Movement to Music:
Notating Baroque Dance for Musicians

Aimee Brown

A thesis submitted in partial fulfilment of the requirements
for the degree of

Master of Music (Musicology)

Sydney Conservatorium of Music
The University of Sydney

2024

This is to certify that to the best of my knowledge, the content of this thesis is my own work. This thesis has not been submitted for any degree or other purposes.

I certify that the intellectual content of this thesis is the product of my own work and that all the assistance received in preparing this thesis and sources have been acknowledged.

This thesis has Ethics Approval, Number 2021/734.

Acknowledgements

The idea for this thesis was formed over many years of baroque dance courses, music lessons, and attending concerts. To all those I encountered during those years, who share a passion for baroque dance education, your contribution to the field has motivated me to pursue this research. Many people have played a role in the formation of this thesis, to whom I am very grateful. I would first like to express my deepest gratitude to my supervisors, Dr Alan Maddox and Dr Amanda Card, for their support, encouragement, and guidance. Thanks also to Dr David Kim-Doyle for his assistance with using Melodyne.

The research conducted in this thesis was supported by the Research Training Program and the award of the Kathleen E. Armstrong Bequest.

Special thanks to Catherine Turocy, Director of New York Baroque Dance Company, and Philippa Waite, Director of Consort de Danse Baroque, who shaped my understanding and passion for baroque dance. Thanks also to the participants in the interviews and experiments, whose open-mindedness and acceptance of my wild theories has allowed me to explore this realm of research, specifically: members of The Muffat Collective - Anton Baba, Matthew Greco, and Kiseok Kim; and Directors of The Early Dance Consort, Dr Fiona Garlick and John Barnard. I have thoroughly enjoyed repeatedly listening to and watching their fantastic performances.

I am extremely grateful to my family for the endless support they have offered me throughout my journey and for the editing help. Their belief in me has kept me motivated throughout.

I would also like to acknowledge the use of Grammarly in the final editing stages to assist in identifying grammatical errors. Additionally, parts of this thesis have been workshopped in coursework. Unless otherwise stated, all translations are by the author.

Finally, special thanks to my partner, friends, and cats who have given me joy and laughter over the last few years and helped me to stay motivated, especially during the many COVID lockdowns.

Abstract

The connection between musicians and dancers in eighteenth-century France was strong because of the opportunities they had to play together and their experience with each other's art. Many musicians today lack the opportunity to develop this same understanding of dance. The experience of performing eighteenth-century French dance music for both dancers and musicians today can be improved by facilitating musicians' understanding of dance. In this thesis, I propose a new dance notation system, Baroque Musical-Dance Notation (BMDN), which indicates to musicians the types, directions, and number of steps in a dance. These elements of a dance assist musicians in understanding how best to support a dancer through their choice of tempo, phrasing, accent, articulation, and ornamentation.

In this thesis, I discuss the development of, and experimentation with, the BMDN to explore how musicians' increased knowledge of dance influences the performance of eighteenth-century French dance music, and aids communication with dancers. Through audio-visual analysis of the recordings made in these experiments, and interviews with the participants, I found that the BMDN changed musicians' approaches to the music in their choice of tempo, use of tempo changes, placement and type of accent usage, length of articulation, and choices of ornamentation. These changes resulted in better support for the dancers and enhanced the musical performance. The experiments revealed that the BMDN has the potential to greatly enhance the performance of eighteenth-century French repertoire. Further experimentation with the BMDN could result in a reinvigoration of the connection between dancers and musicians and better the experience of performing historical dance and music.

Table of Contents

List of Tables

List of Figures

List of Music and Dance Terms:

I include here a list of the terms used in the following analysis, as they are often specific to music or dance. The dance steps are not included in this list as they will be explained in Chapter 3. Terms are defined in relation to how they are used within this thesis.

Music Terms:

Accent: when a note is emphasised through sound alteration. This can be one of three kinds: dynamic accent–volume; agogic accent–lengthening duration; or pitch accent–ornament or pitch inflection.[1] In this thesis, I use the word 'attacked' to describe a sudden increase in volume at the beginning of the note.

Affect: the emotional states or passions which music evokes, such as joy, sadness or love. Theorists in the eighteenth century assigned affects to dance types which I reference throughout this thesis. I discuss this in Chapter 2.[2]

Articulation: how the performer separates successive onsets of notes. This refers to the length of time between notes.

Counter-rhythm: different rhythms heard simultaneously. Used within this thesis to discuss the differing rhythms between music and dance.[3]

Enflé: when a note swells in volume, equivalent to Italian *crescendo*.[4] Used in this thesis when the musicians become louder within a single note.[5]

Détacher: notes played with equal value and detached by articulation.[6]

---

1 Matthias Thiemel, "Accent," *Grove Music Online*, ed. Deane Root, accessed 2 Nov 2023, https://www.oxfordmusiconline.com.
2 George J. Buelow, "Affects, theory of the," *Grove Music Online*, ed. Deane Root, accessed 2 Nov 2023, https://www.oxfordmusiconline.com.
3 The term is used in this thesis as it is used in Helen Meredith Ellis, "The Dances of J.B. Lully (1632-1687)" (PhD. Diss., Stanford University, 1967).
4 Robert Donington, "Crescendo," *Grove Music Online*, ed. Deane Root, accessed 2 Nov 2023, https://www.oxfordmusiconline.com.
5 Peter Walls, "Bowing," *Grove Music Online*, ed. Deane Root, accessed 2 Nov 2023, https://www.oxfordmusiconline.com.
6 David D. Boyden, "Lourer." *Grove Music Online*, ed. Deane Root, accessed 18 Mar. 2024.

Diminué: when a note becomes softer, equivalent to Italian *diminuendo*.[7] Term coined by Monteclair.[8]

Hemiola: three beats played simultaneously against two beats. This was a crucial characteristic of French baroque dance music. It is used in this thesis to describe the relationship between the dancers' counts and that of the music.

Ornament: embellishment of a note. The French term *agrément.*[9]

Coulament: Flowing. Connection of notes by the absence of articulation.[10]

Messa di voce: a note beginning soft, growing louder, and becoming soft again.[11] The term "son filé entier" is a French equivalent but it remains unclear whether this term was in use for instrumental music around 1700.[12] This term is also not in common usage today, so I use the standard term, *messa di voce*, to describe the practice of modern historically informed performers.

Notes inégales: unequal notes, alternating long and short.[13] Often in step-wise passages of notes. This was a crucial element of French baroque music.

Dance terms:

Extension: a lengthening of a physical movement through stretching in any direction.

Landing: can refer to the placing down of a foot, or both feet, from rise or from a jump.

Lifted: executing the physical movement higher on the toes.

Synchronisation: in this context, dancers' steps with musicians' notes.

---

7 David Fallows, "Diminuendo," *Grove Music Online*, ed. Deane Root, accessed 2 Nov 2023, https://www.oxfordmusiconline.com.

8 Bruno Nettl, Rob C. Wegman, Imogene Horsley, Michael Collins, Stewart A. Carter, Greer Garden, Robert E. Seletsky, Robert D. Levin, Will Crutchfield, John Rink, Paul Griffiths, and Barry Kernfeld, "Improvisation," *Grove Music Online*, ed. Deane Root. accessed 18 Mar. 2024. https://www.oxfordmusiconline.com.

9 Kenneth Kreitner, Louis Jambou, Desmond Hunter, Stewart A. Carter, Peter Walls, Kah-Ming Ng, David Schulenberg, and Clive Brown, "Ornaments," *Grove Music Online*, ed. Deane Root, accessed 2 Nov 2023, https://www.oxfordmusiconline.com.

10 David Fuller, "Notes inégales," *Grove Music Online*, ed. Deane Root, accessed 2 Nov 2023, https://www.oxfordmusiconline.com.

11 Ellen T Harris, "Messa di voce," *Grove Music Online*, ed. Deane Root, accessed 2 Nov 2023, https://www.oxfordmusiconline.com.

12 Beverly Jerold, "Mystery in Paris, the German Connection and More: the Bérard–Blanchet Controversy Revisited" Eighteenth-Century Music 2/1, (2005): 108.

13 David Fuller, "Notes inégales," *Grove Music Online*, ed. Deane Root, accessed 2 Nov 2023, https://www.oxfordmusiconline.com.

Chapter 1

Establishing the Connection Between Music and Dance

Figure 1.1 Performance of J.S. Bach's *Cello Suite No.4 in E-Flat Major*[14]

The photo in **Figure 1.1** captures a mid-performance moment between dancer and musician of harmonious communication and connection. To me, this is an ideal moment, but one that I have found after many years of dancing, teaching, and playing music, to be rare in our time. This level of communication was most prevalent in eighteenth-century France, as musicians and dancers were deeply connected; this connection greatly enhanced the performance of dance and music. My goal is to make these moments more common today, to bring musicians and dancers closer together.

In the early eighteenth century, musicians' experience and understanding of dance music was more comprehensive than that of most musicians playing eighteenth-century French dance

[14] Photo taken by Peter Hislop, Canberra 2023.

music today. In this thesis, I argue that the experience of performing French dance music for both dancers and musicians is improved by facilitating musicians' understanding of dance. To facilitate this relationship, I have created a Baroque Musical-Dance Notation (hereafter, BMDN). My notation can be used to bridge the knowledge gap that often exists between musicians and dancers today. This thesis discusses the development of and experimentation with the BMDN, and the associated outcomes.

Many educators have found that by teaching musicians to dance, musicians' experience of performing baroque dance music has improved. One such example was recorded in 1975 by Meredith Ellis Little:

> In the summer of 1974 an intensive two-week workshop with Wendy Hilton at Stanford University was attended by about 30 dancers and musicians. Of 13 (out of 19) musicians who responded to a follow-up questionnaire two months later, all but one felt that they had profited considerably from the dance instruction and that it had influenced their performance of baroque music in many ways.[15]

I, too, have found in my own teaching of musicians to dance, that they all leave a class with fresh ideas about how to perform baroque dance music. Unfortunately, but reasonably, not every musician is eager to commit the time and money to learn baroque dance. Thus, I propose a simple system of notating dance, which will allow musicians to visualise the elements usually taught in a dance class and understand the movement of the dance in a format they are familiar with.

This introductory chapter provides a short history of the types of dances practised in France during the early eighteenth century. I discuss the relationship between music and dance, and musician and dancer, by exploring dancers, dancing masters, musicians, composers, and visual images. I also introduce the dance notation systems used in the eighteenth century. In Chapter 2, I examine advice given to musicians in performing French dance music, drawing from both primary and secondary sources. In Chapter 3, I lay out the Baroque Musical-Dance

[15] Meredith Ellis Little, "Dance under Louis XIV and XV: Some Implications for the Musician," *Early Music* 3, no. 4 (1975): 340.

Notation (hereafter; BMDN) with an outline of its development and components, and give two examples of music written with the notation. In Chapter 4, I discuss the results of an experiment, in which musicians and dancers performed pieces of music under differing circumstances: 1) with no added notation, 2) with the additional BMDN, and 3) with dancers in line of sight. The results from these experiments reveal the profound influence that the BMDN has on the performance of eighteenth-century French dance music as well as on communication between dancers and musicians. In Chapter 5, I summarise the findings from the experiments and discuss improvements that can be made to the BMDN as a result of this study.

The Role of Dance in France 1690-1730

To establish how important it is for contemporary musicians to learn baroque dance and how the BMDN provides an efficient and thorough method for doing so, I begin this section by exploring the role of dance in France in the eighteenth century and how musicians' practices during this time were shaped by their experience of playing for dancing and dancing themselves. Dance played a major role in court and theatre in France from 1690 to 1730. As such, there was a high demand for dance music, and large volumes of music composed and performed during this period were heavily influenced by dance practices. We know this because of the large number of dance and dance suites composed, the prevalence of dancing masters and their manuals, and the inclusion of dance in aristocratic training. Through this we begin to see how dance and music were closely connected during this period.

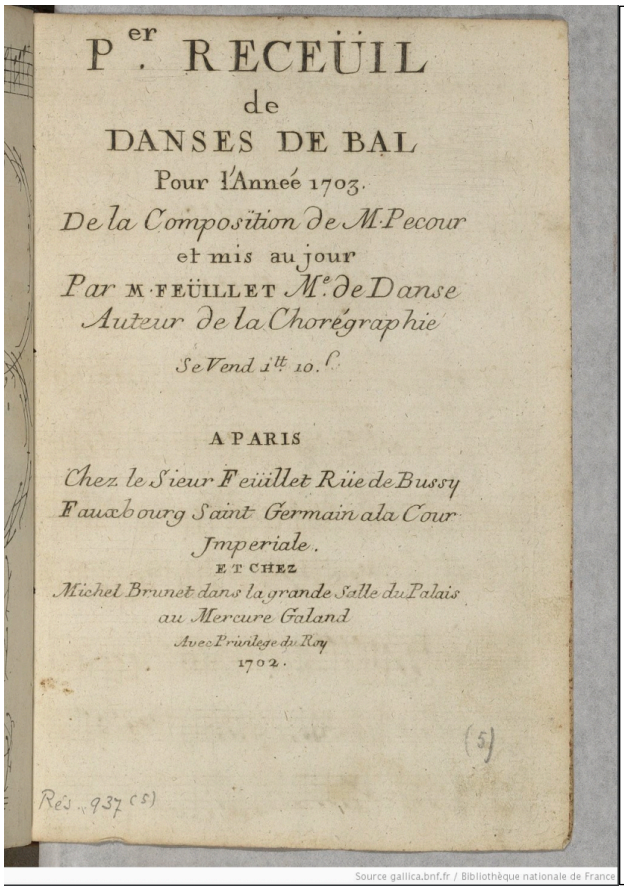
There were two principal styles of dance in this period in France: court dance, and theatrical dance. Each had a different style of performance, intention for the performance, and recorded notation.

Ballroom or Court Dance

Dance played a highly political role in French society during and after the reign of King Louis XIV (1643 to 1715), who was a great advocate for the arts. Spectacular balls were held

to indicate, promote, and elevate wealth and position.[16] As such, many of the upper-class French were required to learn dance, not only to promote their own status and standing at court, but also to promote the image of France as a powerful nation.[17]

The dances performed at balls are referred to as court dances or ballroom dances. We owe our understanding of these dances to the various dancing masters of the French court who transcribed them in manuals. An example of one of these can be observed in **Figure 1.2**, which shows the title page with composer, year, location, and occasion.



First Collection
of
Ballroom Dances
For the year 1703.
Composed by M. Pecour
and published
by M. Feuillet Master of Dance
Author of *Chorégraphie*

Sold [1livre tournois, 10 sous]

In Paris
At the house of Mr. Feuillet Rüe de Bussy
Fauxbourg Saint Germain at the Imperiale
court.
And at the house of
Michel Brunet in the Great Hall of the
Palace at the Mercure Galand.
With Privilege of the King
1702.

Figure 1.2 Raoul Anger Feuillet, *Per. Recüeil de Danses de Bal pour l'Année 1703. De la Composition de M. Pecour* (Paris, 1702), title page.

[16] Lisa Christianna Devero, "The Court Dance of Louis XIV as Exemplified by Feuillet's "Chorégraphie" (1700) and How the Court Dance and Ceremonial Ball Were Used as Forms of Political Socialization" (Ph.D. diss., New York University, 1991), 29.
[17] Devero, "The Court Dance of Louis XIV as Exemplified by Feuillet's "Chorégraphie" (1700)," 75-76. Also, in Little, "Dance under Louis XIV and XV: Some Implications for the Musician," 331.

Balls were meticulously organised. Couples took turns performing dances they had learnt from their dancing master. In 1728, Pierre Rameau described the order of performers: the King danced with the Queen or the first Princess, followed by each couple in order of societal rank. The dancing began with a *Branle*, followed by a *Gavotte*, then a *Courante* (later replaced by a *Menuet*.)[18] Often these dances were performed to well-known music, such as pieces from the operas of Jean-Baptiste Lully.[19]

Ballroom dancing during the eighteenth century was admired because it reflected the French ideals of control, precision, nobility, and power.[20] As dancing reflected social standing in Louis XIV's court, it was essential that court musicians could play skilfully to emphasise the dancer's ability. It was therefore important that a musician understood how to play for dancers. Theatre dance began in the court and ballroom, as such, ballroom dances were often an approximation of, or similar to, those performed by professionals but with lower technical demands, as I explain in the next section.

