems a very unfortunate idea to me; because the recurring ‘d’ after [every] lightly articulated ‘l’ is the very thing that gives the double tongue – which may not sound too thickly – its clarity and lightness.”<sup>292</sup> On the other hand, Liebeskind gladly omits the *d* in the *second* syllable. “Incidentally, Quantz and Hr. Tromlitz have taught incorrectly that the bad note, which ought to be pronounced only with an ‘l’ or ‘ll’, should be pronounced with ‘d’ll’, and it is likely that they did not observe their own rule when performing.”<sup>293</sup> He writes that this technique should be called *D-l*, however, the term *did’ll* is already established.<sup>294</sup>

### 2.8.1.2 Nuances

Liebeskind suggests a number of consonants: the first syllable can be *di*, *thi*, *ti*, *dih*,

289. “In beyden Fällen ist sie freylich von ganz vorzüglicher Brauchbarkeit; aber man kann sich derselben sogar mit Vortheil auch allenfalls bey Liedchen bedienen, die man fröhlichen Muthes singend lullen oder dudeln würde, und bey welchen ungefähr auf eine Secunde acht Töne kommen.” Liebeskind *Doppelzunge* 669-670

290. Tracks 20 and 21 on the CD attached to the study. See music example in section 2.1.2.

291. “Zur Erleichterung der Aussprache des Wortes *tad’ll* kann, besonders im sehr geschwinden Vortrage, bey der Wiederholung das *t* weggelassen werden.” Müller *Elementarbuch*, quoted in Lichtmann *Müller* 215, translation Lichtmann *Müller* 216.

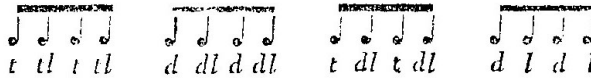
292. “scheint mir eine sehr unglückliche Idee zu seyn; denn was der Doppelzunge, die nicht lullen darf, den Vorzug der Deutlichkeit und Leichtigkeit giebt, ist gerade das nach dem leicht abgeschwellten l immer wiederkehrende d.” Liebeskind *Doppelzunge* 671.

293. “Quantz und Hr. Tromlitz haben übrigens unrichtig gelehrt, dass die schlechte Note, die blos mit l oder ll ausgesprochen werden sollte, mit d’ll ausgesprochen werden sollte, und haben wahrscheinlich in der Ausübung ihre eigene Regel nicht befolgt.” Liebeskind *Doppelzunge* 670.

294. Liebeskind *Doppelzunge* 668.

*tih, did, ditt, thid, thitt* or *titt*, the second *l* or *ll*.<sup>295</sup> According to my practical experiments, however, it does not matter whether the consonant is at the end of the first syllable or at the beginning of the second. Therefore, the five last syllables create the same effect as *di-dl, dit-tl, thi-dl, thit-tl* and *tit-tl*. The sharpest nuances in double-tonguing with *d-l/t-l* are made with a sharp *t* in both syllables, softer nuances with *d* and even softer with *l*. The double consonants suggest a short vowel, thus creating a staccato. For me it does not feel comfortable or functional to pronounce a sharper consonant on the second syllable than on the first, as in Liebeskind's suggestion *ditt* above.

Weber mentions the nuances *t-tl, t-dl* and *d-dl*; his example includes the softest *d-l*.<sup>296</sup>



Example 103. Weber *Doppelzunge* 109.

Besides *d-dl* *Universalexikon* also lists *t-tl* and *t-dl* as nuances.<sup>297</sup>

### 2.8.1.3 Defence and criticism

The French condemnation of double-tonguing at the turn of the century upset Liebeskind and Müller. Liebeskind writes:

In Paris/.../ even in most recent times, the double tongue has had the sad fate of being completely misjudged, even banished. Devienne had, in fact, no better opinion of the double tongue than had Emperor Julian of the singing of the bards, which he compared to the call of wild birds of prey\*); and I believe that the flute method of the Paris Conservatory has expressed its banning judgment strongly enough by passing over the double tongue with censorial silence.

\*) Devienne says, namely, in his *Nouvelle méthode théorique et pratique pour la Flûte*: that the pronunciation of the double tongue (double –coup de langue) consists in the words Dou-gue-du or tourou and turu. Their effect would not be anything but a disagreeable rumbling (roulis désagréable), and he asks the

295. Liebeskind *Doppelzunge* 668–669.

296. Weber *Doppelzunge* 109.

297. Schilling *Universalexikon* 921.

friends of this stuttering (bredouillage) whether one also uses these supernatural means (des moyens surnaturels) with the other wind instruments?

In Paris, /.../ hat die Doppelzunge, selbst noch in den neuesten Zeiten, das traurige Schicksaal gehabt, gänzlich verkannt, ja sogar verbannt zu werden. Devienne hatte nämlich von der Doppelzunge keine bessere Meinung, als Kaiser Julian von dem Bardengesange, den er mit dem Geschreye wilder Raubvögel verglich\*); und die Flötenschule des Conservatoriums zu Paris scheint mir dadurch, dass sie die Doppelzunge mit censorischem Stillschweigen übergang, ihr Verbannungsurtheil über sie laut genug ausgesprochen zu haben.

\*) Devienne sagt nämlich in seiner Nouvelle méthode théorique et pratique pour la Flûte: Die Aussprache der Doppelzunge (double –coup de langue) bestehe in den Worten dou-gue-du oder auch tourou und turu. Die Wirkung davon wäre nichts, als ein unangenehmes Gepolter (roulis désagréable), und er frage nur die Freunde dieses Gestotters (bredouillage), ob man sich denn so übernatürlicher Mittel (des moyen surnaturels) auch bey andern Blas-Instrumenten bediene?<sup>298</sup>

In 1810 the official flute method of the Paris Conservatory was Hugot and Wunderlich's *Méthode*. Müller writes that:

there still are to be found flute players who either out of ignorance or lack of ability deem it unnecessary to use the double-tongue and this particularly for the following reason—because neither on the oboe nor on the clarinet or bassoon is double-tonguing used. How should, however, the oboist or the clarinetist who has a mouthpiece in his mouth—how should he be able to make use of a tongue motion that takes place in the area of the roof of the mouth where the mouthpiece would make a motion of this kind totally impossible!? That the double-tonguing is rejected by many flute players only out of ignorance –for this, the newer, more recent French methods give the strongest proof. Devienne calls the tongue motion that is to be used for two notes, the double-beat or double-stroke, and wants to have the word dugö, also turu and türü pronounced. He says, however, that this execution would always remain very faulty and imperfect (certainly yes!), and calls it a stammering.

so giebt es doch noch immer Flötenspieler, die theils aus Unkunde oder Mangel an Fähigkeit die Anwendung derselben für unütz halten, und dies besonders aus dem Grunde: weil weder auf der Oboe, noch Clarinette oder dem Fagott die Doppelzunge angewandt würde. Wie soll aber der Oboist oder Clarinettist, der

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298. Liebeskind *Doppelzunge* 666.



ein Rohr oder einen Schnabel im Munde hat, von einer Zungenbewegung Gebrauch machen können, die in der Gegend des Gaumens Statt hat, wo diese Körper eine Bewegung der Art ganz verhindern?! Dass die Doppelzunge von manchen Flötenspielern nur aus Unkunde verworfen werde, davon geben die neuern französischen Flötenschulen den stärksten Beweis. Devienne nennt nämlich eine auf zwey Noten anzuwendende Zungenbewegung den Doppelschlag, und will dabey das Wort *dugö* auch *туру* oder *türü* ausgesprochen haben; meint jedoch, dass dieser Vortrag immer sehr mangelhaft und unvollkommen bleiben würde (Ja wohl!), und nennt ihn ein Gestotter.<sup>299</sup>

Müller's argument for the possibility of different articulation on the flute than on other wind instruments has a point. Double-tonguing, especially with *d-l/t-tl*, is not as easily accomplished on all other wind instruments as the flute.<sup>300</sup> In *Universallexikon* one can read that double-tonguing is mainly a technique [Kunstmittel] for the flute, shared by no other wind instruments except trumpets and the French horn.<sup>301</sup> Consequently, articles about tonguing such as Weber's and the one in Koch's *Lexikon* discuss articulation first and foremost on the flute. Müller continues:

He [Devienne] continues then and says "One has another tonguing that makes a great effect. It resembles the short, detached bow stroke of the violin and is applicable with speed in all kinds of passages. It is produced by pushing the tongue against the roof of the mouth." That here the proper double tonguing is meant is clear. How insufficient, however, is the teaching of the same since its author has not given a single example of its application!

Er fährt fort und sagt: "Man hat einen andern Zungenschlag, der von grosser Wirkung ist. Er kommt dem kurzen abgesetzten Bogenstrich der Violine gleich und lässt sich bey allen möglichen Passagen mit Schnelligkeit gebrauchen. Er wird gemacht, indem man mit der Zunge-gegen den Gaumen stösst." Dass hier die eigentliche Doppelzunge gemeint sey, ist klar; aber wie unzureichend ist die Lehre davon, da ihr Verfasser auch nicht ein einziges Beyspiel zu ihrer Anwendung gegeben hat!<sup>302</sup>

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299. Müller *Elementarbuch*, quoted in Lichtmann *Müller* 211-213, transl. Lichtmann *Müller* 212.

300. As Liebeskind points out, Quantz writes, "the bassoonist has the advantage over the oboist in that he can also use the double tongue did'll like the flutist." Liebeskind *Doppelzunge* 667.

301. Schilling *Universallexikon* 920.

302.. Müller *Elementarbuch*, quoted in Lichtmann *Müller* 213, transl. Lichtmann *Müller* 214.

I note that Müller identifies the articulation that Devienne describes last as *d-l/t-tl*, and that Müller refers to it as “proper double tongue.” For Müller the reason for Deviennes opposition to double-tonguing is “ignorance” or lack of familiarity with the technique. **Müller also comments on Hugot and Wunderlich’s recommendation for fast passages:**

Equally incompletely and briefly [as Devienne’s] is this subject [die Doppelzunge] treated in Hugo and Wunderlich’s *Flute Method*. The twelfth example there carries the title “All notes unslurred” and then it continues to explain the notes that are marked staccato. “This articulation, the most difficult and most effective or splendid of all of them, has to be done with the tongue tonguing on each note and the syllable *du*. It has to be practiced at all rates of speed.” One can hardly say less about this most difficult and virtuosic of articulations than has been said here.”

Eben so unvollständig und kurz wird dieser Gegenstand in Hugos und Wunderlichs Flötenschule abgehandelt. Das zwölfte Beyspiel führt da die Ueberschrift: ”Alle Noten ungebunden,” wo es dann zur Erklärung der mit *staccato* bezeichneten Noten heisst: „diese Artikulation, die schwerste und glänzendste von allen, muss mit dem Zungenschlag auf jeder Note und der ausgesprochenen Sylbe *dü* gemacht werden. Sie muss in allen Graden der Geschwindigkeit geübt werden.” Kann man wohl weniger von der schwersten und glänzendsten Artikulation sagen, als hier gesagt worden ist?<sup>303</sup>

As seen above, Hugot and Wunderlich recommend single-tonguing. It seems that Müller would double tongue such a passage, and does not understand why Hugot and Wunderlich do not write about double-tonguing here. Liebeskind relates an anecdote about the different techniques common in France and Germany:

A few years ago, for instance, I heard a travelling French flute player say to a German flutist, who played the double tongue: Mr., vous me surpassez en staccato! [Mr., you surpass me in playing staccato] The German answered: Vous êtes très-honnête Mr., mais ce que vous prenez pour staccato, ne l’est pas; c’est le double-coup de langue, ou ce que nous autres Allemands appellons: die Doppelzunge [you are very honest, Mr. but what you believe to be a staccato is nothing of the sort; it is the double tongue or, as we Germans call it, die Doppelzunge]. – this did not help [to clarify matters]; the answer was: eh bien, cela est égal [well, that makes no difference].

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303. Müller *Elementarbuch*, quoted in Lichtmann *Müller* 213, transl. Lichtmann *Müller* 214.

So hörte ich vor einigen Jahren einen reisenden französischen Flötenspieler zu einem deutschen Flötisten, der die Doppelzunge spielte, sagen: Mr., vous me surpassez en staccato! Der Deutsche versetzte hierauf: Vous êtes très-honnête Mr., mais ce que vous prenez pour staccato, ne l'est pas; c'est le double-coup de langue, ou ce que nous autres Allemands appellons: die Doppelzunge. –Es half nichts; eh bien, war die Antwort, celà est égal!<sup>304</sup>

The story is understandable if one assumes that the flutist by “staccato” refers to staccato executed with single tongue. This anecdote is enlightening in that it confirms a connection between staccato passages and single-tonguing, at the same time as it shows that passages executed with *d-l/t-tl* could be played detached enough to be called staccato. Liebeskind write, “The pronunciation titt'll, which I would call the accented double tongue, sounds almost as if both notes, the good and the bad one, were accentuated very sharply.”<sup>305</sup> In Kuhlau's *Introduzione* and *Rondo* bars 63-66 the sixteenth notes are executed with *d-l/t-tl* and played staccato. The bars covered in the music example are track 31 on the CD attached to the study; the full movement is track 13.

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304. Liebeskind *Doppelzunge* 669.

305. “Die Aussprache titt'll, die ich die stossende Doppelzunge nennen möchte, klingt täuschend so, als würden beyde Noten, die gute und schlechte, scharf abgestossen.” Liebeskind *Doppelzunge* 669.

The image shows a musical score for Example 104, consisting of two systems. The first system includes a Flute part and a Piano part. The Flute part has a treble clef and a key signature of one sharp (F#). It features a sequence of notes with 'dl dl dl' markings above it, indicating double-tonguing. The Piano part has a grand staff (treble and bass clefs) and provides accompaniment with dynamic markings 'p' and 'sf'. The second system includes a Flute part and a Piano part. The Flute part has a treble clef and a key signature of one sharp (F#). It features a sequence of notes with 'dl dl dl dl dl dl' markings above it, indicating double-tonguing. The Piano part has a grand staff and provides accompaniment with dynamic markings 'sf' and 'p'.

Example 104. Kuhlau *Introduzione* and *Rondo*, bars 62-66. The indicated double-tonguing is added by the present author.

Weber quotes Drouët's criticism of *d-l/t-tl* in his own German translation.<sup>306</sup> Weber admits that with the *l*, the airstream is, so to speak, going sideways, which makes it sound different from the *d*-stroke. Using an *l* is also unfavorable for the sound in the beginning.<sup>307</sup> However,

The fact that this difficulty can be completely and beautifully overcome is proven by a host of excellent German flutists; indeed so vividly and beautifully that the alleged impossibility needs no further refutation. Additionally, in fact, this tongue technique appears to be especially commendable because it can be so beautifully adjusted to the various nuances and degrees of hardness and softness, depending upon whether one pronounces the *d* quite sharply, even like a hard *t*, in order to accentuate the notes *staccato* as hard and sharply as possible, - or pronounces the *d* rather softly and the *dl* almost only as *l* etc., in order to accentuate softly.

Dass aber diese Schwierigkeit sich vollkommen und schön besiegen lässt, wird von einer Menge sehr vortrefflicher deutscher Flötisten so lebendig und schön durch That dargethan, dass die angebliche Unmöglichkeit nicht weiter wiederlegt zu werden braucht. Ja, es muss diese Art von Zungenschlag auch darum

306. Presumably he only had access to the first French edition.

307. Weber *Doppelzunge* 115-116.

noch insbesondere vorzüglich schätzenswert erscheinen, da derselbe sich so schön in so verschiedenen Nüancierungen und Abstufungen von Härte und Weichheit geben lässt, je nachdem man, -um die Noten möglichst hart und scharf *staccato* zu accentuiren, das *d* recht hart, und selbst völlig wie ein hartes *t* ausspricht, -oder, um weich zu accentuiren, das *d* recht weich und das *dl* fast nur wie *l*, u.s.w.<sup>308</sup>

Fürstenau criticizes double-tonguing for being monotonous,<sup>309</sup> for sounding “einförmig, gleich einem Flötenuhrwerke,”<sup>310</sup> for being “most unuseful for clear and precise playing,”<sup>311</sup> and for not giving the playing enough variety.<sup>312</sup> In a review of Drouët’s *Méthode* that might be written by Fürstenau double-tonguing is criticized for working well only at a certain, constant tempo.<sup>313</sup> However, Fürstenau writes in *Kunst*:

Although the single tongue suits a characteristic, splendid playing without doubt far better than that [the double tongue], of which fact my previous experience has convinced me, I shall nevertheless not *entirely* and *at all costs* advise against the double tongue, since the manner [technique] of the tongue is left to the individuality of each player and needs to shape itself according to the path that his playing is taking.

So zweifellos nun aber auch zu einem charakteristischen, grossartigen Spiele die einfache Zunge sich ungleich besser eignen mögte als jene, wovon mich alle mein bisherigen Erfahrungen überzeugt, so will ich jedoch von der Doppelzunge *nicht durchaus* und *unbedingt* abrathen, indem die Manier der Zunge der Individualität eines jeden Spielers überlassen bleiben und sich nach dem Wege richten muss, den sein Spiel nimmt.<sup>314</sup>

Fürstenau writes in *Kunst* about “double-tonguing in its different subdivisions,”<sup>315</sup> which shows that he does not exclude techniques other than *d-l/t-tl* from what he calls double-tonguing.

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308. Weber *Doppelzunge* 116.

309. Fürstenau *Kunst* 38.

310. Fürstenau *Kunst* 39.

311. “deutlichen und akzentuierten Vortrag” Fürstenau *Flötenschule* § 15, quoted in Delius *Einführung* XXIII.

312. “dass man dem Spiele nich genug Mannigfaltigkeit damit geben könne.” Fürstenau *Kunst* 38.

313. *Allgemeine Musikalische Zeitung* XXXII (1830): 500-501.

314. Fürstenau *Kunst* 38.

315. “der Doppelzunge in ihren verschiedenen Unterarten” Fürstenau *Kunst* 38.

In an review of Fürstenau's *Flötenschule* from 1828 we can read:

The author is against the latter [the double tongue]. For our taste he appears to go too far in this respect, as also some others, such as A.E. Müller, went too far in the opposite direction. *Abusus non tollit usum*. [Wrong use does not preclude proper use.] It is, however, true that one can achieve the well known advantages of the double tongue even without it. But how difficult is this!

Der Vf. ist gegen die Letztere.[der doppelten Zunge] Er scheint uns auf dieser Seite zu weit zu gehen, wie andere, z.B. A. E. Müller, auf der entgegen gesetzten zu weit gingen. *Abusus non tollit usum*. Wahr ist freylich, dass man die bekann-ten Vortheile der Doppelzunge auch ohne sie erreichen kann. Aber wie schwierig ist es!<sup>316</sup>

I conclude that the reviewer finds no reason to reject a useful tool to make life easier (double-tonguing, presumably with *d-l/t-tl* since he writes about A. E. Müller), though his opinion is that Müller overuses it.

Carl Grenser translates parts of James' *Word* in an article titled "Für Flötenspieler bemerkenswerthe Stellen aus dem Buche: A word or two..." in the *Allgemeine Musikalische Zeitung* in 1828. Grenser writes, "Mr. James judges quite correctly the so called double tongue"<sup>317</sup> and translates James' criticism of double-tonguing with *d-l/t-tl*.<sup>318</sup>

## 2.8.2 Double-tonguing with *d-g/t-k*

As seen from the passage quoted above, Müller is unfamiliar with double-tonguing with *d-g/t-k* and *d-r/t-d*, and rejects both of them. In *Universalexikon*, the French *dougue dougue* is called a misuse.<sup>319</sup> Maximilian Schwedler writes in *Flöte und Flötenspiel*, the third edition from 1923:<sup>320</sup>

Sixty to eighty years ago so-called double-tonguing was known to only a few flutists and was very familiar to even fewer. A mere superficial acquaintance with it may well have been the main reason that even excellent flutists refrained from its use, even advising against it.

316. *Allgemeine Musikalische Zeitung* XXX (1828): 571-572.

317. "Recht gut urtheilt Hr. James über die sogenannte Doppelzunge," Grenser *Flötenspieler* 220.

318. Quoted in section 2.9.1.3.

319. "Eine falsche Anwendung schreibt *dougue dougue* vor," Schilling *Universalexikon* 921.

320. First published in 1897 as *Katechismus der Flöte und des Flötenspiels*.

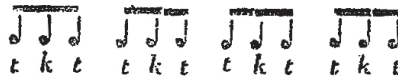
Vor sechzig bis achtzig Jahren war die sog. Doppelzunge nur wenigen Flötisten bekannt und noch wenigeren geläufig. Eine jedenfalls nur oberflächliche Beschäftigung damit mag wohl die Hauptursache gewesen sein, dass selbst hervorragende Flötenkünstler von ihrer Verwendung absahen, ja sogar abrieten.<sup>321</sup>

In *Flötenspiel*, Schwedler use the term “double-tonguing” exclusively for double-tonguing with *d-g/t-k*. Drouët, however, writes in *Method*, “In Germany /.../ again many say Take, Teke, Tike, Toke, Tuke.”<sup>322</sup> Weber agrees, writing that double-tonguing with *d-g/t-k* is used, though less often than *d-l/t-tl*.<sup>323</sup>

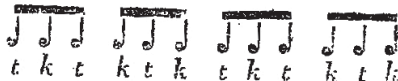
After quoting Drouët’s criticism of double-tonguing with *d-g/t-k*, Weber writes that we should not:

forget the excellent effect with which we have heard this tongue stroke [double-tonguing with *d-g/t-k*] so often from excellent artists. I particularly want to add as a defence for this manner of articulation that it is not only very well suited for the really hard and sharp accentuation, in contrast to the increasingly soft slurring tongue [Schleifzunge, *d-l/t-tl*], that it not only can be learned much easier than that /.../ but we must accredit this double tongue also an inherent advantage, that it in itself allows for not only equally manifold shades as does the slurred tongue [Schleifzunge], but in fact for many more. Because, on the one hand, it varies in many ways if one articulates the t and k harder or softer. On the other hand, it accommodates a certainly very laudable variation, especially in triplets, depending on the way it is used.

This way:



or this way:



vergessen, mit welche wir eben diesen Zungenstoss [double-tonguing with *d-g/t-k*] schon so oft von trefflichen Künstlern vernommen. Insbesondere möge ich, als

321. Schwedler *Flötenspiel* 58, transl. 359-360 (corrected by the author).

322. Drouët *Method* 14.

323. “minder häufig [als mit *t-tl* oder *t-dl* oder *d-dl*] wird die [Doppelzunge] mit *t-k* oder *d-k* gebraucht!” Weber *Doppelzunge* 110.

Apologie dieser Articulationsweise, noch anführen, dass sie nicht nur ganz trefflich zum völlig scharfen und harten Abstossen, im Contrast gegen die immer weichere Schleifzunge, [*d-l/t-l*] dient, dass sie nicht nur weit leichter zu erlernen ist, als diese, /.../ sondern es muss dieser Doppelzunge noch als eigner Vorzug angerechnet werden, dass sie auch in sich selbst nicht bloß eben so vielfältiger, sondern selbst noch weit mehrer Schattierungen fähig ist als die Schleifzunge. Denn Einestheils schattiert sie sich schon dadurch sehr mannigfaltig, dass man das *t* und das *k* bald härter, oder bald weicher articulirt. Andertheils ist sie insbesondere bei Triolen einer gewiss sehr schätzenswerthen Abwechslung fähig, je nachdem man sie nämlich bald so angewendet, [und] bald so:<sup>324</sup>

Weber here suggest to reasons that double-tonguing with *d-l/t-tl* was later out-competed by *d-g/t-k*: the latter is easier to learn, however, in my opinion more important, more suited for hard and sharp strokes. He also claims that *d-g/t-k* is as good as *d-l/t-tl* for making nuances, and an additional benefit is that it is possible to reverse the syllables, especially in triplets. It is worth noticing, that in this the earliest German recommendation of double-tonguing with *d-g/t-k* includes the practice for triplets with the alternation *t-k-t k-t-k*.

Later in the article Weber suggests combining *d-l/t-l* and *d-g/t-k*, thus yielding *d-k-d-l d-k-d-l* or *d-l-d-k d-l-d-k*; for triplets *d-k-dl d-k-dl* in order to get varied nuances (“manichfaltige Schattirungen”).<sup>325</sup>

In a review in the *Allgemeine Musikalische Zeitung* from 1837, Soussmann is praised for, among other things, his double-tonguing.<sup>326</sup> In *Flötenschule* Soussmann discusses double-tonguing with *d-g/t-k* (he writes it “*dücke*”, in the French parallel text “*duke*”), as the normal form of double-tonguing.<sup>327</sup> Soussmann prints an etude with double-tonguing with sixteenth notes, mostly stepwise, but also some leaps and repeated notes. The tempo is Allegro (♩ = 120). Soussmann writes that double-tonguing should completely resemble single-tonguing.<sup>328</sup> Soussmann recommends the alternating application of *d-g/t-k* for triplets; he prints an etude for triple-tonguing with the articulation “*ketüke, tüketü*”<sup>329</sup>

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324. Weber *Doppelzunge* 116-117.

325. Weber *Doppelzunge* 119.

326. *Allgemeine Musikalische Zeitung* XXIV (1837): 389.

327. Soussmann *Flötenschule* 4:14 and 4:34.

328. Soussmann *Flötenschule* 4:14.

329. Soussmann *Flötenschule* 4:34.



### 2.8.3 Double-tonguing with *d-r/t-d*

According to Weber, J. Fröhlich recommends the use of *r* at slow tempi.<sup>330</sup> I have not found any later documentation of the use of *r* at slow or moderate tempi, except in dotted rhythms. An article from Berlin in *Allgemeine Musikalische Zeitung* from 1820 reports on a concert that Drouët played the same year:

Especially Mr. Drouet possesses great skill playing the double tongue, with which he performs the most difficult and fastest passages, whether on different notes or on notes of the same pitch, in leaps, diatonic or chromatic passages, and with which he truly inspires admiration. However, I believe that he, being a truly excellent master of this tongue, perhaps for this very reason uses it as often as possible, but applies it in fact too frequently and does, therefore, harm to the effect.

Besonders besitzt Hr. Drouet grosse Fertigkeit in der Doppelzunge, mit welcher er die schwersten und schnellsten Passagen sowohl in einzelnen verschieden benannten, als auch in gleichbenannten Tönen, in Sprüngen, diatonischen und chromatischen Tonleitern ausführt, und dadurch wirklich zur Bewunderung hinreißt. Indessen dünkt mich, dass er als ein ganz vorzüglicher Meister in dieser Zunge sie vielleicht desswegen so viel als möglich benütze, sie aber zu oft gebrauche, und dadurch der Wirkung schade.<sup>331</sup>

This concert might have been included in a tour Grenser refers to in 1828, writing in the *Allgemeine Musikalische Zeitung* about “the /.../extraordinary applause that Hr. Drouët obtained from the artists and the enthusiasts especially for his staccato, during his tour through Germany a few years ago.”<sup>332</sup> In the same article, Grenser translates James’ praise of Drouët’s articulation.<sup>333</sup> Furthermore, in a review in *Allgemeine Musikalische Zeitung* in 1830 of Drouët’s *Méthode*, the reviewer writes, “Those who were lucky enough to hear him [Drouët], praise

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330. Weber *Doppelzunge* 105.

331. *Allgemeine Musikalische Zeitung* XXII (1820): 845. The article is probably written by Gottfried Weber, see de Reede *Allgemeine* XXII.

332. “Der /.../ausserordentlich Beyfall, den Hr. Drouët auch auf seiner Reise durch Teutschland vor mehren Jahren, vornehmlich durch sein Staccato, von Künstlern und Liebhabern erhalten hat,” Grenser *Flötenspieler* 158.

333. Grenser *Flötenspieler* 157. James is quoted in section 2.9.2.

especially his inimitable skill in the use of the double tongue.”<sup>334</sup> I conclude that Drouët’s double-tonguing attracted great attention during his visit to Germany. This was also long remembered; Adolph Goldberg writes in *Biographien zur Porträts-Sammlung hervorragender Flöten Virtuosen, Dilettanten und Komponisten* from 1906 that in Drouët’s playing, passages and staccati with double tongue were especially admired.<sup>335</sup> An edition of Drouët’s *Méthode* with parallel French and German texts was published in 1827. It is reviewed in *Allgemeine Musikalische Zeitung* in 1830, where the reviewer writes, “Now Mr. D. comes to the chapter where he describes what is understood by the double-tonguing. Because that is already common knowledge, we will see which syllables Mr. D. uses, and find, that those are the syllables pronounced in French deu-reu.”<sup>336</sup> However, there seems still to have been some confusion about Drouët’s tonguing. In *Universallexikon* Drouët is praised for possessing the greatest skill in double-tonguing of all flute virtuosi,<sup>337</sup> however, further down on the page it is stated that Drouët rejects double-tonguing, and executes an equally fast staccato with single tongue.

Weber mentions *t-r-t-r* as an alternative for double-tonguing.<sup>338</sup> As far as he knows, *t-r* or *d-r* is used even more seldom than *t-k* or *d-k*.<sup>339</sup> Weber does not write that he refers only to German players; he might well refer to the his whole sphere of experience. A review from 1844 of Fürstenau’s *Kunst* states:

If used sparingly and at the right place, the double tongue creates the most brilliant effect, especially in very fast passages for which the most exercised single tongue would be too slow. The student should therefore always include this artful technique in his exercises, for which he will find the best instruction in the flute school by Drouët.

Selten gebraucht und am rechten Ort ist die Doppelzunge von der glänzendste Wirkung, namentlich in sehr schnellen Passagen, denen die geübteste einfache

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334. “Diejenigen, welche das Glück hatten, ihn [Drouët sic] zu hören, rühmen vor Allem seine fast unnachahmliche Fertigkeit im doppelten Zungenschlage” *Allgemeine Musikalische Zeitung* XXXII (1830): 500-501.

335. Goldberg *Biographien* 107.

336. “Jetzt kommt Hr. D. an das Kapitel, worin er beschreibt, was man unter dem doppelten Zungenschlage versteht. Da diess schon allgemein bekannt ist, so sehen wir sogleich nach, welche Sylben Hr. D. braucht, und finden, dass er die französisch ausgesprochene Sylben deu-reu sind.” *Allgemeine Musikalische Zeitung* XXXII (1830): 500-501.

337. Schilling *Universallexikon* 921.

338. Weber *Doppelzunge* 109.

339. Weber *Doppelzunge* 110.

Zunge nicht nachzukommen vermag. Der Schüler nehme daher dieses Kunstmittel immer mit in seine Uebungen auf, wozu er in der Drouët'schen Flötenschule die beste Anleitung findet.<sup>340</sup>

It is possible that the reviewer recommends Drouët's method because of the reputation of the latter's tonguing, rather than the syllables recommended in his method.