Theatre Dance

Theatre dance was performed on stage by professional dancers or highly talented nobles, as part of a court ballet or opera. Theatre dance began as court entertainment for the nobility to participate in; as it became more complicated, theatre dancing became a genre on its own.[21] **Figure 1.3** shows a theatrical dance notated using the system of dance notation developed by Raoul-Anger Feuillet in 1700.[22] In this example, the dance is a *Sarabande* for two which was danced by Mr Dumoulin lainé the elder and Mademoiselle Chaillou in the opera dyssé. The opera from which the dance comes, and the character who was dancing, were often also included in these manuscript pages. These records are often our only source for locating where the musical score came from.

[18] Pierre Rameau, *The Dancing Master: or, The art of dancing explained,* trans. John Essex (London: J. Essex, 1728), 29-30.
[19] Lully's music is commonly used for the dances published in manuals.
[20] Little, "Dance under Louis XIV and XV: Some Implications for the Musician," 334.
[21] Wendy Hilton, *Dance of Court & Theater: The French Noble Style 1690-1725* (London: Dance Books, 1981), 9.
[22] Raoul-Anger Feuillet, *Chorégraphie, ou l'Art de De'Crire la Dance* (Paris, 1700).

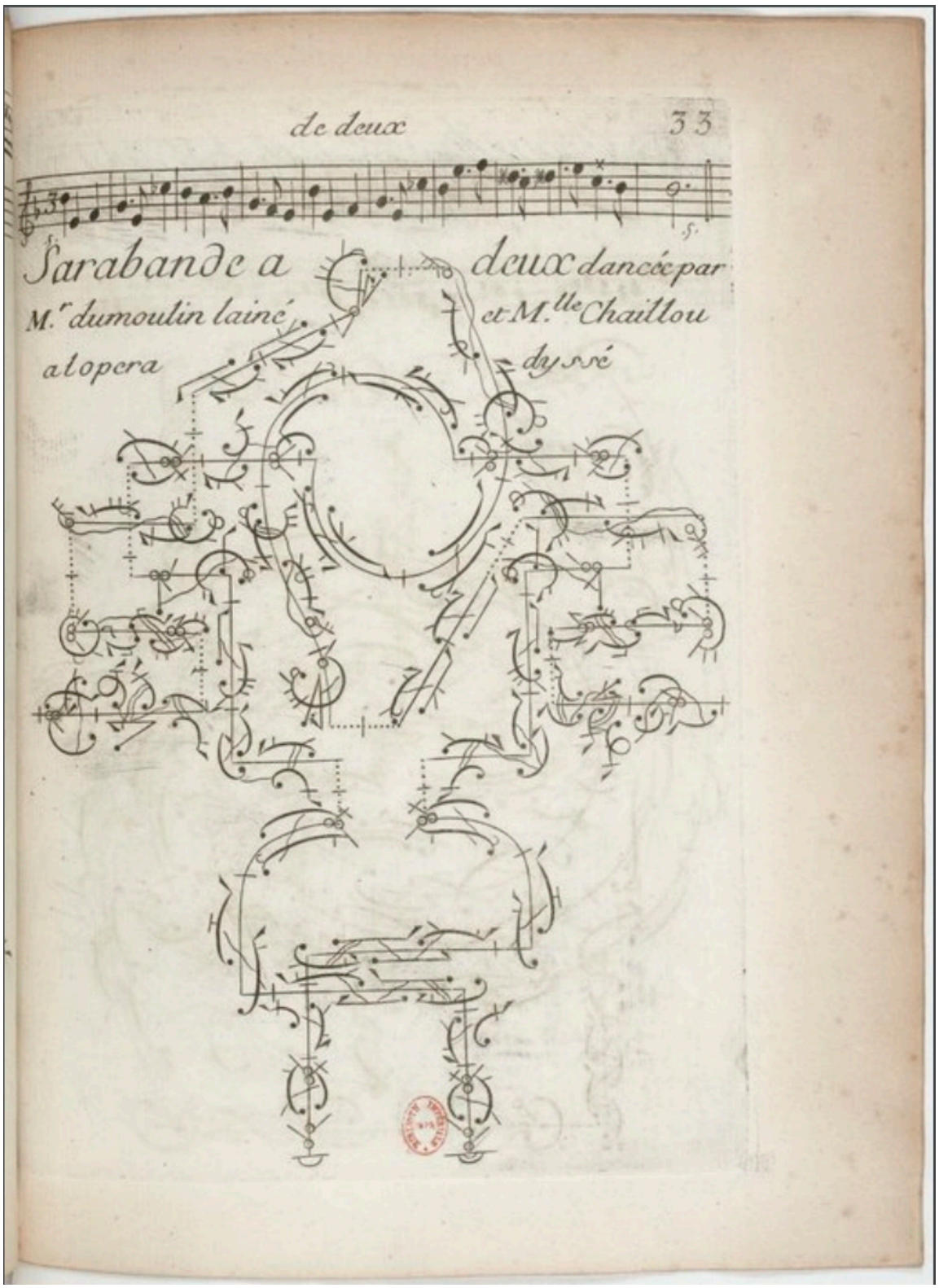


Figure 1.3 Sarabande for two, Michel Gaudrau, *Nouveau Recüeil de Dance de Bal et Celle de Ballet… da la Composition De Mr. Pecour* (Paris c.1713), 33.

Theatre (or stage) dancing, like ballroom dancing, was used to promote status and power, but it also allowed composers and performers to explore a wide array of characters and emotions. John Weaver in 1712 wrote:

> Stage dancing was at first designed for Imitation; to explain things conceived in the mind, by the gestures and motions of the body, and plainly and intelligibly representing actions, manners and passions; so that the spectator might perfectly understand the performer by these his motions, though he say not a word.[23]

The way dancers communicate thoughts and evoke emotional reactions in their audiences is deeply enhanced by musicians' performances. That is, the rhetorical delivery by the dancer relies strongly on the musician. Additionally, the technical command of a theatrical dancer relies on musicians' abilities to adjust to their needs and provide rhythmic stability. Throughout this thesis I refer to rhetorical delivery as the way the performers convey and inspire an affect in the audience. This, I have found, was most effectively done through the alignment of ideas; for example, when the musicians' *enflé* through a note and the dancer reacted by creating a longer extension. Rhetorical delivery was an important aspect of eighteenth-century performance as it heavily linked dancers and musicians with their audience.

[23] John Weaver, *An Essay Towards an History of Dancing* (London: Jacob Tonson, 1712), 160.

The Relationship Between Music and Dance 1690-1730

My proposed notation aims to provide a means for modern musicians to experience something of the close connection between dancer and musician that existed in the eighteenth century. This section therefore examines the relationship between music and dance, and musician and dancer in the eighteenth century, and how we may learn from their training, skills, and professional life.

Dancers as Musicians

In eighteenth-century France, professional dancers and dance instructors for the aristocracy were required to learn how to read, follow, perform and, even sometimes, compose music. These requirements highlight the importance of the interaction between dancers and musicians. French dancing masters were responsible for teaching the aristocracy how to dance for court as well as choreographing theatrical dance. They were also required to be proficient in composing and performing the accompanying music. Before receiving their title, dancing masters were examined by a musicians' guild and would compose the music for their choreography.[24] An example of a dancing master who was particularly proficient in playing music was Pierre Beauchamp (1631-1705), a dancer, choreographer, composer, and conductor working for King Louis XIV.[25] He exemplified the dance-music connection in this period.

Dancing masters played music for their pupils as they taught, as can be observed in **Figure 1.4** where the dancing master is playing the 'pocket violin', or pochette, as his pupils dance.[26] There are few dance schools today that have the luxury of a live musician for every class. While using pre-recorded music is the more economical option, the interaction, learning, and play between musicians and dancers engendered by learning to dance to live music has, to a large extent, been lost.

[24] Hilton, *Dance of Court & Theater*, 28.
[25] Maureen Needham, "Beauchamps [Beauchamp], Pierre," *Grove Music Online*, ed. by Deane Root, accessed 10 December 2022, https://www.oxfordmusiconline.com.
[26] Pierre Rameau, *Le Maître a Danser* (Paris, 1725).

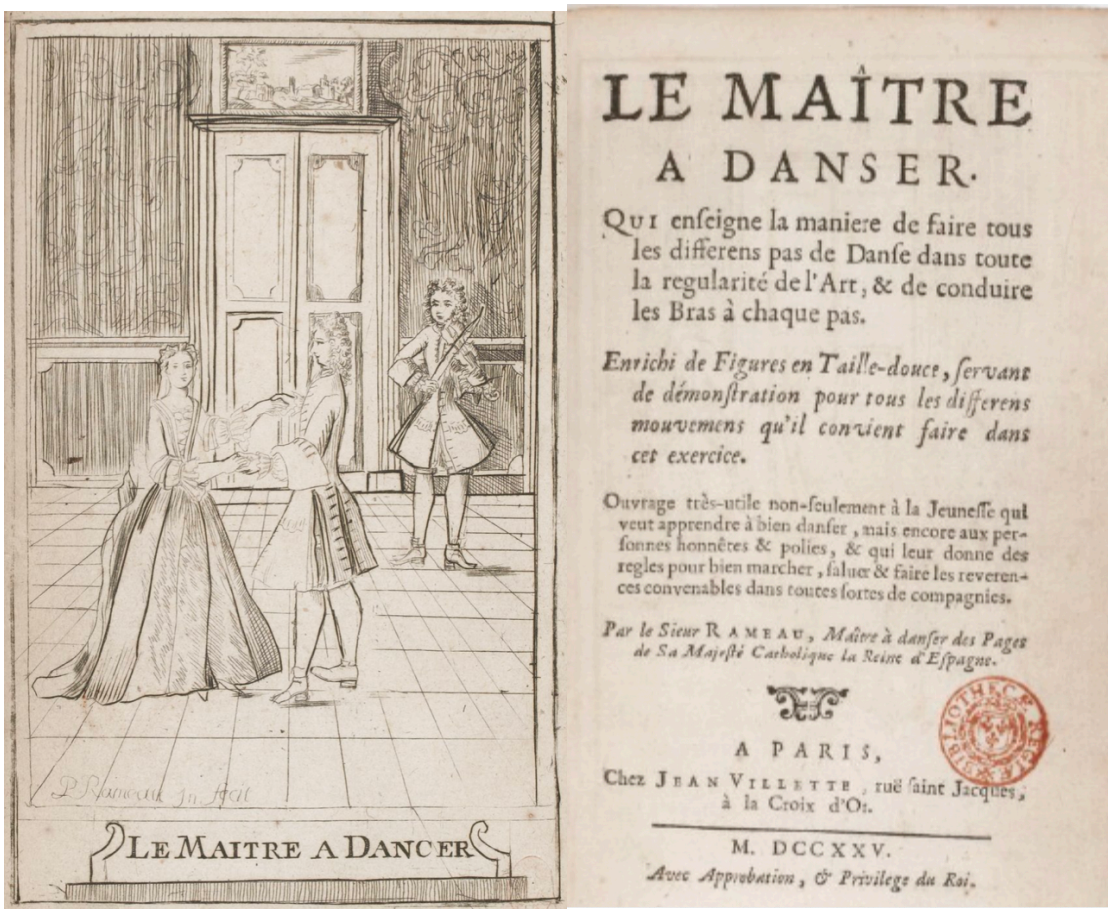


Figure 1.4 Pierre Rameau, *Le Maître a Danser* (Paris, 1725).

Dancers in the eighteenth century were taught to understand the relationship between dance steps and the music. Dancing master Raoul-Anger Feuillet (1659/60-1710), dedicated a whole section of his manual of dances in 1704 to describing the relationship between music and dance.[27] This meant that dancers not only learnt to count out the musical beats but understood the accents and phrasing in the music.

Proficiency in music assisted a dancer in advancing their skills as they approached some of the more difficult dance styles. John Weaver, dancing master of the French style in England, wrote:

[27] Raoul-Anger Feuillet, *Traîté de la Cadance* in *Recüeil de Dances* (Paris, 1704), 5-10.

> A master or performer in Grotesque dancing ought to be a person bred to the profession, and throughly skilled in his business. As a master, he ought to be skilled in music, and particularly in that part relating to time....[28]

Additionally, dancers who were proficient musicians were admired for being so; Pierre Rameau described a 'Mr. Firbank' as an excellent dancer and musician.[29]

Through this brief discussion, we can understand the requirements of a dancer to be proficient in musical practices in the eighteenth century. The following section explores the musicians' understanding of dance practices.

Musicians as Dancers

Composers and musicians in the eighteenth century were often proficient dancers or, at the very least, intimately experienced in playing for dancers, whereas musicians today rarely have the opportunity to develop proficiency in dance. The following discussion explores composers' and musicians' interactions with dance practices in the eighteenth century, and how these interactions shaped the way they composed and performed. By examining these interactions, we can begin to uncover how similar relationships can be recreated today.

Musicians had many opportunities to play for dancers in the French court as balls and social occasions for dancing were frequently held. Often, these musicians were also dancers and understood the language of dance.[30] Evidence of this can be found in the writing of the musician and theorist, Monteclair, who in his 1739 *Principes de Musique* described how a musician should execute a musical *glissé* by explaining how one dances it.[31] This description indicates that Monteclair trusted that musicians understood the language of dance and would be able to apply it to musical gesture.

---

[28] Weaver, *An Essay Towards an History of Dancing*, 166.
[29] Rameau, *The Dancing Master,* xiii.
[30] Jennifer Piper, "Meaning in Movement," *The Flutist Quarterly* 45, no. 3, Spring 2020, 28.
[31] Andrew Robinson ed., *Les Agréments–French Baroque Ornamentation, Monteclair's descriptions of the ornaments taken from for his Principes de Musique 1739,* trans. Gilles Aufray (Hebden Bridge: Peacock Press, 2008), 22.

Alongside musicians, composers were also often proficient dancers. Dance music was a popular and required genre of composition in eighteenth-century France, as evidenced by the volume of dance suites and music composed. Often, a composer's ability to successfully compose in the dance style was partially due to their own practice as a dancer. We see an example of this in composer Jean-Baptise Lully who, Dubos speculated, choreographed theatre dance.[32] Lully's 268 dance pieces were widely popular and used for dancing long after his death.[33] In Chapter 2, I will discuss how composers and writers recommended that musicians learn to dance as a way of improving their performing and composing.

Representations in Visual Images

Eighteenth-century images also reveal the interaction between musicians and dancers in the period and attest to the close relationship between the two. Questions of historical accuracy do arise when using iconography as source material, as depictions of figures, especially royalty, can be affected by considerations such as the purpose of the image, for example, to glorify the king, or even the artist's personal taste; however, if there is a consideration of this bias, and the analysis of the image is correlated against other sources, then information can be gleaned from these images that is not available in other sources.[34] Many of these images show key features of the relationship between dancers and musicians, such as their relative positioning in both court and theatrical settings. In particular, these images reveal the line of sight musicians may have had to dancers.

For this study, I have chosen three images dating from 1696-1745, which depict the ballroom and theatre in France. These images show a range of venues and chronological periods relevant to my argument and are representative of other images from this period. The first two images show the ballroom at two different times at Versailles (**Figures 1.5 and 1.6**). Through these images, we can see two different angles of the performance and notice the

[32] Hilton, *Dance of Court & Theater*, 29.
[33] Helen Meredith Ellis, "The Dances of J.B. Lully (1632-1687)" (PhD. Diss., Stanford University, 1967), 144.
[34] Terence Ford and Andrew Green, *Inventory of Music Iconography*, *no. 3. The Piermont Morgan Library Medieval and Renaissance Manuscripts* (New York: Research Center for Musical Iconography, 1988), vii, ix.

similarities between depictions of musicians within ballroom scenes. The third image is set in the theatre and offers an insight into the roles musicians played in the theatre (**Figure 1.7**).

In both representations of the court or ballroom (**Figures 1.5 and 1.6**), the musicians are positioned above the dancers, giving them a view of the entire dance floor and, by implication, all of the dancers. So, instead of viewing only the individual choices of a dancer, musicians would be viewing the floor patterns created between dancers. Their familiarity with the dance steps, along with a general view of the ballroom, meant their playing would have provided rhythmic and structural stability for the dancers. I explore this further in Chapter 4.

The first image (Trouvain, 1696, **Figure 1.5)** appears staged; it shows two dancers on the right (the future Duke of Chartres, future Regent for Louis XV, and Duchess of Chartres), a noble audience sitting or standing on the left and five musicians in the top left. Despite the staged nature of the engraving, the significance in this image is that the musicians are positioned above the audience and dancers and off to one side. In this position, the musicians would have a clear view of both dancers but the dancers' view of the musicians would be minimal.

Figure 1.5 Engraving of two court dancers before a noble audience. Antoine Trouvain, *Fourth Room of the Apartments at Versailles,* 1696, Engraving, The Minnich Collection the Ethel Morrison Van Derlip Fund, Minneapolis, 1966, *The Sun King,* https://collections.artsmia.org/art/77489/fourth-room-of-the-apartments-at-versailles-antoine-trouvain.

The second image, (Rameau, 1725, **Figure 1.6**) it should be noted, was likely engraved to glorify the King and thus, as mentioned previously, does not necessarily provide an accurate representation of what the ballroom may have looked like. We do know, however, that elements of the image reflect Pierre Rameau's description of the running of a ball, where he writes, for example, that 'the ladies [are] placed foremost, and the lords behind them… The King places himself in that Part of the Room most proper for the Beginning of the Ball (which is by the Musick Room).'[35] Additionally, the image was included in an educational dance manual and therefore more likely to be accurate than engravings for pleasure or politics. The engraving shows the musicians, in the foreground of the image, in tiered seating positioned above and behind the dancers. There is no obvious conductor but it is possible that a violinist is leading the ensemble and that the musicians are either facing the dancers or facing sideways towards

[35] Rameau, *The Dancing Master*, 28-30.

each other. While the musicians would have had a full view of the dancers, the dancers would not have had the musicians in their line of sight. This is significant because the dancers would have trusted the musicians to stay in time with the dance and to indicate phrase endings and metre changes, rather than the dancer communicating with the musicians during these significant moments.

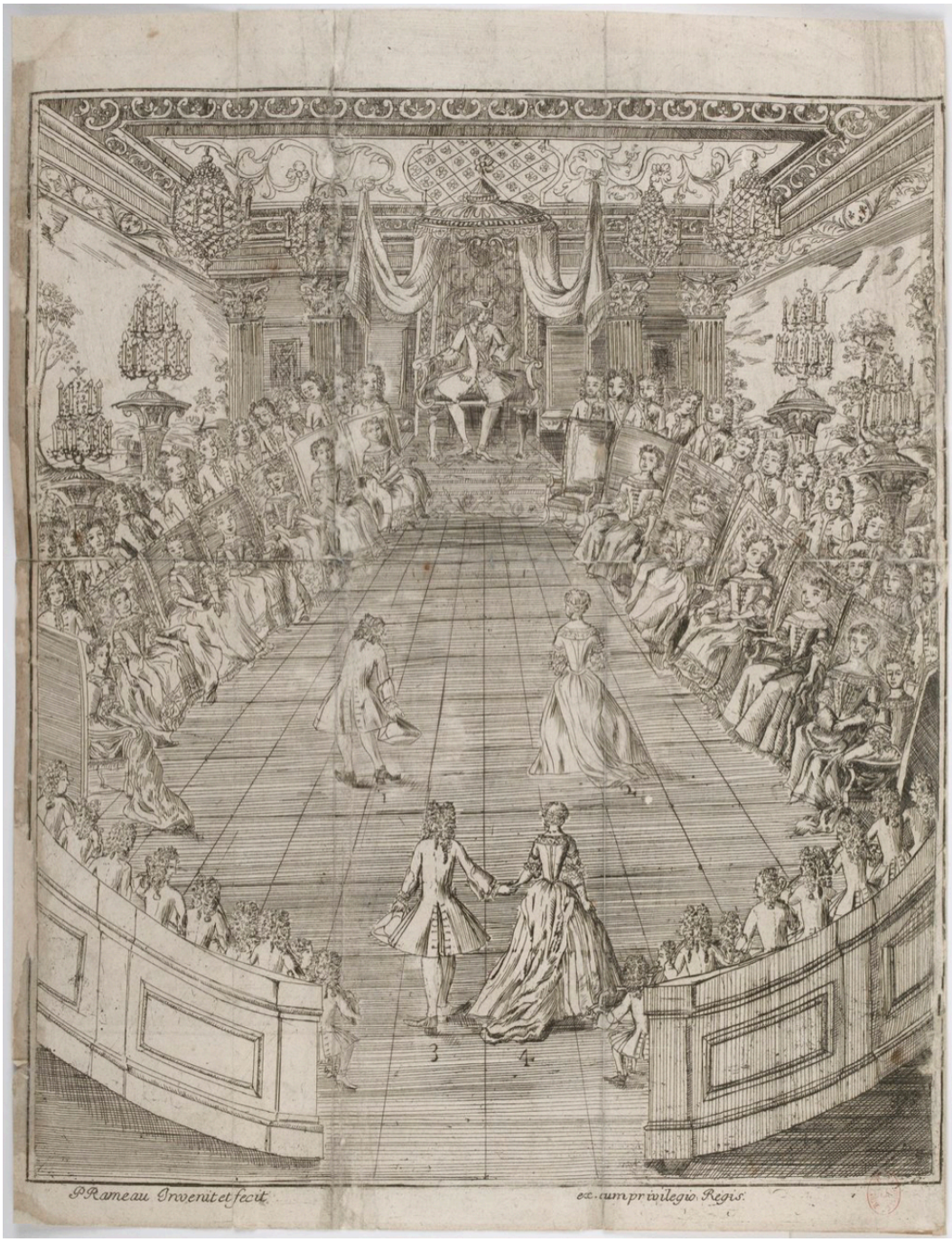


Figure 1.6 Engraving of a ball presided over by Louis XV, 1725. Rameau, *Le Maître a Danser*, 49.

The final image, **Figure 1.7**, depicts the theatre in 1745. Here the musicians are placed in an orchestral pit immediately in front of the stage.

Figure 1.7 A performance of Rameau's *La Princesse de Navarre* on 23 February 1745 in the theatre of the Grande Écurie, Versailles, as part of the celebrations of the marriage of the dauphin Louis to Maria Teresa of Spain. Charles Nicolas Cochin II, *Decoration de la salle de spectacle construite a Versailles pour la representation de la Princesse de Navarre*, ca. 1745, Etching, The Elisha Whittelsey Collection, Metropolitan Museum of Art, New York, https://www.metmuseum.org/art/collection/search/371440.

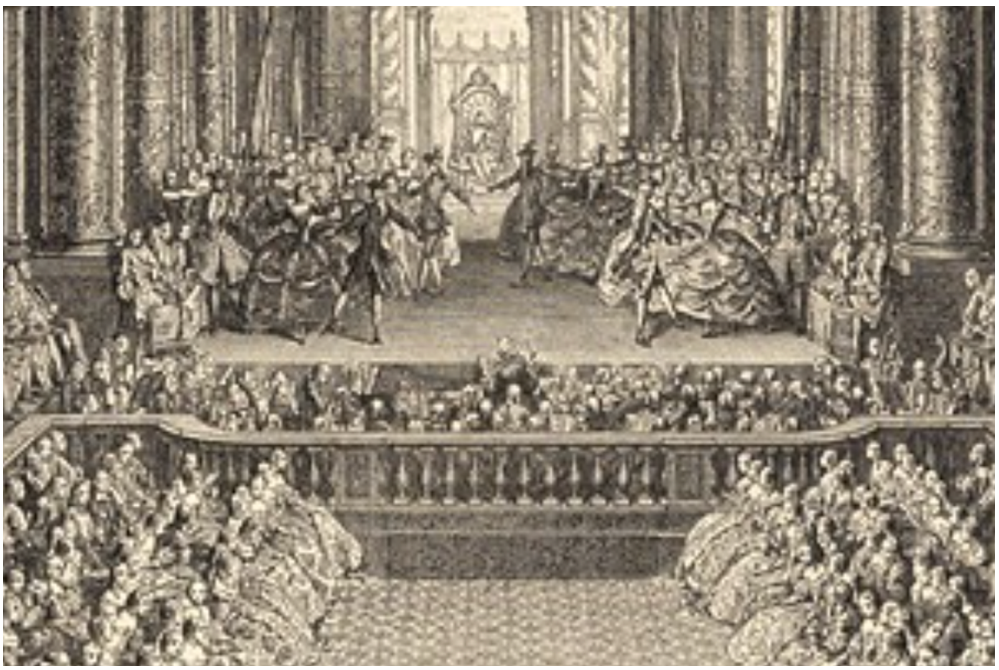


Figure 1.7a Enlarged image to show orchestra in orchestral pit. Note the conductor immediately in front of the stage with his back to the orchestra.

The musicians in this image are either facing towards each other, towards the conductor, or facing the stage. This would give many of them a clear view of the dancers. In this position, the conductor was able to give most help to those on stage. The full scope of the information that can be gleaned from this image and a study of the theatre in eighteenth-century France is beyond the scope of this thesis; however, we can acknowledge that while the positioning of the musicians in this particular image is different to those in the ballroom scenes, similar conclusions can be made that, in a large ensemble of musicians and dancers, musicians would be required to provide rhythmic stability and follow the conductor, concert master, or continuo players, who would be following those on stage.

The images of the ballroom first tell us that musicians were relied upon to follow dancers, more than dancers following musicians. Additionally, musicians' perspectives in a ballroom were most likely of the whole body of dancers, except in the case of solos. It is not as clear in the theatrical image whether the dancers could see the musicians, but the musicians' role would equally be to provide rhythmic and structural stability as they follow the conductor. These observations become relevant in Chapters 3 and 4 as I discuss the development of the Baroque Musical-Dance Notation and experimentation with musicians and dancers.

Review and History of Notation Systems 1690-1730

My system of notation was influenced by the symbols and structure of the various systems of dance notation created in eighteenth-century France. Here I examine these original systems of notation to understand their creation, use, and influence. Additionally, I review some of their limitations to see how best a new system of notation may be useful to modern musicians who are less familiar with dance than their eighteenth-century predecessors.

The invention of dance notation meant that dance could be recorded, taught, and shared across Europe. This led to an increase in the success of the French dance style and enables eighteenth-century dance to be recreated today.[36] As far as we know, there were three main systems for notating dance invented in France from the end of the seventeenth century into the beginning of the eighteenth century—by Lorin, Favier and, most notably, Beauchamp and Feuillet. The only surviving manuscripts notated in the Lorin system are *contredanses* from around 1685,[37] while the only manuscript to survive written in Favier notation is a collection of dances for a comic masquerade, dating from around 1688.[38] The Favier notation is most like a musical manuscript, with each set of steps set out on what appears to be a musical stave, underneath a melody line (**Figure 1.8**).

[36] Hilton, *Dance of Court & Theater*, 53-54.
[37] Ken Pierce, "Dance Notation Systems in Late 17th-Century France," *Early Music* 26, no. 2 (1998): 289.
[38] Pierce, "Dance Notation Systems," 290.

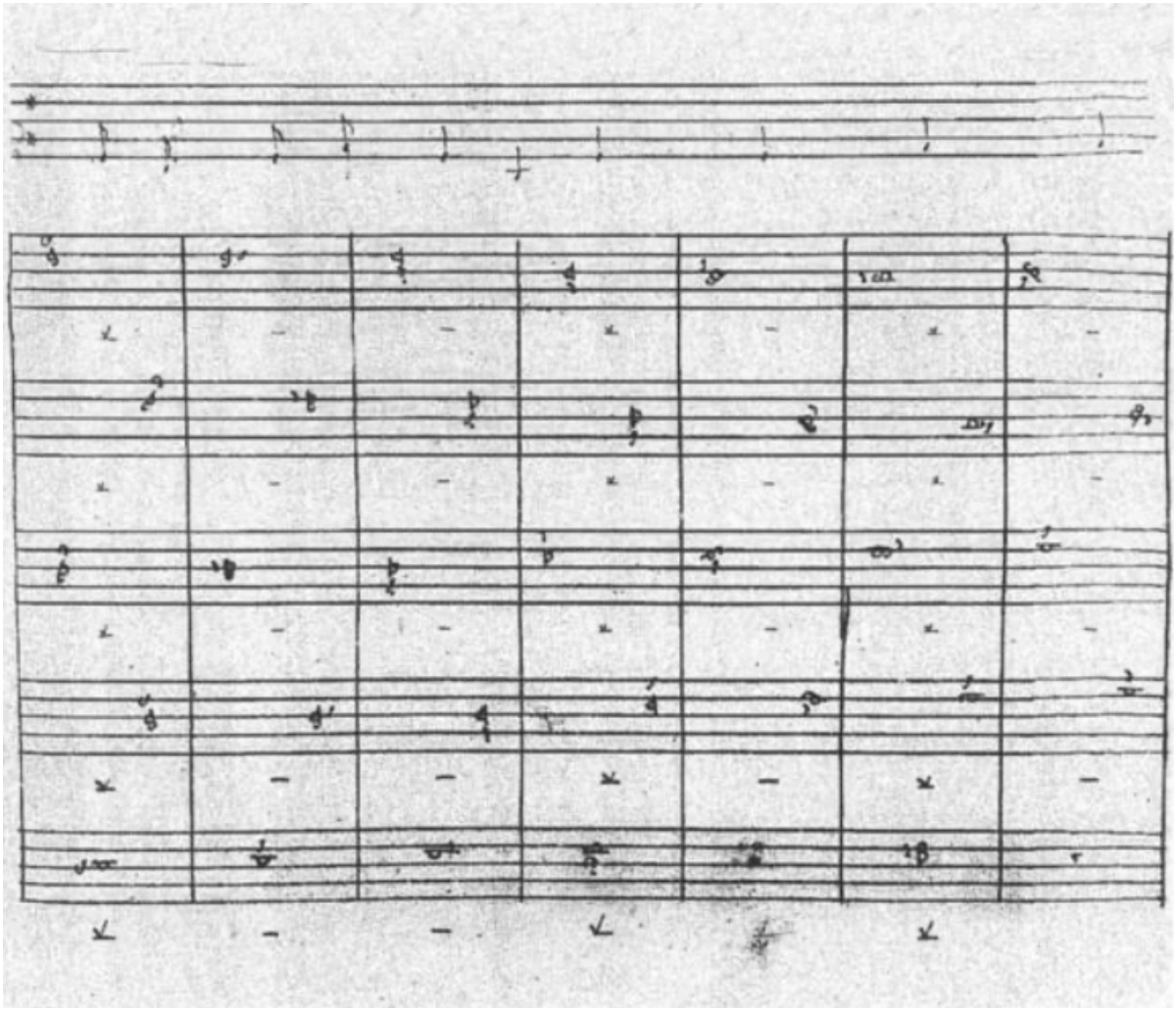


Figure 1.8 Example of Favier notation. First page of the Rigaudon from *Le Mariage de la Grosse Cathos* (Paris, Bibliothèque Nationale, Rés. F. 534b, 83) reproduced in Pierce, "Dance Notation Systems in Late 17th-Century France," 290.

I took inspiration for my notation from the Favier notation in terms of the clear alignment of steps with musical notes and the dance steps being set out on a stave, with bar lines aligning with musical bars.

While Favier's notation was not widely taken up (and hence why few records of it survive), a notation devised by dancing master Pierre Beauchamp and updated by Raoul-Anger Feuillet was very popular and the greatest influence in the development of my notation. Beauchamp, upon request from King Louis XIV, created his system for notating the dances used at court and theatre in the seventeenth and eighteenth centuries, while Feuillet expanded on the system, detailing it in his book *Chorégraphie ou l'art de decrier la danse*.[39] This

[39] Feuillet, *Chorégraphie.*

combined authorship has led to this form being commonly referred to as Beauchamp-Feuillet notation. This system is noteworthy because it was the most widely used notation system across Europe and, as a result, there are records of it being used in France, England, Germany, Spain, and Portugal.[40] There are also multiple translations of the system including John Weaver's English translation in 1706.[41] Pierre Rameau, in 1725, also expanded the system, reprinting many of Feuillet's original compositions;[42] however, the Beauchamp-Feuillet system was limited to the range of dance steps and combinations that could be notated and, due to the rapid development of dance steps, by the middle of the eighteenth century, it was mostly unusable.