Although a number of techniques were used for double tonguing, not all flutists mastered it. *Universallexikon* states that many reject double-tonguing because it is so difficult.<sup>341</sup>

### 2.8.4 Single-tonguing

Not all German writers disagreed with Devienne. A review of Devienne's *Méthode* in *Berlinische musikalische Zeitung* in 1806 states:

The information/.../given about the tongue stroke is entirely correct. On the flute there is no double tongue, just as little as on the oboe or the clarinet. If the flute players begin early with their exercises and work patiently, they can, even without the double tongue, develop their brilliant tongue technique just as much as the artists of other wind instruments. It is sad that, in the last five lines of this page, Mr. D. spoils what he had set out to do so well: his recommended tongue stroke is nothing else than Quantz's tit'l and did'l, and it is worth just as little as turu, turu, dugo etc.

Was /.../vom Zungenstoss gesagt wird, ist vollkommen richtig. Es gibt auf der Flöte eben so wenig eine Doppelzunge, als auf der Oboe oder Clarinette. Bei zeitig angefangener und unverdrossener Uebung können es Flötenspieler auch ohne Doppelzunge in der glänzenden Zungenfertigkeit eben so weit bringen als Künstler auf andern Blasinstrumenten. Nur Schade, dass Hr. D. in den letzten fünf Zeilen dieser Seite wieder verdirbt, was er vorher gut gemacht hatte: der von ihm empfohlne Zungenschlag ist nichts anders als Quantzens tit'l und did'l, und taugt eben so wenig als turu, turu, dugo etc.<sup>342</sup>

340. *Allgemeine Musikalische Zeitung* XLVI (1844): (718-719).

341. Schilling *Universallexikon* 921.

342. *Berlinische Musikalische Zeitung*, 1806 no. 2:6.

It is tempting to speculate on who the reviewer is.<sup>343</sup> Judging from the tone of the review as a whole, he/she seems to be an accomplished, professional flutist. In my opinion, the writer here advocates single tongue for fast passages. This writer also interprets the last double-tonguing Devienne describes as *d-l/t-tl*. Not surprisingly, Liebeskind is indignant about this review.<sup>344</sup>

Grenser writes:

Personally, I will, after everything that I have heard and read about it, nevertheless prefer the single tongue, which is a natural means of articulating the tones, and through which, after much exercising, exceptional and admirable things can be achieved, which, amongst others, Hr. Fürstenau has proved most brilliantly.

Was mich betrifft, so werde ich doch, nach Allem, was ich darüber sprechen gehört und gelesen habe, eine Vorliebe für den einfachen Zungenstoss behalten, der ein natürliches Mittel bey der Articulation der Töne ist, und womit ebenfalls, nach vieler Uebung, Ausserordentliches und Bewunderungswürdiges geleistet werden kann, was unter Andern Hr. Fürstenau aufs Glänzendste beweist.<sup>345</sup>

In 1825 Fürstenau writes in his article “Etwas über die Flöte und das Flötenspiel” in *Allgemeine Musikalische Zeitung*, “The best language on the flute cannot be but *simple* /.../the player who truly masters it will be able to imitate all the bowings of the violin and thus give his playing a diversity which always will be of interest.”<sup>346</sup>

In *Kunst* Fürstenau writes that single tongue can be performed at every tempo,<sup>347</sup> and passages can be executed “with a charming freshness and lightness, and every now and then even with some spiciness.”<sup>348</sup> The nuance of the tip changes considerably according to tempo, character, dynamic and note length.<sup>349</sup> In reports on Fürstenau’s playing we read that he had “a peculiar staccato, that is not made by the common double tongue, but through striking every single note with great

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343. Most likely not Grenser or A. B. Fürstenau, who in 1806 were 12 and 14 years old, respectively.

344. Liebeskind *Doppelzunge* 666.

345. Grenser *Flötenspieler* 158.

346. “Die beste Sprache auf der Flöte kann nicht anders als *einfach* seyn, /.../ Der Spieler, welcher diese recht in seiner Gewalt hat, wird alle Stricharten der Violine zu copiren im Stande seyn, und dadurch seinem Spiel eine Mannigfaltigkeit geben, welche stets Interesse erregen wird.” Fürstenau *Flöte* 713.

347. Fürstenau *Kunst* 38-39.

348. “mit reizender frische und Leichtigkeit, auch hin und wieder mit etwas Pikanterie.” Fürstenau *Kunst* 39.

349. Fürstenau *Kunst* 38-39.

carefulness,”<sup>350</sup> and that he could perform single-tonged staccato at such speed that it was mistaken for double-tonguing by many flutists.<sup>351</sup>

Soussmann prints three etudes for single tongue; the fastest notes are in an etude consisting of sixteenth notes with the tempo indication  $J = 126$ .<sup>352</sup> Fürstenau prints an etude for staccato with sixteenth notes and the tempo indication  $J = 132$ .<sup>353</sup> Assuming the etude is for single tongue, the tempo is faster than Soussmann’s, but considerably slower than the tempo Soussmann requests for double-tonguing with *d-l/t-tl*.<sup>354</sup>

It is difficult to estimate how many players used single-tonguing for fast passages. Fürstenau writes in 1825 that “True, the single tongue requires special industry, but to date I have had the pleasure of seeing that all those whom I had advised to use it, after persistent study, did achieve excellent skills.”<sup>355</sup> In this article he recommends only single-tonguing. Fürstenau might also have written the review from 1830 of Drouët’s *Méthode* in the *Allgemeine Musikalische Zeitung* where it says:

Hence not even Mr. D has changed my conviction that the single tongue stroke is the preferable one, because it makes every tone, on any flute, in all the dynamic gradations pure and equally strong; its almost exclusive application is useful when playing in an orchestra but even in solo playing one can reach an admirable skill with it.

Sonach ist meine Ueberzeugung auch von Hrn. D. nicht verändert worden, dass der einfache Zungenstoss der vorzüglichste sey, da er jeden Ton, auf jeder Flöte, rein und gleich stark, nach allem Graden der Stärke, die man anwenden will, angebt, fast allein brauchbar im Orchesterspiele ist, und man es damit in Hinsicht auf Solospiel ebenfalls zu einer bewunderungswürdigen Fertigkeit bringen kann.<sup>356</sup>

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350. “ein besonderes Staccato, das nicht durch die gewöhnliche Doppelzunge, sondern durch Abstossen jedes einzelnen tones mit grosser Genauigkeit hervorgebracht wird.” *Allgemeine Musikalische Zeitung* XIX (1817): 867.

351. *Allgemeine Musikalische Zeitung* XLVI (1844): 719.

352. Soussmann *Flötenschule* 4:4.

353. Fürstenau *Kunst* 95-96.

354. See section 2.8.1.1 above.

355. “Zwar erfordert die einfache Zunge einen besondern Fleiss, doch habe ich bisher die Freude gehabt, es alle, denen ich den Gebrauch derselben angerathen habe, bey anhaltendem Studium zu einer ausgezeichneten Fertigkeit bringen zu sehen.” Fürstenau *Flöte* 713.

356. *Allgemeine Musikalische Zeitung* XXXII (1830): 500-501.

As seen above (2.8.1), in *Kunst*, Fürstenau's approach is further softened.

Weber writes:

some flute players have studied it [the single tongue] to such perfection that they can articulate each note with a single tongue thrust even in quick passagework. This possibility has, on the other hand, its limits, and in very fast passages such an articulation of each note with a T or D is ultimately impossible.

manche Flötenspieler haben denselben [Zungenstoss T oder D] bis zu solcher Fertigkeit eingeübt, dass sie auch in schnellen Passagen eine jede Note mit einem eigenen Zungenstosse anzugeben vermögen. Diese Möglichkeit hat indessen auch ihre Grenzen, und bei ganz schnellen Passagen ist solches Abstossen einer jeden Note mit einem eigenen T oder D am Ende doch nicht möglich.<sup>357</sup>

Single-tonguing could also be objected to criticism. A review from 1844 of Fürstenau's *Kunst* states, "In the same fashion, an artist can become monotonous if he uses the single tongue, like any other artful technique, too often."<sup>358</sup>

Fürstenau notates all of the unslurred fast passages in his examples with staccato dots. He also writes that at a faster tempo, the articulation should be shorter.<sup>359</sup> It seems that, more than for his predecessors at the end of the pervious century, Fürstenau's concept of a tongued fast passage is staccato.

### 2.8.5 Legato-playing and relating to indicated articulation

For Fürstenau, a technically correct execution includes paying attention not only to the notes, but also to the signs and words indicated by the composers.<sup>360</sup> In his next section, which is about what is needed to elevate a performance from being correct to being beautiful he writes about the appropriate use of the various ways of articulating and slurring the notes especially in passages whose specific expression is left to the discretion of the player.<sup>361</sup> By "passages whose expression is left to the discretion of the player" I assume Fürstenau refers to passages without indicated

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357. Weber *Doppelzunge* 106.

358. "Eben so kann der Künstler durch zu öfteren gebrauch der einfachen Zunge, überhaupt jedes Kunstmittels, monoton werden." *Allgemeine Musikalische Zeitung* XLVI (1844): 718-719.

359. Fürstenau *Kunst* 38-39.

360. Fürstenau *Kunst* 88.

361. Fürstenau *Kunst* 89.

articulation, and conclude that the player is supposed to know the art of applying articulation for such passages. Fürstenau provides examples of different articulation patterns,<sup>362</sup> and writes:

Even more frequently than merely articulating or slurring the tones of a passage, the mixed use of both manners of performing is used, [that is,] a manner of separating and connecting the tones which consists in a combination of slurring and articulating, by means of whose infinite diversity the playing becomes very interesting and appealing, if it is used with tasteful discretion and care.

Häufiger noch, als das blossе Abstossen oder Schleifen der Töne in einer Passage, kommt die gemischte Anwendung jener beiden Vortragsweisen, die aus Stossen und Schleifen zusammengesetzte Manier des Trennens und Verbindens der Töne vor, durch deren unendliche Mannigfaltigkeit dem Spiele sehr viel Interesse und Reiz abzugewinnen ist, wenn dabei mit geschmackvoller Auswahl und Vorsicht verfahren wird.<sup>363</sup>

Drouët was criticized in the *Allgemeine Musikalische Zeitung* for not making enough use of legato in a concert in 1820, “Because a few more slurred passages in his playing would not only have elevated his art of the tongue even more, they would also have surprised us every time. Instead we were deprived of this [element of] surprise already by the middle of his performance, and soon we could guess what would come next.”<sup>364</sup>

A. E. Müller prints a large number of short examples of articulation of different figures in *Elementarbuch*. Of the indicated articulation patterns, two slurred and two tipped is the far most common.<sup>365</sup> Fürstenau calls this pattern “a somewhat dated manner, which should not be used too frequently. Formerly, one assumed that this manner was intended as soon as there were no indications above the notes.”<sup>366</sup>

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362. Fürstenau *Kunst* 44-46.

363. Fürstenau *Kunst* 44.

364. “Denn einige gebundene Passagen mehr in seinem Spiel, würden seine Kunst in der Zunge nicht nur mehr gehoben, sondern uns auch stets überrascht haben, statt dass wir in der Mitte seines Spieles schon diese Ueberraschung entbehren mussten, und bald errathen konnten, was da kommen würde.” *Allgemeine Musikalische Zeitung* XXII (1820): 846. (Probably written by G. Weber, see de Reede *Allgemeine* XXII).

365. Lichtmann *Müller* 129-210.

366. “Eine etwas veraltete Manier, welche nicht zu oft anzuwenden ist. In früherer Zeit wurde angenommen, dass, sobald keine Bezeichnung über den Noten stand, diese Manier gemeint sei.” Fürstenau *Kunst* 44.

It seems that two slurred and two tipped was a common articulation pattern early in the 19<sup>th</sup> century, but less so later on.

## 2.9 England, first half of the 19<sup>th</sup> century

### 2.9.1 Double-tonguing with *d-l/t-tl*

The English preference for double-tonguing with *d-l/t-tl* continued in the 19<sup>th</sup> century. John Beale writes in *A Complete Guide to the Art of Playing the German Flute* from 1813, “Of Double Tongueing/.../depending on the action and reaction of the tongue; you must pronounce the words tootle, tootle, to yourself.”<sup>367</sup> Charles Nicholson writes in *Nicholson’s Complete Preceptor for the German Flute* from 1816:

There are many Examples in the following Treatise of Passages, which the Pupil would find extremely difficult to execute without the aid of Double Tonguing, which at once produces a brilliant and spirited effect, with a facility of Articulation, which cannot be accomplished by the ordinary mode of Tonguing;/.../ Double Tongueing is the effect produced by the action of the Tongue against the roof of the mouth, and is to be acquired by the Pupil endeavouring to articulate the words tootle, tootle, tootle, very distinctly.<sup>368</sup>

The “ordinary mode of tonguing” refers to single-tongue. In *C. Nicholson’s Preceptive Lessons for the Flute* from 1821 Nicholson mentions *dig-ga* and *tuc-ca* as alternatives, but writes that he decidedly prefers the syllables *too-tle*.<sup>369</sup> In *A School for the Flute* from 1836 Nicholson writes, “For rapid and continued passages there is no articulation equal in effect to that of double tongueing; and I deem it quite impossible that the same degree of velocity and continuity can be obtained by any other articulation.”<sup>370</sup> E. Riley, Robert William Keith and Francisco Kuffner also endorse double-tonguing with *d-l/t-tl* in their flute methods printed in c. 1811, 1816-22 and c. 1820 respectively.<sup>371</sup> James Alexander writes in his method from 1821:

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<sup>367</sup> Beale *Complete* 16.

<sup>368</sup> Nicholson *Complete* 19.

<sup>369</sup> Nicholson *Lessons* 5.

<sup>370</sup> Nicholson *School* 65.

<sup>371</sup> Spell *Nicholson* 162. Dates from Powell *Bibliography*.



Double-tongueing is the most brilliant articulation on the Flute, with a facility of executing many difficult passages, which cannot be performed with good effect by ordinary mode of articulation. Double-tongueing is produced by pronouncing the two syllables *tootle* with the tongue, very distinctly into the Flute, which will produce two notes.<sup>372</sup>

Charles N. Weiss writes in *A New Methodical instruction Book for the Flute* from c. 1824:

I recommend it as indispensable to any amateur or professor, who is anxious to become a finished performer on the Flute to be acquainted with the double tonguing./.../The syllable *tu* or *too* pronounced in the Flute is the action of the tongue striking against the roof of the mouth and produces the first and strongest emphasis on the note. The syllable *tle* is the reaction of the tongue.<sup>373</sup>

Furthermore, George Washington Bown writes in *The Flauto Instructive Companion or Preceptor for the Flute* from c. 1825:

As it would be very difficult if not impracticable to execute some passages with the ordinary mode of Tongueing, the method of playing two notes in the time of one is adopted with every success, and when executed by a good performer has a most brilliant effect. The tongue is always kept in the centre of the mouth and raised towards the roof, to be in capacity to express the word Tut-tle or too-tle.<sup>374</sup>

Raphael Dressler declares in *Dressler's New and Complete Instructions for the Flute* from 1828, "after a patient trial of every variety of articulation, I have by long experience proved that mode of Double tonguing to be the best which I shall explain in the course of the following pages."<sup>375</sup> Dresslers indicates double-tonguing with the syllables *too-tle*.<sup>376</sup> Lindsay writes:

Double-tonguing, which is effected by the action and reaction of the tongue against the upper gum, or roof of the mouth, whilst pronouncing, in a whisper,

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372. Alexander *Preceptor* 32.

373. Weiss *Instruction Book* 86.

374. Bown *Preceptor* 58.

375. Dressler *Instructions* 48-49.

376. See below.

two different syllables, in rapid succession. Double-Tonguing is held in a great esteem by a large majority of the most eminent masters, and is variously applied, by them, not only in a quick delivery of passages of double, triple, or quadruple notes, but also to Arpeggios and passages of the Scale, with admirable effect./.../ He, therefore, who would qualify himself to display all the beauties and capabilities of the Flute, should lose no time in making himself master of this accomplishment.<sup>377</sup>

Lindsay discusses different syllables,<sup>378</sup> but writes, “If our own personal experience may be any criterion, the first method (*tootle, tootle*) will in most instances prove the easiest, and, unless a great deal of practice be given to the others, we are persuaded, it will also generally be found the most effective.”<sup>379</sup> James writes that [Carl Johann] Weidner uses double tongue in the same manner as Nicholson.<sup>380</sup> Some non-English flutists comment on their English colleagues. Walckiers and Coche write in 1829 and 1838 respectively that the English use the *tut le*.<sup>381</sup> Drouët writes in *Method*, “It would be superfluous to mention what articulations are used in this country [England] They are well known.”<sup>382</sup>

### 2.9.1.1 Where and how it was used

Weiss and Lindsay describe the method of leaving out the *t* or *d* of the first syllable in successive, ongoing passages, thus getting *tootle ootle*.<sup>383</sup> Weiss calls it “quadruple tongue”; it is only used for very fast passages. It is the same technique that was described earlier by Tromlitz and A. E. Müller.<sup>384</sup> Dressler similarly suggests starting a very fast passage with *doo-dle*, and articulating the next and all the succeeding pairs of notes with *loo-dle*.

Nicholson writes, “There are many Amateurs who erroneously think the

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377. Lindsay *Elements* 97.

378. See section 2.9.2.

379. Lindsay *Elements* 98.

380. James *Word* 209. According to Fairley, Weidner was an 18<sup>th</sup> century flutist and teacher who published flute arrangements of popular melodies, Fairley *Flutes* 132. British Library’s Integrated Catalogue lists eight compositions for flute by Carl Johann Weidner, dated to between c. 1810 and c. 1825.



381. “les Anglais se servent de *tut le*” Walckiers *Méthode* 154 and Coche *Méthode* 130.

382. Drouët *Method* 14.

383. Dressler *Instructions* 49, Lindsay *Elements* 100, and Weiss *Instruction Book* 87.

384. See sections 2.2.1 and 2.8.1.

articulation of Double Tongueing only applicable to very quick and continued passages.<sup>385</sup> Dressler goes a step further, "But it is not alone in rapid passages that the *Double tongue* is practicable; on the contrary, I am fully convinced that it may be employed with effect in any degree of time."<sup>386</sup>

In *Complete*, Nicholson use the letters "D.T." to indicate double-tonguing.<sup>387</sup> In *Lessons* and in *School* he indicates it with a slur and strokes: .<sup>388</sup> This latter notation also occurs in the first Prelude in *Complete*; I believe it refers to double-tonguing also there.<sup>389</sup> Lindsay uses the same slur with strokes as Nicholson to indicate double-tonguing,<sup>390</sup> though he (or the engraver) mistakenly uses a slur with dots on two occasions.<sup>391</sup> Dressler alone denotes double-tonguing with the mark .<sup>392</sup>

Weiss writes that double-tonguing has an admirable effect in repeated notes, but he is not partial to double-tonguing in arpeggio passages.<sup>393</sup> Lindsay agrees about the repeated notes, "In ascending or descending scales, where the same note is repeated/.../the double tongue should always be applied."<sup>394</sup> However, Lindsay more than once also indicates and recommends double-tonguing for arpeggiated passages.<sup>395</sup> He comments on the example below, "To all arpeggio passages, of the following construction, the application of the Double Tongue cannot be too strongly recommended. The effect is excellent."<sup>396</sup>



Example 105. Lindsay *Elements* 106.<sup>397</sup>

385. Nicholson *Lessons* 53.

386. Dressler *Instructions* 48.

387. Nicholson *Complete* 64 and 68.

388. See Appendix 5.

389. Nicholson *Complete* 75.

390. Lindsay *Elements* 98, 99, 105-108, 110-111.

391. Lindsay *Elements* 31 and 39.

392. Dressler *Instructions* 49-53.

393. Weiss *Instruction Book* 86-87.

394. Lindsay *Elements* 110.

395. Lindsay *Elements* 110.

396. Lindsay *Elements* 106.




397. © British Library Board. All rights Reserved. British Library shelfmark: h.2104.

Nicholson indicates double tonguing as well in arpeggiated passages and broken chords.<sup>398</sup> Lindsay writes, “It is difficult properly to apply the Double Tongue in detached Octaves and Tenths; but, nevertheless, they are both susceptible of this articulation.”<sup>399</sup> Bown indicates double-tonguing on descending big leaps.<sup>400</sup>

Usually the alternation with *l* is repeated throughout, however, there are examples of a more differentiated application. Dressler recommends striking a note with an accent after a leap with *t*, rather than *dl*.<sup>401</sup>



Example 106. Dressler *Instructions* 50.<sup>402</sup>

It is technically very difficult to make an accent on the second syllable with *d-l/t-tl*. In Nicholson's etudes for double-tonguing, double-tonguing is indicated throughout, but the biggest leaps upwards in these etudes are sixths, without accents.<sup>403</sup> In Dressler's system of indicating double-tonguing,  means that the second note of four is tongued with *t* (yielding *t t d d l l t d d l l t*),  the last note of four is tongued with *t* (*d d l l t*);  is used for triple tongue.<sup>404</sup>

Nicholson writes in *Complete*, “The following Example /.../ will be found to produce a distinct expression in passages where the Pupil may wish to substitute it for the usual articulation of the word tootle.”<sup>405</sup>



Example 107. Nicholson *Complete* 19.<sup>406</sup>

The effect of this when I play it resembles two slurred, two tipped.

398. For example Nicholson *Lessons* 46 and 61.

399. Lindsay *Elements* 110.

400. Bown *Preceptor* 65.

401. Dressler *Instructions* 49-50.

402. © British Library Board. All rights Reserved. British Library shelfmark: h.1152.(1)

403. Nicholson *School* 109.

404. See examples below.

405. Nicholson *Complete* 19.

406. © British Library Board. All rights Reserved. British Library shelfmark: h.1155.a.(2).

Lindsay writes that double-tonguing should not be reversed; the first syllable is always on the stronger part of the beat.<sup>407</sup> When I play Berbiguier's examples for reversed double-tonguing with *d-l/t-l*,<sup>408</sup> only the scale after a short rest works better reversed than starting with repeating the *d* or *t*.

### 2.9.1.2 Triplets

The same problem that Tromlitz notices with double-tonguing triplets is also taken up by Dressler, who writes, "The notes should be as equal as possible and the greatest care is required to avoid that stop or hiatus, which so many performers make between successive triplets."<sup>409</sup> Dressler suggests practicing *too-tle-too* slowly and distinctly, then increasing the tempo using *doo-dle-doo* and then, very rapidly, the syllables *doo-dle-loo*.<sup>410</sup> For certain figures Dressler suggests the syllable with *l* on the first note of the triplet:

The following Ex. exhibits various passages in which there is a wide interval from the first to the second note, with an accent on the second. This accentuation is produced by the syllables which I have marked, and the effect will be found most excellent.<sup>411</sup>



Example 108. Dressler *Instructions* 51.<sup>412</sup>

As with figures of even numbers, Dressler recommends using *t* on an accented note after a leap:

407. Lindsay *Elements* 98.

408. Berbiguier *Méthode* 249-250, see section 2.7:1.3.

409. Dressler *Instructions* 50.

410. Dressler *Instructions* 50.

411. Dressler *Instructions* 51.

412. © British Library Board. All rights Reserved. British Library shelfmark: h.1152(1).



Example 109. Dressler *Instructions* 51.<sup>413</sup>

### 2.9.1.3 Criticism and defence

Teobaldo Monzani writes in the new and enlarged edition of his *Instructions for the German Flute* from 1813, “in whatever way it [double-tonguing] is done, the Effect is equally bad, as it Produces nothing but a disagreeable confusion, which precludes the Performer from giving either neatness or expression to the Passages.”<sup>414</sup> It is tempting to speculate that Monzani’s Italian origin is a reason for his condemnation of double-tonguing. Beale seems to answer him when writing about double-tonguing with *d-l/t-tl*, “[double-tonguing] when attained if judiciously used has certainly a wonderful effect, rapid passages being by that means rendered clear, distinct, and easy; and consequently it is very far from producing that confusion, which some assert to be the consequence of attempting to double tongue.”<sup>415</sup> Nicholson writes in *Complete*:

although some Professors on this Instrument; have not recommended this Embellishment as necessary in forming a part of the Pupils course of study, nevertheless the Author from a full conviction of its utility and effect in those Passages where he recommends its introduction; feels confident, that a more general exercise of it alone is wanting to insure its universal adoption.<sup>416</sup>

Here Nicholson is possibly defending double-tonguing against the French flutists; the professors he refers to would then be Devienne and/or Hugot and Wunderlich. Or he may be referring to Monzani. James writes:

413. © British Library Board. All rights Reserved. British Library shelfmark: h.1152.(1).

414. Monzani *Instructions for the German Flute*, 19, quoted in Spell *Nicholson* 158.

415. Beale *Complete* 16.

416. Nicholson *Complete* 19.

The *double tonguing* used to be of high consideration among flute-players; but, with all possible deference to the eminent masters who still use it, I am of opinion, that, in this age of refinement, it ought to be entirely exploded. It is, in every point, view it which way we will, a trick of execution, which has as much of quackery in it as any of the wonderful nostrums, which have for their object the renovation of human life. It is also a false and bad articulation; and however well it might have served the purpose of old masters, when the flute was, as it were, an instrument full of quackeries, it is certainly unworthy the professors of the present age, and of the great perfection to which the instrument is now brought. /.../ To hear a moderate player on the flute performing a double-tonguing passage, is one of the most disagreeable noises which the ear is subject to. It is, in fact, a complete jumble of notes, which have neither meaning, articulation, nor expression; and even in the best specimens of it, of our best masters, there is always such a degree of dryness and harshness attending it, that it is much to be wished the means of using it had never been discovered. This articulation is used to an alarming extent by some masters; and whether it be that the evil is contagious, and they cannot avoid using it, I know not, but there is scarcely a staccato passage in any composition, which they do not execute with this “Babylonish gabble.” Such a method must always be derogatory to the instrument, as it presupposes the impossibility of accomplishing the staccato passages in any other manner.<sup>417</sup>

James credits Nicholson with being the most perfect practitioner of double-tonguing, something that cannot, however, alter the fact that it is an erroneous and defective principle.<sup>418</sup> It might appear from this passage as if James, like Monzani, condemns all types of double-tonguing, but that is not the case. He strongly recommends double-tonguing with *d-r/t-d*, which he, however, does not call double-tonguing.<sup>419</sup> This might be the “other manner” of accomplishing a staccato passage that he refers to. The master that James claims is overusing double-tonguing (with *d-l/t-tl*) is certainly Nicholson. Nicholson is defended by Lindsay, who writes about the

illiberal remarks which have been so plentifully and unceremoniously applied to Mr. Nicholson's *double-tonguing*, in a certain periodical, and also in another publication, by the same writer, have not, we are persuaded, originated in the pure spirit of criticism: for those who have heard Mr. N's performance of his *Pot*

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417. James *Word* 122-123.

418. James *Word* 158.

419. See section 2.9.2.

*Pourri*, his *Fall of Paris*, his “*Au clair de la Lune*,” of Drouet’s *Rule Britannia*, and a dozen other pieces, could not, we opine, without some marvellous obliquity of judgement, honestly charge that peculiar mode of articulation, by which, to the delight of admiring thousands, he has defined his passages, as being a mere system of “trick” and “quackery,” capable, only, of producing a “Babylonish gabble,” and so forth.<sup>420</sup>

The periodical mentioned is presumably James’ *The Flutist Magazine*,<sup>421</sup> and the other publication James’ *Word*, quoted above.

Double-tonguing with *d-l/t-tl* is defended as well by Dressler:

On Double Tonguing

This spirited and brilliant mode of articulation has been adopted by the most eminent Flute players with success; and its utility is thereby fully proved, in opposition to the erroneous idea held by many, that the *double tongue* is founded on a defective principle. If a superior mode of detaching notes in rapid passages were proposed, there could be no hesitation in rejecting the *Double tongue*; but as no such thing has been discovered, and probably never will be, let us improve and cultivate that means of perfect articulation which we possess. Without this agent, it is impossible to bring into display all the capabilities of the instrument; and there being no other mode of performing *rapid passages staccato*, without this accomplishment the performer will ever fail of reaching the highest rank as a Flute player. Let not mere prejudice, therefore, cause us to hesitate in adopting a mode of articulation, which places the Flute above every other Wind-instrument, in the rapidity and beauty of its staccato.<sup>422</sup>

Lindsay acknowledges that double-tonguing with *d-l/t-tl* is inferior to Drouët’s system because its second syllable is less strong, clear, neat, decisive and impressive than the first,<sup>423</sup> but Drouët’s articulation is more difficult. Lindsay continues, however, “since the natural accents, in regular time, lie upon the first, third, and each alternate Quaver, or Semiquaver, of the Bar, -and the first, or strong syllable, *too*, also falls in those same situations of the measure, /.../we consider the defect to be of considerably less real importance than is generally believed.”<sup>424</sup> Weiss agrees,

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420. Lindsay *Elements* 98.

421. See Appendix 1.

422. Dressler *Instructions* 48.

423. Lindsay *Elements* 98.

424. Lindsay *Elements* 98.



“[The syllable *tle*] is necessarily weaker than the first but if pronounced distinctly the second note will be as clear and as pleasing to the ear as the first.”<sup>425</sup> In bars 80-82 and 121-128 of Kuhlau’s *Introduzione* and *Rondo*, the sixteenth notes are articulated with *d-l/t-tl*, and in my opinion the second syllable does not sound weaker than the first. The bars covered in the music example are track 32 on the CD attached to the study; the full movement is track 13.

Example 110. Kuhlau *Introduzione* and *Rondo*, bars 78-84. The articulation indicated in the flute part is added by the present author.

In other words, I agree with Lindsay and Weiss that for an audience the second syllable is strong and clear enough when used on the weak beats. However, in some figures this is not the case; Lindsay writes, “In the next example the last two notes may either be executed with the Single Tip or Double Tongue; but the former will produce the best effect.”

425. Weiss *Instruction Book* 86.



Example 111. Lindsay *Elements* 110.<sup>426</sup>

When I play this figure with *d-l/t-tl*, the second note is audibly less clear and strong than the first, while with single tongue and double-tonguing with *d-g/t-k* it is equally clear and strong.

Nicholson writes in *School*:

Double tonguing is an articulation which has had its full share of abuse and condemnation, but like other innovations on the good old style of flute playing, it has carried conviction by its utility: its advances are now freely admitted, and clearly developed by the vast improvement which has taken place in flute playing within the last few years; for certainly our predecessors were totally unacquainted with the “railroad speed” displayed in the performances of the present generation.<sup>427</sup>

However, there were still players who, like Monzani, for whatever reason did not approve of double-tonguing. In *New Flute Tutor. Bernhard Lee’s Edition of Wragg Improved* from 1840, Bernhard Lee copies Weiss’ article on double-tonguing, but then adds, “The Author is of opinion with many others that Double Tonguing is mere Quackery.”<sup>428</sup>

### 2.9.2 Double-tonguing with *d-r/t-d*

Drouët visited London a first time between 1817 and 1819, and gave concerts in Argyll Rooms and other places, and also lessons to students. The writer of an article in *The Quarterly Musical Magazine* from 1823 dislikes most of Drouët’s playing, but states, “His method of articulation, though resembling double-tonguing, was not really so, but was some modification of the organs peculiar to himself, which gave him the power of most brilliant, distinct, and rapid execution that can be conceived.”<sup>429</sup> Lindsay reports enthusiastically from the same occasion:

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426. © British Library Board. All rights Reserved. British Library shelfmark: h.2104.

427. Nicholson *School* 65.

428. Lee *Improved* 27.

429. “Compositions for the Flute.” *The Quarterly Musical Magazine and Review* 5 (1823):84.

When he was in London, about ten or twelve years ago, the articulation of the celebrated Monsieur Drouet, as applied to rapid execution, was perhaps the most splendid example which has ever yet been heard, and left an impression upon the mind, which few who then had an opportunity of hearing that surprising performer will readily forget. . . . / The unparalleled excellence of M. Drouet's tipping must, however, be allowed by all, and well, in fact, it may; for few, we imagine, would consent to sacrifice the days, months, and even years, which he so perseveringly devoted to the acquirement of his certainly inimitable tip.<sup>430</sup>

On the next page Lindsay writes that Drouët's tonguing was "more uniformly clear, equal, and distinct, than that of any other individual,"<sup>431</sup> and two pages later he writes about "that perfect style of tipping, which continues so greatly to excite the admiration – we had almost said the wonder – of the Flute-Playing world."<sup>432</sup> James is equally impressed, and calls Drouët's articulation "clear, vivid, distinct, and expressive; qualities which every performer, in his execution, ought to grasp at."<sup>433</sup> There was, however, confusion as to how Drouët's articulation was made. James claims that it was a sort of secret amongst those flute-players who studied with Drouët when he was in England, and Lindsay writes that various speculations were afloat as to the means which Drouët employed.<sup>434</sup> James writes about Drouët's "slur'd staccato," and Lindsay's terminology is equally confusing; though he discusses Drouët's tonguing in the chapter on double-tonguing he calls it "Mr. Drouet's Single Tip"<sup>435</sup> or even "Single staccato Tip."<sup>436</sup> In other places Lindsay uses "Single Staccato Tip" and "Single tip" to mean single tongue.<sup>437</sup> The English flute audience apparently believed Drouët's brilliant, clear and distinct articulation to be a sort of single tongue, as compared to double-tonguing with *d-l/t-tl*, and when the descriptions or "explanations" appeared in the late 20's the terminology had already been set. James notices, however, a difference between Drouët's technique and single-tonguing:

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430. Lindsay *Elements* 96.

431. Lindsay *Elements* 97.

432. Lindsay *Elements* 99.

433. James *Word* 123-125. A summary of the text is translated into German in Grenser *Flötenspieler* 156-158.

434. Lindsay *Elements* 99-100.

435. Lindsay *Elements* 98.

436. Lindsay *Elements* 97.

437. Lindsay *Elements* 96 and 110. On page 96 Lindsay use *Single staccato tip* as a translation of *Détacher*.

the effect [of double-tonguing with *d-r/t-d*] is, that each note is sustained, yet perfectly distinct: One note runs into another, yet a brilliant articulation of each is correctly preserved. And it is here that it essentially differs from the common staccato, because the notes are *separate* and *divided* from each other; whilst, in this system, they flow on uninterruptedly, possessing all the distinctness and beauty of the staccato, without its pointed termination.<sup>438</sup>

“Common staccato” refers to single-tonguing. Thus, a picture of Drouët’s articulation appears; it is similar to single-tonguing, but rounder, more fluent and faster. According to James, the tone of the instrument is also gets better than with double-tonguing with *d-l/t-tl*.<sup>439</sup> To shed some light on this admired articulation, Lindsay translates the section on double-tonguing from Drouët’s first method.<sup>440</sup> Lindsay also points out that Weiss “about eight or nine years ago,” in his directions prefaced to No. 5 of his *Two Hundred Studies*, anticipated Drouët by describing a double tongue with “soft *tu-ru, tu-ru*, which/.../pronounced with rapidity, produces *tu-du, tu-du*.”<sup>441</sup> It is surprising that Lindsay does not comment upon Gunn’s double-tonguing with *teddy*. That Lindsay knows Gunn’s *The Art* is evident from the fact that he reprints its first chapter,<sup>442</sup> and quotes from the second.<sup>443</sup>

James suggests imagining the word *Teth-thi-to-dy* as a more qualified and softened version of Drouët’s *Territory*.<sup>444</sup> Lindsay does not agree; he considers it a thickening of Drouët’s word, and any syllable including *th* impossible to articulate clearly with great rapidity.<sup>445</sup> As seen above, Lindsay admits the inferiority of the syllable with *tl*. He continues:

Let the student, therefore, who cannot please himself with Mr. Nicholson’s agent, apply all, or either, of the following vehicles, in their turn, *viz., Tu-du, Too-ta, Too-da, Tit-ta, Tud-da*, (all pronounced short, except the *too*, which must be sounded as in *tooth*), and after giving a full, impartial trial to each, let him, we say, adhere to that one in particular which he finds best suited to his own pecu-

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438. James *Word* 126-127.

439. James *Word* 126-127.

440. Lindsay *Elements* 99, quoted in section 2.7.2.

441. Lindsay *Elements* 100.

442. An essay entitled “Of the Formation and various properties of Musical Sound!”

443. Dockendorff Boland *Introduction Gunn* ii.

444. James *Word* 123-125. A summary of the text is translated into German in Grenser *Flöten-spieler* 156-158.

445. Lindsay *Elements* 100.

liar Organs/.../This suggestion appears to us the more feasible, because, by adopting either of the means pointed out, we should get rid of the L, and thereby promote that clearness and distinctness of tonguing, so essential to this, and every other mode of articulation.<sup>446</sup>

Lindsay writes that techniques other than Nicholson's need a great deal of practice;<sup>447</sup> double-tonguing with *d-l/t-tl* requires much less work to master.<sup>448</sup> I conclude that Lindsay suggests *d-r/t-d* as a second choice; the disadvantage is that it is more difficult. James also considers this articulation difficult,<sup>449</sup> but still recommends it, as "one of the chief, (if not the very highest,) beauties which the flute is capable of expressing."<sup>450</sup> One of Drouët's students in London was Georg Rudall;<sup>451</sup> of whom James writes, "His articulation of the staccato, upon M. Drouët's system, he performs exquisitely; and he gives, perhaps, the finest specimen of it of any player in this country."<sup>452</sup> In 1829 Drouët returned to London where his treatise with English text was published in 1830. Drouët writes:

I was happy to find on my return to this country, that some pupils to whom I had formerly given instructions, used this articulation with success. There are many who imagine there is a secret in its acquirement. They are not mistaken and shall now embrace the opportunity of divulging it, the secret lies in three things; master, practise, and patience.<sup>453</sup>

The letters "D.T." are used by Drouët to indicate double-tonguing in an etude in *Method*.<sup>454</sup>

### 2.9.3 Single-tonguing and double-tonguing with *d-g/t-k*

Bown expresses what seems to be a general approach, "In Music that does not re-

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446. Lindsay *Elements* 98.

447. Lindsay *Elements* 98.

448. Lindsay *Elements* 97.

449. James *Word* 123.

450. James *Word* 127.

451. English amateur flutist and maker (1781-1871) who was a partner in Rudall&Rose, and later in Rudall, Carte&Co. Bate *Rudall, Carte* 311.

452. James *Word* 178.

453. Drouët *Method* 15.

454. Drouët *Method* 72.

quire rapid execution, the method of single tonguing/.../is the best, the tone being more clear and brilliant [than double tonguing].”<sup>455</sup> Nicholson’s last example in his section about double-tonguing in *Complete* consists of eighth notes in ascending octave leaps with staccato dots and *te* indicated on all notes. Nicholson writes, “Passages in which the notes are dotted as in the last Example must be played, by articulating the syllable *te*, distinctly with each note as above.”<sup>456</sup> In my opinion, Nicholson recommends single-tonguing in this case for three reasons: the moderate tempo (eighth notes instead of sixteenth notes), the staccato marking, and to avoid an articulation with *dl* after an ascending leap.<sup>457</sup>

The only references to double-tonguing with *d-g/t-k* from this period are Nicholson’s suggestion of *dig-ga* and *tuc-ca* for variation,<sup>458</sup> and Lindsay’s translation of Drouët’s criticism of *d-g/t-k* from *Méthode*.<sup>459</sup>

One answer to the question why single-tonguing or double-tonguing with *d-g/t-k* was not much in favor for fast passages can be found in the statements that double tonguing with *d-l/t-tl* is easy to master.<sup>460</sup> Another reason might be the prevailing view of staccato expressed in the passage by James above.<sup>461</sup> Lindsay claims (in defending double-tonguing with *d-l/t-tl* against *d-r/t-d*) that the flute’s true character is not a staccato delivery, although this is occasionally desired for variety.<sup>462</sup> It seem that the ideal for both these writers for a “normal” staccato passage is a round, flowing execution.

## 2.9.4 Legato-playing and relating to indicated articulation

Monzani writes in *Instructions for the German Flute* from 1801 that his table of articulation patterns “will teach how to tip properly passages of every description without attending to the usual marks: Slurs, dots &c. which is introduced in music without meaning or effect.”<sup>463</sup> In the *New and Enlarged Edition* Monzani writes

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455. Bown *Preceptor* 21.

456. Nicholson *Complete* 19.

457. Compare also the sections on reversed double-tonguing above.

458. Nicholson *Lessons* 5.

459. Lindsay *Elements* 99, quoted in section 2.7.2.

460. James *Word* 122 and Lindsay *Elements* 97.

461. See section 2.9.2.

462. Lindsay *Elements* 97.

463. Quoted in Spell *Nicholson* 140. The copy of *Instructions* that was available to me include only the first part of this sentence.

about “composers not being always aware of the Peculiar articulation belonging to the Flute.”<sup>464</sup> Apparently, Monzani’s opinion is that the player does not necessary have to pay attention to the articulation indicated in a piece. Other writers do not share this attitude, however. Alexander writes, “the Learner should pay particular attention to the /.../articulation/.../of superior composition.”<sup>465</sup> Bown writes, “As a neatness of execution depends on a proper method of articulation the Pupil must tongue and slur each Note as marked,”<sup>466</sup> and, “the Pupil has only to tongue and slur the Notes in each lesson as marked, which he must do very attentively, as neatness of execution and style depends on a right articulation.”<sup>467</sup> Nicholson similarly writes in *Lessons* about “the necessity of attending to marks of expression and articulation, to give an author’s intended effect to his composition.”<sup>468</sup> In *School* he discusses the issue at greater length:

little is now left to the discretion of the performer, various marks being placed over notes and passages by which the intended expression is indicated; and unless strict attention be paid to them by the performer, the most simple but beautiful compositions may be destroyed. This becomes very conspicuous in trio, quartet, or orchestral playing, where the same passage is frequently given successively to the various performers; and if the accent and notes of marked articulation are not the same, the beauty of imitation, and the intention of the composer, are lost.<sup>469</sup>

Since Nicholson points to the problem, I assume there were more players than Monzani with an attitude like his. B. Eldred Spell argues in *Selected Aspects of Performance Practice in the Flute Tutors of Charles Nicholson* that at the time of *School* the attitude towards composers’ articulation markings had become increasingly respectful compared to earlier in the century, and that Nicholson was more concerned than his contemporaries about this matter.<sup>470</sup> However, as Spell reports, in 1817 Nicholson printed a “Selection of Passages,” with excerpts from the flute repertory which he freely edits, changing the composers’ indicated articulation.

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464. Quoted in Spell *Nicholson* 140.

465. Alexander *Preceptor* 33.

466. Bown *Preceptor* 8.

467. Bown *Preceptor* 21.

468. Nicholson *Lessons* 52.

469. Nicholson *School* 13.

470. Spell *Nicholson* 139-144.

In fact, Nicholson's suggestions are a selling point for the collection.<sup>471</sup> I see no significant difference between Nicholson's attitude towards composers' indications and that of his contemporaries, in or outside of England. Nicholson, Dressler and Lindsay occasionally discuss more than one articulation of an example in their methods, including double-tonguing passages that have slurs.<sup>472</sup> To sum up, the treatises recommend to obey the indicated articulation, though it seems that a virtuoso soloist still articulated according to his/her style and taste.

Studying the art of applying articulation was nevertheless considered important. Weiss writes:

In order to accustom the amateur to the use of all the different methods of articulation, and to the great art of knowing when to use them properly, I have taken care in the different Exercises to mark when a passage requires to be tipped, slurred, or pronounced with force. Excellence of execution does not consist entirely in playing a piece, staccato, from beginning to end, nor in slurring it, but in blending skilfully the different methods of articulation, and preventing the monotony, which necessarily results from too great an uniformity.<sup>473</sup>

Weiss devotes 10 pages to exercises with and demonstrations of different articulation patterns,<sup>474</sup> and Beale prints 40 "Examples of different modes of Tonguing, necessary in certain passages and often left out in the engraving."<sup>475</sup> Though the heading is a translation of Deveienne's on the same subject, the examples are unique to Beales's method. Lindsay translates Berbiguier's discussion in *Méthode* on how to apply different articulations.<sup>476</sup> He also gives examples of various modes of articulation, as does Lee.<sup>477</sup> **In all of his three methods Nicholson prints examples of different articulations,**<sup>478</sup> and in *Lessons* and *School* there are exercises and

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471. Spell *Nicholson* 168-171.

472. "I would double tongue this, but this also works." Nicholson *Lessons* 17. "The chromatic passages may, or may not, be double tongued, but the slur will produce in them the most powerful effect." Lindsay *Elements* 105. "In passages of Triplets, where the first two notes are slurred and the third tipped, as in the following /.../ the triple Tongue may be very effectively applied." Lindsay *Elements* 105. "These passages produce also an admirable effect with the double tongue." Dressler *Instructions* 33.

473. Weiss *Instruction Book* 51.

474. Weiss *Instruction Book* 48-58.

475. Beale *Complete* 45.

476. Lindsay *Elements* 39, partly quoted in section 2.7.5.

477. Lee *Improved* 6, Lindsay *Elements* 39.

478. Nicholson *Complete* 16-17, *Lessons* 4, *School* 63-64.



pieces with no articulation indicated and the recommendation to practice all the articulation patterns demonstrated previously.<sup>479</sup>

Legato was recommended for various reasons. Lee, who condemns double-tonguing, recommends slurring passages instead.<sup>480</sup> Weiss considers legato more effective than double-tonguing for arpeggio passages in the lower range of the instrument, and the only way of making the lowest notes clearly audible.<sup>481</sup> Lindsay writes, “If considerable power of volume of Tone is wished to be thrown into a Chromatic scale, the Slur will best aid the effect of the swell; but where good neatness is desired, such passages may be delivered with the double Tongue.”<sup>482</sup>

Beale calls the articulation pattern two slurred, two tipped “very useful & brilliant if well executed.” He prints an example with sixteenth notes in octaves upwards with paired slurs and writes, “Octaves up should always be slur’d.”<sup>483</sup> At an example with sixteenth notes in octaves downwards with dashes he writes, “Octaves down must be tip’d.”<sup>484</sup> At an example with tenths upwards and dashes he writes that tenths up should be tipped.<sup>485</sup> Triplets slurred over three he calls “a brilliant articulation.”<sup>486</sup> About triplets three slurred, three tipped he writes, “This is a fine Articulation for those who have a good execution, and it is very useful in quick passages.” Of paired slurs in triplets he says, “This articulation has a fine effect but should be used sparingly.”<sup>487</sup>

James suggests an articulation pattern for arpeggiated passages not discussed elsewhere in my material from this time:

There is, however, another description of articulation, which is much easier than M. Drouét’s, and much preferable to the old system of *double tonguing*, and that is, the first notes to be tipped, and the remainder played in a slur of three. This is, in truth, a very smooth and elegant execution of the solfeggio passage, which flute-solos generally abound with, and which M. Tulou used with much taste and effect.<sup>488</sup>

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479. Nicholson *Lessons* 8-9, 11, 15, 17, 30, 37, 44, 45, 52, 54, 67 and 74. Nicholson *School* 64.

480. Lee *Improved* 27.

481. Weiss *Instruction Book* 87. Berbiguier shares this opinion, see section 2.75.

482. Lindsay *Elements* 110.

483. Beale *Complete* 45.

484. Beale *Complete* 46.

485. Beale *Complete* 46.

486. Beale *Complete* 46.

487. Beale *Complete* 46.

488. James *Word* 125-126.

## 2.10 Northern Europe in the first half of the 19<sup>th</sup> century

Drouët, who was educated in his native country Holland, writes in *Méthode* about how he in his youth was taught *dougue* and also *tu tel*.<sup>489</sup> In *Method* he writes, “In Holland they use the word Tutel (pronounced with the french U) This produces a weak, but good effect.”<sup>490</sup> He also writes that throughout northern Europe they use the same tonguing as in Germany, which is (different nuances and spellings of) *d-l/t-tl* and *d-g/t-k*.

## 2.11 Southern Europe in the 19<sup>th</sup> century

Drouët writes in *Method*, “In Italy, Spain, and in the south of France, they have not yet adopted any articulation for Double Tonguing.”<sup>491</sup> This is supported in *Universalexikon*, where it is written that the Italians are even less capable than the French of learning the proper double-tonguing [with *d-l/t-tl*].<sup>492</sup> James writes in *Word*, “There is at Naples a very promising youth, named Boucha, who is said to be following very successfully the system of M. Drouët.”<sup>493</sup>

## 2.12 England from c. 1840

### 2.12.1 Double-tonguing with *d-l/t-tl*

Carte writes that double-tonguing with *tootle* is almost never used anymore in England.<sup>494</sup> This is confirmed some decades later by Rockstro, “For many years the syllables *too’-tle*, or others which caused a similar action of the tongue, were frequently employed, particularly in England and Germany./.../ Too-tle may now be considered out of date, and almost out of mind./.../ The double tonguing of

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489. Drouët *Méthode* 67.

490. Drouët *Method* 14.

491. Drouët *Méthode* 14.

492. Schilling *Universalexikon* 921.

493. James *Word* 247.

494. Carte *Instructions* 26.

Charles Nicholson, who always used these syllables, was notoriously defective.”<sup>495</sup> As Rockstro was eleven years old when Nicholson died, his information on the latter’s tonguing is probably second-hand. Carte presents the usual criticism of double-tonguing with *d-l/t-tl*, writing that, “Its defect arises from the indistinctness of the second syllable *tle*, in pronouncing which the tongue rather assists in preventing the escape of the air than aids in propelling it.”<sup>496</sup> Rockstro admits that double-tonguing with *d-l/t-tl* can be used with great speed, “but it is almost impossible, by their means, to produce a clear *staccato*. /.../ Joseph Richardson was the only player, that I ever heard, who used them quite neatly, and even his double-tonguing was invariably *mezzo staccato*.”<sup>497</sup> Joseph Richardson was named “the English Drouet,”<sup>498</sup> possibly because of his excellent double-tonguing technique. Rockstro gives a hint as to the reason why the preferences had changed away from the technique with *d-l/t-tl*. According to my practical experience, double-tonguing with *t-k* can produce a sharper *staccatissimo* than *d-l/t-tl*. Rockstro writes, “Some persons are able to play exceedingly rapid triplets with the syllables too’-tle-too, too’-tle-too, but very few can execute neatly, and no one evenly, by this means.”<sup>499</sup>

That, however, double-tonguing with *d-l/t-tl* had not died out completely is evident from Robert Sydney Pratten’s *Flute Tutor* from 1860, where he says, “When a tongued passage is too fast for the articulation already learnt, it becomes necessary to employ two syllables, viz: ‘Too-tle Too-tle,’ or ‘Tee-key Tee-key,’ this is called ‘double tonguing.’”<sup>500</sup> Pratten gives examples with both *too-tle* and *tee-key* indicated. On the next page, however, only *tee-key* is indicated, which might suggest that it was more common to him, or it might be simply for layout reasons. Furthermore, in Walter Redmond’s elementary and undated *Sixpenny Flute and Piccolo Tutor*, it says, “Double tonguing is played/.../by pronouncing distinctly the syllables ‘Tootle.’”<sup>501</sup>

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495. Rockstro *Flute* 510.

496. Carte *Instructions* 26.

497. Rockstro *Flute* 510. Joseph Richardson (1814-1862) studied flute with Nicholson, and succeeded him as Professor of flute at the Royal Academy of Music in London upon Nicholson’s death in 1837. He was solo flutist in Jullien’s band 1838-1850 and an successful soloist. Fairley *Flutes* 106-107.

498. Fairley *Flutes* 106-107.

499. Rockstro *Flute* 512.

500. Pratten *Tutor* 15.

501. Redmond *Tutor* 20.

### 2.12.2 Double-tonguing with *d-g/t-k*

John Clinton writes in *A School or Practical Instruction Book for the Boehm Flute* from 1846:

When a staccato or tongued passage is too rapid or the action of the Tongue already given [single tongue], it becomes necessary to alternate a second syllable, which is commonly termed "Double Tongueing," this is effected by simply alternating the syllable "Kee" with the articulation already learnt. /.../ There are other methods of double tonguing, but none will be found so good for general practice, or so quickly and easily acquired as above. Should however this work be employed by a master who teaches a different double action of the tongue, the exercises will be found equally efficacious.<sup>502</sup>

I conclude that Clinton is the first English writer to recommend *d-g/t-k* as the preferred method of double-tonguing. Rockstro writes, "their [*dou'-gou, deu'-gue, te'-que*] use has now become almost universal."<sup>503</sup>

I should recommend *too'-coo* for ordinary *staccato* passages and *took'-coot* for the extreme staccato, with modification of the abruptness of the consonants and the length of the vowels, as occasion may require. For the mezzo staccato it will be found convenient to employ *doo'-goo*. Double-tonguing, being simply a means for the attainment of a particular end, should never be perceptible to the hearer, the greatest perfection that can possibly be attained in its employment lies in its complete disguise.<sup>504</sup>

A recording from 1908 with Eli Hudson<sup>505</sup> playing *Variation sur un air allemande*, Op. 22 by Theobald Boehm includes double-tongued notes in big leaps in a tempo corresponding to thirtysecond notes in ♩=176.<sup>506</sup> On repeated notes the tempo rises to a maximum corresponding to thirtysecond notes in ♩=200.

Rockstro writes, "The accents of the syllables [too-coo] may, from time to time,

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502. Clinton *School* 47.

503. Rockstro *Flute* 510.

504. Rockstro *Flute* 510.

505. English flutist (1877-1919) who studied at London's Royal College of Music and became principal flutist of the London Symphony Orchestra and co-funder of the "New Symphony Orchestra" (Royal Albert Hall Orchestra). Nelson *Booklet*.

506. *The Flute on Record*, track 2.

be reversed.”<sup>507</sup> It is not clear to me whether Rockstro really refers to reversed double-tonguing. He recommends *d-r* for dotted notes,<sup>508</sup> but he does not print any examples with reversed double-tonguing.

For triplets Clinton recommends *t-k-t k-t-k*,<sup>509</sup> and Pratten *t-k-t*.<sup>510</sup> Rockstro writes:

In the execution of a succession of rapid staccato triplets, the employment of *too' -coo- too, too-coo-too* is not uncommon, but it is objectionable on account of the undue separation of the groups which it is likely to cause. The alternate use of the groups of syllables, *too'-coo-too, coo'-too-coo*, gives excellent results, and has, besides, the merit of being perfectly easy. The practice of triplets on this system is extremely useful as an exercise, on account of the change in the accented syllables.<sup>511</sup>

I conclude that, as in France, when double-tonguing with *d-g/t-k* came into use, triplets were executed with the backstroke on every second triplet. Yet another way to articulate triplets for Rockstro is with the third note articulated with *coo* and the first two notes slurred.<sup>512</sup> Rockstro recommends starting on *coo* after a short rest, or a tied-over note, or after a slur over three sixteenth notes.



Example 112. Rockstro *Flute* 511.

Rockstro writes, “Sometimes a single triplet with a following note may be effectively executed by *coo' -too-coo-too*.”<sup>513</sup>

Double-tonguing with *d-g/t-k* is subjected to similar criticism as *d-l/t-tl* by Carte:

In the mode represented by *diggadigga*, or, what is nearly the same, *tukka-tukka, /.../* the same observation applies as to the second syllable *ka* or *ga*, [as to

507. Rockstro *Flute* 510-511.

508. Rockstro *Flute* 509.

509. Clinton *School* 50.

510. Pratten *Tutor* 16.

511. Rockstro *Flute* 512.

512. Rockstro *Flute* 512.

513. Rockstro *Flute* 512.

the *tle* in *tootle*, being indistinct] but not to the same extent. In pronouncing the syllable *ka*, or, what is the same softened, *ga*, the air is not propelled with the same force and distinctness as in *too*. A check is also given to the stream of air by the *k* and *g* in *tuk* and *dig*.<sup>514</sup>

### 2.12.3 Double-tonguing with *d-r/t-d*

Carte writes in *Instructions*:

Double-tonguing or Double Tipping. There is another mode of tonguing [than single tongue], which may be defined to be two alternate single tongueings, produced by the alternate application of the tongue to different parts of the mouth. In this articulation, the tip of the tongue is first applied to, and suddenly withdrawn from, the lower gum or teeth, the air being forced to escape with a jet, and one note being articulated by this action. It is then applied in a similar way against the palate or upper gum, as in single-tonguing, and again retracted, allowing a second jet of air to escape, and thus producing a second note. By the reiteration of these two movements of the tongue, an articulation is obtained which may be varied to any degree of force, acuteness, and rapidity. This mode of double-tonguing gives the notes so distinctly that it cannot be known from the single-tonguing, except by its superior freedom and velocity. It is usual, in explaining the articulation of double-tonguing, to convey some idea of the motion of the tongue, by reference to a word, in pronouncing which, the tongue is supposed to have the same action. The word *territory*, softened in the pronunciation to *teditody*, has been used for this purpose, in this mode of double-tonguing just described. But on a close examination of the pronunciation of *territory* or *teditody*, or, nearer still (the mouth being closed in playing), *toodoo-toodoo*, it will be seen that, the tongue acts only as in single-tonguing; for on observing the motion of the tongue in pronouncing these syllables, it will be found that in the *d* in *di* and *do* is but a softened *t*; the only difference being that the tongue in *d* touches the palate more lightly or loosely than in *t*.<sup>515</sup>

Carte prints 27 exercises for double-tonguing in different types of passages. He requests a tempo equivalent to sixteenth notes in  $\text{♩} = 180$  for repeated and stepwise notes.<sup>516</sup>

Rockstro states that Carte had lessons with Rudall from about 1822, and that:

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<sup>514</sup>. Carte *Instructions* 26.

<sup>515</sup>. Carte *Instructions* 25-26.

<sup>516</sup>.  $\text{♩} = 60$  with thirty-second notes.

Rudall initiated him [Carte] into the mysteries of the articulation so successfully adopted by Drouet./.../The master and his pupil were the only two persons that I ever knew, who conquered the difficulties of the double-tonguing used by Drouet./.../The pupil certainly achieved wonderful facility in neat and rapid articulation, although I have always doubted that the system he adopted was precisely the same as that used by Drouet.<sup>517</sup>

Rockstro writes that he does not recommend *d-r/t-d* for even notes.<sup>518</sup> Still, he recommends it in combination with *k* for figures of one triplet, “Single triplets, whether followed immediately or not by another note, may be rapidly and brilliantly articulated by means of the syllables *too'-roo-coo*, the following note, if any, taking *too*. The same method may be adopted in playing three quick staccato notes.”<sup>519</sup>

#### 2.12.4 Single tongue

Rockstro writes, that “The ordinary single-tongueing should be used in slow or in moderately fast passages, but beyond a certain rate of speed single-tongueing, though it may be practicable, is not desirable, as it is liable to cause the betrayal of signs of exertion and fatigue.”<sup>520</sup>

#### 2.12.5 Legato-playing and relating to indicated articulation

Rockstro writes:

This action [of the tongue] should, of course, be always applied in accordance with the intentions of the composer, as far as they can be divined; indeed, there are occasions on which it is as important to observe the correct articulation as to play the indicated notes. It is so easy to pay attention to the *staccato* and *legato* signs with which modern flute-music is generally furnished, that there is absolutely no excuse for disregarding them.<sup>521</sup>

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517. Rockstro *Flute* 631.

518. Rockstro *Flute* 511.

519. Rockstro *Flute* 512.

520. Rockstro *Flute* 509.

521. Rockstro *Flute* 508.

Later he expresses a similar view, “Endeavour to understand the meaning of the composer, and in every note you play strive to give effect to his intentions. If you carry out this direction you will, of course, never omit to observe every mark of articulation, slurring and expression.”<sup>522</sup> If, however, the musical score lacks indicated articulation, this does not mean that all notes should be played detached. Rockstro writes:

In the rendering of music which is destitute of such indications, the player must exercise his judgement to the best of his ability, and careful observation, with a little experience, will soon lead to the discovery of the style of articulation best suited to the character of the music. It is not necessary to enter into the details of the almost innumerable combinations of legato and staccato; examples of mixed articulation occur in almost all flute-music, and the modes of rendering them are obvious.<sup>523</sup>

Pratten, however, writes, “Every note is understood to be tongued, unless marked otherwise.”<sup>524</sup> From Pratten’s discussion surrounding this remark, my impression is that the absence of slurs is interpreted as the composer’s intention that the passage is not to be played legato. This marks a new concept, according to which the indications are to be considered complete.

## 2.13 Germany, second half of the 19<sup>th</sup> century

### 2.13.1 Double-tonguing with *d-g/t-k*

Wilhelm Barge writes in *Praktische Flötenschule* from 1880:

In a rapid succession of tones in a staccato, the single tongue, with which we have acquainted ourselves until now, is not sufficient, for these one uses the double tongue/.../ the double tongue is produced by a retraction of the tongue and by thrusting it forward again (such a movement of the tongue happens, for example, when articulating *tü-ke*).

Bei schneller Tonfolge reicht in Staccato die einfache Zunge, die wir bis jetzt ken-

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522. Rockstro *Flute* 516.