Since my focus here is on the early eighteenth century, my notation is heavily based on the Beauchamp-Feuillet notation. To articulate my ideas discussed in Chapter 3, it is useful to briefly describe how to read Beauchamp-Feuillet notation. The notation comprises floor patterns and steps. **Figure 1.9** shows an example of the first page of *La Bourée d'Achille,* in which the line of music represents downstage, and the bottom of the page, upstage. The dancers thus begin upstage, the male dancer on the left, represented by a single semicircle, and the female dancer on the right, represented by a double semicircle. The dancers follow the continuous line on the page. In this case, moving downstage, they then travel sideways away from each other, then circle in towards each other and back upstage.

40 Clara Rico Osés, "French Dance in Eighteenth-Century Spain," Dance Chronicle, 35(2), (2012): 133.
41 Raoul-Anger Feuillet, *Orchesography, or the Art of Dancing*, trans. John Weaver (London, 1706).
42 Rameau, *Le Maître a Danser*.

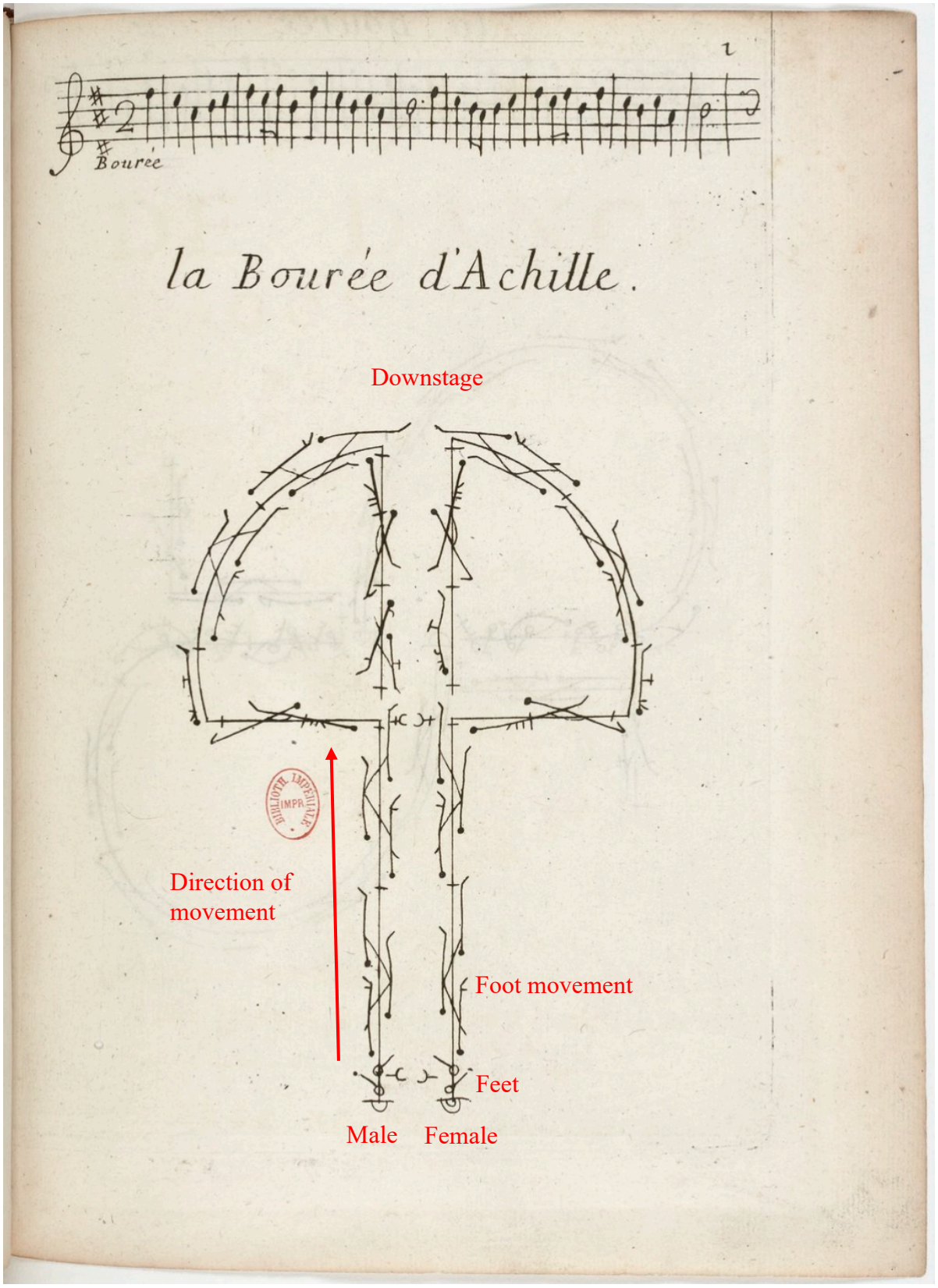


Figure 1.9 *La Bourée d'Achille* in Raoul-Anger Feuillet, *Recueil de dances, composées par M. Pecour* (Paris, France,1700), 1.

The symbols along the continuous line represent the feet. The dancers begin in third position, with the back foot pointed, then *pas de bourée* forward. This occurs in bar 1 of the music, as shown in **Figure 1.10**. The small dashes through the continuous line represent the bars and align with the melody at the top of the page. Despite the notation of a *plié* after the bar line, the step occurs before the first beat of bar 1 as represented by the location of the downward dash along the foot. Each step will be discussed in more detail in Chapter 3.

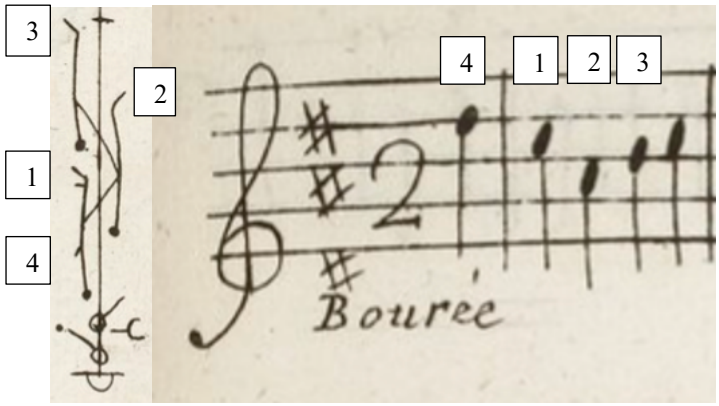


Figure 1.10 *Pas de Bourée* forwards with beat alignment to bar 1 of *La Bourée d'Achille*

The Beauchamp-Feuillet system had the advantage of allowing choreographers to preserve their own dances in writing, reaching a wider audience; however, one of the biggest issues inherent in transposing movement to text is the inability to preserve many elements of the dance. For example, Feuillet's notated choreographies originally omitted the positions and patterns for the arms. It is also not always clear on which part of the bar each step falls.[43] Also, the notation does not include the height of legs or the length of steps, nor does it include emotion, style or character, which at the time were very important to theatrical performance.[44] Dance reconstruction, therefore, involves a study of many sources to piece together a fuller idea of historical dance performance practice.[45] Reconstructing a dance written in Feuillet's notation requires studying many other sources, including his early manuals, John Weaver's translations, and Rameau's later writing.

[43] Ellis, "The Dances of J.B. Lully (1632-1687)," 29.
[44] Weaver, *An Essay Towards an History of Dancing*, 160.
[45] Janet Adshead-Lansdale, "The Dance History Literature," in *Dance History: An Introduction,* ed. Janet Adshead-Lansdale and June Layson (London: Routledge, 1994), 39.

For someone unfamiliar with baroque dance steps, Beauchamp-Feuillet notation makes very little sense. The original intention of the notation was to encode a particular choreography for someone who already knew how to dance these styles. It shows them, as Wendy Hilton explains, 'what to do, but not how to do it.'[46] It is therefore unfair to expect contemporary musicians to learn the complexities and limitations of Beauchamp-Feuillet notation when there are problems with interpretation, even for those experienced with baroque dance. As Esther Coorevitz and Dirk Moelants wrote: '… the complexity of these [notation] systems can obscure the correct interpretation.'[47] It is for this reason that my notation, presented in Chapter 3, simplifies eighteenth-century dance notation, allowing a musician to access knowledge of the dance through a medium similar to that used by dancers in the eighteenth century but in a more accessible format.

[46] Hilton, *Dance of Court & Theater*, V.
[47] Esther Coorevits and Dirk Moelants, "Tempo in Baroque Music and Dance," *Music Perception: An Interdisciplinary Journal* 33, no. 5 (2016): 524.

Chapter 2

Written Advice for Musicians

This chapter discusses the written sources available to musicians on how to play early eighteenth-century dance music in the French style. Throughout the eighteenth century, music treatises were written that suggested how to play dance music. These treatises assist musicians today to understand the character and affect relating to each dance type, to learn common bowing patterns, and to make decisions regarding suitable ornamentation. Books and articles written by modern scholars can assist musicians in interpreting these earlier works and offer further explanations of appropriate bowings and ornamentation. In addition, dance treatises published in the early eighteenth century include advice on character, affect, and accent placement, which can be applied to musical performance. While an underlying theme in all these works is the recommendation that the best way to understand how to play eighteenth-century dance music is for musicians to learn how to dance, often they do not go further than recommending attending dance classes. My Baroque Musical-Dance Notation (BMDN) offers hints to musicians as to how the dance looks and feels in the body so that musicians can embody the ups and downs of the movements and the flow of the phrase, which is the knowledge missing from presently available written advice.

In this chapter, I will discuss the lack of available resources for musicians when reconstructing French dance music today and the challenges musicians face in trying to become better informed when playing for dancers. Additionally, I describe the recommendations of early and recent writers and explain how my BMDN has been informed by these writings and designed to allow musicians, who accompany dance, to understand dance music more efficiently and thoroughly.

For this section, I focus on the three representative dance forms which I refer to in Chapter 4 (*sarabande*, *bourée*, and *menuet*), with a brief mention of other forms when appropriate, to illustrate my argument. The *sarabande* is an example of an often technically difficult, slower, ornamental dance. In comparison, the *bourée* and *menuet* are quicker, playful dances and are often repetitive. These three dances were commonly performed in the eighteenth

century and allow us to consider different styles and recommendations for dancing and playing music to accompany dance.

The following discussion looks first at the general comments made by European music writers from 1690-1750 on how to play French dance music. Most notably, they recommend that musicians are familiar with dancing. I then discuss tempo recommendations, which is the focus of many treatises, followed by affect descriptions and, finally, musical execution including bowings, articulation and ornamentation. I draw not only from early French treatises but also early German treatises because they often provided more detailed advice needed by those trying to recreate the French style in other languages and locations.

Dance Music in Musical Treatises (1690-1750)[48]

Tempo

Georg Muffat (1653-1704), although German, provided one of the most useful descriptions of how to play French dance music. His intention was to provide a simple explanation of the French court style,[49] which consisted predominantly of dance music, to German readers. Most relevant to my argument is Muffat's advice, in *Florilegium Secundom,* in which he claims that the best way to establish tempo in dance music is to have knowledge of the dance, 'to become acquainted with the proper tempo of the Ballets, what helps the most… is an understanding of the art of the dance.'[50] A decision can be made about the quickness or slowness of a piece of dance music, dependent on the number and types of steps in a bar. Muffat also advised that;

[48] A broader time period has been chosen for this section to include all prominent writing on the topic. These later manuals, however, often refer to earlier performance practices. The time frame for the scores and choreography used in the experiments for this thesis is 1690-1730.
[49] Susan Lewis Hammond, *Music in the Baroque World: History, Culture, and Performance* (United Kingdom: Routledge, 2018), 139-141.
[50] David Wilson, ed., *Georg Muffat on Performance Practice: The Texts from Florilegium Primum, Florilegium Secundum, and Auserlesene Instrumentalmusik: A New Translation with Commentary* (Publications of the Early Music Institute. Bloomington: Indiana University Press, 2000), 42.

> First, one knows well the tempo ascribed to each piece. Second, that one holds to that tempo with constant steadiness… Third, that one somewhat alters and accommodates the values of certain notes for greater grace.[51]

Following this advice ensures that dancers have stability of tempo while also allowing musicians to highlight key moments. As such, the BMDN developed in my research highlights the number and types of steps in a bar which compensate for the experience of a dancer and let musicians make an informed decision about tempo and small tempo changes.

Muffat recommends stability in tempo, choosing the correct tempo and altering it only within a bar. But this prompted me to ask: how can musicians know the correct tempo to choose without learning to dance? Primary sources provide general guidelines, which I discuss below, but my BMDN allows musicians to decide on tempo based on the number and types of steps. Combined with the guidelines in primary sources, this could lead to what may be considered a choice of a 'correct' tempo, especially when, as in contemporary situations, the musician may not necessarily know the dance. A 'correct' tempo will be one that is comfortable to dance to and aligns with the affectual description and the difficulty of the music.

In the following paragraphs, I occasionally refer to affect and tempo interchangeably, as often eighteenth-century indications of affect can be applied to tempo, for example, *grave* may be played slowly. Johann Philipp Kirnberger (1721-1783)[52], Michel Pignolet Monteclair (1667-1737)[53], Georg Muffat, Michel Corrette (1707-1795)[54], and Johann Joachim Quantz (1697-1773)[55] all described the tempo of time signatures and of dance forms. Kirnberger (1776) said that 'every dance has its definite tempo, determined by the meter and the note values that are employed in that dance;'[56] however, the rule of time signatures and the recommended tempo of dance forms do not always align. For example, Monteclair in 1709 correlated the tempo and

---

[51] Wilson, *Georg Muffat on Performance Practice,* 42.
[52] Johann Philipp Kirnberger, *Die Kunst des Reinen Satzes in der* Musik (Berlin und Königsberg: G.J. Decker und G.L. Hartung, 1776).
[53] Michel Pignolet Monteclair, *Principes de Musique* (Paris, 1736).
[54] Michel Corrette, *Méthode Raisonnée Pour Apprendre Aisément À Joüer De La Flûte Traversiere* (Paris, 1753).
[55] Johann Joachim Quantz, *Versuch einer Anweisung die Flöte traversier zu spielen* (Berlin, 1752).
[56] Kirnberger, *Die Kunst des Reinen Satzes in der* Musik, 106, quoted in: Lawrence M. Zbikowski, "Dance Topics I: Music and Dance in the *Ancien Régime*," in *Oxford Handbook of Topic Theory*, ed. by Danuta Mirka (Oxford University Press, 2014), 144.

the time signature; however, thirty years later, he contradicted his assertions, saying that the rule of time signatures could no longer be trusted.[57] Additionally, Monteclair confirmed the unreliability of time signatures when he stated that dance music could be marked with differing time signatures; for example, a *sarabande* could be in 3/4 or 3/2. Hence, the indications for the tempo of dance music as provided by early theorists are more reliable than the theory of time signatures. Thus, we can confidently believe Monteclair when he wrote that *sarabandes* and *passacailles* are *grave* [slow, serious], *chaconnes* and *menuets* are *gay*, and *passepieds* are *trés leger* [very light] (**Table 2.1**).[58]

Similarly, Muffat provided some brief descriptions of tempo in *Florilegium Primum.* First, that musicians follow the general rules of metre: cut common is twice as fast as common time, 3/2 is held back, and 3/4 is lively, except in *sarabandes.* The time signature of the *sarabande* is a recurring issue across many of these manuals. Michel Corrette, for example, wrote in 1753 that 3/2 is used for a slower movement than 3/4, and sometimes used for a *sarabande*.[59] These descriptions confirm Monteclair's statement that the rule of time signatures is not always correct. More relevant are Muffat's comparative descriptions of the tempos of dance forms: a *gavotte* in cut common is slower than a *bourée,* also in cut common,[60] *minuets* and *courantes* are 'frisch*'* [fresh],[61] while *gigues* and *canarie*s are fastest.[62]

Muffat and Corrette imply that tempo can be decided through a comparison between dance types. Similarly, Johann Joachim Quantz (1697-1773), who, as an example, wrote in *On Playing the Flute*, that the *sarabande* has the same motion as an *entree, loure* and *chaconne*.[63] Beverly Jerold in her article on metre and tempo suggested that Quantz's tempo markings should also be interpreted, similarly to Muffat and Corrette, as comparisons between dances.[64] Due to this comparative approach, these descriptions of the tempo of dance forms need to be

[57] Robinson, *Principes de Musique,* 36.
[58] Robinson, *Principes de Musique,* 36.
[59] Corrette, *Méthode*, 4-5.
[60] Wilson, *Georg Muffat on Performance Practice,* 17.
[61] Hermann Rietsch, *Georg Muffat. Florilegium Primum für Streichinstrumente* (Austria: Artaria and co, 1894), 11.
[62] Wilson, *Georg Muffat on Performance Practice,* 17.
[63] Quantz, *Versuch*, 270.
[64] Beverly Jerold, "Numbers and Tempo: 1630-1800," *Music Performance Issues: 1600-1900,* (2016): 236.

read chronologically and are most helpful to readers who already understand each dance type and use the texts as simply a reminder.