523. Rockstro *Flute* 508.

524. Pratten *Tutor* 7.



nen nicht, man bedient sich dazu der Doppelzunge, /.../ Die Doppelzunge wird durch ein Zurückziehen und Wiederhervorstossen der Zunge (eine Zungenbewegung, wie sie etwa bei der Artikulation tü-ke vor sich geht,) hervorgebracht.<sup>525</sup>

John Robert Bailey reports that Ernesto Köhler recommends double-tonguing with *d-g/t-k* and triple-tonguing with *d-k-d* in his *Flöten-Schule* from c. 1880.<sup>526</sup> According to Nikolaus Delius, Moritz Fürstenau recommends practicing double-tonguing (probably with *d-g/t-k*) in a comment in a new edition of *Flötenschule* from 1885.<sup>527</sup> Schwedler writes, “Today there is no flutist who does not make use of double-tonguing.”<sup>528</sup> Schwedler use the syllables *ti-ke*, and writes that one should study double-tonguing until the listener cannot distinguish it from single-tonguing.<sup>529</sup> Köhler agrees, “Be careful that the articulated tones produced by this double tonguing resemble the simple tu-tu.”<sup>530</sup> Schwedler considers the solo passage from the Scherzo from *A Midsummer Night’s Dream* by Felix Mendelssohn unplayable without using double-tonguing.<sup>531</sup> He does not advocate reversed double-tonguing; *t* in his examples are always on the good beat.

Emil Prill writes in *Schule für die Böhmflöte/Method for the Boehm Flute* from c. 1898-1903:

Where single-tonguing is incapable of producing quick passages, double-tonguing is used. It is an excellent help, and cannot be enough impressed on the mind of the student to acquire a sovereign command over double-tonguing through diligent practice. When this is the case, the most difficult passages can be executed with ease and with far more endurance than with single-tonguing. Whereas in single-tonguing each note necessitates a double motion of the tongue forwards and backwards and also the pronunciation of the syllable “tah,” in double-tonguing the motions forwards and backwards combined with the disyllable “Dee-gay” produce a tone for each syllable.<sup>532</sup>

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525. Barge *Flötenschule* 37.

526. Bailey *Schwedler* 200, date from Powell *Bibliography*.

527. Delius *Einführung* XXIII.

528. “Heute findet man wohl keinen Flötisten, der von der Doppelzunge, /.../ nicht Gebrauch macht.” Schwedler *Flötenspiel* 58, transl. 360.

529. Schwedler *Flötenspiel* 58.

530. Köhler *Flöten-Schule* 26, quoted in Bailey “Maximilian Schwedler’s Flute and Flute-playing: Translation and Study of Late Nineteenth-century German Performance Practice.” 200.

531. Schwedler *Flötenspiel* 61. See also Altés suggestions for tonguing this piece, section 2.14.1.

532. Prill *Schule* 19.

### 2.13.2 Double-tonguing with *d-l/t-tl*

As an alternative to double-tonguing with *d-g/t-k*, Schwedler recommends the softest nuance of *d-l/t-tl*, “Learning to tongue with ,di-l’ will prove to be no less useful than double- and triple-tonguing. It is a very charming means of performing series of notes which are to be attacked lightly and softly, for example, these types:”<sup>533</sup>



Example 113. Schwedler *Flötenspiel* 62.

Swedler continues, “In general one could do without this type of articulation, but for the soloist there is ample opportunity to make use of it effectively.”<sup>534</sup> Here Schwedler uses the softness of *d-l* as a contrast to the more brilliant, sharper and clattering *t-k*. Soussmann might have the same reason for choosing double-tonguing with *d-l/t-tl* over *t-k* for the middle section of one of his etudes.<sup>535</sup> For sextolets Schwedler suggests *d-l-d l-d-l*. He writes that *d-l* is less good in the first octave than *d-g/t-k*.<sup>536</sup>

Swedler does not consider learning double-tonguing with *d-l/t-tl* a problem, “He who is already well-exercised in other manners of articulation will find that learning [the double tongue with *d-l/t-tl*] presents only some completely negligible

533. “Nicht minder nützlich als die Doppel- und Tripelzunge wird sich das Erlernen des ,Di-l“-Zungenstoß erweisen. Sie ist ein sehr reizvolles Vortragsmittel für leicht und weich anzustoßende Tonfolgen, z. B. dieser Formen” Schwedler *Flötenspiel* 62.

534. “Im allgemeinen könnte man ja diese Zungenstoßart entbehren, für den Solisten findet sich jedoch häufig Gelegenheit, sich ihrer wirkungsvoll zu bedienen.” Schwedler *Flötenspiel* 62-63, transl. 364-365.

535. See section 2.8.1.

536. Schwedler *Flötenspiel* 63.

obstacles.”<sup>537</sup> Then he recommends studying the practicing advice given for the double tongue with *d-g/t-k*.

Bailey considers Schwedler’s used of *d-l/t-tl* related to his use of the simple-system flute, and writes that *d-l/t-tl* could not be effectively produced on the Boehm flute.<sup>538</sup> In my opinion, *d-l/t-tl* can be used on the Boehm flute, I believe that the reason for Schwedler’s use of *d-l/t-tl* for variation is a matter of taste and style.

### 2.13.3 Double-tonguing with *d-r/t-d*

I have not found any documentation on double-tonguing with *d-r/t-d* from this period.

### 2.13.4 Single-tonguing

Leonardo De Lorenzo writes of Karl Joachim Andersen<sup>539</sup> in *My Complete Story of the Flute*, “Andersen, who, by the way, was as much against double-tonguing as he was antagonistic to the Boehm flute, said that the real staccato on the flute should be single-tonguing.”<sup>540</sup> However, according to Kyle J. Dzapo there is no other source that corroborates this account.<sup>541</sup> On an undated recording Schwedler plays the Minuet from *Divertimento* by W. A. Mozart (K. 334) with what to me sounds like single-tonguing on sixteenth notes. The tempo is around  $J=132$ .<sup>542</sup>

### 2.13.5 Legato-playing and relating to indicated articulation

Prill writes, “Every musical composition contains signs, marks and technical terms calculated to facilitate matters for the interpreter as regards his comprehension of the work, illustrating to him the composer’s idea as to the manner of rendering it.”<sup>543</sup> Neither Schwedler, Prill nor Barge print examples of articulation or advice on how to articulate if nothing is indicated. It seems that the articulation indicated

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537. “Der bereits in den andern Stossarten Geübte findet bei ihrer [double tonguing with *d-l/t-tl*] Erlernung nur ganz unwesentliche Hindernisse.” Schwedler *Flötenspiel* 63.

538. Bailey *Schwedler* 201

539. Danish flutist and conductor (1837-1909).

540. Leonardo De Lorenzo *My Complete Story of the Flute* 322, quoted in Dzapo *Andersen* 11.

541. Dzapo *Andersen* 11.

542. *The Flute on Record*, track 8.

543. Prill *Schule* 17.

by the composer is supposed to be enough, if followed carefully, in order to realise the composers intentions.

## 2.14 France, second half of the 19<sup>th</sup> century

### 2.14.1 Double-tonguing with *d-g/t-k* and single-tonguing

Giuseppe Gariboldi recommends double-tonguing with *d-g/t-k* in *Méthode complète de Flûte* from 1876,<sup>544</sup> and Henry Altés writes in *Méthode complète de flute* from 1880:

Double-tonguing is executed by trying to pronounce the two syllables Tuku./.../ After articulating the first syllable, with a second movement which is a result of this first impulse, pull the tongue back on itself in the same way it strikes the palate when pronouncing the syllable *ku*. From these two movements, or rather, from this double movement of the tongue caused by one single impulse, comes the name double-tonguing.

On produit le Double coup de langue en cherchant à rendre la prononciation des deux syllables Tuku. /.../ Après avoir articulé la première syllabe, il faut, par un second mouvement résultant de cette première impulsion, replier rapidement la langue sur elle même de manière à ce qu'elle vienne frapper le palais en cherchant à rendre la syllabe *ku*. De ces deux mouvements, on plutôt de ce double mouvement imprimé à la langue par une seule impulsion, vient le nom de Double coup de langue.<sup>545</sup>

Altés writes that double-tonguing is “used mainly in fast tempi, or rather when the notes follow each other at such speed, that it becomes impossible to execute them with single-tonguing.”<sup>546</sup> In Paul Taffanel and Philippe Gaubert’s *Méthode Complète de Flûte* from 1923 it is similarly stated, “When the speed of a tongued passage is too fast, single tongue is found to be inadequate. It becomes necessary to use double-tonguing *te-ke, te-ke*, which allows greater agility.”<sup>547</sup>

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544. Brown *Early Flute* 62. Powell *Bibliography* dates the treatise to c. 1878.

545. Altés *Méthode* 279.

546. “On emploie ces deux dernières articulations [Tuku and Tukutu] principalement dans la vitesse, ou plutôt, lorsque les notes se succédant avec trop de rapidité, il devient impossible de les exécuter par le simple coup de langue.” Altés *Méthode* 278.

547. Taffanel and Gaubert *Méthode* 92.

In Altés' etudes there is some information on how fast that would be. At an etude for single-tonguing that consists mainly of sixteenth notes, Altés writes that it should be practiced at both Moderato ( $\text{♩}=100$ ) and Allegro ( $\text{♩}=120$ ),<sup>548</sup> and in an etude with sixteenth notes articulated with two slurred, two tipped, single tongue is indicated on the tipped sixteenth notes at a tempo of  $\text{♩}=138$ . After two thirds of the piece, the tempo is raised to  $\text{♩}=168$  and the tipped notes are indicated with double tongue.<sup>549</sup> In his four exercises for double-tonguing with sixteenth notes the tempo indications are  $\text{♩}=138-176$ ,<sup>550</sup>  $\text{♩}=108-120$ , (equivalent to  $\text{♩}=162-180$ ),<sup>551</sup>  $\text{♩}=168-184$  and  $\text{♩}=168$ . An etude with thirtysecond notes has the tempo indication  $\text{♩}. = 56$  (equivalent to  $\text{♩}=168$  with sixteenth notes). This can be compared to Quantz's opinion that sixteenth notes at  $\text{♩}=160$  is the fastest that can be played well with double-tonguing.<sup>552</sup>

Altés indicates where to use both single- and double-tonguing in an arrangement for two flutes of the Scherzo from Mendelssohn's *A Midsummer Night's Dream* with the tempo indication  $\text{♩}. = 88$  (equivalent to  $\text{♩}=132$ ). Generally, single tongue is indicated on shorter passages of sixteenth notes (for example in the opening passage), and double-tonguing in longer sections with sixteenth notes.<sup>553</sup> A study of etudes and flute repertoire with metronome markings by other composers could yield more information on how fast players were supposed to be able to execute double tongued passages, and possibly also single-tongued passages.

Taffanel and Gaubert write that when played quickly, double-tonguing gives the impression of single-tonguing.<sup>554</sup>

For triple tongue, the methods by Altés and by Taffanel and Gaubert indicate only the pattern *t k t t k t*.<sup>555</sup> Altés writes that sextolets are played as triplets: *t-k-t t-k-t*. When the triplets start with a rest, or after a note which is tied over, the articulation starts with *t-k*.<sup>556</sup> Both Altés' *Méthode* and Taffanel and Gaubert's *Méthode* recommend always starting with *t* after a short rest or a tied-over note;<sup>557</sup> they do

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548. Altés *Méthode* 278-279.

549. Altés *Méthode* 356-360.

550. Altés *Méthode* 280.

551. Altés *Méthode* 280.

552. See section 2.1.2.

553. Altés *Méthode* 383-391.

554. Taffanel and Gaubert *Méthode* 94.

555. Altés *Méthode* 283-284 and Taffanel and Gaubert *Méthode* 108.

556. Altés *Méthode* 283-284.

557. Altés *Méthode* 282, Taffanel and Gaubert *Méthode* 96, 99-100.

not recommend reversed double-tonguing. Taffanel and Gaubert print an etude with eighth note triplets and the tempo indication of 109 on a halfnote, which is very fast, especially with the articulation *t k t t k t*.

### 2.14.2 Double-tonguing with *d-l/t-tl* and *d-r/t-d*

I have not found any documentation of double-tonguing with *d-l/t-tl* or *d-r/t-d* from this period. Taffanel and Gaubert use tonguing with *t-r* on dotted notes.<sup>558</sup>

### 2.14.3 Legato-playing and relating to indicated articulation

Neither Altés nor Taffanel and Gaubert discuss whether indicated articulation has to be attended to, if legato could or should be applied where no articulation is indicated, or recommended articulation patterns for certain types of figures. The reason for this might be that articulation generally was indicated in the musical scores of this time. A possible way to investigate whether or not flutists paid attention to indicated articulation would be to compare articulation heard on recordings from the early 20<sup>th</sup> century to what is indicated in the musical scores.

## 2.15 Sweden, second half of the 19<sup>th</sup> century

### 2.15.1 Double-tonguing with *d-g/t-k* and *d-r/t-d*

The article “Double-tongue” in Höijer’s *Lexikon* from 1864 begins:

Double-tongue. A manner of executing fast and prolonged staccato-movements in flute playing, and which consists in, while blowing, moving the tongue forwards and back, precisely as when two syllables are quickly pronounced after one another, so that *one* separate tone occurs when the tongue is moved forwards, and *another such* tone when it is quickly drawn back. In different nations different syllables or words are used for this: by Germans and Scandinavians: *ti-ki*, *ti-ke* or *dik-ke*; by the French: *deu reu* –(*dö-rö*), *dou-gue* (*du-gu*) or *du-gue* (*dy-ge*). This difference, which does not in any respect influence the matter itself, comes from the different pronunciations and characters that belong to the languages of the nations./.../nowadays, this manner is seen these days as an indispensable requirement for gaining virtuosity.

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558. Taffanel and Gaubert *Méthode* 90-91 and 149.

Dubbel-tunga. Ett manér, för att vid flöjtblåsning kunna utföra hastiga och ihållande staccato-satser, och som består deri, att vid blåsningen röra tungan fram och åter, alldeles såsom när 2:ne stafvelser hastigt uttalas efter hvarandra, hvarigenom uppkommer *en* afskild ton när tungan föres fram, och *en dylik* när hon drages fort tillbaka. Hos särskilda nationer brukas härför olika stafvelser eller ord: hos Tyskar och Skandinaver: ti-ki, ti-ke eller dik-ke; hos Fransmän: deu reu –(dö-rö), dou-gue (du-gu) eller du-gue (dy-ge). Denna skiljaktighet, som icke i någon mån inverkar på sjelfa saken, härrör af det olika uttal och skaplynne, som tillhöra nationernas språk./.../detta manér nu mera anses som ett oeftergiftligt vilkor för vinnandet af virtuositet.<sup>559</sup>

Höijer refers to Schilling in the article; it is unclear how much of the information stems from flutists around Höijer, and how much comes from lexica such as Schilling's.

Gustaf Widegren writes in his handwritten essay *Om Staccato på Flöjt* from 1868 that Höijers description is “certainly correct, but far from so complete that the student would learn the correct method solely from it.”<sup>560</sup> Widegren devotes most of his 17-page essay to double-tonguing, and describes the principle of double-tonguing in which two notes are created when the tongue moves forward and back respectively, the tongue thus not necessarily having to move as fast as in single-tonguing.<sup>561</sup> He claims that, “so far no other *Swedish* man has reached the very substantial skill in it [double-tonguing], than the Linköping flutist *Olof Westerdahl* had, and still retains to a great extent in his elder days.”<sup>562</sup> Widegren does not specify which syllables Westerdahl used; an assumption is that he used *d-g/t-k*. Widegren had studied with Westerdahl and with Jean Baptist Sauvlét, of

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559. Höijer *Lexikon* 108–109.

560. “visserligen riktig, men inte på långt när så utförlig, att den studerande eleven skulle ensamt deraf kunna inhämta rätta metoden.” Widegren *Staccato* 11.

561. Widegren *Staccato* 4–5.

562. “hitintills har ingen annan *svensk* man derutinnan upphunnit den högst betydliga förmåga, som Linköpings-flöjtisten *Olof Westerdahl* egt, och ännu på äldre dagar till större delen bibehåller.” Widegren *Staccato* 1.

whom Widegren reports that he used double-tonguing with *d-g/t-k*.<sup>563</sup> In Arvid Ahnfelt's dictionary *Europas Konstnärer* from 1887 Sauvlét is complimented for his excellent double-tonguing.<sup>564</sup>

Louis Müller writes in his *Ny Flöjtskola*, which is undated, but appears in a catalogue from 1876:<sup>565</sup>

Double-tonguing/.../ should only be used in executing fast and prolonged staccato passages, and means, that the tongue, moving forwards and back, blows (strikes), so to speak, into the embouchure hole of the flute the syllables: „Ti-ke“ or „Ti-ka“. In this way one note is created when the tongue is pulled vigorously back, and one note, when it is vigorously pushed forward again.

Dubbeltunga/.../blott bör användas vid utförandet af hastiga och ihållande staccatosatser och består deruti, att tungan, rörande sig fram och tillbaka, liksom inblåser (stöter) i flöjtens munhål stafvelserna: „Ti-ke“ eller „Ti-ka“. På detta sätt uppkommer en ton, då tungan drages häftigt tillbaka och en ton, då hon åter häftigt framskjutes.<sup>566</sup>

Like Höjjer, Widegren includes different syllables in the term double-tonguing. He lists the syllables *ti-ki*, *ti-ka*, *dik-ka* and *dug-ga* “or similar syllables,”<sup>567</sup> and says that to his syllables several others can be added, for instance Drouët's *dö-rö*. Widegren considers Drouët's syllables perhaps the least suitable for Swedes,<sup>568</sup> but praises Drouët's articulation, “Until now, probably no one has pushed his/her skill in double-tonguing further than the celebrated French virtuoso Louis Drouët, during his best years.”<sup>569</sup> Drouët visited Stockholm in the early 1820's; however, Widegren's

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563. J. B. Sauvlét (1841-?) was a flutist and singer of Dutch-French origin, who studied with his uncle Antoine Sauvlét (flutist in the Royal chapel in the Hague and the imperial opera orchestra in St. Petersburg), and thereafter, but before 1860, by Dorus. He came to Stockholm in 1863 and was teaching at the Stockholm music conservatory from 1867-1879, and was flutist in *Hovkapellet* 1866-1870. Sauvlét introduced the Boehm-flute in Sweden, also in his teaching. He served as principal flute of Benjamin Bilse's Concert Orchestra between 1873 and 1876. Karle *Hovkapellet* 339-340 and Ahnfelt *Konstnärer* 514-516.

564. Ahnfelt *Konstnärer* 516.

565. See Appendix 1.

566. L. Müller *Flöjtskola* 7.

567. Widegren *Staccato* 6.

568. “till vilka kunna läggas åtskilliga andra sådana t.ex. Drouët's dö-rö (dessa kanske de minst lämpliga för svenskar)” Widegren *Staccato* 6.

569. “Hitintills lärer väl ingen människa ha drivit sin färdighet i dubbel-stöten längre, än den célebre franske virtuosen Louis Drouët, under hans bästa ålder;” Widegren *Staccato* 1-2.



information on Drouët's tonguing is probably second-hand since Widegren was born in 1812.

Widegren feels obliged to advocate double-tonguing above single-tonguing:

There has been much debate about the need for the so called double-tongue; but such a debate has always appeared to me to be both peculiar and foolish. Why [would anyone] want to underestimate a solution, which, rightly understood and well executed, gives the flute a part of the excellence of the violin?

Man har mycket tvistat om den såkallade Dubbel-tungans behöflighet; men en sådan tvist har alltid förekommit mig vara både besynnerlig och dum. Hvarföre vilja underskatta en utväg, som, rätt förstådd och väl tillämpad, gifver åt Flöjten en del af Violinens förträfflighet?<sup>570</sup>

Furthermore, double-tonguing stirs up the saliva very little, compared to the plentiful liquid which always comes with prolonged/extended single-tonguing.<sup>571</sup>

### 2.15.1.1 Reversed double-tonguing

Widegren writes that Sauvlét always uses double-tonguing reversed, always starts a figure without an upbeat with the backstroke. "His method/.../consists therein, that he always *begins* with a backstroke or, as he calls it, palate-stroke, followed by a pointed front-stroke and so on, thus *reversed* tongue."<sup>572</sup> Widegren continues:

The real advantages of Sauvlét's way lie in the fact that all *weaker* beats/.../will be executed with the slightly sharper first stroke and precisely therefore will achieve more clearness than is usually the case. Furthermore, his method certainly seems advantageous rhythmically, since the first note in [a] figure should, according to the demands of the beat, be prolonged a bit more than the other notes in the same figure, and precisely that is more easily done with a palate-stroke than with the comparatively more pointed front-stroke.

Egentliga fördelar af Sauvlets sätt ligger däri, att alla *svagare* taktdelarne, t.ex. i

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570. Widegren *Staccato* 2.

571. "Dubbel-tungan drager upp saliven ytterst föga relativt till den ymniga och förderfwande flytning, som alltid åtföljer en länge fortsatt enkel-stöt." Widegren *Staccato* 5.

572. "Hans method,/.../består deruti, att han alltid [the word 'med', crossed over] *börjar* med bakstöt eller, såsom han kallar den, gom-stöt, derpå följer en spetsig fram-stöt o.s.v., således *omvänd* tunga." Widegren *Staccato* 11-12.

4/4 takt 2:a och 4:e noterna i sextondelsfigurer, då komma att göras med den något skarpare fram-stöten och just derigenom erhålla *mera* tydlighet, än som eljest vanligen blir händelsen. Dessutom verkar hans method bestämdt fördelaktigt i rytmiskt hänseende, emedan *första* noten i figur bör, enligt taktkänslans fordringar, hållas an (förlängas) en smula mer än de öfriga noterna i samma figur, och just sådant låter sig lättare göras medelst en gom-stöt, än med den jämförelsevis spetsigare fram-stöten.<sup>573</sup>

Widegren himself considers reversed double-tonguing as essential as the “direct” system.<sup>574</sup> It can be used for instance in 3/8, 6/8, 9/8 and 12/8<sup>575</sup> and in longer passages with dotted notes.<sup>576</sup> An upbeat of three notes, however, is played with *t-t-k*.<sup>577</sup>

The “direct” method (which Widegren calls Soussmann’s) is, however, the most commonly used.<sup>578</sup> Widegren suggests trying both methods, and choosing and practicing the one that turns out to be the easiest. He writes that he himself nowadays sometimes uses one, sometimes the other.<sup>579</sup>

### 2.15.1.2 Triplets

For triplets and sextolets Widegren recommends *k-t-k t-k-t*,<sup>580</sup> which he calls “Soussmann’s method.”<sup>581</sup> He writes that Sauvlét uses the same system; however, one or another flutist presumably practise triplets the “direct” way (*t-k-t k-t-k*), “but in that way it becomes really slightly more difficult and the rhythm surely duller and less good.”<sup>582</sup> L. Müller recommends the same system for triplets as Widegren, *k-t-k t-k-t*.<sup>583</sup>

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573. Widegren *Staccato* 12-13.

574. Widegren *Staccato* 6.

575. Widegren *Staccato* 8.

576. Widegren *Staccato* 9.

577. Widegren *Staccato* 9.

578. Widegren *Staccato* 13.

579. “Jag använder numera, allt som det faller sig, än den ena, än den andra.” Widegren *Staccato* 14.

580. Widegren *Staccato* 7-8.

581. Widegren *Staccato* 13. Soussmann indicates double-tonguing that way in one of his etudes. Soussmann *Flötenschule* 4:34.

582. “Men saken blir därigenom verkligen *något* svårare och rytmten bestämdt mattare och försämrad.” Widegren *Staccato* 8.

583. L. Müller *Flöjtskola* 7.

### 2.15.2 Double-tonguing with *d-l/t-tl*

There is no documentation of the use of double-tonguing with *d-l/t-tl* from this period, though Widegren is familiar with Tromlitz's *Unterricht*.<sup>584</sup>

### 2.15.3 Single-tonguing

Widegren writes:

With the so-called single-tongue, however, no flutist has managed to execute *really fast and also long extended detached passages* according to the demands of the present day. The study of single-tonguing, which I in my youth industriously occupied myself with, and, I admit, also with hope of greater success, I later had to abandon, when the success did not meet my perhaps too-great expectations.

Med den såkallade enkel-tungan har emellertid inte någon flöjtist förmått utföra enligt nutidens pretentioner *verkligen hastiga och derjemte länge ihållande stötsatser*. Studiet af enkla tung-stöten, hvilket jag i min ungdom flitigt dref och, jag tillstår det, äfven med hopp om större framgång, måste jag dock sedermera uppgifva, enär framgången icke svarade mot mine måhända alltför stora förhoppningar.<sup>585</sup>

Widegren states that already Tromlitz labels single-tonguing as impossible in *Unterricht*. Widegren recommends, however, single-tonguing for slow and moderate speed<sup>586</sup> and for shorter fast passages:

However, one *can*, of course, though not until after industrious practicing, also use single-tonguing *fast*, yes! even quite fast for a couple of bars with sixteenth notes or thirty-second notes in 4/4; but add just another couple of bars with such notes, and the matter becomes 100 percent more difficult in succession. Human strength is in this case soon exhausted.

Nog *kan* man, naturligtvis, först efter trägen öfning, stöta med äfven enkel-tunga *fort*, ja! till och med ganska fort ett par takter sexton-delar eller 32 noter i 4/4 takt; men sätt till blott ännu ett par takter sådana noter, och saken blir 100 pro-

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584. Widegren *Staccato* 3.

585. Widegren *Staccato* 3.

586. Widegren *Staccato* 4.

cent svårare allt i samma progression. Menskliga kraften är i så fall snart uttömd.<sup>587</sup>

Dotted figures are mostly executed with single-tonguing.<sup>588</sup> Furthermore, “If a movement includes repeated detached figures with different and varying numbers of notes, /.../one has to help oneself through it as well as possible with both single- and double-tonguing, e.g. a four-note figure with double-tonguing and a triplet with single-tongue.”<sup>589</sup>

In his entire essay, Widegren writes about a detached passage as played staccato. A brilliant staccato is for him the highlight of flute playing. He writes that, “Among all presently used instruments there are only two kinds upon which a very quick staccato can be achieved; that is the violin (all kinds) and the flute. Staccato in a perfectly sharp nuance is never heard on e.g. the pianoforte, because the resonance can not be entirely cut off.”<sup>590</sup> My conclusion is that for Widegren a detached passage is ideally played with a rather sharp staccato.

## 2.16 Advice for practicing double-tonguing

Many flute treatises include advice for practicing double-tonguing. One advice commonly given is to initially practice double-tonguing on repeated notes.<sup>591</sup> Even in the methods where this is not specifically written out, the musical examples usually begin with one or several examples with notes of the same pitch. I agree with R. Brown<sup>592</sup> that Quantz’s exercises below, where the direction of the figure is towards the longer note are very useful. To learn double-tonguing with *d-l/t-tl*, a strong breath is useful, and the direction towards the last note helps the student to blow

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587. Widegren *Staccato* 4.

588. Widegren *Staccato* 9.

589. “Om uti en sats förekomma upprepade stöt-figurer med olika och omvexlande notantal/.../ så måste man på möjligen bästa sätt hjälpa sig fram med *både* enkel- och dubbel-tunga, t.ex. fyra-nots-figur med dubbel-tunga och triol med enkel-stöt.” Widegren *Staccato* 10-11.

590. “Bland alla nu för tiden *mera* brukade instrumenter finnas blot två slag, nämligen Violin (alla sorter, små och stora) samt Flöjt, hvarpå kan åstdkommas mycket hastigt staccato. På Pianoforte t.ex. får man aldrig höra staccato i just skarp nyans; ty efterklangen kan ej helt och hållet afklippas.” Widegren *Staccato* 2.

591. For instance Quantz *Versuch* 69, Granom *Instructions* 15, Tromlitz *Unterricht* 220, Alexander *Preceptor* 32, Nicholson *School* 65, Pratten *Tutor* 15, Miller *Remarks*, Schilling *Universalexikon* 921, Rockstro *Flute* 510.

592. Brown *Early Flute* 60.

more air into the flute and to not get stuck on the last fast note.



Example 114. Quantz *Versuch* Tab. IV.

Granom, Arnold, Miller, A. E. Müller and Schwedler recommend initial practice without the flute, and later with only the mouthpiece.<sup>593</sup> Practicing without the flute is also advocated by Berbiguier, Walckiers and Schwedler and in the article “Zunge oder Zungenstoss” in *Universalexikon*.<sup>594</sup>

Several methods recommend practicing in the middle register first,<sup>595</sup> which is also indirectly recommended by many of the examples. It is in my opinion the easiest, and therefore the best.

Berbiguier and Lindsay advise the student to study ascending scales before descending.<sup>596</sup> This is also indirectly recommended in the examples by Walckiers,<sup>597</sup> Coche<sup>598</sup> and Nicholson.<sup>599</sup> It is a good method because in double-tonguing an upwards scale there is more support from the air stream than in a downwards scale, which makes it easier.

Another recommended method is to practice slowly.<sup>600</sup> However, when practicing without the flute, the tempo should be fast.<sup>601</sup> Most writers use sixteenth notes for the musical examples. Only the methods by Bretonnierre, Drouët and

593. Granom *Instructions* 13, Arnold *Instructions* 31, Miller *Instructions* 13, Müller *Elementarbuch*, quoted in Lichtmann *Müller* 213, Schwedler *Flötenspiel* 58.

594. Berbiguier *Méthode* 246, Walckiers *Méthode* 154, Schilling *Universalexikon* 921, Schwedler *Flötenspiel* 58

595. Quantz *Versuch* 69, Walckiers *Méthode* 154, Schilling *Universalexikon* 921, Schwedler *Flötenspiel* 58.

596. Berbiguier *Méthode* 242, Lindsay *Elements* 105.

597. Walckiers *Méthode* 155-156.

598. Coche *Méthode* 131.

599. Nicholson *School* 67.

600. Tromlitz *Unterricht* 220, Gunn *The Art* 14, Nicholson *Complete* 19, Nicholson *School* 67, Lee *Improved* 26, Müller *Elementarbuch*, quoted in Lichtmann *Müller* 214, Weiss *Instruction Book* 87, Pratten *Tutor* 15, Lindsay *Elements* 98 and 105, Walckiers *Méthode* 154 and 155, Dressler *Instructions* 49, Clinton *School* 47, Rockstro *Flute* 510, Altés *Méthode* 279, Taffanel and Gaubert *Méthode* 92.

601. Granom *Instructions* 13, Berbiguier *Méthode* 246, and Walckiers *Méthode* 154.

Schwedler have exercises that start with quarter notes and continue with eighth notes and sixteenth notes.<sup>602</sup> Tulou's examples start with eighth notes and continue with sixteenth notes.<sup>603</sup> Berbiguier recommends to initially practice slow, and to proceed with faster examples which are easier; the faster the passage is, the easier is double-tonguing.<sup>604</sup>

The student is also advised to articulate a bit harder or very distinct in the beginning.<sup>605</sup> Another common piece of advice is to pay attention to the tongue and fingers moving together;<sup>606</sup> still another is to work on making the second syllable as clear and strong as the first, which is considered necessary for double-tonguing with *d-l/t-tl*,<sup>607</sup> *d-r/t-d*,<sup>608</sup> and *d-g/t-k*<sup>609</sup> alike. A recommendation that is only made for double-tonguing with *d-g/t-k* is to practice the backstroke separately.<sup>610</sup>

Several 19th-century writers stress that the student should not practice double-tonguing until he/she is well-versed in single-tonguing.<sup>611</sup>

Quantz and Weber remark that double-tonguing (in Quantz's words) "will be a little prejudicial to tone or embouchure at the beginning."<sup>612</sup> Granom and Tromlitz describe their own long struggle to learn it; Tromlitz writes in *Unterricht*, "Of course it takes a long time and demands much time and daily practice to become master of this; only ceaseless application conquers the difficulties."<sup>613</sup>

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602. Drouët *Méthode* 158, Drouët *Method* 15, Bretonnière *Méthode* 53, and Schwedler *Flötenspiel* 59-60.

603. Tulou *Method* 129.

604. Berbiguier *Méthode* 242.

605. Granom *Instructions* 14, Tromlitz *Unterricht* 220, Gunn *The Art* 14, Berbiguier *Méthode* 243, Walckiers *Méthode* 154 and 155.

606. Quantz *Versuch* 69, Granom *Instructions* 13-14, Arnold *Instructions* 31, Tromlitz *Unterricht* 222, Miller *Instructions* 13, Beale *Complete* 16, Wragg *Improved* 14, Alexander *Preceptor* 32, Weiss *Instruction Book* 87, Nicholson *School* 67, James *Word* 126 (about *d-r/t-d*), Lindsay *Elements* 98 and 105, Clinton *School* 48 (for *d-g/t-k*).

607. Quantz *Versuch* 71, Granom *Instructions* 13, Arnold *Instructions* 31, Miller *Remarks*, Tromlitz *Unterricht* 219, Miller *Instructions* 13, Nicholson *Lessons* 5, Nicholson *School* 65, Lindsay *Elements* 97-98.

608. Drouët *Méthode* 79, Drouët *Method* 25.

609. Soussmann *Flötenschule* 4:14, Walckiers *Méthode* 154, Rockstro *Flute* 510, Schwedler *Flötenspiel* 58, Altés *Méthode* 279, Taffanel and Gaubert *Méthode* 92.

610. Walckiers *Méthode* 154, Rockstro *Flute* 510-511, and Schwedler *Flötenspiel* 59.

611. Berbiguier *Méthode* 6, Bown *Preceptor* 21, Weiss *Instruction Book* 51, Tulou *Method* 8, and Schwedler *Flötenspiel* 58.

612. Quantz *Versuch* 69 and Weber *Doppelzunge* 115-116.

613. Tromlitz *Unterricht* 222, transl. 201

## 2.17 The vowels

As seen above, a number of different vowels were used by flutists in writing down the articulation syllables. For vowels even more than for consonants, the pronunciation depends upon the language in question, and complementary information on which language the vowel should be pronounced in is often given.<sup>614</sup> Generally, writers often choose one vowel, or suggest the possibility of different vowels. Some flutists comment on their choices; among these some prefer a vowel over another for the benefit of the sound. Tromlitz prefers *a* over *i* for sound quality; in his opinion it makes the tone fuller, rounder and brighter.<sup>615</sup> Drouët discusses which vowel or vowels produce the best sound. He prefers *eu*, but advises practicing with *u*, *e*, *ou* and *o*; the choice depends on the individual flutist and his/her native language and instrument.<sup>616</sup> The vowel *oo* is preferred by Dressler, because in pronouncing it, “the lips are contracted so as to be very nearly in the position required for playing the Flute.”<sup>617</sup> Rockstro is concerned that Quantz’s *i* might lead to the habit of keeping the tongue dangerously low in the mouth, and recommends *oo* or *e* instead.<sup>618</sup>

Others point out that the vowel does not affect the articulation: Weber explains that he does not pay any attention to the vowels, first because it is outside the scope of his article (which is about single- and double-tonguing), and second because the issue of vowels is more imagined than real; no windplayers actually pronounce a vowel.<sup>619</sup> According to Carte, the choice of vowel does not affect the articulation; he writes in *Instructions*, “As to the vowels, *e*, *i*, *o*, it matters not which is appended to the *t* or *d*; they are made by the different manner of *opening* the mouth, and have nothing to do with the motion of the tongue. The mouth is *closed* in playing, and the motion of the tongue in pronouncing the syllables *ta*, *te*, *ti*, *to*, *tu*, is the same.”<sup>620</sup>

Altés points out that different syllables are used by different professors, and agrees with Weber that a syllable only approximately represents an articulation. Among the vowels commonly used he therefore chooses the vowel *u*, which creates

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614. For instance Drouët *Méthode* 68, Walckiers *Méthode* 154, Rockstro *Flute* 437.

615. Tromlitz *Unterricht* 157–158, and 218.

616. Drouët *Méthode* 32 and 78, and *Method* 24.

617. Dressler *Instructions* 48.

618. Rockstro *Flute* 437.

619. Weber *Doppelzunge* 100.

620. Carte *Instructions* 26.

what he considers a neater and more distinct articulation than *e* or *i*.<sup>621</sup>

It is as common as not to use different vowels for the first and the second syllable in double-tonguing. No writer comments on that; my impression is that, when pronounced carefully and slowly (as when the player is to determine which vowels to suggest), the imagined vowel becomes different in a backstroke. Some writers, like Quantz and Tromlitz, use one vowel consistently for all articulations; some, like Devienne and Prill, use different vowels to describe slower and faster notes.<sup>622</sup> Since they do not comment on their choices, it is hard to say how conscious this use is. Vanderhagen's indication of *té* for staccato and *tu* for eighth notes without indicated articulation in *Méthode* seems to suggest that *é* is an indication of a short vowel;<sup>623</sup> however, in the earlier *Méthode nouvelle et raisonnée* he indicates the opposite: *Té* for eighth notes without indicated articulation and only *T* for eighth notes with staccato dots.<sup>624</sup>

Liebeskind is of the opinion that the *i* can be replaced with another soft vowel (*ä*, *ö*, or *ü*). According to him, flutists change the vowel (not always consciously) according to the pitch: the highest notes are played with an *i*, and in descending the vowel is changed successively towards a harder one until the lowest notes are played with an *a* or an *o*.<sup>625</sup>

If the player places the tongue further back in the mouth with *a* in double-tonguing (regardless of technique) and the tongue and the lips more in front with *ü*, the double-tonguing with *a* will sound harder and clearer and slightly more staccato than with *ü*. The double-tonguing with *ü* will correspondingly sound rounder and softer with slightly longer notes, because the tongue will then make smaller movements.

There is no indication that images of different vowels were used for the sake of varying the articulation. Naturally, the length of the vowel is the length of the note, so a short vowel (like in Liebeskind's *titt*) creates a short note. However, my conclusion is that the imagined vowel does not change the articulation itself.

621. Altés *Méthode* 20.

622. Devienne writes *dougue* and *tourou* or *туру* for double tonguing, and *tu* for slow notes. Prill use *tah* for slow notes and *dee-gay* for double-tonguing. Devienne *Méthode* 7 and 9, Prill *Schule* 19.

623. Vanderhagen *Méthode* 36.

624. Vanderhagen *Méthode nouvelle et raisonnée*, quoted in Castellani/Durante *Lingua* 212.

625. Liebeskind *Doppelzunge* 672-673.



## 2.18 Conclusions on the articulation of fast passages in the 18<sup>th</sup> and 19<sup>th</sup> centuries

In this section I have shown the documented techniques used to execute fast passages on the flute in the investigated area, musical style and period.

The vowel imagined influences first and foremost the sound, but also to a limited degree the tongue stroke. However, since it does not alter the articulation itself it is reasonable to exclude it when notating the different articulation techniques. I have not found any syllables documented for double-tonguing that would not fit into one of the three techniques, *d-g/t-k*, *d-r/t-d* and *d-l/t-tl* respectively, and conclude that the different syllables notated for double-tonguing in the 18<sup>th</sup> and 19<sup>th</sup> centuries could be categorized into them. Nuances (degrees of hard/soft consonants) were used in all three techniques.

During the early decades of the 18<sup>th</sup> century, moderately fast passages were articulated with *d* or *t* alternating with *r*. The syllable with *r* was usually on the good beat, except that starting with *r* was not recommended. For very fast notes Freillon-Poncein recommends the reverse: placing the syllable with *t* or *d* on the good note. If the tempo is very fast, alternating *t* or *d* with *r* creates what is technically a double-tonguing, thus double-tonguing with *d-r/t-d* could have been used by flutists accustomed to tonguing with *r* as was common in France in the early 18<sup>th</sup> century and in Germany during the whole 18<sup>th</sup> century.

Quantz is the first writer in the period of my investigation to describe tonguing with *d-l/t-tl*; he discusses it thoroughly, and describes a compound and advanced application, mixed with *d*, *t* and *r*. Quantz claims that this technique was used earlier by recorder and bassoon players; in my opinion the double-tonguing technique Quantz describes is the same that is documented by wind players in the 17<sup>th</sup> century using syllables with *l*. Delusse recommends a softer nuance, which he uses on repeated notes for programmatic effects. Mahaut's comment suggests a use in all kinds of passages; however, Mahaut seems to be writing about other flutists than himself using it. In general, double-tonguing with *d-l/t-l* was used very little by French flutists, which possibly is related to the French language. Single-tonguing is not described by Hotteterre and is advised against by Quantz, but probably used by Corrette, and requested by Mahaut on notes with dots and dashes. If the tempo makes it necessary, Quantz recommends slurring the first two notes of four.

Double-tonguing with *d-l/t-l* is the most recommended double-tonguing technique in Germany in the 18<sup>th</sup> century; double-tonguing with *d-g/t-k* is not

mentioned in my material from this period. Far from all flutists, however, mastered double-tonguing; an alternative method was paired slurs. Tromlitz advises against single tongue for fast passages, however, in a report from Schubart's *Deutsche Chronik* it is appreciated. Tromlitz recommends paired slurs where *t* or *d* is alternated with *r* for passages in moderate speed with no articulation indicated. However, the player is requested to vary his/her playing by other articulation patterns as well.

In France during the late 18<sup>th</sup> and early 19<sup>th</sup> century, articulation patterns with legato as well as single-tonguing were used for passages of moderate speed and fast passages alike. The articulation patterns two slurred, two tipped and paired slurs are commonly recommended. For triplets, two slurred and one tipped is recommended. Double-tonguing with *d-g/t-k* was adopted by French players in the late 18<sup>th</sup> century. It is, however, advised against by Devienne and Peraut, and the method by Hugot and Wunderlich does not discuss it. That double-tonguing with *d-r/t-d* was also used is evident from Devienne and Peraut's criticism of it. Gunn reports having picked it up from a player "on the continent," not, however, specifying France. Vanderhagen and Devienne describe double-tonguing with *d-l/t-tl*; however, it is unclear if they were familiar with the practice themselves.

A brief comparison of scores of flute music from the first and second halves of the 18<sup>th</sup> century shows that more legato slurs occur in the later ones. This study shows that also as a playing style (that is, applied by the player) more legato was used later in the century than earlier.

During the late 18<sup>th</sup> and early 19<sup>th</sup> centuries there was a connection between the term "staccato-passage" and single-tonguing, though a passage could also be performed staccato with double-tonguing. An ideal detached passage for German 18<sup>th</sup> century writers was, however, supposed to be round, clear and rolling, like a singer's coloratura. The single-tonguing with *d* rather than *t* requested by Hugot and Wunderlich also creates smoother, more fluent passages.

In the 19<sup>th</sup> century, *d-g/t-k* is by far the most documented double-tonguing in France. Double-tonguing with *d-l/t-tl* is mentioned, but not recommended as a first choice by any French writer. The flute methods stress the importance of learning the art of applying legato. Variation and personal taste are stressed; however, the articulation patterns paired slurs and two slurred, two tipped are still in favour. In the latter articulation the tipped notes could also be double-tongued. Legato is, according to Berbiguier, more advantageous in flat keys and in the low register.

Drouët developed his own double-tonguing with *d-r/t-d*, which he executed with remarkable skill. Because of his success as a soloist and his activity as a teacher,

some players learned this technique, among them the English players Carte and Rudall. However, double-tonguing with *d-r/t-d* was never used by a majority of players in any period or geographical area. In France, apart from Drouët, only Bretonnier recommends double-tonguing with *d-r/t-d* as a first choice. Double-tonguing with *d-r/t-d* is the double-tonguing technique that most resembles single-tonguing, the syllables used being less different from each other, and it was sometimes mistaken for single-tonguing. Compared to double-tonguing with *d-l/t-tl* and, to a lesser degree with *d-g/t-k*, there is less of a problem with the second syllable not being as clear and forceful as the first.

Double-tonguing with *d-l/t-tl* is the most documented technique for tonguing fast passages in England from the 1760's through the first half of the 19<sup>th</sup> century. All English treatises for the one-keyed or simple-system flute that I had access to<sup>626</sup> discuss this technique, except Monzani's *Instructions*, which condemns double-tonguing without specifying with which technique. It is spelled with the consonants *t-tl*, except by Gunn, who writes *d-dl*. A reason for its popularity could be that it is easily pronounced for English speakers. There was criticism that the second syllable is not as clear as the first, and Gunn tries to promote double-tonguing with *d-r/t-d*. In the 19<sup>th</sup> century, with the renowned virtuoso Nicholson using the technique, it was still heavily criticised, and was considered inferior to but easier than the astonishing articulation of Drouët. Double-tonguing with *d-g/t-k* is not recommended as a first choice in England until Clinton's treatise from 1846. There is no documentation of single-tonguing used for longer fast passages.

In Germany, *d-l/t-tl* was the most common technique for double-tonguing during the first half of the 19<sup>th</sup> century, and nuances from the soft *d-l* to the sharp *t-tl* were discussed. Double-tonguing with *d-g/t-k* was also used, and some flutists, notably Fürstenau, used single-tonguing for fast passages. Fürstenau, like Devienne before him, argues for single tonguing versus double tonguing for its possibilities of adding nuances, variation and expression to the runs. A commonly expressed opinion is that single-tonguing cannot be used at as quick tempi as double-tonguing, and, indeed, the tempo Fürstenau indicates in his etude for staccato is lower than the tempi requested for double-tonguing with *d-l/t-tl*, *d-g/t-k* and *d-r/t-d* alike. Drouët's double-tonguing was admired also in Germany, but to my knowledge there is no documentation of German flutists using it. Flutists could use more than

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626. The methods by Heron, Arnold, Gunn, Miller, Wragg, Monzani, Nicholson (three methods), Alexander, Beale, Weiss, Bown, Dressler, Lindsay and Lee.

one double-tonguing technique; Schwedler and Soussmann used, besides *d-g/t-k* (which they call double-tonguing), *d-l/t-tl* as an alternative for musical reasons.

There are suggestions that Northern Europe in the early 19<sup>th</sup> century was influenced by Germany, as well as reports that Italian flutists in the later 18<sup>th</sup> and 19<sup>th</sup> centuries did not use double-tonguing with *d-l/t-tl*, or any other double-tonguing.

In the second half of the century *d-g/t-k* was the most-used double-tonguing technique also in Germany and England. Flutists in Sweden in the second half of the 19<sup>th</sup> century used double-tonguing with *d-g/t-k*, though both Drouët's playing and Tromlitz's *Unterricht* were known. The alternative for moderately fast and shorter passages was single tongue.

The 19<sup>th</sup> century statements that double-tonguing should resemble single-tonguing<sup>627</sup> suggest an ideal of equality and clarity. Fürstenau indicates staccato dots on his examples, and writes that the notes should be played shorter in fast tempi. This indicates a different idiom for tongued passages than the one described by German 18<sup>th</sup>-century writers. Rockstro's opinion that double-tonguing with *d-l/t-tl* only can produce a *mezzo staccato*, and is therefore inferior to *d-g/t-k*, and Widgren's statement about a brilliant and rather sharp staccato suggests that this change in taste towards even shorter detached passages continued throughout the 19<sup>th</sup> century.

Throughout the entire period discussed in this study, the treatises request the flutist to pay attention to the articulation indicated by the composer. Several writers, however, occasionally disobey this rule, and my impression is that a trained virtuoso used his/her own style of articulation. Flutists were supposed to study the art of applying tasteful articulation to passages where articulation was not indicated by the composer. The study material for this is most abundant in the French methods from the late 18<sup>th</sup> and the first half of the 19<sup>th</sup> centuries. It is almost absent in the methods from the later 19<sup>th</sup> century; at that time the articulation was normally indicated in the musical scores.

The same practicing advice is generally given for double-tonguing, regardless of technique. The student is advised to initially practice on repeated notes in the middle register, also to practice without the flute and/or with only the head joint. Other recommendations include articulating a bit hard or forcefully in the begin-

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627. By for instance Walckiers, Coche, Soussmann, Köhler, Carte, Schwedler and Taffanel and Gaubert.

ning, and paying attention to the coordination between the tongue and fingers. Practicing time should be spent trying to get the backstroke as clear and strong as the first. Practicing the backstroke alone is recommended only for double-tonguing with *d-g/t-k*.

Though in general double-tonguing is recommended only for fast passages, there are suggestions that *d-l/t-tl* could also be used in moderate tempi like sixteenth notes in  $J=120$ , which, as this study shows, also works technically in musical performances. Quantz considers sixteenth notes in a tempo of  $J=160$  the fastest that can be executed well, while Altés requests sixteenth notes to be played in a tempo of about  $J=180$ .

For triplets double-tongued with *d-l/t-tl*, the only pattern documented is *d-l-d d-l-d*. With double-tonguing using *d-g/t-k*, the alternation *d-g-d g-d-g* is described beginning with the first writers to describe this technique for triplets (Weber and Walckiers). I see no technical reason for never articulating triplets with *d-l-d l-d-l*; it works well in a fast tempo.

Berbiguier recommends reversed double-tonguing for some types of passages, for instance when an upward scale starts after a short rest. Sauvlét is reported to have used reversed double-tonguing as the normal form; Widegren considers it as essential a the “direct” way, and recommends it for passages of dotted notes and passages in three.

Despite influential players such as Nicholson, Drouët and Fürstenau using and advocating other techniques, by the end of the period of this study *d-g/t-k* became the most used double-tonguing. The reason might be that it is well-suited for a sharper and brilliant staccato and leaps. According to my practical experience, double-tonguing with *d-g/t-k* also works better than *d-l/t-tl* in the highest register of the flute. The backstroke can be made equal to the first stroke, and it was considered easier than *d-r/t-d*. For German players it was also said to be easier than *d-l/t-tl*.<sup>628</sup>

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628. Weber *Doppelzunge* 116-117.

## VI. Conclusion

In this study I set out to contribute to our knowledge of flute playing in Western Europe in the 18<sup>th</sup> and 19<sup>th</sup> centuries by disclosing and defining the various vibrato techniques and techniques for fast passages used on the flute that are documented from the period. In sections 1.17 and 2.18, conclusions about vibrato techniques and techniques used for fast passages, respectively, are put forward. Sometimes, the techniques that were used reflect and therefore contribute to our understanding of musical taste in a certain period, like, for instance, the comparatively rounder and smoother syllables used for fast passages in late 18<sup>th</sup>-century Germany compared to the sharper syllables used in the late 19<sup>th</sup> century, and the use of the slow and controlled chest vibrato to enhance an emotional peak of a phrase in early 19<sup>th</sup> century Germany.

The dissemination of a musical treatise is not necessarily equivalent to the impact of its influence, and practice could differ even from written descriptions in very influential treatises. For example, it seems reasonable to assume that the students at the Paris conservatory were influenced by the treatises used at the school; however, despite the strong position of the methods by Devienne, and Hugot and Wunderlich, both of which advocate single-tonguing, double-tonguing with *d-g/t-k* soon became the most used technique in France for articulating fast passages. Furthermore, these treatises were also widely spread in Germany, where, however, the dominant practice concerning both vibrato and the articulation of fast passages remained different from that recommended in these methods. This study also shows that although Quantz's *Versuch* had a large impact on the articulation techniques used in Germany during the second half of the 18<sup>th</sup> century, a number of players used other techniques. Consequently, to imagine that double tonguing with *d-l/t-d* was used in Sweden in the 18<sup>th</sup> century, because Quantz's *Versuch* was translated to Swedish in the 1780's, would be tempting, but incautious, since we know that in the next century, Tromlitz's *Unterricht* (which also discusses double-tonguing with *d-l/t-tl at length*) was familiar to a Swedish flutist, who instead used double tonguing with *d-g/t-k*.

To definitively determine why a change in playing technique took place would involve an investigation into areas outside the scope of this study. However, judging from my source material, the changes in the techniques investigated in this study seem to have taken place because of changes in musical taste.

To use playing as a method of evaluating the evidence contributed greatly to the results of the study. For further research in historical performance practice, playing might be considered a natural and valuable method of source criticism and a sounding documentation a natural part of the presentation of results. To study flute technique in the area and period investigated in this study is a privileged situation in terms of the amount of source material, compared to carrying out a similar study on most other instruments, including the voice. Furthermore, the subjects chosen in this study are physically easier to study and define than several other matters of interest in flute-playing. Therefore, in building our knowledge about performance practice in the 18<sup>th</sup> and 19<sup>th</sup> centuries, the results of this study should be a valuable resource for investigations into, for example, the articulation of fast passages on other wind instruments. Further research on the use of *portamento* and *mezzo staccato* on the flute could also benefit from the results and methods used in this study. Further research on legato playing could include analysis of musical scores from the period; interesting studies would be to investigate to what extent players during the late 19<sup>th</sup> and early 20<sup>th</sup> century followed the indicated articulation by comparing recordings from the period with the scores, and if the transition to the view of the musical notation as complete concerning articulation occurred about the same time on other instruments than the flute.

A playing technique that was used in a certain period is a small segment of our cultural heritage, and can, as a part of its socio-cultural context, tell us something about the society it belongs to. The focus of this study is, however, to increase our knowledge about flute playing in the period studied. Knowledge about playing styles and techniques can be used to inspire musical performances. I believe that the potential of research in musical performance practice to contribute to pleasure in the form of new musical experiences should not be underestimated.

To be able to adorn a note with a *sweetening* sounds like a pleasant possibility. On the other hand, no one wants an articulated fast passage to sound like “Babylonish gabble.” Furthermore, research in performance practice aims towards a better understanding of the objects we study, and today, when there are musicians all over the globe interested in 18<sup>th</sup> and 19<sup>th</sup> century flute playing style in Western classical music, it is my wish that this study may contribute to a better understanding of some of the playing techniques used.





# Appendices 1-6

- 1. About the treatises, articles and books discussed in the text and their authors**
- 2. Musical pieces for the flute in which vibrato is indicated**
- 3. An analysis of indicated vibrato in musical pieces from 19<sup>th</sup> century flute methods**
- 4. Vibrato indications in the flute sonatas by Morten Raehs**
- 5. A list of musical pieces, exercises and examples with double-tonguing notated in Nicholson's *Lessons and School***
- 6. Contents of the recordings and program of the recorded recital made for the study**

## APPENDIX 1

## About the treatises, articles and books discussed in the text and their authors

James Alexander (n.d.) is the author of *Alexander's Complete Preceptor for the German Flute* [1821],<sup>629</sup> which together with the *Improved Preceptor for the Flute* was republished at least ten times, also in America.<sup>630</sup> *Improved* (c. 1830)<sup>631</sup> is a thoroughly reworked edition of basically the same material. *Preceptor* has 48 pages and is written for a flute with up to eight keys. The first 10 pages discuss posture, tone, music theory, and fingering. Then follow 40 easy and progressive duos arranged by key with comments on e.g. ornaments and articulation. A discussion of more advanced subjects such as double tonguing and expression follows and finally there are 21 preludes and popular Airs.

Joseph Henry Altès (1826-1899)<sup>632</sup> was a French flutist and composer who studied with Tulou at the Paris Conservatory.<sup>633</sup> He was appointed first flute at the Paris Opera from 1848-72, and succeeded Dorus as professor of flute at the Paris Conservatory 1868,<sup>634</sup> where he stayed until 1893 when he was succeeded by Taffanel. Altès' flute method was first published in Paris in 1880; a second edition, which was also translated to English, was made in 1906. It is very substantial (the English translation has more than 428 pages) and contains information on music theory, flute technique, style, and a great deal of practice material. It is based on Pierre Marie Baillot's violin method rather than on earlier flute methods,<sup>635</sup> and became one of the most used flute methods far into the 20<sup>th</sup> century.

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629. Date from Powell *Bibliography* and Fairley *Flutes* 2.

630. Neuhaus *Fingering* 49.

631. Date from Fairley *Flutes* 2.

632. Fairley *Flutes* states 1895 as the year of death, while Goldberg *Biographieen* 14 and Powell *Flute* 215 give 1899. Goldberg names Fétis as his source.

633. This paragraph is based on Fairley *Flutes* 108.

634. Or 1869, according to Powell *Flute* 215.

635. Powell *Flute* 216.

**Samuel Arnold** (1740-1802) was an English composer, keyboard player and editor.<sup>636</sup> *Dr. Arnold's New Instructions* for the German Flute was published in 1787 and is addressed to the English gentleman. It discusses basic music theory, fingerings for the one-keyed flute, ornaments, and articulation in its 34 pages of text and musical examples. It concludes by promoting Richard Potter's flutes, shortly before Potter had achieved the patent for his inventions.<sup>637</sup> It provides fingerings for a six-keyed flute.<sup>638</sup>

**Wilhelm Barge** (1836-1925)<sup>639</sup> was a German flutist and teacher. Primarily self-taught, Barge was the principal flutist in the *Gewandhaus* orchestra in Leipzig between 1867 and 1895, and he taught at the Leipzig Conservatory from 1882. Barge was one of the last proponents of the simple-system flute. *Flötenschule* is written for such a flute with 9 keys (C, C#, B, E♭, two keys for F, G#, B♭, and C) and published in Leipzig in 1880. It is written in both German and French with a limited amount of text and consists of 47 pages, musical pieces and etudes included. It is well-written, aimed at the beginner and the not-too-advanced student.

**John Beale** (c. 1776-c. 1830)<sup>640</sup> was an English composer and pianist, and professor of pianoforte at the Royal Academy of Music in London. According to the title page of his flute method, Beale was also "Professor of the flute."<sup>641</sup> *A Complete Guide to the Art of Playing the German Flute* was published as his opus 3 in London in 1813.<sup>642</sup> A second revised edition appeared about 1821.<sup>643</sup> Its 58 pages contain discussions on flute technique and music theory and include short pieces and duets for practicing purposes. It is written for a flute with six keys, but Beale also discusses flutes with eight keys.

**Antoine Tranquille Berbiguier** (1782-1838)<sup>644</sup> was a French flutist, teacher and composer who studied at the Paris Conservatory with Wunderlich. From 1819 he

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636. Hoskins *Arnold* 1002.

637. Powell *Flute* 122.

638. Powell *Introduction* 8.

639. This paragraph is based on Bailey *Schwedler* 23.

640. The biographical material is from Neuhaus *Fingering* 43.

641. Fairley *Flutes* 10.

642. Fairley *Flutes* 10.

643. Powell *Bibliography*.

644. Bate *Berbiguier*. Fairley writes 1835, Fairley *Flutes* 12.

worked in Paris as a soloist and composer of flute music.<sup>645</sup> He played left-handed. Berbiguier wrote two flute methods:<sup>646</sup> *Nouvelle Méthode pour la Flute*, which was published in Paris c. 1818, and *L' Art de la Flûte*, published in Paris in c. 1838. *Méthode* is written in the tradition of the treatises for the Conservatory, but extended to 259 pages with text and musical exercises, duos, sonatas and etudes. It is written for a flute with four or five keys. It was enlarged and translated to Italian by Giuseppe Rabboni.<sup>647</sup> It was also shortened and translated to English by William Nelson James and published in London probably in 1827.<sup>648</sup>

**Johann Daniel Berlin** (1714-1787) was an organist, composer and instrument maker of German birth. He lived from 1737 in Trondheim, Norway, where *Musicaliske Elementer eller Anledning til forstand paa de første Ting udi Musiquen* was printed in 1744. About half of the book discusses music theory, while the other half gives fingerings and elementary information on how to play different musical instruments, including the flute.

**Theobald Boehm** (1794-1881) was a German flutist, teacher, composer and flute constructor. He studied the flute with Johann Nepomuk Capeller in the Bavarian Court Orchestra, and became a member of this orchestra in 1818.<sup>649</sup> By 1832 he had developed the ring-keyed flute, a conical flute with large holes,<sup>650</sup> and in 1847 the cylindrical Boehm-flute, which is the type of flute used today. *Die Flöte und das Flötenspiel* was published in 1871, and in an English translation in 1908 and 1922. It is not an ordinary flute treatise; most of the 29 pages discuss the acoustics of the instrument and the key mechanism of the Boehm flute of 1847.

**Toussaint Bordet** (c.1730 - after 1783)<sup>651</sup> was a Parisian composer and editor, and according to the front page of his treatise also a "Maitre de Flute traversière." *Méth-*

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645. Fairley *Flutes* 12 and Goldberg *Biographieen* 39.

646. Bate writes "several," Bate *Berbiguier*.

647. This could be the method that is listed as "Gran Metodo Paris, 1820" in Brown *Early Flute* 148. The British Library's Integrated Catalogue lists a "Gran Metodo per flauto...Edizione riveduta e corretta" with the date [1860?].

648. The British Library's Integrated Catalogue. Nicholson refers to this translation in *A Word or Two* 1, quoted in Powell *Flute* 135. See also Rockstro *Flute* 576.

649. Bate *Boehm* 839.

650. More or less in collaboration with Gordon, see e.g. Powell *Flute* 166-170.

651. Vester *Music* 81.

*ode Raisonnée* is undated, but was published in Paris, probably in 1755.<sup>652</sup> It has 75 pages, starting with a section of 16 pages mainly on music theory followed by fingerings for the one-keyed flute, violin, descant viol, vielle and musette. The remaining 56 pages consist of 92 easy duets. No reprints are known.

**George Washington Bown** (n.d.) is the author of *The Flauto Instructive Companion or Preceptor for the Flute*, which he published in London in c. 1825.<sup>653</sup> According to the front page of the method he was a “teacher of the flute,” and in the introduction he writes about his “many years experience as a Teacher of the Flute.” The book is 72 pages long, including 45 small progressive duets and six airs. It contains information on music theory and flute technique and is written for an instrument with up to eight keys. It is directed to the English amateur market.

**V. Bretonnier** (n.d.) is the author of *Méthode complète théorique et pratique pour la Flûte*, which was published in Paris at an unknown date. Powell lists a *Méthode Théorique et Pratique pour la Flûte ... 6 et 8 clefs et la Flûte Cylindrique de Boehm* op. 302 by Bretonnier, published in Milan also at an unknown date,<sup>654</sup> which could be another method, or a translation and/or a different edition of the French method. *Méthode* has 186 pages with text about music theory and flute technique as well as exercises and etudes. It can be assumed to have been published after 1827, since it includes information on Berbiguier’s method and describes Drouët’s double-tonguing technique in a way that seems to be influenced by Drouët’s method from 1827. In the British Library’s Integrated Catalogue it is dated to c. 1840. *Méthode* is aimed for a flute with four to seven keys.