Character and Affect

These early musical treatises offer brief descriptions regarding the character and affect of each dance type (**Table 2.1**).[65] Quantz' and Johann Mattheson's (1681-1764) books are most useful for this aspect of interpreting dance music, but each description leaves many gaps for today's musicians to fill. Quantz described the *sarabande* as 'mit einem etwas annehmlichern Vortrag gespielt' [played with a more agreeable delivery (than the Entrée, Loure and Courante, which he describes as 'prächtig'–splendid, brilliant)],[66] while Mattheson described the *sarabande* as expressing 'Ehrsucht' [ambition].[67] Combining these, one might suggest that *sarabandes* have assertive but gentle grandeur. Quantz described the *bourée* and *rigaudon* as executed in a 'Lustig' [gay, funny] manner,[68] while Mattheson wrote of the *bourée* 'Zufriedenheit einem gefälligen Wesen' [contentment of a pleasing character].[69] Finally, for the *menuet,* Mattheson described the affect as 'mässige Lustigkeit' [moderate cheerfulness][70], which Quantz said should be played 'hebend' [elevated, springing].[71] These descriptions leave a lot for today's musician to imagine, for example, how they might evoke this 'ambition.'

Table 2.1 Descriptions of three example dance forms in late seventeenth and eighteenth-century treatises

Dance Type	Monteclair	Muffat	Quantz	Mattheson
Sarabande	Grave [slow, serious]		More agreeable delivery than the Entrée, Loure, and Courante.	Ehrsucht [ambition]

[65] Affect meaning: the emotional states of passions which music evokes. Buelow, "Affects, theory of the." *Grove Music Online.*
[66] Quantz, *Versuch*, 270.
[67] Johann Mattheson, *Der Vollkommene Capellmeister* (Hamburg, 1739), 230. Translation from Ernest C. Harris, *Johann Mattheson's Der Vollkommene Capellmeister* (Michigan: UMI Research Press, 1981), 461.
[68] Quantz, *Versuch*, 271.
[69] Mattheson, *Der Vollkommene Capellmeister*, 226.
[70] Mattheson, *Der Vollkommene Capellmeister*, 224.
[71] Quantz, *Versuch*, 271.

Bourée			Lustig [gay, funny]	Zufriedenheit einem gefälligen wesen [contentment of a pleasing character]
Menuet	Gay	Frisch [fresh]	Hebend [elevated]	mässige Lustigkeit [moderate cheerfulness]

Musical Execution

These eighteenth-century musical treatises occasionally describe certain elements of musical execution, such as accent placement, note length, ornamentation, or bowing. In general, for French dance music, Quantz said that the articulation is 'more detached than slurred.'[72] Of the *sarabande*, Quantz suggests employing the use of overdotting; to do this he said that the crotchet or quaver following the dotted note 'must not be [the] literal value but very short and sharp.'[73]

A danced *sarabande* does not indicate an accent on the second beat in the bar, however, if the music is accented on this beat, there could be a contrast between dance and music. Mattheson, in the *sarabandes* included in his collection of harpsichord suites,[74] wrote *tremblements* (an ornament which fluctuates between the note and the note above) on the dotted crotchets on the second beats in each bar. This suggests he wanted an accent on this beat, which could, when used sparingly, create contrast between dance and music, creating a dialogue between dancers and musicians.

In a *bourée*, emphasis on the first beat of each bar could give dancers necessary grounding. Of the *bourée* and *rigaudon*, Quantz suggested short and light bow strokes and a pulse on each bar.[75] This suggests that these dances, and others, may be counted as each bar having one beat, which Muffat reiterated when he explained bowing patterns. His main point was that down-bows lie on the *thesis* (the downbeat, first beat of each bar) and up-bows on every other beat,[76] which emphasises the first beat of every bar.

[72] Johann Joachim Quantz, *Johann Joachim Quantz On Playing the Flute,* trans. Edward Reilly (Faber and Faber, London: 1966), 290.
[73] Quantz, *On Playing the Flute*, 290.
[74] Johann Mattheson, "Suite Premiere Pour Le Clavecin," London: I.D. Fletcher, 1714, 6.
[75] Quantz, *On Playing the Flute*, 291.
[76] Wilson, *Georg Muffat on Performance Practice*, 34-41.

Grassineau's English translation of Brossard's *Dictionaire De Musique* was the one eighteenth-century musical description that mentioned the actual dance.[77] In this, Grassineau described *menuets* as containing a *coupé* (a simple step with no change of weight), 'a high step' which could be interpreted as a 'rise,' (since the first movement of a *pas de menuet* is a step onto rise), and a *'balancé'* which is a hold on the toe.[78] He does not describe their specific relevance to the music; however, his inclusion of the steps indicates that knowledge of dance steps may assist musicians in executing the music.

These eighteenth-century treatises provide a good starting point for playing French dance music but there is, nevertheless, a lot of assumed knowledge which has been lost over the passage of time. My BMDN aims to fill those gaps in assumed dance knowledge, to assist musicians in performing for dancers.

[77] Apart from Monteclair's description of the *glissé* as I described in Chapter 1.
[78] James Grassineau, *A Musical Dictionary* (London: J. Wilcox, 1740), 131-132.

Finding Advice for Musicians in Dance Treatises (1690-1750)

Dancing treatises naturally focus on teaching dancers and include few instructions for musicians; however, dance instructions can sometimes be applied to musical performance. John Weaver (1673-1760) wrote in *A History of Dancing*, that each style of dance requires a particular approach: '…the brisk requires vigour, lightness, agility and quick springs, with a steadiness and command of the body...'[79] These requirements can easily be applied to musical performance; the brisk dances, *bourée* and *rigaudon,* for example, use light bowings or articulation, short notes, and strict metre and tempo. The slower dances, such as *sarabande* and *chaconne,* require a softer, more graceful approach while still maintaining a strict metre and a driving, regular motion. As Weaver stated: '... the grave (which is the most difficult) [requires] softness, easy bendings and risings, and address; and both [brisk and grave] must have air and firmness, with a graceful and regulated motion of all parts…'[80] Similarly, Pierre Rameau wrote that the dancer should not be stiff and should always have a sense of ease.[81] This effortless performance can also be applied to musicians.

Awareness of the alignment of steps within a bar of music allows musicians to adjust to the intensity and energy of the dance. In his 1704 *Traîté de la Cadance,* included at the beginning of a collection of dances, Feuillet provided examples of where each step aligns with the music (**Figure 2.1)**.[82] Feuillet divided each step according to the bar so that the dancer is aware where they need to be at each moment of the music. Weaver, in his translation of Feuillet's manual, stated that: 'cadence or time, is a right understanding of the different measures, and observations of the most remarkable places in the Tune.'[83] This indicates that there are moments in a performance where dance and music should align, which will assist the energy and flow of movements and synchronisation between dancers and musicians.

[79] Weaver, *History of Dancing*, 163.
[80] Weaver, *History of Dancing*, 163.
[81] Rameau, *The Dancing Master*, 2.
[82] Feuillet, *Traîté de la Cadance* in *Recüeil de Dances* (Paris, 1704), 5-10.
[83] John Weaver, *A Small Treatise of Time and Cadence in Dancing* (London, 1706), 5.

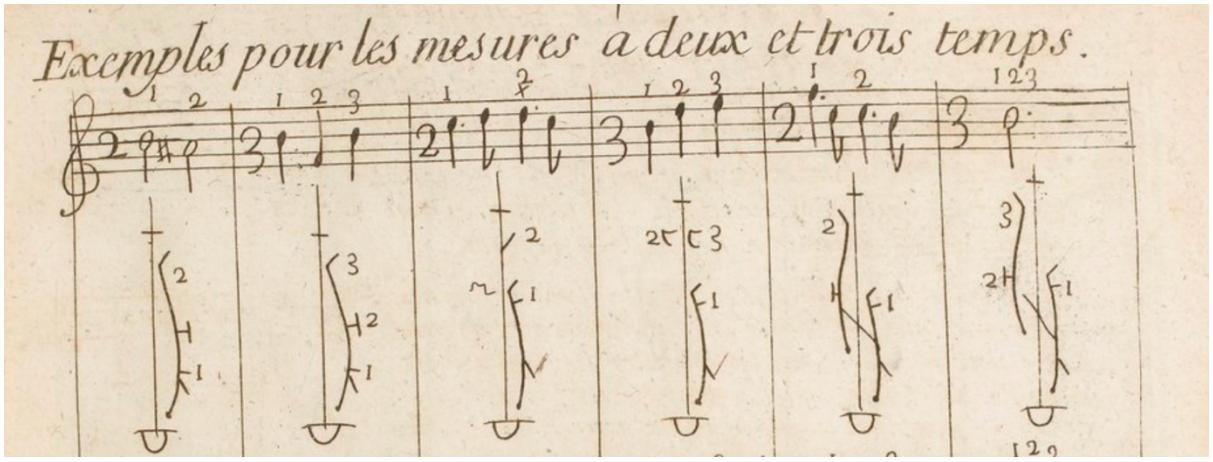


Figure 2.1 Feuillet, *Traîté de la Cadance* in *Recüeil de Dances* (Paris, 1704), 9.

Feuillet included Pendulum markings in some of his compositions, which have the potential to be quite ground-breaking and many scholars have endeavoured to reconstruct their tempo marking equivalent **(Figure 2.2)**.[84]

[84] Such as Rebecca Harris-Warrick,"Interpreting Pendulum Markings for French Baroque Dances," *Historical Performance 6/1* (1993): 9-22 and Beverly Jerold, "The French Time Devices Revisited," in *Music Performance Issues: 1600-1900*, 193-214: Boydell & Brewer (2016).

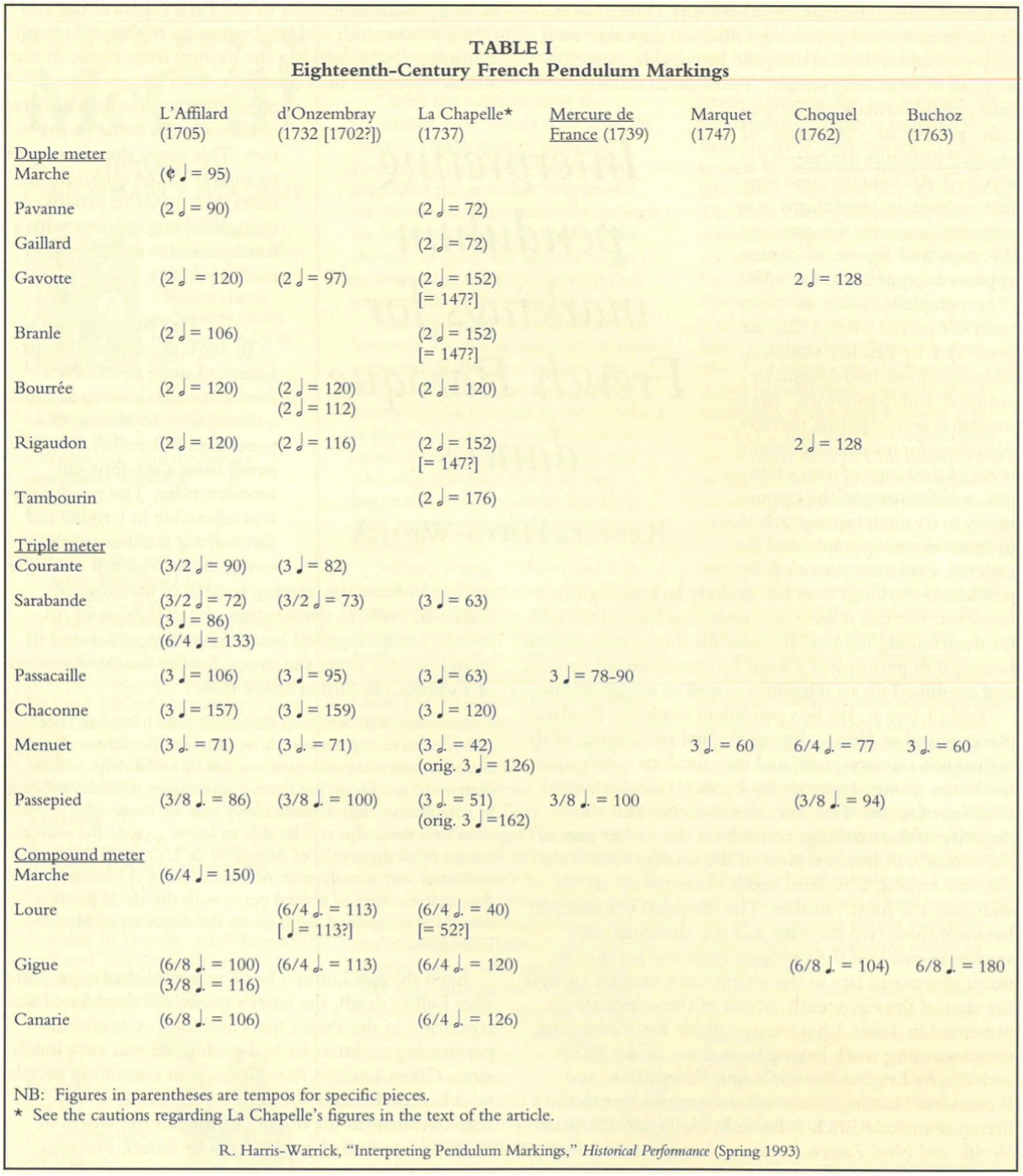


TABLE I
Eighteenth-Century French Pendulum Markings

	L'Affilard (1705)	d'Onzembray (1732 [1702?])	La Chapelle* (1737)	Mercure de France (1739)	Marquet (1747)	Choquel (1762)	Buchoz (1763)
Duple meter							
Marche	(¢ 𝅗𝅥 = 95)						
Pavanne	(2 𝅗𝅥 = 90)		(2 𝅗𝅥 = 72)				
Gaillard			(2 𝅗𝅥 = 72)				
Gavotte	(2 𝅗𝅥 = 120)	(2 𝅗𝅥 = 97)	(2 𝅗𝅥 = 152) [= 147?]			2 𝅗𝅥 = 128	
Branle	(2 𝅗𝅥 = 106)		(2 𝅗𝅥 = 152) [= 147?]				
Bourrée	(2 𝅗𝅥 = 120)	(2 𝅗𝅥 = 120) (2 𝅗𝅥 = 112)	(2 𝅗𝅥 = 120)				
Rigaudon	(2 𝅗𝅥 = 120)	(2 𝅗𝅥 = 116)	(2 𝅗𝅥 = 152) [= 147?]			2 𝅗𝅥 = 128	
Tambourin			(2 𝅗𝅥 = 176)				
Triple meter							
Courante	(3/2 𝅗𝅥 = 90)	(3 𝅗𝅥 = 82)					
Sarabande	(3/2 𝅗𝅥 = 72) (3 𝅗𝅥 = 86) (6/4 𝅗𝅥 = 133)	(3/2 𝅗𝅥 = 73)	(3 𝅗𝅥 = 63)				
Passacaille	(3 𝅗𝅥 = 106)	(3 𝅗𝅥 = 95)	(3 𝅗𝅥 = 63)	3 𝅗𝅥 = 78-90			
Chaconne	(3 𝅗𝅥 = 157)	(3 𝅗𝅥 = 159)	(3 𝅗𝅥 = 120)				
Menuet	(3 𝅗𝅥. = 71)	(3 𝅗𝅥. = 71)	(3 𝅗𝅥. = 42) (orig. 3 𝅗𝅥 = 126)		3 𝅗𝅥. = 60	6/4 𝅗𝅥. = 77	3 𝅗𝅥. = 60
Passepied	(3/8 𝅗𝅥. = 86)	(3/8 𝅗𝅥. = 100)	(3 𝅗𝅥. = 51) (orig. 3 𝅗𝅥 =162)	3/8 𝅗𝅥. = 100		(3/8 𝅗𝅥. = 94)	
Compound meter							
Marche	(6/4 𝅗𝅥 = 150)						
Loure		(6/4 𝅗𝅥. = 113) [𝅗𝅥 = 113?]	(6/4 𝅗𝅥. = 40) [= 52?]				
Gigue	(6/8 𝅗𝅥. = 100) (3/8 𝅗𝅥. = 116)	(6/4 𝅗𝅥. = 113)	(6/4 𝅗𝅥. = 120)			(6/8 𝅗𝅥. = 104)	6/8 𝅗𝅥. = 180
Canarie	(6/8 𝅗𝅥. = 106)		(6/4 𝅗𝅥. = 126)				

NB: Figures in parentheses are tempos for specific pieces.
* See the cautions regarding La Chapelle's figures in the text of the article.

R. Harris-Warrick, "Interpreting Pendulum Markings," *Historical Performance* (Spring 1993)

Figure 2.2 Rebecca Harris-Warrick, Table of Pendulum Markings and Tempo Marking Equivalence.[85]

These markings (**Figure 2.2**) appear to align with the musical treatise descriptions: a *passepied* is faster than a *menuet, gigues* and *canaries* are fastest and so on. This similarity is a sign that the markings can be used as a basis for establishing tempo. The main issue that

[85] Harris-Warrick, "Interpreting Pendulum Markings," 10.

arises when using pendulum markings as a means for determining the tempo of a dance type is that many were intended for a particular choreography or occasion and therefore cannot be generalised across all of the same dance type. For the most part, reconstruction of the pendulum markings suggests that pieces intended for dancing and dance pieces intended for listening would have been played at the same speed in eighteenth-century France.[86] There are, nonetheless, discrepancies. As an example, Harris-Warrick suggests that there was a wide range of *sarabande* pendulum markings, meaning one would first need to determine the type of *sarabande* being performed.[87] For this thesis, tempos are determined in Chapter 4 by practice and physicality as well as the intended affect. I mention the pendulum markings and their various interpretations so that we can compare and see whether musicians today are inclined to choose tempos, when aware of the dance, that are in line with potential historical practices.

As these dance treatises suggest, an understanding of the principles of dance is useful to musicians in explaining the style of movement and how that can be reflected in musical performance as well as in deciding a tempo basis. I aim to put these ideas into a form that favours the language already familiar to musicians – markings on a stave.

Recent Advice for Musicians 1950-2020

Recent scholarship in this field mostly focuses on teaching musicians how to play music composed in a dance style,[88] rather than how best to play music for a dancer.[89] Many of these books and articles, however, stress the important role that learning to dance plays in musicians' understanding of both forms of dance music. Here, I present elements most useful to musicians in playing for dancers as they appear in each text and discuss how my BMDN may fill the gaps I have observed.

---

[86] Harris-Warrick, "Interpreting Pendulum Markings," 14.
[87] Harris-Warrick, "Interpreting Pendulum Markings," 13.
[88] Music intended for musical listening and not to be danced to.
[89] Judy Tarling, *Baroque String Playing for Ingenious Learners* (Corda Music Publications, 2001), Betty Bang Mather, *Dance Rhythms of the French Baroque: A Handbook for Performance* (Bloomington: Indiana University Press, 1987), Meredith Little and Natalie Jenne, *Dance and the Music of J. S. Bach, Expanded Edition* (Bloomington: Indiana University Press, 2001).

Music in a Dance Style

Many books that advise musicians on how to play dance music focus on explaining the musical execution of music composed in a dance style but not intended for accompanying dancing. These books provide a good basis for musicians when they are first learning how to perform French baroque dance music and assist in interpreting eighteenth-century treatises. For instance, in *Baroque String Playing for Ingenious Learners*, Judy Tarling provides an outline of each dance style. The *bourée* is 'easy-going, relaxed and not at all serious… medium fast.' Of the *menuet*, Tarling describes common phrasing and that the dance bar is six beats rather than three.[90] The *sarabande* has a majestic and serious style which can be achieved by overdotting, lingering on dissonant harmonies and using expressive ornaments.[91] Tarling's writing provides a guide for how to play music in a dance style but, I contend, provides little information to assist musicians in playing for dancers. For instance, she does not mention how musicians' choices of accent, tempo, and ornamentation, could assist dancers in synchronizing their body movements and in their delivery of character and affect.

Similarly, Betty Bang Mather's *Dance Rhythms in the French Baroque* focuses mostly on explaining each dance style. Mather adds some explanation of dance steps and recommends musicians try each step.[92] She discusses the step units and how they align with rhythm and harmony; for example, in *La Bourée d'Achille* the leaps heighten the drama created by the harmony.[93] I will revisit the step and music correlation in the next section. There are elements of Mather's work which have been useful to my research: leaps, which can illustrate climactic moments, should be included in the BMDN, as should other moments when the steps reflect or alarmingly counteract the harmony or rhythm.

Meredith Ellis Little and Natalie Jenne's *Dance and the Music of J.S. Bach* also provides descriptions of each dance style.[94] Their descriptions are detailed, and they introduce the dance itself; for the *menuet* they refer to dancing master Pierre Rameau's treatise. The focus of their

[90] Tarling, *Baroque String Playing for Ingenious Learners*, 11.
[91] Tarling, *Baroque String Playing for Ingenious Learners,* 119.
[92] Mather, *Dance Rhythms of the French Baroque*, 101.
[93] Mather, *Dance Rhythms of the French Baroque*, 109.
[94] Little and Jenne, *Dance and the Music of J. S. Bach.*

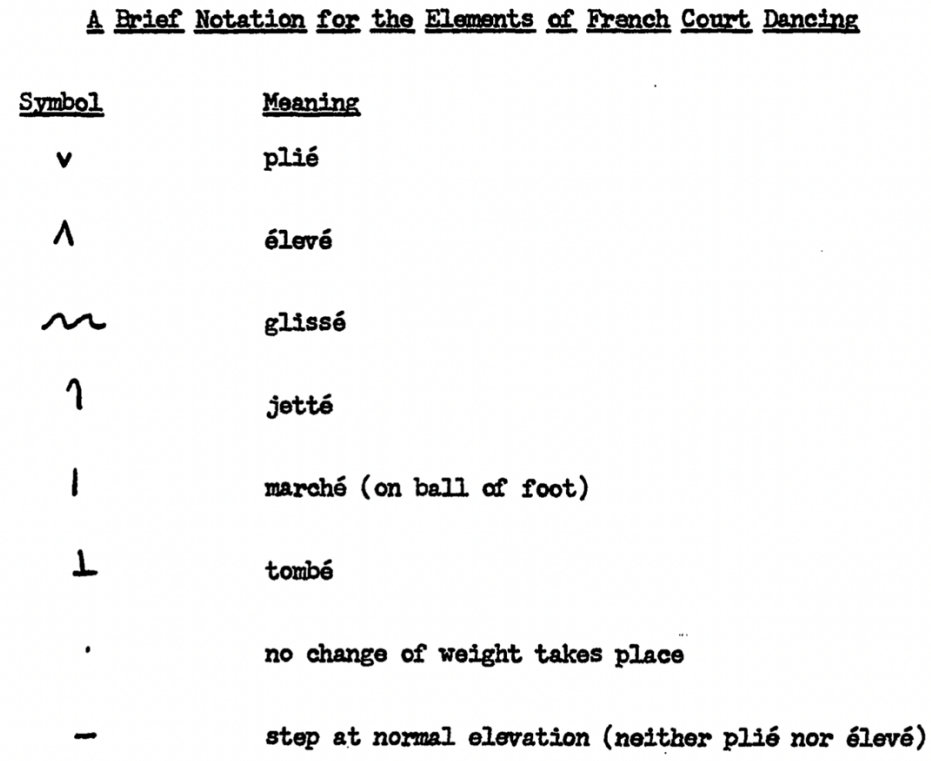
book, however, is on relating these dance styles to J.S. Bach's music, of which little, if any, were intended for practical dancing.

As explained, these books provide an ideal starting point for musicians new to French baroque dance music but, as with the early treatises, they do not explain how best to play for dancers. So, while these books have been useful in developing my BMDN, I have found that the BMDN will provide much more practical assistance to musicians when playing for dancers than the books alone can provide.

Understanding the Relationship Between Steps and Music

Although most modern scholarship focuses on playing music in a dance style (whether or not it is intended for actual dancing), some work has been focused on playing for dancers. Most of this scholarship highlights the need for musicians to understand the relationship between steps and music, as knowledge of the steps in a dance can assist in showing accent placement and tempo changes. In 1967, Little designed what she described as a 'brief notation'. Her system was created so that musicians could see how music and dance 'fit together.'[95] She took the basic steps of dancing and created symbols to represent each step (**Figure 2.3)**.[96]

[95] Ellis, "The Dances of J.B. Lully (1632-1687)," 31.
[96] Ellis, "The Dances of J.B. Lully (1632-1687)," 31.


A Brief Notation for the Elements of French Court Dancing

Symbol	Meaning
v	plié
∧	élevé
∿	glissé
⅂	jetté
|	marché (on ball of foot)
⊥	tombé
·	no change of weight takes place
–	step at normal elevation (neither plié nor élevé)

Figure 2.3 Little (née Ellis)'s symbols for her 'Brief Notation'[97]

These symbols could be combined to notate common step patterns in baroque dance. Little (née Ellis) used this notation to analyse the music of J.B. Lully,[98] Feuillet's *La Bourgogne*,[99] and the dance music of J.S. Bach.[100] When applying the notation to music, Ellis grouped each step pattern to show how the dance does not always exactly align with the music. Ellis's 'brief notation' works exactly for her purpose: to visually show the relationship between score and choreography. Her basic symbols are easy to learn and follow; however, I found that using a similar notation in a practical setting requires a different approach. Her symbols do not reflect a flowing line of movement but rather require one to sit down and study the markings. Her symbols for *plié* and *élevé* are also remarkably like the symbols used in string music to indicate up-bow and a down-bow and, if used in performance, could potentially confuse a string

[97] Ellis, "The Dances of J.B. Lully (1632-1687)," 31.
[98] Ellis, "The Dances of J.B. Lully (1632-1687)."
[99] Meredith Ellis Little, "The Contribution of Dance Steps to Musical Analysis and Performance: "La Bourgogne"," *Journal of the American Musicological Society* 28, no. 1 (1975): 112-24.
[100] Little and Jenne, *Dance and the Music of J. S. Bach.*

player. Additionally, Ellis does not notate ornamental steps, such as *battu* or *rond,* and *tourné* are notated only as a rise.

Other scholars have analysed eighteenth-century dance and music to understand the rhythmic relationship between steps and music. These scholars have concluded that many eighteenth-century dances included counter-rhythms to create tension with the music. Anne Louise Witherell's 1981 PhD dissertation focused on Louis Pécour's 1700 "*Recueil de Dances.*" In this thesis she explored how Pécour sometimes ignored the musical rhythm to purposely create counter-rhythms between dance and music, promoting tension.[101] Similarly, Judith Schwartz analysed the *Passacaille* from Lully's "Armide" observing that:

> ... the interplay of both rhythm and gestural relationship between the dance and the music adds levels of conflict and resolution, tension and release that affect the rhetorical outcome of the work.[102]

This interplay is often what creates interest and are the moments, Witherell advises, that need to be emphasised. In understanding such steps we can also look to Julie Andrijeski, who says that accented beats are indicative of a rise in the dance, and that often a long note is accompanied by movement in the dance, meaning the note needs shape and cannot be slowed.[103] This raises the question: how is a musician supposed to know these moments without being intimately familiar with the dance itself or being told by the dancer? My BMDN is intended to fill this gap, so that musicians can see a visualisation of these contrasting rhythms and use the knowledge to enhance communication between dancers and musicians.

Learn to Dance

A common theme in recent literature, is the recommendation that musicians learn how to dance to understand dance music. For example, in her article, *Dance under Louis XIV and XV: Some Implications for the Musician,* Little concludes by encouraging musicians to seek dance

---

[101] Anne Louise Witherell, "Louis Pecour's 1700 "Recueil De Dances"" (Ph.D. diss., Stanford University, 1981).
[102] Judith L Schwartz, "The Passacaille in Lully's "Armide": Phrase Structure in the Choreography and the Music," *Early Music* 26, no. 2 (1998): 318.
[103] Julie Andrijeski, "Baroque Dance for Musicians: The Magazine of Historical Performance," *Early Music America* 24, no. 1, January 2018, 3.

training.[104] Similarly, Julie Andrijeski, who teaches baroque dance to musicians, writes about the importance of knowledge of dance in her article 'Baroque Dance for Musicians.' For Andrejeski, steps illustrate 'tension and release, action and reaction, and ebb and flow,'[105] which change according to the dance type. While I agree that learning dance helps a musician to understand the music, it is costly in time and money for musicians, and classes are often not readily available. My BMDN system will provide musicians with information about the dance, presented in an accessible and easy-to-learn format.

Finally, Dorothy Olsson argues that many musicians are too focused on choosing a dance tempo whereas accent, mood and movement characteristics are equally as important.[106] She further explains that knowledge of dance steps can assist musicians in understanding where accents are in the music and in determining the character and mood of the dance.[107] She recommends learning dance, which would in some way replicate the skill set of early musicians. Olsson also suggests that communication between the music director and the dance director is key to determining all the main characteristics of the music.[108]

Tempo

Another prolific recommendation is to understand dancers' needs, particularly when it comes to choosing tempo. As discussed in the sections on primary dance and music scholarship, pendulum markings and tempo-indicative words can assist in determining tempo. There is, however, another approach: to look directly at the dancer's needs and ability. Esther Coorevitz and Dirk Moelants conducted a study into this practical side of choosing a tempo according to the dance. They recommend that the tempo should reflect the dance and dancer's needs; for example, more intricate steps would require a slower tempo.[109] The tempo should also reflect the character of the dance; a dance with sliding steps and few leaps would be slower and more serious than a dance with leaps and jumps, which would be a more joyful dance. The tempo also depends on what the dancer is trying to achieve; for example, a slow *plié* would evoke a

[104] Little, "Dance under Louis XIV and XV: Some Implications for the Musician," 340.
[105] Andrijeski, "Baroque Dance for Musicians," 2.
[106] Dorothy Olsson, "Dance," In *A Performer's Guide to Seventeenth-Century Music*, ed. Stewart Carter, (Indiana University Press, 2012), 408.
[107] Olsson, "Dance," 408-409.
[108] Olsson, "Dance," 423.
[109] Coorevits and Moelants, "Tempo in Baroque Music and Dance," 526.

different mood to a quick one.[110] Mojca Gal explains that tempo also depends on the dancers' expressive choice. For example, extending the leg higher or leaping further takes more time and a slower tempo would be more appropriate.[111] In order for the musician to understand the quality of the steps, they need to be aware of the dance, which is the gap that I propose my BMDN fills.

This discussion about the advice written to musicians in the eighteenth century and today reveals how the consistent recommendation is that musicians understand the physical movement and rhythm of the dance. My notation, which I present in Chapter 3, offers musicians knowledge about the dance in a language accessible to them and fills many of the gaps in eighteenth-century and modern scholarship.

[110] Coorevits and Moelants, "Tempo in Baroque Music and Dance," 526.
[111] Mojca Gal, "Matching Music and Dance in the 18th Century: Aesthetic Issues in Historically Informed Performance Practice," (paper presented at the Tanz als Musik - Zwischen Klang und Bewegung, Schola Cantorum Basiliensis, 2021).

Chapter 3

Introducing the Baroque Musical-Dance Notation

In this chapter, I formally introduce the Baroque Musical-Dance Notation (BMDN), a new system for notating dance in an accessible format for use by musicians. I explain the process of developing the notation, and provide a guide for reading, writing, and using the notation.

Developing the Notation

The goal of the BMDN is to provide musicians with easy to access knowledge about eighteenth-century dance. Musicians should gain an understanding of the movement of dance and be able to apply that to music. After musicians have had an experience of playing with the BMDN, the goal is that they will not only understand the particular choreography with which they worked, but have a general understanding of the dance, which they can then adjust to different choreographies. The BMDN should also provide musicians with a better understanding about how to play for dancers in general.