**Giuseppe Maria**<sup>655</sup> **Cambini** (1746-1825 (?)) was an Italian composer and violinist, who came to Paris in 1770 and was active there during the rest of the 18<sup>th</sup> century and to a lesser extent until 1810.<sup>656</sup> His violin treatise was printed in 1795; his flute method entitled *Méthode pour la flute traversière* is undated, but was probably

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652. Castellani *Preface Bordet*.

653. The date of the treatise and Bown’s full surnames are given in Powell *Bibliography* and Brown *Early Flute* 180.

654. Powell *Bibliography*.

655. Or Joseph Marie, Castellani *Neoclassicismo* 9.

656. White *Cambini* 640.

published in 1796 or early 1797.<sup>657</sup> Cambini's *Méthode* is considerably shorter than the comparable treatises by Vanderhagen, Devienne and Perault. It has 33 pages, of which only nine consist mainly of text. It includes basic information about music theory, fingerings and ornaments, exercises and musical examples. It concludes with 20 *Airs* (short and easy duos), followed by six larger and more difficult duos. It is written for the one-keyed flute, and directed to amateurs rather than future professionals.<sup>658</sup> No reprints are known.<sup>659</sup>

**Pierre(?) Paul Hippolyte Camus** (1796 - c. 1850)<sup>660</sup> was a French flutist who studied with Wunderlich at the Paris Conservatory from 1806. In 1813 he fled Paris to avoid conscription, but by 1819 he had returned to hold the position of first flute in the Porte St. Martin Theatre Orchestra. After 1824 he made a career as a soloist, but returned in 1836 to a position as first flute in the Italian Opera in Paris. He is credited with being the first French flutist to adopt the Boehm's ring-keyed flute from 1832.<sup>661</sup> He later changed to Dorus' closed G sharp mechanism. Camus made several successful visits to England as a soloist, and in 1845 returned to London to superintend the production of the Boehm flute. His short treatise *Méthode pour la nouvelle Flûte Boehm* of 63 pages is, together with Coche's *Méthode*, the first French method for the ring-keyed flute. It was published in 1839; a shortened English translation was published in 1849.<sup>662</sup> *Méthode* contains information on music theory and flute technique, as well as practicing material.

**Richard Carte** (1808-1891) was an English flutist, flute teacher, composer and manufacturer.<sup>663</sup> He studied with George Rudall on an eight-keyed flute with large holes. He had a solo career from 1831, and was noted for, among other things, his double-tonguing technique. He became one of the first advocates of Boehm's ring-keyed flute, which he adopted in 1843 (with the open G sharp key). In 1835 he published a *Flute Tutor* in London, and in 1845 *A Complete Course of Instructions for the Boehm Flute*, the first English method for the ring-keyed flute, and

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657. Castellani *Neoclassicismo* 9.

658. Castellani *Neoclassicismo* 9.

659. Castellani *Neoclassicismo* 9.

660. This paragraph is based on Fairley *Flutes* 23-24.

661. Powell *Flute* 171.

662. Wentorf *Coche* 192.

663. This paragraph is based on Rockstro *Flute* 631-633, Fairley *Flutes* 25 and Goldberg *Biographieen* 75.

partly originally prepared for the simple-system flute. Carte also wrote *Sketch of the Successive Improvements Made in the Flute*, which was published in 1851.<sup>664</sup> Carte was a friend of Louis Spohr, and a partner in Rudall & Rose from 1850, where he instigated many improvements and additions to Boehm's systems, all of which culminated in the popular model by Rudall, Carte and Co. from 1867. Carte's best-known pupil was Richard Rockstro. *Instructions* consists of 73 pages, of which 32 pages are practicing material. The text includes arguments for the Boehm flute as well as information on music theory and flute technique and maintenance.

**John Clinton** (1810-1864)<sup>665</sup> became the first prominent flutist to take up Boehm's ring-keyed flute in England in 1841,<sup>666</sup> teaching it from 1843. He was for many years the principal flutist at the Italian Opera in London, as well as a teacher at the Royal Academy of Music and a composer of flute music. He had his own flute-making business, where he worked on improvements on the Boehm flute. Apart from a few smaller books about new types of flutes he wrote three flute methods: *A School or Practical Instruction Book for the Boehm Flute* (1846), *The Universal Instruction Book for the (8-keyed) Flute* (c. 1855)<sup>667</sup> and *A Complete School, or Practical Instruction Book for the Boehm Flute ... as Manufactured by A. G. Badge*. The last-mentioned method is designed for the American market and was published in New York in c. 1860. *School* from 1846 is a comprehensive work of 101 pages, not progressive, containing, apart from the text, some English tunes and a great number of exercises and 16 etudes. It is written for the ring-keyed flute.

**Victor Coche** (1806-1881) was a French flute player and teacher who studied with Tulou at the Paris Conservatory. Later he himself taught the "classe préparatoire" there. Coche was one of the first to play on the ring-keyed flute constructed by Boehm in 1832. Perhaps the most important student of Coche was A. de Vroye, who also became a strong champion for the Boehm flute.<sup>668</sup> The *Méthode pour servir à l'enseignement de la nouvelle Flûte* was published in Paris in 1838,<sup>669</sup> which

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664. Powell *Flute* 286.

665. This paragraph is based on Fairley *Flutes* 27.

666. Powell *Flute* 159.

667. Powell *Bibliography*

668. Bailey *Schwedler* 14-15.

669. Wentorf writes that it was printed in 1839, but written in 1838. Wentorf *Coche* 178. It was accepted by the library of the Paris Conservatory in August 1839. Byrne *Tooters* 123.

makes it the first treatise for the ring-keyed flute. It advocates strongly the new flute. It is a very informative book of 236 pages, not progressively or pedagogically organized, but highly praised by Rockstro.<sup>670</sup> According to Mary Catherine Byrne, it was never reprinted.<sup>671</sup> It is the first of a new generation of methods that do not go back to the methods of Devienne and Hugot and Wunderlich. On aesthetic issues Coche sometimes quotes Baillot.<sup>672</sup> It is more thorough and displays a more technical approach to breathing, sound production, and style than preceding flute treatises. It also includes many musical examples, small exercises and etudes.

**Michel Corrette** (1707-1795)<sup>673</sup> was a French composer and organist, and the author of at least 17 treatises for different instruments, published between 1738 and 1784. *Méthode pour apprendre aisément à jouer de la flûte traversière* is undated, but was probably published in 1740. The first edition is anonymous, but later editions bear Corrette's name. *Méthode* was republished in 1753, and enlarged to include advice for the oboe and clarinet in 1773. Reprints appeared in 1778 and 1781. There is also an Italian 18<sup>th</sup>-century translation.<sup>674</sup> Although Corrette was not a flutist himself, *Méthode* shows a strong familiarity with flute technique and playing style. Like Corrette's other methods, it is addressed to the musically interested members of the Paris bourgeoisie. It has 50 pages, 39 mostly with text, and 11 with tunes or exercises. There is a section on music theory of six pages, followed by chapters about the instrument, embouchure, fingering, articulation and ornaments. It also contains some easy tunes by Georg Friedrich Handel and various French and Italian composers.

**Andreas Dauscher** (n.d.) is the author of *Kleines Handbuch der Musiklehre und vorzüglich der Querflöte*, which was published in Ulm in 1801. It is the last flute method that is strongly influenced by Quantz's *Versuch*; it also borrows from Tromlitz's *Unterricht*. In the preface, Dauscher criticizes both *Versuch* and *Unterricht* for being too long and detailed.<sup>675</sup>

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670. Rockstro *Flute* 630.

671. Byrne *Tooters* 124.

672. Wentorf *Coche* 183.

673. This paragraph is based on Bowers *French* 80-81 and Jaffrès *Corrette* 1655.

674. Powell *Bibliography*.

675. Hadidian *Introduction* xxv, quoting Edward R. Reilly "Quantz and his *Versuch*," *Journal of the American Musicological Society*, New York (1976): 53.



**Charles<sup>676</sup> Delusse or de Lusse** (1723? - after 1774) was a French flutist and composer who was appointed first flute in the *Opéra Comique* in Paris in 1758. *L'Art de la Flûte Traversière* was printed in 1760 or possibly 1759.<sup>677</sup> It is written for the one-keyed flute, and is strongly influenced by Francesco Geminiani's *The Art of Playing on the Violin*; some sections are merely translations. However, *L'Art* also includes descriptions of several new elements of flute technique. It includes fingerings for higher notes than earlier methods, and contains descriptions of *harmoniques* and vibrato techniques that are not included in any earlier flute method. *L'Art* also points towards later French flute methods in that it consists of only 11 pages of text with music examples and fingering charts, but includes 28 progressive tunes, 20 Preludes and 12 extensive caprices. The caprices can be looked upon as the first etudes for flute, and their final sections can be used as cadenzas. The caprices include technically demanding passages of, for instance, fast leaps, which were more common in violin repertoire of the time. No reprints are known of the method.

**Francois Devienne** (1759-1803)<sup>678</sup> was a French flutist, bassoon player, composer and teacher. He studied the flute with Felix Rault, and was appointed professor for the first class at the Paris Conservatory from its foundation in 1795 and until 1802. The first edition of the *Nouvelle Méthode theorique et pratique pour la flûte* is not dated; Castellani believes that a first edition from 1792 (now lost) contained only the text and 20 Ariettas. A second edition from 1796 is preserved which contains the text and also duos for practicing and sonatas. The *Méthode* was published in three parts, which could be bought separately. Since I use primarily the text of this book, I have chosen to use the year 1792 as the year of publication. Devienne's *Méthode* was the first flute method to become the official method for the influential Paris Conservatory. It was to serve as a model for French treatises for a considerable time. Montgomery lists 30 editions, the latest from 1950; however, many of these editions include only fractions of the original material. Devienne's *Méthode* was the best-selling flute method in the 1790's, not only in France, but also in Germany.<sup>679</sup> A bilingual French and German edition was published in Hamburg in 1795. *Méthode* contains a great deal of practice material, as significant as the text.

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<sup>676</sup> According to Fétis, Lasocki *Preface* i.

<sup>677</sup> Moens-Haenen *Introduction* II.

<sup>678</sup> This paragraph is based on Montgomery *Devienne* 86-89 and Castellani *Neoclassicismo* 2-3.

<sup>679</sup> Powell *Flute* 124.

Of 77 pages, 24 consist of text with musical examples and fingering charts. The method also includes 18 little *Airs* (duos), 22 Preludes and 18 sonata movements (duos) in different keys. *Méthode* is written for the one-keyed flute, but Devienne is positive regarding the use of four keys in slow and sustained playing.

**Louis Dorus** (1813 or 1812-1896)<sup>680</sup> was a Dutch/French flutist, regarded as one of the finest in the world. His real name was Vincent Joseph van Steenkiste. He studied with Joseph Guillou at the Paris Conservatory, obtaining first prize in 1828. He was appointed first flutist at the Théâtre de Variétés in Paris, playing on an eight-keyed simple-system flute. From 1835 to -66 he was first flutist in the Orchestra des Variétés de l'Opera, and from 1839 to 1853 he was a member of the Emperor's Band. He adopted Boehm's ring-keyed flute in 1837 or 1838, and invented the closed G# mechanism for it. His early preference was for wood-bodied cylindrical flutes, but he later changed to a metal instrument. According to Rockstro he was the first player to adopt the cylindrical 1847 model.<sup>681</sup> Dorus succeeded Tulou as flute professor at the Paris Conservatory in 1860,<sup>682</sup> holding this position until 1868. His method, *L'Etude de la Nouvelle Flûte* (c. 1840), is written for the ring-keyed flute. Its 105 pages contain a relatively small amount of information about music theory and flute technique but a quite large body of practicing material and lots of exercises on tone production as well as six sonatas for two flutes.

**Raphael Dressler** (1784-1835) was a flutist, teacher and composer of flute music of Austrian birth. He was first flutist at the Hofteater<sup>683</sup> in Vienna, and from 1817 at the Royal Chapel in Hannover. He moved to London in 1820, and worked there as a performer and teacher.<sup>684</sup> In the preface to *New and complete Instructions for the Flute* Dressler writes that it is intended to be used by a teacher with an amateur student. The method is progressive and pedagogically built up. It consists of 55 pages including musical examples and many short exercises and pieces. It is written for a multi-keyed flute (Dressler writes that his own instrument has eleven keys).<sup>685</sup>

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680. This paragraph is based on Fairley *Flutes* 34 and Goldberg *Biographieen* 104.

681. Rockstro *Flute* 636.

682. Powell *Flute* 161.

683. Rockstro writes "Kärntnerthor Theater." Rockstro *Flute* 578.

684. Goldberg *Biographieen* 105.

685. Dressler *Instructions* 4.

*Instructions* was published in London in 1828, and also in Bonn and New York.<sup>686</sup> The text includes information on music theory and flute technique. Dressler returned to Germany in 1834.<sup>687</sup>

**Louis Drouët** (1792-1873)<sup>688</sup> was a flute virtuoso, teacher and composer of Dutch birth.<sup>689</sup> In 1808 he was appointed soloist to the King of Holland, and in 1811 he received a similar appointment in Paris, where his success was immense. Between 1817 and 1819 he was in London, where he was praised for his fabulous double-tonguing technique and classic taste and style.<sup>690</sup> After 1819 he spent three years in Naples, and then returned to Holland. He also played concerts in Germany in the 1820's to great acclaim. In 1829 he was again in England, and later stayed for 15 years in Gotha. Drouët wrote two flute methods. The earliest was called *Méthode pour la Flûte* and was published in French in Paris in 1827, and in Antwerp in the same year with both French and German texts.<sup>691</sup> There is also an Italian edition published in Milan from about the same time.<sup>692</sup> It has 161 pages, and includes information on music theory and also the usual topics of flute technique and playing style. It is intended for beginners and more advanced players. *Drouët's Method of Flute Playing* (published in London in 1830) contains partly the same material as *Méthode*, but excludes the music theory and embraces only matters related to flute playing. *Method* consists of 113 pages; the last 60 contain 12 preparatory studies and 30 etudes. Both methods are written for the multi-keyed flute.

**Marie Joseph Duvergès** (1838-1876/77) was a French flutist who studied with Tullou. He was a solo flutist in "Regiment des Guides de la Garde Impériale."<sup>693</sup> *Nouvelle Méthode Complète de Flûte Boehm Cylindrique* was published in Paris c. 1870<sup>694</sup> and is called a valuable flute method by Adolph Goldberg.

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686. Powell *Bibliography*.

687. Rockstro *Flute* 579.

688. This paragraph is based on Bate Drouët and Dockendorff Boland *Introduction* i.

689. There were differing opinions among Drouët's German contemporaries about his nationality: Weber calls Drouët "dem französischen Kammer-Virtuosen" Weber *Doppelzunge* 110, while Schilling writes, "Drouët/.../ ist bekanntlich ein Niederländer und kein Franzose." Schilling *Universal-Lexikon* 921.

690. James *Word* 168-170.

691. Dockendorff Boland *Introduction* i and Powell *Bibliography*.

692. Dockendorff Boland *Introduction* i.

693. Goldberg *Biographieen* 112.

694. Brown *Early Flute* 148 and Powell *Bibliography*.

**Johann Philipp Eisel** (n.d.) devotes more than eight pages of his *Musicus Autodidactos, oder der sich selbst informirende Musicus* from 1738 to the flute. The book also contains information on music theory and several other musical instruments in use at the time. The section on the flute is mostly about technique and is progressive and informative.

**Jean Pierre Freillon-Poncein** (n.d.)<sup>695</sup> was most probably an oboist; according to François-Joseph Fétis (1784-1871) he was employed in the *grande écurie du roi* under Louis XIV. *La véritable manière d'apprendre à jouer en perfection du hautbois, de la flute, et du flageolet* was published in Paris in 1700, and as the title indicates discusses mainly oboe playing, but also the recorder and the flageolet. The treatise is intended for amateurs and includes information on music theory, technique for the three instruments, ornaments, articulation and short musical pieces.

**Anton Bernhard Fürstenau** (1792-1852)<sup>696</sup> was the most prominent German flutist of his generation. He studied with his father Caspar, and became principal flutist in the Dresden orchestra under Carl Maria von Weber. He also toured as a soloist, mostly in Germany but he also tried his luck in London together with his close friend Weber in 1826. Fürstenau was not well received by the English audience;<sup>697</sup> he was admired for his sweet and flexible sound<sup>698</sup> rather than for powerful playing. Fürstenau wrote two flute methods: *Flötenschule* op. 42, published in 1826, and *Die Kunst des Flötenspiels* op. 138, published in 1844.<sup>699</sup> Both methods are written for the multi-keyed (simple-system) flute. *Flötenschule* has a text part of 24 pages followed by scales and exercises. It contains information on music theory and flute technique. It was translated into Swedish in a shortened version in 1841.<sup>700</sup> *Kunst* is written for the advanced player and includes exclusively information on flute playing. It has 112 pages: 90 with text and music examples, the rest consisting of 12 etudes. *Kunst* is modelled on Spohr's *Violinschule*;<sup>701</sup> it carefully examines all the fingering possibilities of the instrument. *Flötenschule* was re-published at least once (in 1885).

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695. This paragraph is based on Parsons Smith *Introduction*.

696. This paragraph is based on Delius *Einführung*.

697. See also Bailey *Schwedler* 17-18.

698. Rockstro *Flute* 595.

699. Delius *Einführung* XX.

700. By J. P. Cronhamn. Walin *Cronhamn*.

701. Brown *Classical* 549 and Schmitz *Fürstenau* 11-12.

**Giuseppe Gariboldi** (1833- 1905)<sup>702</sup> was an Italian flutist and composer, active for most of his life in Paris. *Méthode complète de Flûte* was published in Paris in 1876.<sup>703</sup>

**Philippe Gattermann** (n.d.) is the author of *Méthode pour Flûte système Boehm*, which was published in Paris in about 1850.<sup>704</sup>

**Francesco Geminiani** (1687-1762) was an Italian violinist, one of the greatest violin virtuosos of his time. He studied with Archangelo Corelli, among others, and from 1714 to -59 he worked in London as a teacher, composer, player and theorist. Among his numerous writings and methods are *Rules for playing in a true Taste on the Violin, German flute, Violoncello and Harpsichord* from 1747, *A Treatise of Good Taste in the Art of Musick* from 1749 and *The Art of Playing on the Violin* from 1751. *The Art* was published in London in 1751; only a year later it was published in Paris as *L'art de jouer le Violon*. It was re-published there several times during the 1750's.<sup>705</sup>

**Lewis Christian Austin Granom** (c. 1725-d. by 1791)<sup>706</sup> was an English composer, flutist and teacher living in London. *Plain and easy Instructions for Playing on the German Flute* is directed at the gentleman public. It is the earliest method for transverse flute written by an English person. Its fourth edition was printed in London in 1766 and it was reprinted in 1770. It is written for a one-keyed flute, and has 21 pages containing information on music theory and flute technique.

**Karl Grenser** (1794-1864)<sup>707</sup> was a German flutist, composer and teacher; he was a member of a well-known family of wind instrument makers. He took flute lessons with “Herzoglich kurländische Hofmusiker Knoll” in Dresden. Between 1814 and 1855 he was first flutist in the *Gewandhaus* Orchestra, and from 1843 he was “inspector” of the Leipzig Conservatory. He wrote no flute method, but did author several articles in the *Allgemeine Musikalische Zeitung* about flutes and flute playing.

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702. This paragraph is based on Fairley *Flutes* 48.

703. Brown *Early Flute* 62. Powell *Bibliography* gives the year of the method to c. 1878.

704. According to Powell *Bibliography*. Brown *Early Flute* gives 1865, which might be a later edition.

705. Moens-Haenen *Introduction* II-V and Moens-Haenen *Vibrato* 235-238.

706. This paragraph is based on Byrne *Granom*.

707. This paragraph is based on Von Huene *Grenser* och Goldberg *Biographieen* 177-178.

**John Gunn** (c.1765-c.1824) was a Scottish cellist, flutist, educationist and antiquarian who lived in London between 1786 and 1802. He published musical treatises about the cello, the piano and the flute as well as an important work on the Scottish harp.<sup>708</sup> He published a basic method for beginning flutists named *School of the German Flute* in 1794. His *The Art of playing the German Flute* was published in London c. 1793, and is written for one-keyed and six-keyed flute. It is the most advanced, intellectual and comprehensive of the English 18<sup>th</sup>-century flute methods, and it was sold at a far higher price than most English anonymous tutors of the time.<sup>709</sup> Its 32 pages of text about flute playing reflects the changes that took place at this time regarding, among other things, the instrument, tonal concept, articulation and concept of practicing. It also includes a chapter on the acoustic aspects of flute sound that is the first of its kind. The book consists of 53 pages with various musical examples, exercises and pieces.

**Luke Heron's** (n.d.) *A Treatise on the German Flute*, written for English gentlemen and amateurs, was printed in 1771. The front page describes its content well, "containing An Account of the ancient Music, its Modes, their Application and Effects: Instructions for Playing the Flute; wherein The Common Objections to that Instrument are obviated; and Any Defects that may be attributed to it are demonstrated to arise from an Improper Method of the Performance: The Diatonic and Chromatic Scales, with the Shakes, laid down in the most obvious manner: The Method of Playing in Time exemplified by Figures, ascertaining the Proportion the Notes bear to each other. With Directions for Accompanying; interspersed with Musick selected from the Most Favourite Authors, and adapted to the German Flute." The book contains a list of 470 subscribers. Though written for the one-keyed flute, it also, however, describes the six-keyed flute. It has 50 pages of text and musical examples.

**Jacques Hotteterre** (c. 1680 - 1761) belonged to one of the most influential French families of oboists and woodwind makers. Specializing on the flute and the musette, he achieved the title *Joüeur de Fluste de la musique de la chambre* in 1717. Largely because of his flute method, he was highly sought after as a teacher, and he also wrote flute music and made musical instruments, mostly flutes and musettes. His

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708. Johnson *Gunn* 848-849.

709. Powell *Introduction* 8.

method on the musette was published in 1737. His *Principes de la Flute traversiere, ou Flute d'Allemagne De la Flute a bec, ou Flute douce, et du Haut-bois* is the earliest method that is directed mainly at the baroque one-keyed flute. It is, together with Quantz's *Versuch* and Devienne's *Méthode*, the most influential 18<sup>th</sup> century flute method. Its 58 pages of text with musical examples are addressed to the upper class amateur milieu and discuss mainly subjects such as posture, embouchure, fingering, articulation and ornaments. *Principes* was published in Paris in 1707, and was widely spread both in France and abroad. It was re-published in 1713, 1720, 1722 and 1741 and with some additions sometime after 1760.<sup>710</sup> Pirate editions were also made. The *Encyclopédie* edited by Diderot and d'Alembert includes quotations and summaries of it in the articles on the flute and recorder.<sup>711</sup> According to Fétis it was published in Amsterdam in 1708, 1710 and once undated. A Dutch translation was printed in 1728, and the German translation possibly dates from the same year.<sup>712</sup> The book was, however, known in Germany well before that; it is mentioned by Johann Mattheson<sup>713</sup> and Johann Gottfried Walter.<sup>714</sup> *Principes* was in its German translation the only complete flute method available in German before 1752. It was also translated into English and printed in London in 1729, thus becoming the first flute-method in English. It became widely spread, especially after being plagiarized as the chapter about the flute in *The Modern Musick-master* from 1730/31, edited by Prellieur.<sup>715</sup> The text was then republished at least thirty times during the next four decades in many small and cheap anonymous flute tutors distributed by London music sellers and instrument dealers.<sup>716</sup>

**Antoine Hugot** (1761-1803) and **Jean Georges Wunderlich** (1755 or -56-1819). Hugot was a French flute player, teacher and composer. He played frequently at the *Concert Spirituel* in the 1780's, and in the 1790's he played first flute in the orchestra of the *Théâtre-Italien*; in 1795 he also became a flute teacher at the Paris Con-

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<sup>710</sup>. Lasocki *Introduction* 12.

<sup>711</sup>. Lasocki *Introduction* 13.

<sup>712</sup>. Lasocki *Introduction* 13.

<sup>713</sup>. In *Das neueröffnete Orchestre* from 1713 (Lasocki *Introduction* 14) and on page 459 in *Der vollkommene Kapellmeister* from 1739.

<sup>714</sup>. In *Musikalisches Lexicon* from 1732, Lasocki *Introduction* 14.

<sup>715</sup>. Moens-Haenen *Vibrato* 108. The chapter about the recorder is not based on Hotteterre *Principes*, which indicates that especially the flute playing technique was influenced by the French.

<sup>716</sup>. Powell *Flute* 112.

servatory.<sup>717</sup> He was highly praised for his correct intonation, fine tone and brilliant execution.<sup>718</sup> Wunderlich was a German flutist and composer of flute music who came to Paris in 1775 to study with Felix Rault. He was a member of the orchestra at the *Concert Spirituel* from 1778 to 1783, and often performed as a soloist there. In 1781 he joined the orchestra at the Paris Opera and stayed there until 1813, when Tulou succeeded him. At the forming of the Paris Conservatory he became a professor of flute, teaching among others Berbiguier, Camus and Tulou, and staying there until his death.<sup>719</sup> Hugot wrote the major part of the *Méthode de Flûte*, but died before its completion. Wunderlich collected and arranged the work, which was published in 1804.<sup>720</sup> The treatise was immediately accepted as the official flute method at the Paris Conservatory and remained so until 1845. A bilingual French and German edition appeared in 1807, followed by twelve other prints in Paris, Leipzig, Hamburg, Berlin, Mainz, Munich and Florence over the next hundred years.<sup>721</sup> Rockstro calls it in 1890 “this excellent and well-known work” and writes that it “has passed through many editions, and is still popular on the Continent.”<sup>722</sup> It is written for a flute with four keys, which the authors consider necessary for a good execution. *Méthode* has 152 pages; the first 28 consist of text with musical examples about posture, sound, articulation, interpretation and ornaments. Pages 29-59 contain exercises for the use of the keys, then follow scales and 15 easy pieces, 24 easy duos, 6 sonatas and 32 short etudes.

**Johan Leonard Höijer** (1815-1884)<sup>723</sup> was a Swedish composer and writer. He was employed as an organist in Stockholm and a member of the Musical Academy. He wrote articles and reviews in a number of Swedish newspapers, and published among other works *Harmonilära för diletanter* 1846 and *Musiklexikon* 1864. He also composed vocal and piano music, and translated a violin method and song texts from French, Italian, English and German.

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<sup>717</sup>. Dudley *Hugot* 770.

<sup>718</sup>. Rockstro *Flute* 563.

<sup>719</sup>. Schulman *Wunderlich* 547-548.

<sup>720</sup>. Schulman *Wunderlich* 559.

<sup>721</sup>. Powell *Flute* 212.

<sup>722</sup>. Rockstro *Flute* 261.

<sup>723</sup>. This paragraph is based on Hofberg *Handlexikon*, entry “Höijer, Johan Leonard.”



**William Nelson James** (c. 1801-1854)<sup>724</sup> was an English flute teacher and publisher who had flute lessons with Nicholson. *A Word or Two on the Flute* was published in 1826; it is not a treatise, but rather a book about the contemporary flute scene. It contains chapters on flute history, the “capabilities of the German flute,” articulation, tone and descriptions with often subjective opinions of the most celebrated flute players of his time, their playing and compositions. Shortly after the publication of *Word*, James published for a period of a year or more a musical magazine called *The Flutist Magazine and Musical Miscellany* with a format like that of the *Quarterly Musical Magazine*. In 1832 he began publishing another journal, *The Fluticon*, and in 1835 *The German Flute Magazine*, both directed to the flute-interested English upper class.

**Justin Heinrich Knecht** (1752-1817)<sup>725</sup> was a German organist, composer and theorist who studied with his father and later with Georg Joseph Vogler. Apart from the organ and the piano he also studied violin and singing. His principal theoretical work *Gemeinnützlichtes Elementarwerk der Harmonie und der Generalbasses* was published in 1792-8. *Allgemeiner Musikalische Katechismus* was published in 1803 and later in 1808, 1816 and 1824. Knecht also authored articles in musical periodicals, including the *Allgemeine Musikalische Zeitung*.

**Heinrich Christoph Koch** (1749-1816)<sup>726</sup> was a German violinist, composer and theorist. He belonged to a family of musicians, and worked as a violinist in Prince Johann Friedrich’s Royal Chapel between 1764 and 1771; during this time he also studied composition. Koch wrote articles for musical periodicals, and tried to establish one himself in 1795. The ambitious *Versuch einer Anleitung zur Composition* is in three volumes and was published in 1782-1793. *Musikalisches Lexikon* was published in Frankfurt am Main in 1802 and contains over 3000 entries. It was re-published in 1817, and in a revised version by Arrey von Dommer in Heidelberg in 1865. Parts of it were translated to Danish and published in Copenhagen in 1826.

**Bernhard Lee** (n.d.) is the author of *The Bernhard Lee’s Edition of Wragg Improved*, which was published in 1840 and is written for a flute with up to eight keys.

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724. This paragraph is based on Preston *Introduction*. See also Powell *Flute* 135.

725. This paragraph is based on Loewenberg/Rönnau *Knecht* and Koldau *Knecht*.

726. This paragraph is based on Hinrichsen *Koch*.

Despite its title the treatise does not include much of the same material as Wragg's *Improved*. It spends less space on music theory and describes a more advanced flute technique than Wragg's method. It is progressive and pedagogical, starting with easy exercises, quickly moving to difficult ones. The text is limited to short sections commenting the musical examples. The 64 pages also include 50 small duos and 18 short pieces. James writes in 1826 about a composition of Lee.<sup>727</sup>

**Joh. Heinr. Liebeskind D. (oktor?)** (1768-?)<sup>728</sup> was "Königl. Baierschen oberstem Justizrathe," and the son of Georg Gotthelf Liebeskind, a professional flutist and a student of Quantz. J. H. Liebeskind was also considered a good player.<sup>729</sup> He wrote no flute method, but authored several articles in the *Allgemeine Musikalische Zeitung* about flutes and flute playing which according to Rockstro attracted "a great deal of notice in Germany."<sup>730</sup>

**Thomas Lindsay** (n.d.) is the author of *The Elements of Flute-Playing*, the most elaborate and literate of all English methods of his time. The flutist that is most strongly admired in the treatise is Charles Nicholson. However, Lindsay also acknowledges Devienne, Hugot and Wunderlich, Monzani, Weiss, Gunn, Drouët and Berbiguier. He quotes long passages from the works of Drouët and Berbiguier, as well as Gunn's essay on the acoustic aspects of flute sound, but also adds a lot of his own ideas, including an explanation of harmonics. Lindsay published *Elements* himself in 1828;<sup>731</sup> the second part was published in London c. 1830.<sup>732</sup> Both parts together consist of 149 pages. According to the preface, it is intended for a teacher with a student. About half of the material consists of text about music theory, flute technique and interpretation, and the rest comprises musical examples, exercises and tunes. *Elements* is written for a multi-keyed flute.