To develop the BMDN, three main sources were consulted: eighteenth-century dance and musical treatises, as described in Chapter 2, my own experience as a dancer trained in baroque (and classical) styles and as a musician trained in historical performance, and the experiences of professional dancers who specialise in baroque dance. I used the primary treatises to establish the building blocks of eighteenth-century dance and my own and others' practical experiences to determine how best musicians' knowledge of dance can impact the music and assist a dancer physically and emotively.

As explained in Chapter 1, the Beauchamp-Feuillet notation was the main influence for my notation. So, to begin constructing the BMDN, I first deconstructed Beauchamp-Feuillet notation into the following key elements:

- step type;
- step-unit;
- number of steps per bar;
- floor pattern (figures);

- danced bars;
- order of the steps;
- alignment of the steps with the music;
- foot (right or left);
- number and prescribed gender of dancers;
- title of the dance (sometimes the opera that it came from);
- original court or theatrical dancer;
- the musical melody; and
- pages and phrases.

These elements were critically considered as to their significance in relation to musical performance. Below is an evaluation of each element and the ways they are or are not useful in the creation of my BMDN system.

Step type

Step type is the most important element of the BMDN. It is crucial when identifying the type of note execution, tempo, affect, ornamentation, articulation, and accent. Eighteenth-century French dance was made up of three principal steps: *plié* (bend), *élevé* (rise)[112] and *pas simple* (simple step). In 1721, John Weaver described: '… this sinking [*plié*], and rising [*élevé*], seems to be to Dancing, as light and shades are to painting.'[113] These two steps, as well as the *pas simple* [the dancer remains on the same level (on rise or flat foot) when taking a step] are the essential building blocks of all dance step patterns. Additionally, there are four basic accented or ornamental steps: *jetté*[114]*/sauté* (jump/spring), *pirouette/tourné* (turn/spin), *tombé* (fall) and *glissé* (slide). Thus, the steps chosen for my notation are *plié, élevé, pas simple, jetté, pirouette, tombé* and *glissé*. These basic steps make up most dances from the late seventeenth century to mid-eighteenth century in France. The inclusion of seven basic steps means that both theatrical and court dance can be notated in the BMDN. In the conclusion (Chapter 5) I discuss the addition of two more ornamental steps.

---

[112] Eighteenth-century French writers did not classify *pliés* and *élevés* as steps but rather changes of weight. For this thesis, I decided to include them as steps as I want musicians to be able to identify these as movements as equally important to other 'steps.'
[113] John Weaver, *Anatomical and Mechanical Lectures Upon Dancing* (London, 1721), 138.
[114] This thesis retains original French spelling of *jetté.*

Step-unit

A step-unit is a combination of steps; for example*, pas de menuet*. These are not directly shown in the BMDN; however, in my experiment, the musicians were educated by me on how to identify where a certain combination of steps created a step-unit. This is not essential for the musician to know, as the individual steps show the accent, amount of movement, and type of movement, all of which can be used by musicians to identify their choice of accent and tempo; however, being able to identify step-units may assist in determining the style of dance if it is not indicated in the title, as well as allowing musicians to understand the BMDN more quickly.

Number, order, and alignment of steps in a bar

This refers to the number of steps in a bar, their sequence, and where the step coincides with the musical note. These three elements of the dance are essential for determining how a musician might perform the music, if they are to work with the dancer in a helpful manner. Including these elements in the BMDN means that musicians can see where accents lie and where the dancer needs extra rhythmic support, for example, a dancer performing a series of jumps cannot adjust the timing of their landing and would need more definite accents. In my experiment it was determined that, for musicians, it would be most useful if every step was included and written exactly above the note on which it occurred. The exact alignment on weak beats, however, is not always determined by the choreography but by the dancer; for example, the dancer might choose to linger on a hold and delay the next step by a half beat. If musicians are using the BMDN with a dancer present, then this alignment can be adjusted in the notation; if a dancer is not present then the notation will indicate the most likely possibility as it appears in Feuillet's 1700 *Chorégraphie,* or 1704 *Recüeil,* explanation.[115]

Floor pattern (figures)

The floor pattern is the direction the dancers follow on the floor. It indicates how much floor space the dancer is covering and shows the beauty in the symmetry of a dance, especially when there is a series of repetitive step-units. Symmetry is particularly evident in *La Bourée d'Achille* where the two dancers often create a mirrored path on the floor **(Figure 3.1**); however, I, and the musicians I worked with, found that the inclusion of a useful floor pattern in the BMDN was difficult while still maintaining the ability to read the music. My original

[115] Feuillet, *Choregraphie*. Feuillet, *Recüeil de Dances,* (Paris, 1704), 5-10.

BMDN included a small image of the floor pattern (figures) at the beginning of each phrase; however, these figures made it difficult for the musicians to see the correlation between the amount of space the dancer was using and the step type. In the experiments, the musicians did not find these figures positively influenced their playing in terms of engagement with the dancers. Words such as 'travelling', to illustrate that the dancers were moving a significant distance, were also included to test whether this influenced musical performance. This, too, seemed to have little influence on illustrating how far the dancers were moving. In Chapter 5, I revisit the idea of including the floor pattern and offer an alternative.

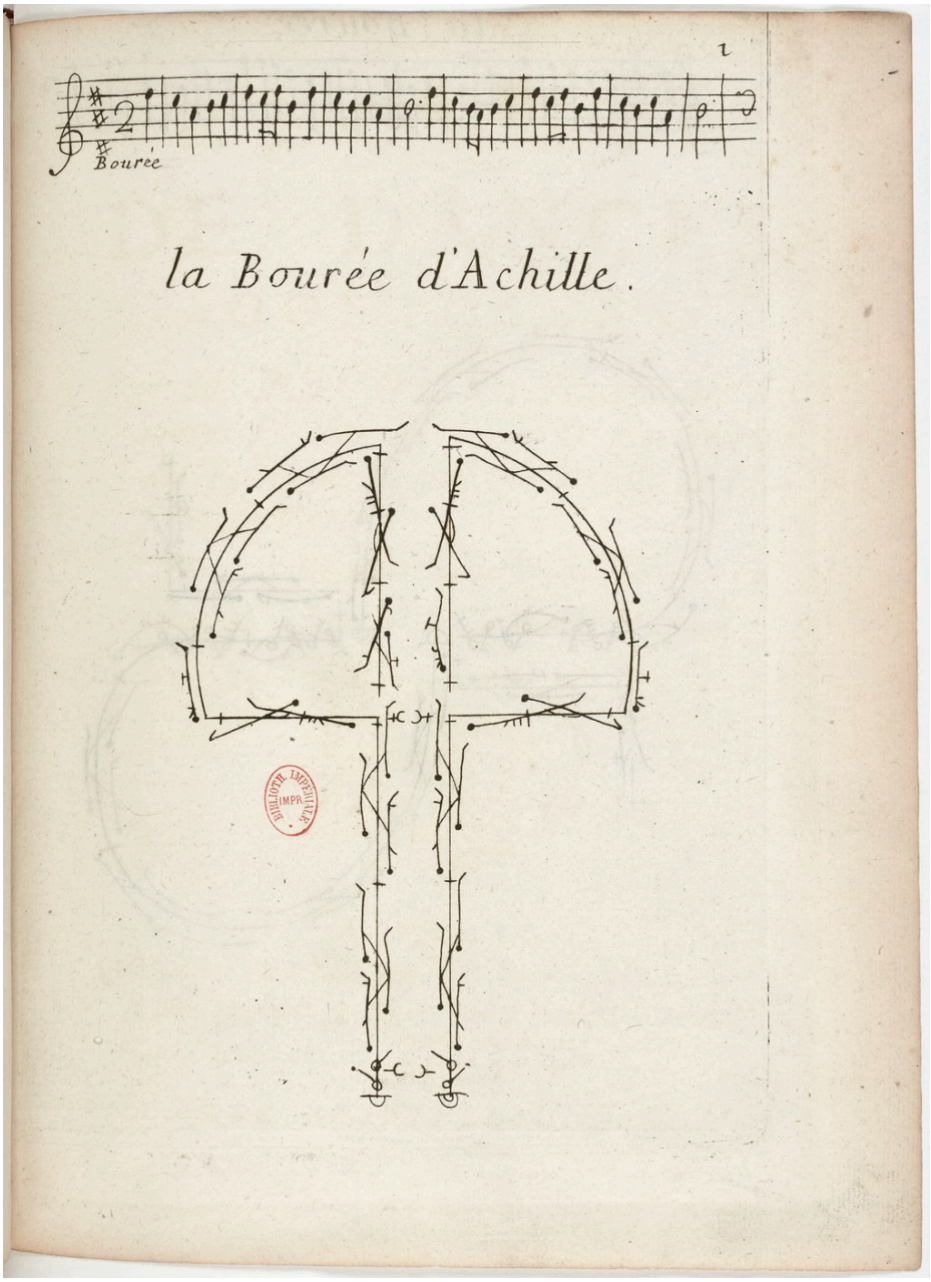


Figure 3.1 *La Bourée d'Achille*, Feuillet, *Recueil de dances* (Paris, 1700), 1.

Danced Bars

The bars in the BMDN, as they are in Beauchamp-Feuillet notation, are essential for being able to illustrate exactly where a step falls in the music. The BMDN symbols are placed above each line of music so that the barlines can be extended upwards to include the notation as part of the musical line. The danced bars are normally the same as the musical bars except in most instances of the *menuet* where one danced bar equals two musical bars.

Right or Left

During the experimental stage of the creation of the BMDN it became apparent that identifying which foot was moving was irrelevant to the music and more important was the type of step; however, I chose locations in the dance where the inclusion of which foot moved could subconsciously assist musicians in moving in a similar way to the dancers and thus alter the way they played. For example, in *La Bourée d'Achille*, the dancers alternate *pas de bourée* on right and left feet, creating a playful attitude between the dancers and the audience, as if they are teasing one another. For the experimentation, I included which foot was moving in a few circumstances to see if it influenced musical performance.

Number and prescribed gender of dancers

This refers to how many dancers are in the dance and their prescribed gender. It may be useful for musicians to know, in an historical context, whether the dancers are identified as male or female for two reasons: firstly, dances for a male were often more complicated than dances for a female and, secondly, female costuming is often more restrictive than male costuming. These variants need to be taken into consideration as gendered costumes can have different restrictions regarding weight and arm movement.[116] I chose not to explicitly include gender prescription in the BMDN as gender-relative intricacy of the dance will be apparent in the steps, and often even in the title of the dance (for example, *Sarabande pour une Femme* (Sarabande for a Woman)).

The number of dancers was also often included in the title of a dance. My research and experimentation suggested that when playing for more than one dancer, musicians could take

[116] Miranda C Penley, "Interpreting Musical Character in the Dances of Seventeenth-Century Ballets De Cour." (Masters Diss., The Florida State University, 2020), 45-50.

fewer liberties in freedom of tempo and expression. The music's main purpose becomes providing stability of tempo and regularity of accents for the dancers so that all performers are coherent. Playing for two dancers also required musicians to view the dancers together as a whole (rather than individually). Musicians were required to adjust to the overall feel of the whole body of dancers and not just the needs of one. These elements of Beauchamp-Feuillet notation (number and prescribed gender of dances) would not influence musical decision-making prior to collaboration with dancers, thus I have chosen not to explicitly include these elements in the BMDN.

Title of the dance and original dancer

Occasionally, the title of the dance is different to the title of the music. Knowing the original dancer can assist in providing context of when and why it was danced and in finding, for example, the opera that the dance may have come from. The title of the dance is included in the BMDN, and the name of the original dancer, if available. The sources for the dances used in the experimentation in Chapter 4 did not include the original dancer.

The music melody

The dance in its original form was written with the melody and not the bass. Therefore, the melody line would normally lead the ensemble. The dance was also taught with the dancing master playing the violin. In my experimental process, this idea is something that the musicians were taught in the workshop, and I found that it did not need to be directly transferred to the BMDN.

Pages (Phrases)

Normally, one page of Feuillet's dance notation equals one or two large dance phrases. These most commonly align with the larger musical phrases. Occasionally, the dance might continue over what one might consider the end of a musical phrase. I found that this would be implied in the steps, for example, a *pas de bourée* might continue through and into the next bar. In my experiment, I found that different interpretations of the danced phrasing could be made and that the steps indicate obvious dance phrasing, so I made the decision not to specifically notate the danced phrases in the BMDN.

Refining the Notation – Interviews with Professional Dancers

After the initial notation was developed, two professional dancers and choreographers were invited to participate in separate interviews to address the challenges faced when collaborating with musicians, and to consider how the BMDN might be refined to assist in the intention of helping musicians work with dancers. I interviewed Catherine Turocy, Director of New York Baroque Dance Company, and Philippa Waite, Director of Consort de Danse Baroque, United Kingdom. These interviews were conducted one-on-one with me. The structure was informal and discussion based. Each interviewee was asked to talk about their experience working with musicians and how the process of combining music and dance might be improved. These interviews aimed to establish the challenges musicians and dancers face when performing dance music, the elements that dancers would like to be improved, and how best the BMDN might assist.

Difficulties musicians and dancers face when working together

Musicians' understanding of the dance and the dancers' needs within that dance could, according to both Turocy and Waite, solve many of the challenges practitioners currently face when putting music and dance together. Turocy described how musicians often miss a sense of flow - the phrasing may be played too strictly in measure and a lack of breath evident between phrases. She expressed, for example, that sometimes in a 'minuet they [musicians] may be too careful about emphasising the downbeat every six beats that they miss the play of the inner beats in terms of rhythm and breath causing the flow to be stilted.' Waite added that, while there is a strict tempo in many dances, there is room for flexibility between phrases and within bars, and there are places where movement can only become clear to the musicians if they understand the dance. Waite also mentioned that the most difficult moment for musicians is when the dance moves from one rhythm to another, for instance from a *bourée* into a *menuet.* She said, 'when they're [musicians] playing lots of different dances it's hard for musicians to go from one dance to another…. Sometimes it isn't just the tempo, it's the way it is played.' Here it is difficult for musicians to immediately establish the right tempo and metre, especially when the dances are quite short.

To overcome these challenges, Waite often provides musicians with a metronome marking, as well as a musical introduction and repeat structure. For a quick and easy solution, these

provisions are useful. We agreed, however, that having a metronome mark on the score promotes the loss of organic movement in the music and the freedom of interpretation. Hence, because of this potential rigidity, metronome markings can inhibit the production of beautiful and unique performances.

Challenges also present themselves when a musician is unwilling to adapt, a situation which, unfortunately, both Turocy and Waite have faced. While this is useful to note, if a musician is unwilling to learn more about the dance, then there is nothing that can be done. In my experimentation, the musicians I worked with were open to experimentation, which resulted in a positive and explorative experience.

Positives of having live musicians

To dive a little further into the value of my notation and, in particular, the worth of dancers having live musicians, I asked Turocy and Waite whether the use of live musicians was always ideal. Their overwhelming response was that live music as opposed to a recording is always worthwhile. Having live music can be a fulfilling experience for musicians and dancers if everyone is willing to adapt and communicate. Live music changes the atmosphere and brings the performance to life; different expressions of the dance can be formed each time it is performed, eliminating the predictability that performing to a recording creates. Waite mentioned that 'the experience of working with different musicians means you get to express dance in different ways.' The dancer also becomes a part of the ensemble, giving the performance more coherence. These ideas from Turocy and Waite helped justify the aim of my experimentation with the notation: to have musicians and dancers become more closely related and to use that extra knowledge of dance, supplied by the BMDN, to create fresh interpretations of the music.

Teaching musicians how to dance

As explained in Chapter 2, while many recent articles recommend that musicians learn dance, they do not suggest how they might be taught. I wanted a perspective on how others, apart from myself, teach musicians to dance. Turocy and Waite frequently teach musicians baroque dance and I have been fortunate to attend classes run by both. Turocy focuses first on helping musicians find a space in the room that is their own, then moves to breathing and the use of movement to make musicians feel as though they are breathing with their whole body.