**Antonio Lorenzoni** (1755-1840)<sup>733</sup> was an Italian lawyer. *Saggio per ben sonare il flauto traverso* was published in Vicenza and Bologna in 1779. It is written for the

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727. James *Word* 250.

728. Rockstro *Flute* 554.

729. Delius *Quantz* 177.

730. Rockstro *Flute* 271.

731. Powell *Bibliography*.

732. The introduction to the second part by Lindsay is signed 1830. There he also quotes reviews from late 1828 and early 1829.

733. This paragraph is based on Gallo *Premessa*.

one-keyed flute, and for an amateur bourgeois milieu that was not common in Italian music life. Large parts are translated from French. The chapters about musical theory are based on the dictionaries by Rousseau and D'Alembert; some material is borrowed from Tartini's *Trattado di Musica*.<sup>734</sup> The discussion about articulation, ornaments, and interpretation comes mostly from Quantz's *Versuch*; Lorenzoni borrows single sentences or even several paragraphs at a time. *Saggio* consists of 91 pages of text with no musical pieces and few examples.

**Antoine Mahaut** (1720?-1785?)<sup>735</sup> was a flutist and composer of Dutch origin. His treatise *Nieuwe Manier om binnen korten tyd op de Dwarsfluit te leeren speelen* or *Nouvelle Méthode pour apprendre en peu de tems à jouer de la flûte traversière* was published in a bilingual Dutch/French edition by Hummel in Amsterdam in 1759. The same year it was published in Paris in French only. Hummel lists reprints between 1762 and 1814, in both French and Dutch.<sup>736</sup> *Nieuwe Manier* has 28 pages with text and finger charts, and the French edition includes short practicing pieces as well as a collection of 35 airs.<sup>737</sup> The method is written for one-keyed flute, and includes only subjects related to flute playing. Mahaut describes an advanced flute technique with, among other things, alternative fingerings and provides an extensive trill fingering chart.

**Edward Miller** (1735<sup>738</sup>-1807) was an English organist, composer and historian; he took a MusD degree at Cambridge in 1786.<sup>739</sup> According to the introduction of his flute method Miller was also a flute player, and the introduction names him as one of the few performers living at the time when the method was published who assisted at Handel's Oratorios during Handel's lifetime.<sup>740</sup> *The New Flute Instructor or The Art of Playing the German-Flute* is written for the British gentleman and beginning flutist, and published in London in c. 1799.<sup>741</sup> It is based on Miller's previously published piano school. *Instructions* consists of 61 pages of text and musical examples on music theory and flute playing, easy tunes for practicing and

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734. Hadidian *Preface* xii.

735. Cotte *Mahaut* 504.

736. Hadidian *Preface* vii.

737. Hadidian *Preface* vii.

738. Vester gives the year 1731.

739. Black *Miller* 322.

740. Miller *Instructions* i.

741. The year is from Fairley *Flutes* 84, Powell *Bibliography* and Brown *Early Flute* 148.

16 short preludes. Then follow 25 pages with progressive airs, duets and trios and a musical glossary. It is written for the one-keyed flute, but Miller also discusses instruments with six keys.

**Teobaldo Monzani** (1762-1839)<sup>742</sup> was a flutist, flute maker and publisher of Italian birth. He came to London in 1768, and was later appointed principal flutist in the Kings' Theatre. He also played in the Italian Opera and in Salomon's concerts.<sup>743</sup> His *Instructions for the German Flute* was published in 1801, and a *New and Enlarged Edition* appeared in 1813. There is a possible third edition from 1820.<sup>744</sup> In the introduction Monzani refers to Gunn's *The Art*; the first section of the book consists of 25 pages with information on music theory, ornaments and flute technique. The 19 pages that follow contain 36 preludes and other short pieces. *Instructions* describes a flute with six keys.

**August Eberhard Müller** (1767-1817) was a flutist, composer and organist in the Nicolaikirche in Leipzig from 1794 and in the Thomaskirche from 1800.<sup>745</sup> He was appointed first flutist in the Leipzig *Gewandhaus* orchestra between 1794 and 1802. Later he became an important figure in the musical life of Weimar, where he was music director of the opera and orchestra at the Weimar court from 1810. Müller wrote flute music as well as other music and a number of treatises for the flute and keyboard, of which only *Elementarbuch für Flötenspieler* survives. According to Lichtmann, *Elementarbuch* was probably written some time between 1794 and 1801 and published in 1817. In fact, it must have been written after 1804, since Müller quotes Hugot and Wunderlich's *Méthode*, which was published that year, and translated to German by Müller in 1807. The book is written for one-keyed and multi-keyed flutes. The comprehensive text with music examples treats, among other things, posture (also of the lips), fingering, sound, music theory, ornaments and articulation. Müller also prints many small, not progressive exercises in different keys.

**Carl Herman Louis Müller** (1832-1889)<sup>746</sup> was a flutist of German origin who

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742. This paragraph is based on Fairley *Flutes* 86.

743. Goldberg *Biographieen* 289.

744. Smith/Ward Jones *Monzani* 546.

745. This paragraph is based on Hempel *Müller* and Lichtmann *Müller* as well as Müller *Elementarbuch*.

746. This paragraph is based on Karle *Hovkapellet* 336-337.

came to *Hovkapellet* in Stockholm from Berlin in 1857<sup>747</sup> and was appointed first flute between 1866 and 1884. After 1884 he worked at minor theatres in Stockholm. His *Ny Flöjt-skola* was published in Stockholm; it is included in a catalogue from 1876.<sup>748</sup> Of its 31 pages, the first 12 contain information on music theory and flute technique, followed by practice material. It is written for both multi-keyed and Boehm flutes. Müller also wrote *Lilla Flöjt-Skolan*.<sup>749</sup>

**Charles Nicholson** (1795-1837) was the most famous flute virtuoso in England of his time, and maybe the most controversial flutist of his generation. He studied with his father. Nicholson was famous for his strong organ-like sound, especially in the low register,<sup>750</sup> his expressive execution of slow movements and his use of special techniques popular at the time such as fast chromatic runs, portamenti, harmonics and vibrato. He designed and played on flutes with big finger- and embouchure- holes, which became exceedingly popular in England. He was appointed Professor at the Royal Academy of Music upon its establishment in 1822<sup>751</sup> and solo flutist in the *Philharmonic Society Concerts*, at the Drury Lane Theatre and the Italian Opera. He also wrote flute music and three flute methods: *Complete Preceptor for the German Flute* (London, first edition 1816),<sup>752</sup> *Preceptive Lessons for the Flute* (London c.1821) and *A School for the Flute* (London and New York, 1836). All three methods are written for the multi-keyed flute, and they were reissued and reprinted in numerous editions.<sup>753</sup> *Complete* contains text about music theory and flute technique as well as a number of progressive duets and a set of preludes. It has 76 pages. *Lessons* is aimed at the already advanced player, and has 89 pages. It contains mostly tunes and exercises with detailed comments and technical advice. *School* is a comprehensive work in two volumes totalling 132 pages. It includes discussions of music theory, flute technique and style as well as musical examples and twelve exercises for double tonguing and twelve impromptus, all with piano accompaniment.

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747. Or 1853, Goldberg *Biographien* 292.

748. Abr. Lundquists' catalogue; information from Anna-Karin Lundberg, February 2008.

749. Information from Anna-Karin Lundberg, February 2008.

750. James *Word* 155-160.

751. Bailey *Schwedler* 26.

752. Powell *Bibliography*.

753. Spell *Nicholson* ix. Spell refers to David Jacobsen's "Charles Nicholson (1795-1837): His Influence on Flute Performance, Manufacture, pedagogy and Literature." DMA Thesis, University of Illinois at Urbana-Champaign, 1982.

**Mathieu Peraut** (n.d.) was a French flute player about whom very little is known.<sup>754</sup> According to Fétis, who spells his name “Perault,” he was “flûtiste du théâtre du Vaudeville” in Paris between 1797 and 1804, and published several sonatas and duos for flutes as well as his flute method. Frans Vester (who use the spelling Pérault) lists nine sonatas for flute and Basso continuo and several duos, all published in Paris.<sup>755</sup> Ernst Ludwig Gerber also mentions him in *Neues historisch-biographisches Lexicon der Tonkünstler* from 1813. The *Méthode pour la Flûte* was probably published between 1800 and 1803. It is written for the one-keyed flute, and has 99 pages. The first 29 contain text with musical examples, mostly about fingering, articulation and ornaments; then follow one longer prelude, 12 small pieces in different keys, six duos with preludes and six sonatas, also with preludes. Finally there are six duos (*caprices*) with difficult first parts.

**Robert Sydney Pratten** (1824-1868)<sup>756</sup> was an English flutist and composer. He was primarily self-taught, and settled in London in 1845 where he was appointed first flutist at the Theatre Royal, Covent Garden. He was renowned for his full tone, accurate intonation and expressive style. He adopted the Siccama flute in 1847, after playing an eight-keyed flute by Rudall & Rose. He succeeded José Maria Ribas at the Italian Opera in 1851, and became the leading flute player in England. He also introduced an altered simple-system flute with some features from the Boehm flute. His *Flute Tutor* was first published in 1860;<sup>757</sup> later it was republished and enlarged by J. A. Kappey.<sup>758</sup> The later version contains information on music theory and flute technique as well as practice material. It is written for a flute with eight keys and has 33 pages.

**Emil Prill** (1867-1940)<sup>759</sup> was a German flutist and teacher. He studied the flute with Heinrich Gantenberg (principal flutist of Berlin’s Royal Opera) 1879-1883, and switched to the Boehm (cylindrical) flute in 1882. He was principal flutist of the Hamburg Symphony between 1889 and 1892, and of the Berlin Royal Opera (later Staatsoper) between 1892 and 1928. He taught at the Berlin Hochschule from 1903 to 1934, and received the title of “Königliche Kammervirtuos” in 1908.

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754. This paragraph is based on Castellani *Preface Peraut*.

755. Vester *Music* 355.

756. This paragraph is based on Rockstro *Flute* 642-647 and Goldberg *Biographien* 320.

757. Powell *Bibliography*.

758. The copy I have seen is from 1883.

759. This paragraph is based on Bailey *Schwedler* 31-32.

Prill had an unusually prolific recording career for an instrumental soloist between 1904 and 1930.<sup>760</sup> The *Schule für die Böhmflöte/Method for the Boehm Flute* was first published c. 1898-1903.<sup>761</sup> An edition from 1927 (which according to its preface is enlarged both in terms of text and exercises) has 123 pages. Twenty-four of them contain mainly text about music theory, flute technique and interpretation; the rest is playing exercises. Prill also wrote a *Guide to Flute Literature* (1899).

**Johann Joachim Quantz** (1697-1773) was a German flutist, composer and teacher. Quantz was first trained as a town musician,<sup>762</sup> and as such he played several instruments, especially the violin, oboe and trumpet, but he also studied the harpsichord and composition. In 1716 he moved to Dresden where he had flute lessons with Pierre-Gabriel Buffardin, whom he later replaced as principal in the orchestra. 1724-1727 he made a Grand Tour to Italy, France and England.<sup>763</sup> Starting in 1728 he gave flute lessons to Crown Prince Frederick of Prussia, and in 1741 Frederick the Great managed to recruit him to Berlin. A record from the teaching period prior to Quantz's move to Berlin is collected in an autograph titled *Solfeggi pour la Flute Traversiere avec l'enseignement*, consisting of exercises and excerpts from flute music with Quantz's comments. Quantz's flute treatise, *Versuch einer Anweisung die Flöte traversière zu spielen*, or in French *Essai d'une methode pour apprendre à jouer de la Flute traversiere*, was published in Berlin in 1752. It was one of the most influential musical treatises of the 18<sup>th</sup> century. The French translation was made under Quantz's supervision,<sup>764</sup> and it is looked upon by scholars as a valuable complement to the German original.<sup>765</sup> The musical milieu in Berlin was conservative, preserving the Dresden tradition; therefore, *Versuch* reflects the performance praxis in Dresden in the 1720's and 30's as well as in Berlin under Frederick the Great. *Versuch* was reprinted in Breslau in 1780. It was translated into Dutch, and published in Holland in 1754 and about 1765.<sup>766</sup> Two chapters about ornamentation were translated into English, and printed in London between 1770 and 1798.

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760. Nelson *Booklet* 9.

761. Powell *Bibliography*. According to Karl Ventzke it was first published in 1905. Bailey *Schwedler* 223.

762. Reilly *Introduction* xii.

763. Reilly *Introduction* xvi-xix.

764. Reilly *Bibliography* 345.

765. Reilly *Preface* xxxv.

766. Reilly *Bibliography* 346-347.

There is a complete Italian translation,<sup>767</sup> and a Swedish handwritten translation from 1783. Nowhere, however, was its influence as great as in Germany, where methods as late as Dauscher's *Kleines Handbuch der Musiklehre und vorzüglich der Querflöte* from 1801, and as thorough as Tromlitz's *Unterricht* lean heavily on it. *Versuch* consists of 353 pages of text, plus 23 pages with musical examples. About half of the text is about flute playing, and the rest discusses matters such as general performance praxis, how to judge a musical composition, and advice to other musicians than flutists.

**Walter Redmond** (n.d.) is the author of *Flute and Piccolo Tutor*, which was published in London by Francis, Day and Hunter (no date). The book is a very elementary learn-how-to-play book for the English amateur market. It has 20 pages of text and 10 with *Airs* for the student. Redmond provides the reader with information on music theory and flute technique. It is written for a person owning a flute with four to eight keys.

**Johann Justus Heinrich Ribock** (1743-c. 1785)<sup>768</sup> was a German amateur flutist and flute-maker. He exchanged letters with Tromlitz about flute construction and flute-playing. The first 50 pages of *Bemerkungen über die Flöte und Versuch einer Anleitung zur besseren Einrichtung und Behandlung derselben* were published in 1782, and a second, improved edition which was extended to 62 pages was made in 1784. *Bemerkungen* is not a flute method; it contains more information on suggested improvements in the flute's construction than on flute technique. However, it also contains the first German fingering chart for a multi-keyed (five keys) flute. Ribock also wrote an essay titled "Über Musik; an Flötenliebhaber insonderheit," which was printed in *Magazin der Musik* in 1783.

**Richard Rockstro** (1826-1906)<sup>769</sup> was an English flutist and writer who studied with Carte. He was appointed first flutist of the Covent Garden Opera Company and Professor at the Guildhall School of Music in London. He made several improvements to the cylindrical Boehm flute, but his most important work is *A Treatise on the Construction, the History and the Practise of The Flute*. It was first

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<sup>767</sup> Reilly *Bibliography* 347.

<sup>768</sup> This paragraph is based on *Ventzke Ribock*. More information about Ribock is found in Hadidian *Introduction* xvii-xviii, Powell *Introduction* 20-22, and Rockstro *Flute* 249-251.

<sup>769</sup> The biographical information is based on Fairley *Flutes* 108.



published in 1890; a second edition appeared in 1928. *The Flute* is a comprehensive work of 664 pages dealing thoroughly with acoustics and the flute and its history, but also with the art of playing. It includes as well short biographies on contemporary flutists. It is not a method in the ordinary sense, and does not contain any practicing material or etudes. Rockstro also wrote *School for the Flute* and *School for the Boehm Flute*, published in London in 1863.<sup>770</sup>

**Gustav Schilling** (1805-1880)<sup>771</sup> was a German musicographer and editor who published over twenty books on musical subjects. *Encyclopädie der gesammten musikalischen Wissenschaften oder Universal Lexikon der Tonkunst* was edited by Schilling together with a number of cowriters including A. B. Marx, L. Rellstab, G. W. Flinck, J. A. G. Heinroth and G. Weber and published in six volumes in 1835-38 and 1840-42 with a supplement in 1849. The article “Zunge oder Zungenstoss” is unsigned. Though Schilling seems to have written many of the unsigned articles in *Universalexikon*, the attribution of this article to him can be questioned. That **Gottfried Weber ist the author is also unlikely, since a comparison of Weber’s article about tonguing in *Caecilia* and the article in *Universalexikon* reveals differing opinions and different understandings of the subject.**

**Maximilian Schwedler** (1853-1940)<sup>772</sup> was one of the most significant German flutists of his generation. He was a flutist in the *Gewandhaus* Orchestra in Leipzig from 1881 to 1917 (principal from 1895), and a teacher at the Leipzig Conservatory from 1908 to 1932. He was the last major German flutist to play on and develop the conical-bore simple-system flute. In 1897 he published *Kathechismus der Flöte und des Flötenspiels*, renamed *Flöte und Flötenspiel* in its second (1910) and third (1923) editions. The performance tradition expressed there can be traced back to Fürstenuau rather than influenced by contemporary ideals of equality and volume, and was already very much on the wane at the time of the first edition. *Flötenspiel* has 147 pages and fingering charts. The body of the treatise is devoted to tone production, ornamentation and style, but it also discusses the history and development of the flute as well as flute maintenance. It does not include any practicing pieces or etudes.

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<sup>770</sup>. Powell *Bibliography*.

<sup>771</sup>. This paragraph is based on King *Schilling* and Balestrini *Schilling*.

<sup>772</sup>. This paragraph is based on Bailey *Schwedler*.

**Heinrich Soussmann** (1796-1848) was a German flutist who was appointed to the Grand Opéra and Chapelle Royale in St. Petersburg from c. 1821,<sup>773</sup> and from 1836 was musical director at the Royal Theatre there. He revisited Germany in 1837, playing concerts.<sup>774</sup> He played on and wrote his method *Grosse praktische Flötenschule* for the simple-system flute. *Flötenschule* was first published as his Op. 53 c. 1840<sup>775</sup> and is in four parts. The first contains 16 pages of short information on music theory, flute technique and practicing pieces; the second, 27 pages of musical material (duettos); the third, trill fingerings and progressive etudes (21 pages); the fourth is bilingual and contains 43 pages with progressive (difficult) etudes with comments. There is a later edition, published not before the late 1880's,<sup>776</sup> where the fourth part consists of easier duettos.

**Paul Taffanel** (1844-1908)<sup>777</sup> was a French flutist, composer, conductor and teacher. He is regarded as the founder of the modern school of French flute-playing. Taffanel studied with Dorus, and became the most significant French flutist of the second half of the nineteenth century, holding a position as flutist at the Paris Opera from 1864, and had a solo career from 1870. Taffanel's influence as soloist, teacher at the Paris Conservatory from 1893 and founder of the *Société de Musique de Chambre pour instruments à vent* was extraordinary. His teaching and that of his pupil Philippe Gaubert dominated flute playing in France, and profoundly influenced players in America. His pupils also included Louis Fleury, Marcel Moysse, Georges Laurent and Georges Barrère. After the First World War Gaubert completed and edited a flute method for which Taffanel had left extensive notes. Taffanel and Gaubert's *Méthode Complète de Flûte* was published in 1923. It has 227 pages, and contains information on flute technique, ornaments and cadenzas as well as exercises, pieces for practicing, etudes and excerpts from the orchestra repertoire.

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<sup>773</sup> Rockstro *Flute* 621. Soussmann is reported to have been playing in the premiere of Weber's *Der Freischütz* in Berlin in 1821. Powell *Flute* 151.

<sup>774</sup> *Allgemeine Musikalische Zeitung* (1837): 24, Powell *Flute* 130 and Rockstro *Flute* 622.

<sup>775</sup> Powell *Bibliography* and Brown *Early Flute* 148.

<sup>776</sup> It includes an advert of, among other pieces, F. Liszt *Hungarian Rhapsody* and a Potpourri from Nessler's *Trompeter*.

<sup>777</sup> The biographical information is based on Bate *Taffanel*.

**Jean-Louis Tulou** (1786-1865)<sup>778</sup> was one of the greatest French flutists in the first half of the 18<sup>th</sup> century. He studied with Wunderlich at the Paris Conservatory, achieving first prize at the age of fourteen. He was first flutist at the Opéra Italien from 1802, and at the Paris Opera from 1813. Tulou was teaching at the Paris Conservatory between 1829 and 1856; he was the last teacher there who rejected the Boehm flute in favour of the old simple-system flute. Tulou was admired for his unprecedented brilliant playing, beautiful tone in the French style, good intonation and smooth, liquid execution, but not for his articulation.<sup>779</sup> Tulou visited London in 1817, and again in 1821, but was somewhat coldly received.<sup>780</sup> Tulou wrote two flute methods: *Méthode de Flûte Progressive et Raisonnée*, and *Petite Méthode Elementaire pour la Flûte* from c. 1840.<sup>781</sup> *Méthode de Flûte* was first published in 1835, and adopted by the Paris Conservatory as its official flute method book in 1845.<sup>782</sup> It was republished c. 1842, 1851, 1853 (in German/French) and 1889 (Spanish/French)<sup>783</sup> It is written for the multi-keyed flute and includes mostly topics about flute technique. It also contains 65 small and 18 substantial etudes.

**Johann Georg Tromlitz** (1723-1805) was a German flutist and flute maker. He was a member of the *Grosses Konzert*<sup>784</sup> in Leipzig 1754-76, and he also toured as a virtuoso in Germany, travelling as far as St. Petersburg.<sup>785</sup> *Kurze Abhandlung vom Flötenspielen*, published in 1786, is an essay of 30 pages about musical expression, articulation, sound and intonation. *Ausführlicher und gründlicher Unterricht die Flöte zu spielen* was published in Leipzig in 1791, and is, together with Quantz's *Versuch*, the most comprehensive of the 18<sup>th</sup> century flute methods. It is modelled on *Versuch*, but Tromlitz limits the material to matters on flute playing, which he treats even more thoroughly than Quantz. *Unterricht* consists of 376 pages; the largest chapter deals with articulation. A review in *Allgemeine Musikalische Zeitung* in 1800 mentions an English translation, which, however, has not been located. No further German editions have been traced. The section about the flute in Froehlich's *Vollständige Theoretisch-practische Musikschule* from 1810 is edited down

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778. The biographical information is based on Dockendorff Boland *Preface*.

779. Bailey *Schwedler* 15 and James *Word* 182-183, 187.

780. Powell *Flute* 137.

781. Powell *Bibliography*.

782. Powell *Flute* 132.

783. Dockendorff Boland *Preface* x.

784. A precursor of the Gewandhaus Orchestra.

785. Hadidian *Introduction* xvii and Powell *Introduction* 51.

from *Unterricht*, and the information on articulation given there is copied from the text in *Unterricht*.<sup>786</sup> *Unterricht* is written for the two-keyed flute of Quantz's design (D# and E ♭ key), but Tromlitz also writes positively about flutes with seven keys. *Ueber die Flöten mit mehreren Klappen* was published in 1800. It is not an ordinary flute method; it consists of 140 pages dealing with the keys (C, B ♭, B ♭ —G#, F, F—D#, E ♭) and their use. As in his other writings, Tromlitz expects that the reader has a good understanding about flutes and flute-playing.

**Amand Vanderhagen** (1753-1822) was a clarinetist from the south of the Netherlands who was active in Paris from 1785.<sup>787</sup> He is today mostly known for his tutors. He wrote two clarinet tutors; the first was published in 1785, which makes it the first clarinet tutor ever, and the second was published in 1798. Vanderhagen also wrote an oboe tutor which was published in 1792, and two methods for flute; *Méthode nouvelle et raisonnée pour la flûte* from c. 1788 and *Nouvelle Méthode de Flute*, which is undated, but probably from c. 1799. In the preface of *Nouvelle Méthode* he claims it to be better and more detailed than his first flute book. *Nouvelle Méthode* is written for the one-keyed flute, and discusses the usual topics of fingerings, sound, posture, musical theory and articulation. Vanderhagen stresses the importance of diligent and methodical practicing, and like Devienne recommends practicing long notes with *mesura di voce* for tone development. Apart from the musical examples more than 80 of its 117 pages provides progressive exercises in the form of easy duos, Preludes, Airs (also duos), *morceaux concertants* (duos) and three etudes.

**Eugène Walckiers** (1793-c.1865)<sup>788</sup> was a French flute player and composer. He studied the flute in Paris with Tulou and composition with Anton Reicha. He became renowned as a flute teacher and composer with more than 100 pieces for the flute, and his *Méthode de Flûte*, first printed in Paris probably in 1829, was reprinted at least once (in 1845). Goldberg writes in 1906 that *Méthode* is still much appreciated.<sup>789</sup> Walkiers was one of the last supporters of the simple-system flute

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<sup>786</sup>. Hadidian *Introduction* xxv.

<sup>787</sup>. The biographical information is based on Rendall *Vanderhagen* and Castellani *Neoclassicismo* 11-13.

<sup>788</sup>. Fairley *Flutes* 129. Goldberg *Biographieen* 430 and Rockstro *Flute* 603 give the year 1866.

<sup>789</sup>. Goldberg *Biographieen* 430.

in France (together with Tulou and Drouët).<sup>790</sup> *Méthode* is a substantial work of 249 pages about music theory, flute technique and interpretation. It also includes music examples, scales, exercises, duos for students and 6 sonatines. It is written for a multi-keyed (simple-system) flute.

**Gottfried Weber** (1779-1839)<sup>791</sup> was a German theorist, lawyer, composer, flutist and cellist and a friend of Carl Maria von Weber and A. B. Fürstenau. His most important book, *Versuch einer geordneten Theorie der Tonsetzkunst* (1817-1821), became a standard reference work for his generation. Weber also wrote many articles, for instance in the *Allgemeine Musicalische Zeitung* in 1816-17 about flute construction. The article “Einiges über die Doppelzunge und überhaupt über Articulation auf Blasinstrumenten” was published in 1828 in *Caecilia*,<sup>792</sup> a magazine that he himself edited and had founded in 1824.

**Charles N. Weiss** (1777-?)<sup>793</sup> was an English flutist, teacher, and composer. He was born in London and first trained by his father. After earning his living by travelling France and Italy as a merchant, he later taught the flute in Naples, Rome and finally in London. His method *A New Methodical Instruction book for the flute* was published in London in the 1820's as his Op. 50.<sup>794</sup> It has 91 pages and is written for a flute with eight keys. The book contains information on music theory, flute technique and ornaments, as well as practice material. In his introduction Weiss directs himself to amateurs on the flute; however, his discussion on flute technique and part of the musical material is quite advanced.

**Gustaf Widegren** (1812-1889)<sup>795</sup> was a Swedish amateur flutist who studied with Olof Westerdahl, Carl Fredrik Bock<sup>796</sup> and Jean Baptist Sauvlét. At the age of 53 he learned the cylindrical Boehm flute from Sauvlét, and advocated it in Sweden. His handwritten essay *Om Staccato på Flöjt* from 1868 was revised and printed in 1875

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790. Brown *Early Flute* 26.

791. This paragraph is based on Hoffman *Weber*.

792. Reede *Die Flöte* VII.

793. The biographical information in this paragraph is based on Fairley *Flutes* 132.

794. Powell *Bibliography* gives c. 1824, Spell *Nicholson* 75 1829 and 1821, Dickey *Untersuchungen* c. 1821 and British Library estimates their copy to 1824. The differences could refer to different editions, or different dating.

795. Years from Odén *Widegren*.

796. Høijer *Lexikon* 545.

as *Om Dubbla Tung-Stöten*. It is very carefully written, with almost no mistakes, and consists of 17 small pages about double- and single-tonguing with a few musical examples. Widegren refers to the works by Tromlitz, Caspar Kummer (c.1850),<sup>797</sup> Berbiguier and Soussmann, and mentions the “ordinary” simple-system flute as well as the Boehm flute.

**J. Wragg** (n.d.) was a London flutist and teacher<sup>798</sup> who apart from his flute method also wrote a method for the oboe and some flute pieces. His *The Flute Preceptor; or the Whole Art of Playing the German Flute* was published in 1792, and Wragg’s *Improved Flute Preceptor* (Op. 6) was first published in 1806. *Preceptor* is written for a flute with one, four or six keys. *Improved* has 62 pages on music theory and flute technique including short duos for practicing as well as “Twenty original airs” and a collection of “Scottish airs” and Preludes. It is written for a flute with up to eight keys. Both methods became immensely popular; *Preceptor* was republished for the 20<sup>th</sup> time in 1802, and a copy of *Improved* that was printed in Boston in 1860 bears the mark “From the fortieth London edition”. The methods are written for the educated amateur.

**J[ohn]<sup>799</sup> Harrington Young** (n.d.) was an English flutist and composer/arranger of flute music. He was considered the finest piccolo player of his day.<sup>800</sup> He edited Nicholson’s *School* as *C. Nicholson’s School of Flute* in 1875, adapting it for the Boehm flute. He also wrote two flute methods of his own: *A Complete Course of Instructions for the Boehm Flute* which was published in London in 1892, and *Instruction Book for the Flute and Piccolo* which is undated.<sup>801</sup> Young also published arrangements for flute and piano, and, in 1883, a book of “operatic solos for Flute and Piccolo.”<sup>802</sup>

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797. Powell *Bibliography*.

798. The biographical information is based on Fairley *Flutes* 137 and Gerhold *Wragg*.

799. The British Library’s Integrated Catalogue.

800. This paragraph is based on Fairley *Flutes* 138.

801. The British Library’s Integrated Catalogue includes a copy dated 1881.

802. The British Library’s Integrated Catalogue.

## APPENDIX 2

## Musical pieces for the flute in which vibrato is indicated

J. Hotteterre (1674-1763)	Handwritten version from 1738 of <i>Sonates en Trio</i> (Paris 1712) <sup>1</sup>
P. Philidor (1681-1731)	<i>Première Oeuvre Contenant III Suites a II Flûtes Tra vers Seules</i> (Paris 1717)  <i>Deuxième Oeuvre Contenant II Suites a 2. Flûtes-Tra vers. Seules</i> (Paris 1718) <i>Troisième Oeuvre Contenant une Suite a deux Flûtes- Traversieres seules...</i> (Paris 1718)  <i>Trio Premier Oeuvre Contenant six suites...</i> (Paris s.a.)
J. S. Bach (1685-1750)	<i>Brandenburg concerto</i> no. 5, first movement (Allegro)
M. Corrette (1707-1795)	<i>Méthode pour apprendre aisément à jouer de la flûte traversière</i>  Menuet de Mr. Handel "Reveillez-vous belle en dormie" Menuet Italien Rondeau Rondeau Gavotte de Dardanus Sarabande Fanfare Fanfare de Mr. Dandrieu Menuet de Dardanus Brunette

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1. Haynes *Fingervibrato* 483

19<sup>e</sup>. Prelude  
20<sup>e</sup>. Prelude  
21<sup>e</sup>. Prelude  
22<sup>e</sup>. Prelude  
23<sup>e</sup>. Prelude  
24<sup>e</sup>. Prelude

**M. Raehs**  
(1702-1766)

*VI Sonate per il Flauto Traverso* (1748)

Sonata 1  
Sonata 2  
Sonata 3  
Sonata 4  
Sonata 5  
Sonata 6

**M. Raehs**

*10 Solos à Flauto Traverso* (ms Copenhagen)

Sonata No. 5 (Adagio)

**Ch. Delusse**  
(1723? - after 1774)

*L'art de la flûte traversière*

Caprice II  
Caprice V  
Caprice X

**Edward Miller**  
(1735-1807)

*The New Flute Instructor or The Art of Playing the German-Flute*

p. 31 Prelude A major  
p. 31 Prelude G minor  
p. 32 Prelude E minor  
p. 39 Air  
p. 47 "Hark! hark! the Joy inspiring Horn"  
p. 22 "Loch Aber"

**Ch. Nicholson**  
(1795-1837)

*Complete Preceptor for the German Flute*

p. 35 Duetto XV  
p. 41 Duetto XXVII



- p. 42 Andante  
 p. 75 Prelude No. 6  
 p. 75 Prelude No. 9
- J. Wragg**  
 (n.d.)
- Wragg's Improved Flute Preceptor 16<sup>th</sup> ed.*
- "The Blue Bells of Scotland"<sup>2</sup>
- Nicholson**
- Preceptive Lessons for the Flute*
- p. 10 "Aileen Aroon" (two pieces)  
 pp. 11-12 "The Plough Boy"  
 p. 18 "No, twas neither shape nor feature."  
 p. 25 "Ar Hyd y Nos"  
 p. 26 "Polacca"  
 p. 31 Prelude  
 p. 32 "The Last Rose of Summer"  
 p. 35 Ex. III  
 p. 36 Ex. V  
 p. 40 "Auld Lang Syne"  
 p. 48 "Ah Perdona"  
 p. 55 Ex. IX  
 p. 56 Capriccio  
 p. 57 "within a Mile of Edinburgh Town"  
 p. 60 "The Yellow Hair'd Laddie"  
 p. 62 Introduction to 2<sup>nd</sup> Pot Pourri  
 p. 63 "Cease your Funning"  
 p. 64 "Waltz"  
 p. 65 "Roslin Castle"  
 p. 67 "Capriccio"  
 p. 68 "Nel cor più non mi sento"  
 p. 68 "Charlie is my Darling"  
 pp. 70-71 "Sul margine d'un Rio"  
 p. 75 "Oh! Nanny, wilt thou gang wi'me?"  
 p. 77 "Shepherds, I have Lost my Love"  
 p. 79 "Cease your Funning"  
 p. 85 Prelude (Andante)  
 p. 87 Prelude (Allegretto)

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2. Gerhold *Wragg* 148

**J. Alexander**  
(n.d.)

*Alexander's Complete Preceptor for the German Flute*

- p. 30 (in *Alexander's Improved Preceptor for the Flute* 34) Romance
- p. 33 Preludes (G Major and G Minor) by I. Townsend
- p. 34 Preludes in D minor, B Major and C Major,
- p. 35 Preludes in C Minor, F Minor, Bb Minor, Eb Major, E b Minor and A b Minor

**G. W. Bown**  
(n.d.)

*The Flauto Instructive Companion or Preceptor for the Flute*

- p. 17 all twelve Preludes
- p. 60 Thema con Variatione

**Th. Lindsay**  
(n.d.)

*The Elements of Flute-Playing*

- p. 124 "The wounded Hussar"
- p. 128 "Roslyn Castle" Scottish Air
- p. 142 "John Anderson, my Joe;" Scottish Air
- p. 146 "Donald; Scottish Melody"
- p. 147 ex. 215 "Kinlock of Kinlock" ex. 217 "Here's a health to them far awa"
- p. 148 ex. 218, ex. 220 "Auld Robin Gray"
- p. 149 "The Groves of Blarney"

**B. Lee**  
(n.d.)

*The Bernhard Lee's Edition of Wragg Improved*

- p. 59 "Roslin Castle"
- p. 60 "Auld Robin Gray"
  - " "The Blue Bells of Scotland"
  - " "Sweet Home"
- p. 63 "Had I a Heart"
- p. 64 "My Lodging is on the Cold Ground"
  - " "John Anderson my Joe"
  - " "Black Eyed Susan"

**A. B. Fürstenau**  
(1792-1852)

*Die Kunst des Flötenspiels*

Übung No. 1 Andante  
Übung No. 5 Allegro Moderato  
Übung No. 6 Moderato  
Übung No. 9 Allegro Moderato  
Übung No. 10 Allegro Brillante  
Übung No. 11 Larghetto

**R. Carte**  
(1808-1891)

*A Complete Course of Instructions for the Boehm Flute*

p. 61 “Fra poco a me” (Larghetto)

**J. Clinton**  
(1810-1864)

*A School or Practical Instruction Book for the Boehm Flute*

p. 89 Etude No. 7

APPENDIX 3

## **An analysis of indicated vibrato in musical pieces from 19<sup>th</sup> century flute methods**

The methods are presented in chronological order. At the end of the Appendix is a summary. The analysis of indicated vibrato in the 19<sup>th</sup> century flute methods that I have studied is guided by the following questions:

1. How many and what kind of musical pieces does this book include?
2. How many of them have signs for vibrato, and how many vibrato signs do these have?
3. Are the vibrato signs on long notes?
4. Are the vibrato signs together with fermata signs? signs for *messa di voce*? accents?
5. Are they on final notes?
6. Are the melodies with indicated vibrato generally in different tempi or affects than the pieces without?
7. Are vibrato signs most commonly indicated in pieces with “Scottish” titles (folksy pieces)?
8. On which notes are the signs for vibrato most common?
9. What can be said in general about the vibrato signs?

**Miller:** *The New Flute Instructor or The Art of Playing the German-Flute*

Pieces with vibrato indications:

- p. 31 Prelude A major
- p. 31 Prelude G minor
- p. 32 Prelude E minor
- p. 39 Air
- p. 47 “Hark! hark! the Joy inspiring Horn”
- p. 22 “Loch Aber”

1. The method includes Preludes, “Scottish” tunes and small composed pieces.
2. Four of the 16 “easy preludes” have one wavy line each. Three of the other pieces have one wavy line each.
3. All vibrato signs are on long notes.

4. Of the seven vibrato signs, three are with a fermatas as well. Four are together with a *messa di voce*. There are no notated accents in the pieces.
5. None of the vibrato signs are on final notes.
6. The melodies with indicated vibrato represent different types, characters and are in different tempi.
7. Not really.
8. There are three signs for vibrato on e'', three on g'' and one on d''.
9. Vibrato is indicated on long notes. There is a connection between signs for vibrato, fermata and *messa di voce*. Vibrato is indicated on notes in the lower part of the second octave.

**Nicholson:** *Complete Preceptor for the German Flute*

Pieces with vibrato indications:

- p. 35 Duetto XV
- p. 40 Duetto XXIV
- p. 41 Duetto XXVII
- p. 42 Andante
- p. 75 Prelude No. 6
- p. 75 Prelude No. 9

1. The method includes Duettos and Preludes.
2. Three of the Duettos and two of the Preludes have vibrato indicated. Two of the Duettos include two signs for vibrato, the others one.
3. All the vibrato signs are on long notes (half notes, whole notes and notes with fermatas).
4. In the Preludes the vibrato signs (one in each Prelude) are together with fermatas. In one of the Duos (XXIV), the vibrato sign appears together with a sign for *messa di voce*.
5. None of the vibrato signs are on final notes.
6. The Duettos with indicated vibrato are in different tempi and character.
7. The book contains no Airs with "Scottish" titles.
8. Vibrato is indicated on the notes: c'', d'', e'', e'', c'', c'' and f'.
9. Vibrato is indicated on long notes. Vibrato is indicated on notes in the lower part of the second octave, especially often on c''.

**Alexander** *Alexander's Complete Preceptor for the German Flute*

Pieces with vibrato indications:

p. 30 (in *Alexander's Improved Preceptor for the Flute* 34) "Romance"

p. 32 Thema con Variatione

p. 33 Preludes (G major and G minor) by I. Townsend

p. 34 Preludes in D minor, B Major and C Major,

p. 35 Preludes in C minor, F minor, B  $\flat$  minor, E  $\flat$  major, E  $\flat$  minor and A  $\flat$  minor

1. The method includes musical examples to illustrate the text, some with "Scottish" titles. Then there are 21 Preludes (cadenza-like) and "A selection of popular airs", after which follow "Specimens of the style of embellishment" (only four pieces).
2. One piece ("Romance") that illustrates the paragraphs on vibrato and glide has six vibrato signs. Of the following 21 Preludes, 11 have one or two vibrato signs each. In the pieces in the selection of popular Airs and the "Specimens of the style of embellishment" there are no vibrato signs.
3. In the Romance the signs for vibrato are on long notes. In the Thema con Variatione they are not on particularly long notes; in the Preludes the vibrato signs appear together with fermatas.
4. In the Preludes all vibrato signs are with fermatas, in the other two pieces they are not. Four out of the 14 vibrato signs in the Preludes are combined with a sign for *messa di voce* as well. There are no accent signs in the pieces.
5. The piece illustrating vibrato and the glide has a vibrato sign on the final note, but none of the Preludes.
6. The piece illustrating vibrato and the glide (the "Romance") is slow and has the indication *Amoroso*. There is (of course) no difference between the Preludes with and without signs for vibrato.
7. The folksy pieces on pp. 36-39 and the Scottish songs on pp. 40-41 are all without vibrato signs, while many of the Preludes have.
8. Vibrato is used on different notes from d' to b'' natural, which does correspond with the chart in Nicholson *School*.
9. In the preludes there is a connection between signs for vibrato and fermatas and signs for *messa di voce*. Vibrato is indicated on notes in the first and second octave.

**Bown:** *The Flauto Instructive Companion or Preceptor for the Flute*

Pieces with vibrato indications:

p. 17	all 12 Preludes
p. 60-64	<i>Six select airs:</i>
	Thema con variazione
	“Le Baisa du Matin”
	“Barcarole Venitienne”
	Romance
	Thema con Variazione
	Thema con Variazione

1. The treatise includes twelve Preludes, 44 Duets and six selected Airs.
2. All of the Preludes have a vibrato sign on the first note. Prelude no. 3 has two signs for vibrato. Of the Airs, no. 1 has 6 signs for vibrato, no. 2 has 6, no. 3 has 7, no. 4 has 5, no. 5 has 2 and no. 6 has one.
3. The signs for vibrato are on long, relatively long and one short note.
4. In the Preludes all signs for vibrato are together with fermata signs. In the Airs, one vibrato sign is together with a fermata. None of the vibrato signs are together with signs for *mesa di voce* or accents (signs for accents do occur, *mesa di voce* not.)
5. In the Airs, four out of six Airs have a vibrato sign on the final note.
6. All the six Airs include signs for vibrato. The vibrato signs are equally frequent in pieces with different tempi and affects.
7. None of the Airs have a “Scottish” title. Vibrato is not more often indicated in the folksy pieces.
8. Vibrato is indicated on f', f'', f''', f''', f''', f''', f'', b'', f'', a'', c'', e'', g'', c'', d'', d'', c'', g'', g'', b b'', f'', f'', a'' and f''. Thus it is most common on f', and all the vibrato signs are on notes in the second octave.
9. The indications in this treatise confirm the connection between vibrato and fermatas. Vibrato is mostly used in the middle register (second octave).

**Wragg:** *Wragg's Improved Flute Preceptor 16<sup>th</sup> ed.*

I have not had access to this book. However, Gerhold prints a “Scottish” tune (“The Blue Bells of Scotland.”) from it with two signs for vibrato on c'', on rela-

tively long notes. There is no vibrato indicated on the final note; no fermatas or signs for *mesa di voce* or accents occur in the piece.<sup>3</sup>

**Nicholson:** *Preceptive Lessons for the Flute*

s means "Scottish"

- means "Composed piece"

c means Cadenza

o means Opera aria

Pieces with vibrato indications:

p. 10	"Aileen Aroon" (two pieces)	s	(c'', e'')
pp. 11-12	"The Plough Boy"	s	(c'', g')
p. 18	"No, twas neither shape nor feature"	s	(g'')
p. 25	"Ar Hyd y Nos?"	s	(d'', e'')
p. 26	"Polacca"	-	(a', a'') both with accents
p. 31	Prelude	-	(c'')
p. 32	"The Last Rose of Summer"	s	(c'', a', f'', f') one with accent
p. 35	Ex. III	-	(c'') with accent
p. 36	Ex V	-	(c'') with accent
p. 40	"Auld Lang Syne"	s	(g'', c'', b b', d'')
			one with <i>mesa di voce</i>
p. 48	"Ah Perdona" (by Mozart)	o	(c'', e'')
p. 55	Ex. IX	-	(a')
p. 56	Capriccio	-	(e'')
p. 57	"Within a Mile of Edinburgh Town"	s	(a'', a'', a'', a'', a', a', e'')
			the last five with fermatas
p. 60	"The Yellow Hair'd Laddie"	s	(c'', a', c'', c'', b b')
p. 62	Introduction to 2 <sup>nd</sup> Pot Pourri	-	(c'', c'', c'', a')
p. 63	"Cease your Funning"	s	(c'')
p. 64	Waltz	-	(c'', c'')

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3. Gerhold Wragg 148



p. 65	“Roslin Castle”	s	(c'', c'', g', e'' with fermata, c'', g', c'' with fermata, f with fermata, g', g', f' with fermata and three accent signs)
p. 67	Capriccio	-	(b', b')
p. 68	“Nel cor più non mi sento”	o	(e'', e'')
p. 68	“Charlie is my Darling”	s	(b', c'', b' (all with strokes), e'')
pp. 70-71	“Sul margine d'un Rio”	o	(f#'', f#')
p. 75	“Oh! Nanny, wilt thou gang wi'me?”	s	(f#'', c#'', b', b')
p. 77	“Shepherds, I have Lost my Love”	s	(f#'', c#'', a#'' with a fermata, #'' with an accent, a#' with a fermata, f#')
p. 79	“Cease your Funning”	s	(c'' with a fermata, d b '' with a fermata)
p. 85	Prelude (Andante)	-	(d'')
p. 87	Prelude (Allegretto)	-	(a b', d b'', g b'', b b')

There are 76 pieces (including many short examples) in *Lessons* without vibrato indicated:

p. 15	Ex. II	
	Ex. III	
	Ex. IV	
p. 16	Ex. V	
	Ex. VI	
p. 17	Ex. VII	
	Ex. VIII	
p. 18	Ex. IX	
	Ex. X	
p. 19	Waltz	-
p. 22	Ex. II	
p. 23	Ex. III	
	Ex. IV	

APPENDIX 3

p. 24	“Rousseau’s Dream”	s
p. 25	Capriccio	-
p. 29	Ex. II	
	Ex. III	
	Ex. IV	
p. 30	Ex. V	
	Ex. VI	
	Waltz	-
p. 31	Ex. IX	-
p. 33	Bollero	-
p. 35	Ex. II	
p. 36	Ex. IV	
p. 37	Ex. VI	
	Ex. VII	
p. 38	Capriccio	-
	Polonoise	-
p. 39	Ex. X	
p. 41	Waltz	-
p. 44	Ex. II	
	Ex. III	
	Ex. IV	
p. 45	Ex. V	
	Ex. VI	
p. 46	Ex. VII	
	Ex. VIII	
p. 47	Prelude	-
	Ex. X	
pp. 48-49	Rondo	-
p. 52	Ex. III	
	Ex. IV	
p. 53	Ex. V	
	Ex. VI	
p. 54	Ex. VII	
	Ex. VIII	
p. 55	Ex. X	
p. 57	Polonoise	-

p. 59	Prelude	-
	Equestrian Rondo	-
p. 61	Rondo	-
	Preludio	-
p. 67	Ex. I	
	Ex. II	
p. 69	“Larry Grogan”	s
p. 71	Prelude	c
pp. 72-73	“Peaceful Slumbering”	s
p. 74	Prelude	c
p. 75	“Lison Dormoit”	s
p. 76	Prelude	c
p. 77	Hornpipe	-
p. 78	Prelude	-
p. 79	Polacca	-
p. 82	Prelude	c
	Prelude	c
p. 83	Prelude	c
	Prelude	c
	Prelude	c
p. 84	Prelude	c
	Prelude	c
p. 85	Prelude (Allegro)	-
p. 86	Prelude	-
	Prelude	-
p. 87	Prelude (Allegro molto)	-
	Prelude (Brillante)	c

1. This book contains the most material and the material with most carefully indicated ornaments. It contains approximately 105 one-part pieces with “Scottish” titles, operatic arias, and titles like “Walz,” “Polacca,” “Prelude,” or “Example.” The Preludes are of two kinds, composed pieces with the title “Prelude” or preludes like solo cadenzas. The pieces with the title “Example” vary from very simple exercises of two systems to composed little pieces.
2. 29 of the 105 pieces have vibrato signs. 13 of them have only one or two, but one has 22, and three have 11.

3. Most of the vibrato signs are on long notes, some on relatively long (like dotted eight notes). In “Charlie is my Darling” vibrato is indicated on eighth notes with dashes.
4. 24 out of in all 128 of the vibrato signs are together with fermatas. However, fermatas without signs for vibrato also occur frequently. Signs for *messa di voce* rarely occur in the book. Once there is a sign for vibrato together with a sign for *messa di voce*. Accent signs are common; sometimes, but not often they are together with vibrato signs.
5. In 13 of the 29 pieces with vibrato indicated there is a sign for vibrato on the final note.
6. Among the folksy tunes that do not have vibrato signs several are merry, rather quick pieces. However, the “ordinary” pieces that have vibrato signs are generally not particularly slow or sad.
7. Most “Scottish” tunes have vibrato signs. Most “composed” pieces do not. Vibrato is much more common in the folksy pieces. The pieces with lots of vibrato signs are “Scottish”.
8. The most common note with vibrato indicated is  $c''$ . In accordance with Nicholson’s chart in *Complete Preceptor* the notes with vibrato indicated are from  $f'$  to  $a\#''$ . The very middle register is preferred. This is striking also when considering that the tessitura of the pieces is generally low, especially in the “Scottish” pieces.
9. Vibrato is indicated mostly on long notes. There is a connection between vibrato signs and “Scottish” tunes. Vibrato is used between  $f'$  and  $a\#''$ , especially often on  $c''$ .

**Lindsay:** *The Elements of Flute-Playing.*

Pieces with vibrato indications:

- p. 124 “The wounded Hussar”
- p. 128 “Roslyn Castle; Scottish Air”
- p. 142 “John Anderson, my Joe Scottish Air”
- p. 146 “Donald; Scottish Melody”
- p. 147 “Kinlock of Kinlock, Here’s a health to them far awa”
- p. 148 “Gramaurree; Irish melody, Auld Robin Gray”
- p. 149 “The Groves of Blarney”

1. The book includes musical examples to illustrate the text. At the end of the book, Lindsay goes through the different keys, with several musical examples and small tunes in each key, “Scottish” tunes or tunes composed by Lindsay or someone contemporary.
2. Vibrato is indicated in seven pieces, each with one to five vibrato-signs.
3. Only two of the 23 vibrato signs are not with fermatas. The signs for vibrato occur on relatively long notes.
4. 21 of the 23 signs for vibrato are together with a *fermata*. 10 of the signs for vibrato are together with a sign for *messa di voce* as well.
5. None of the vibrato signs are on final notes.
6. The pieces with vibrato indicated are generally of a more sad, slow and *affettuoso* character.
7. All of the pieces with vibrato indicated are “Scottish”. There are also “Scottish” pieces without signs for vibrato.
8. Vibrato is commonly indicated on  $c''$  and  $a''$ . Other notes with vibrato signs are  $g''$ ,  $b \flat'$ ,  $g'$ ,  $c'''$ ,  $d'''$  and  $e''$ .
9. The pieces confirm the connection between vibrato and fermatas, and between vibrato and *messa di voce*. They also confirm the connection between vibrato use and “Scottish” pieces and slow pieces with a character of *affettuoso*.

Lee: *The Bernhard Lee's Edition of Wragg Improved*.

Pieces with vibrato indications:

- p. 59 “Roslin Castle”
- p. 60 “Auld Robin Gray”
  - “ “The Blue Bells of Scotland”
  - “ “Sweet Home”
- p. 63 “Had I a Heart”
- p. 64 “My Lodging is on the Cold Ground”
  - “ “John Anderson my Joe”
  - “ “Black Eyed Susan”

1. The treatise includes 50 Duettos, all without indicated vibrato, and 21 Airs with “Scottish” titles.
2. Eight of the Airs have vibrato signs. Two have 1 sign, two have 2 signs, two have 3 signs, and two have 4 signs.
3. All the vibrato signs are on long notes considering the tempo of the piece.
4. Two of the vibrato signs are together with fermatas; accents and signs for *mesa di voce* are generally rare or very rare, none of the notes with indicated vibrato have a sign for a *mesa di voce* or fermata as well.
5. In 7 of the 8 pieces with indicated vibrato the final note has a sign for vibrato.
6. The Airs with vibrato indicated are slower than the airs without and often bears the comment ‘con esspress.’
7. Vibrato signs only occur in the “Scottish” pieces.
8. Of the notes with vibrato signs, c'' is by far the most common note. All notes with vibrato signs are low (the highest is e'').
9. The pieces confirm the connection between vibrato and long notes. Vibrato is often indicated on final notes. There is a connection between vibrato signs and slow, expressive pieces, and also between “Scottish pieces” and vibrato. Vibrato is commonly indicated on lower notes, most commonly on c''.

**Fürstenau:** *Die Kunst des Flötenspiels*

Pieces with vibrato indications:

- p. 92 Übung no. 1 (Andante)
- p. 98 Übung No. 5 (Allegro Moderato)
- p. 101 Übung No. 6 (Moderato)
- p. 106 Übung No. 9 (Allegro Moderato)
- p. 108 Übung No. 10 (Allegro Brillante)
- p. 109 Übung No. 11 (Larghetto)

1. The book includes 12 etudes, composed by Fürstenau.
2. Six of the etudes have signs for vibrato, one has two signs, the others one each.
3. The notes with vibrato signs are long notes.
4. Out of four signs for the *flattement technique* three are with a fermata. None

of the signs for chest vibrato are with a *fermata*. Two of the notes with *flattement technique* indicated are with a *messa di voce*. None of the notes with vibrato signs are with an accent. (There are accent signs in the pieces).

5. Three of the notes with *flattement technique* indicated are final notes.
6. There is no difference in the character or tempo between the etudes with and without vibrato indicated.
7. There are no “Scottish” pieces in this book.
8. The notes with vibrato indicated are  $g'''$ ,  $a'''$ ,  $a \flat'''$  and  $f'''$ , which are very high notes.
9. The pieces confirm the affinity between the *flattement technique* and fermatas and between the *flattement technique* and notes with a dynamic change. All notes with chest vibrato indicated are after or with a crescendo.

**Carte:** *A Complete Course of Instructions for the Boehm Flute*

Pieces with vibrato indications:

p. 61 “Fra poco a me” from “Lucia di Lammermoor” by Donizetti. The tempo is Larghetto ( $\text{♩} = 50$ ).

1. The treatise includes 32 melodies, mostly folksy tunes or opera arias, mostly with variations
2. There is one piece with four vibrato signs
3. The vibrato signs are on relatively long notes.
4. None of the vibrato signs are together with fermata signs for *messa di voce*.
5. No.
6. The signs for vibrato occur in the slow part of the piece.
7. No.
8. All signs for vibrato are on  $f'$ .
9. The vibrato signs are in a slow movement and on the same note.

**Clinton:** *A School or Practical Instruction Book for the Boehm Flute*

Pieces with vibrato indications:

p. 89 Etude No. 7

1. The book includes folksy tunes and 16 etudes.
2. One of the etudes has two signs for vibrato.

3. These two signs are on long notes (dotted quarter notes tied to quarter notes).
4. One of the vibrato signs is together with a fermata, none with *messa di voce* or accent.
5. None of the signs are on the final note.
6. The etude is an Adagio.
7. No.
8. The vibrato signs are on  $b\flat$  and  $b\flat$ .
9. If anything, the piece confirms the affinity between long notes and vibrato use.

### Summary

General conclusions of this material are difficult to draw because the differences in the character of the material in the different methods. However, the pieces in e.g. Nicholson's *Lessons* seem to document an actual practice of playing tunes for the flute. Studying and performing some of these pieces would give further knowledge of the use of vibrato in this style.

1. The analysis confirms the connection between vibrato and long notes.
2. The analysis confirms the connection between vibrato and fermatas as well as with vibrato and *messa di voce*.
3. In two of the books (Lee's *Improved* and Lindsay's *Elements*) there are a connection between indicated vibrato and slow pieces with an *affettuoso* (sad) character.
4. In some books (Lee's *Improved*, Nicholson's *Lessons* and Lindsay's *Elements*) there is a connection between "Scottish" tunes and indicated vibrato. Since these books contain a large amount of pieces, I would say that the analysis confirms the connections between vibrato use and "Scottish" tunes.
5. Even considering the generally low *tessitura* of these pieces, vibrato is used mainly on relatively low notes, that is, in the first and second octaves. In some books (Lee's *Improved*, Lindsay's *Elements*, Nicholson's *Lessons* and Nicholson's *Complete*), vibrato occurs more commonly on certain notes, notably on  $c$ .



## APPENDIX 4

## Vibrato indications in the flute sonatas by Morten Raehs

M. Raehs  
(1702-1766)

### VI Sonate per il Flauto Traverso (1748)

#### Sonata 1

Allegro Moderato	none
Andante	bar 2 (a b'') and 3 (c''')
Allegro	bar 23 (c''') and 25 (c''')

#### Sonata 2

Allegro Moderato	bar 18 (e'')
Adagio	bar 1 (g#'')
Postiglione	none

#### Sonata 3

Adagio	bar 4 (a'')
Allegro Moderato	none
Adagio	bar 1 (a''), 3 (a'), 5 (a'), 11 (e'') and 25 (a'')
Allegro	none

#### Sonata 4

Allegro Moderato	bar 2 (c''') and 31 (c''')
Andante	none
Vivace	none

#### Sonata 5

Vivace	bar 1 (c'''), 9 (c'''), 18 (c'''), 19 (c''') and 37 (c''')
Andante	none
Allegro	none

#### Sonata 6

Vivace	bar 1 (d'') and 5 (d''),
Adagio	bar 14 (c''')
Moderato	none

**M. Raehs**      **10 Solos à Flauto Traverso (ms Copenhagen)**

**Sonata 5:ta**

Adagio	bar 14 (b´-b b´)
Allegro	none
Largo	none
Allegro	none

## APPENDIX 5

## A list of musical pieces, exercises and examples with double tonguing notated in Nicholson's *Lessons and School*

### Nicholson: *Preceptive Lessons for the Flute*

“The Plough Boy”	p. 12
Ex. X	p. 18
Ex. IV	p. 23
Polacca	p. 26
Ex. IX	p. 31
Bollero [sic]	p. 33
Ex. VII	p. 46
Ex. IX	p. 47
Ex. V	p. 53
Ex. VII	p. 54
Ex. IX	p. 55
Rondo	p. 61
Preludio	p. 61
Ex. II	p. 67
Ex. X	p. 69
Ex. XIII	p. 70
Ex. XIII	pp. 70-71
Prelude	p. 74
“Lison dormoit”	p. 75
Hornpipe	p. 77
Prelude	p. 82
Prelude	p. 86

### Nicholson: *A School for the Flute*

Examples and practicing exercises	pp. 65-68
Practicing exercises	p. 74
Practicing exercises	p. 77
Twelve exercises	pp. 95-114
Impromptu no. 11	p. 131

APPENDIX 6

**Contents of the recordings and program of the recorded recital made for the study**

*J. A. Scheibe Morten Raehs*                      Dacapo 8.224213

Johann Adolph Scheibe (1708-1776)

- [1-4]    **Sonata no. 1, D major, for flute and harpsichord obbligato**  
Adagio, Allegro, Andante, Poco presto
- [5-8]    **Sonata no. 2, B minor, for flute and harpsichord obbligato**  
Adagio, Allegro, Affetuoso, Vivace
- [9-12]   **Sonata no. 3, A major, for flute and harpsichord obbligato**  
Adagio, Allegro ma non tanto, Largo, Presto

Morten Raehs (1702-1766)

- [13-15] **Sonata no. 2, D major, for flute and basso continuo**  
Andante, Allegro, Menuetto con variazioni
- [16-18] **Sonata no. 3, C Minor, for flute and basso continuo**  
Adagio, Allegretto, Allegro

Maria Bania, flute

Lars Ulrik Mortensen, harpsichord

*Johan Helmich Roman, Sonate a flauto traverso, violone e cembalo. CAP 22060.*

**CD 1.**

Johan Helmich Roman (1694-1758)

- [1-5]    **Sonata I, G major**  
Largo, Allegro, Larghetto, Andante, Vivace
  
- [6-9]    **Sonata II, D major**  
Vivace-Adagio-Vivace, à tempo giusto, Larghetto-Andante-Adagio, Non presto
  
- [10-14] **Sonata III, C minor**  
Largo, Allegro, Adagio, Vivace, alla Francese
  
- [15-20] **Sonata IV, G major**  
Largo, Allegro, Larghetto, Vivace, Allegro-Non presto
  
- [21-27] **Sonata V, E minor**  
Lento, No title, Grave, Allegro, Vivace, Andante, No title
  
- [28-32] **Sonata VI, B minor**  
Larghetto, Allegro, Non troppo allegro, Grave, Allegro

CD 2

- [1-4] **Sonata VII, G major**  
Largo, Larghetto, Lento, Allegro assai
- [5-9] **Sonata VIII, A major**  
Largo, Allegro, Andante, Allegro, No title
- [10-14] **Sonata IX, C major**  
Cantabile, Vivace, Andante, Allegro, Minuetto
- [15-19] **Sonata X, E minor**  
Larghetto, Andante, Piva, Non presto, Villanella
- [20-23] **Sonata XI, G minor**  
Largo, Allegro, Larghetto, Allegro
- [24-27] **Sonata XII, D major**  
Con Spirito, Allegro, Con affetto, Allegro

Maria Bania, flute

Lars Ulrik Mortensen, harpsichord

Jane Gower, bassoon

Thomas Pitt, cello

*“Flöjtens Beethoven”*

Ludwig van Beethoven  
1770-1827

*Serenade* Op. 41  
Entrata (Allegro)  
Tempo ordinario d’un Menuetto  
Allegro molto  
Andante con Variazioni  
Allegro scherzando e vivace  
Adagio  
Allegro vivace e disinvolto

Friedrich Kuhlau  
1786-1832

*Introduzione and Rondo* Op. 98

Erik Drake  
1788-1870

*Divertimento sur un motif de la Romance*

Kuhlau

*Duo Brillante* (D major) Op. 110  
Allegro vivace con energia  
Andante con moto  
Rondo. Allegro assai

Maria Bania, flute

Tilman Skowroneck, piano

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