Both Turocy and Waite begin teaching the dance steps with walking in a duple metre and triple metre. They then move to basic steps, followed by ornaments such as beats (bouncing one leg off the other), turning, and jumping. Additionally, Turocy emphasises gravity and how to use this to release off the floor. Turocy spoke of noticing significant differences in musicians' playing after they had learnt even basic forms of motion and steps for dancing; she did not, however, expand on these differences.

Elements useful for musicians to know

Turocy spoke of finding it useful if musicians are aware of a consistent pulse, meaning a constant but energetic beat, with decoration happening around that. She added that musicians can change speed within that steady pace, but they are advised to never rush. Waite also encourages a strict tempo, but with slight variations within a bar, in order to enhance the accent on certain steps. Turocy also encourages musicians to form an understanding of where the dance phrase ends, where they can take a breath and continue to the next 'sentence', so to speak. Waite said that this does not always mean slowing down at the ends of phrases, especially if there is a jump into the next, but allowing for a moment of breath at some phrase ends where the dance steps are appropriate. Turocy would also like musicians to embody the character and the story of the music. Dancers should be part of the ensemble and the ensemble should have a coherent idea of the character of the dance and music. Waite noted that character could be observed in the steps; for example, a dance with many jumps is a livelier more cheerful dance than one with many balances. In this case, the dance may be more majestic and slower, requiring the music to be slower.

Alterations to the BMDN

Turocy and Waite were invited to view a small excerpt of the BMDN and suggest additions. Turocy suggested the BMDN be taught through a dance class to provide musicians with an understanding of the movements. She also suggested that they learn how to write the BMDN themselves. She suggested adding a floor pattern to assist musicians' sense of spacing and symmetry. In response to her suggestions, I added a floor pattern to the notation. In Chapter 5, I change this slightly and discuss why in Chapter 4. Turocy also suggested adding arms or shoulders to the notation so musicians can feel their whole body moving. She also suggested including left and right indications so musicians can see the symmetry between dancers. We

found in the experiments that the notation of shoulder movement and lefts and rights did not affect the musicians' understanding of the dance and these were omitted.

In contrast, Waite suggested that the notation may be too detailed and that some steps are redundant; for example, every step which has a rise also has a bend, so there is no need to notate both. After consultation with the musicians, we found that they did not remember standard pairings, such as a bend always coming before a rise, and found they needed each individual step notated; especially as in the moment of playing music, details can be forgotten. In response to this experience, the final notation did not omit any of the steps.

Turocy and Waite both believe that knowledge of dance will improve musical performance, and that the BMDN will assist musicians in their knowledge of dance.

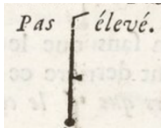
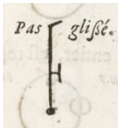
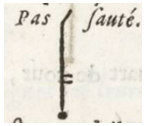
Explanation of the Baroque Musical-Dance Notation

The following section provides an explanation of each symbol in the BMDN followed by two examples of the notation. Each symbol is explained in the same manner as it was to the musicians who participated in the experiments outlined in Chapter 4. All Feuillet notation examples have been taken from Feuillet's *Chorégraphie.*[117]

The following tables include Feuillet's symbols, my symbols, the justification of the design of the latter symbol, what each movement looks like and how the BMDN did, and could, influence musical performance. The word 'initially' is occasionally used to show that, in the final version of the notation, that aspect changed.

[117] Feuillet, *Chorégraphie*.

Table 3.1 Symbols

Step	Feuillet Notation	BMDN symbol	Justification of symbol	Explanation	Application
Plié (Bend)			Reading left to right. Downward stroke for a downward movement.	A bending of the knees, both or one leg.	This is a preparatory movement and is unaccented. Normally comes before an élevé or jetté.
Élevé (Rise)			Upward stroke for an upward movement.	A rise onto the toe with straight leg, on both or one leg.	This is an accented movement; it normally comes on the first beat of the bar.
Pas simple (Step)			No direction vertical line for a step with no change of elevation.	A movement of the leg without élevé or plié.	This step is normally unaccented. It is often a small step, so many can fit into a bar.
Glissé (Slide)			Smooth curled line for a sliding of the foot.	Sliding the foot along the ground.	This is a relaxed movement and can signal a time in the music to breathe. Often it comes at the end of a phrase.
Jetté/Sauté (spring)			Upward arch to reflect the up of the spring and fall at the end.	A spring on both feet, one foot, or from one foot to the other.	This is an accented movement and can give a clear indication of tempo; many jumps in a row are difficult to execute slowly.
Pirouette/tourné (turn)			A circle for a turning of the body.	A turn on the spot. This can be either a full, three-quarter, half, or quarter turn. All turns are indicated as a full	This is an ornamental movement; these can be either accented or unaccented.

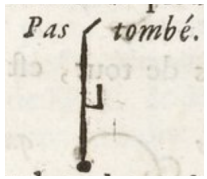
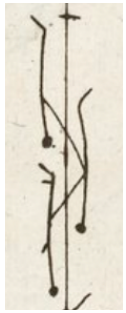
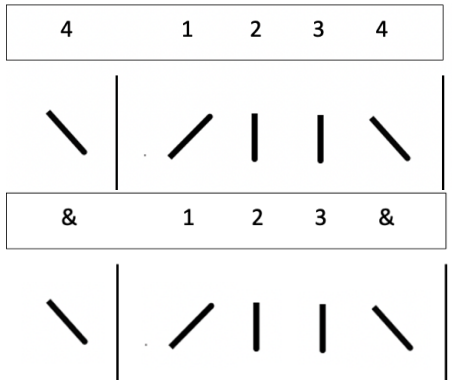
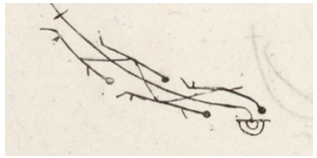
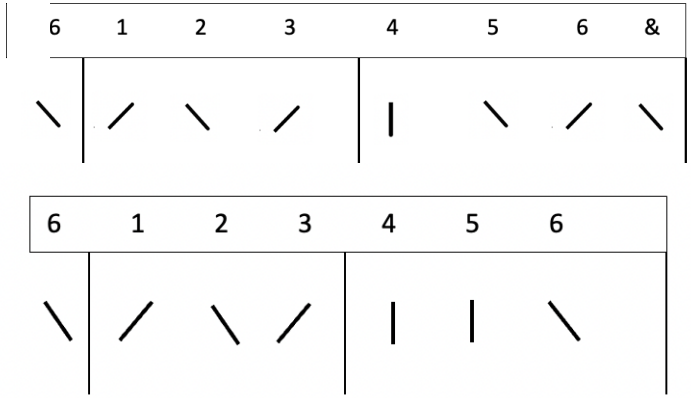
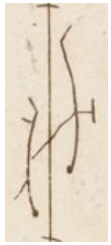
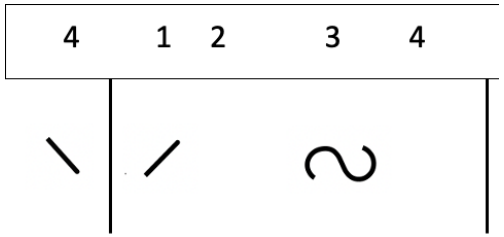
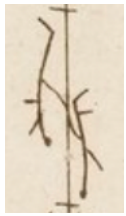
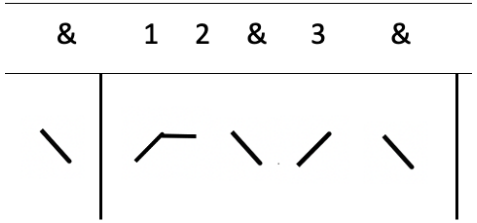
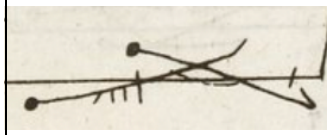
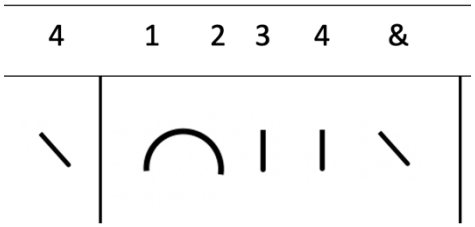
				circle as notating the distance of the turn overcomplicated the notation.	
Hold	Not notated		A straight horizontal line to show continuation of the same movement.	A holding either of the foot in the air or on rise.	This is a graceful and controlled movement. It is not static but has constant extension throughout. More of these can indicate a more difficult and grander dance.
Pointe (point)			A dot for a point.	A pointing of the foot and toe. In the air or resting on the ground.	This is another graceful, ornamental movement normally accompanied by a hold.
Tombé (fall)			An ‘L’ shape to illustrate the gradual fall from rise.	A falling motion.	This is normally an ornamental movement, either accented or unaccented.

Table 3.2 Step-Units

Step-Unit	**Feuillet Notation**	**BMDN**	**Explanation**	**Application**
Pas de Bourée (common example)			Occurs in duple and triple time. A plié before the bar, élevé on 1, pas 2 and 3, plié on either 4 or halfway through the third beat.	Pas de bourée, also called a fleuret, is a quick moving step that covers a lot of floor space. It is simple and easy to execute.
Pas de Menuet (common example)			Occurs over 6 beats of music - one danced bar equals two musical bars, unless the music is in 6/4. The step can be many variations of élevés and pas simple. One of the two that occurs in *La Bourée d'Achille* has an élevé on 1, plié 2, élevé 3, pas 4, plié 5, élevé 6 and plié halfway through 6. Always starts on the right foot.	Pas de menuet, although it has a lot of steps, is easier at a quicker pace. It is a flowing step with many ups and downs.

Coupé with glissé			Occurs in triple and duple time. Consists of a plié before the bar, élevé on 1, glissé gradually on beats 2 and 3.	Coupé is a simple, relaxed step. It often occurs at the end of a phrase and can be used as a time to breathe.
Coupé de deux mouvements			Occurs in triple and duple time. Consists of a plié before the bar, élevé and hold on 1 and 2, plié halfway through 2, élevé on 3, plié halfway through 3.	Coupé de deux mouvements is a graceful step. It creates a slight counter-rhythm against the music.
Contre-temps (common example)			Occurs in triple and duple time. Plié before the bar, lift into the air on 1, land on 2, pas 3 and 4, plié halfway through 4.	Contretemps, as it consists of springs, can be a quick movement. The hop is small.

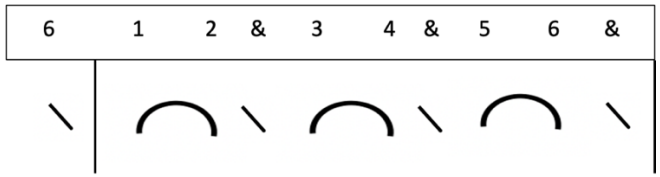
Contretemps de menuet			Occurs in the menuet over 6 beats. Plie before the bar, lift into the air on 1, land on 2, plie halfway through 2 and repeat for beats 3,4,5 and 6.	Contretemps de menuet is like a hemiola in the menuet. It emphasises beats 1, 3, and 5. This should not be reflected in the music as it works best if it creates a counter-rhythm against the music.

Table 3.3 Construction elements

Element	**BMDN Symbol**	**Explanation**	**Application**
Upper body movements (Initially)	Right Shoulder Forward:  Left Shoulder Forward:  Chest Forward:  Chest Back: 	In Feuillet notation, arms were not originally notated in the score and are chosen by the dancer based on Feuillet's recommendations; however, there were common body movements applied to the steps.	Inclusion of body movements is only in select places in the music for slower dances. The dancer uses a full body movement for expression, and it may be useful for musicians to be able to see this and feel it as they play.

Bars	Extension of musical bar	The danced bars are the same as the musical bar except in the menuet where one bar is six crotchet beats.	Bars are a good way to divide the dance and illustrate where each step lands within the music.
Feet (Initially)	R: Right L: Left	Demonstrate which foot is moving.	It may sometimes be useful for musicians to understand which foot is moving especially when it illustrates symmetry.
Floor pattern (figures) (Initially)	Small diagram 	The pattern the dancers follow along the floor. Diagram at the beginning of each phrase.	The floor pattern may assist musicians to see the correlation between steps and distance. It also illustrates symmetry in the dance.
Amount of movement (Initially)	Travelling On the spot	These words indicate how far in the space the dancers are moving.	These assist the floor pattern in showing how far the dancers travel.

Examples of the New Baroque Musical-Dance Notation

Figures 3.2 and **3.3** are examples of the BMDN. These examples were given to the musicians for the second stage of the experiments. The notation is written above the musical line of each instrument. In these examples, the violin is used. Each step is written directly above the beat with which it aligns. The rectangles above the line of notation indicate the floor pattern which aligns with that phrase of music. The wording written in red was not included in the notation but is used here to assist in demonstrating how to read the BMDN.

It should also be noted that the two dancers in *La Bourée d'Achille* execute the same steps for the majority of the dance. When the steps are different, because of the nature of the BMDN, they are notated the same. For example, a *tems de courante*, and *pas coupé* with *glissé* are both notated in the BMDN as an *élevé* followed by a *glissé.* Because of this, *La Bourée d'Achille* only has one line of notation which represents both dancers.

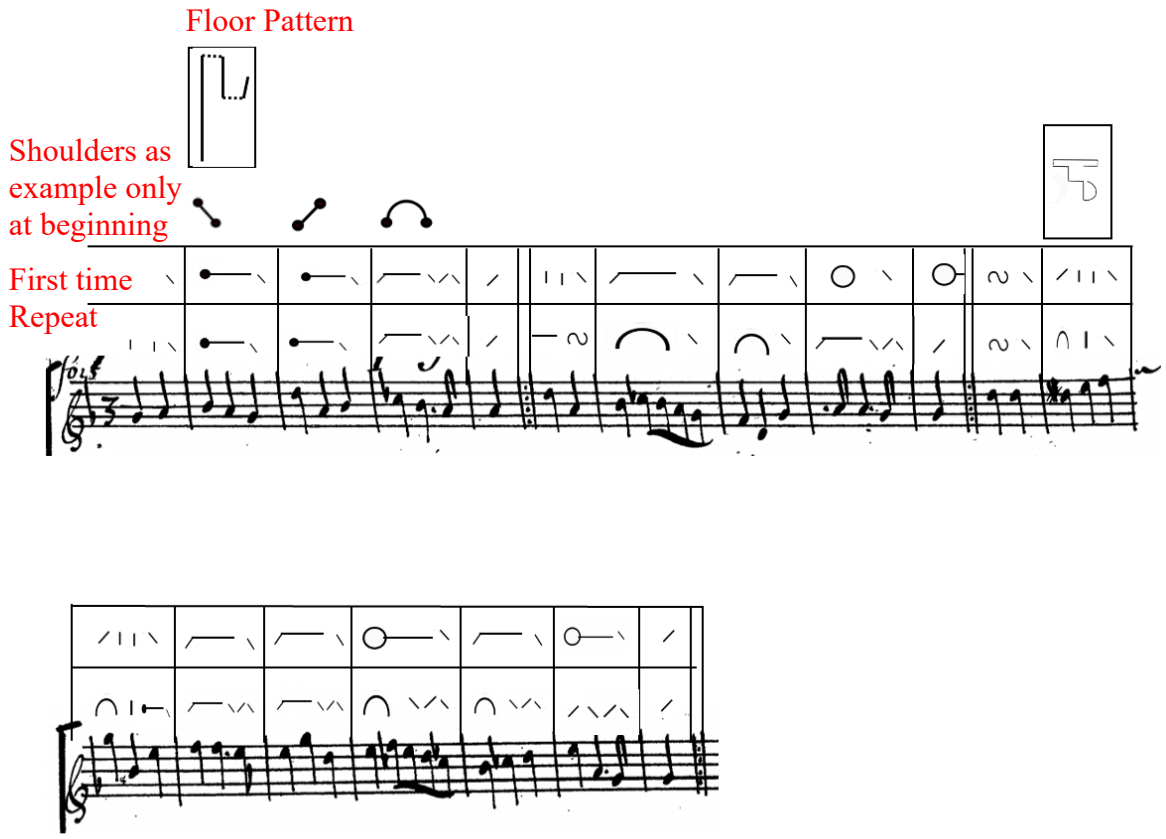


Figure 3.2 *Sarabande pour une Femme* in BMDN[118]

[118] Jean Baptiste Lully, *Le Bourgeois Gentilhomme* (Versailles, France: André Danican Philidor, ca.1690), 159.

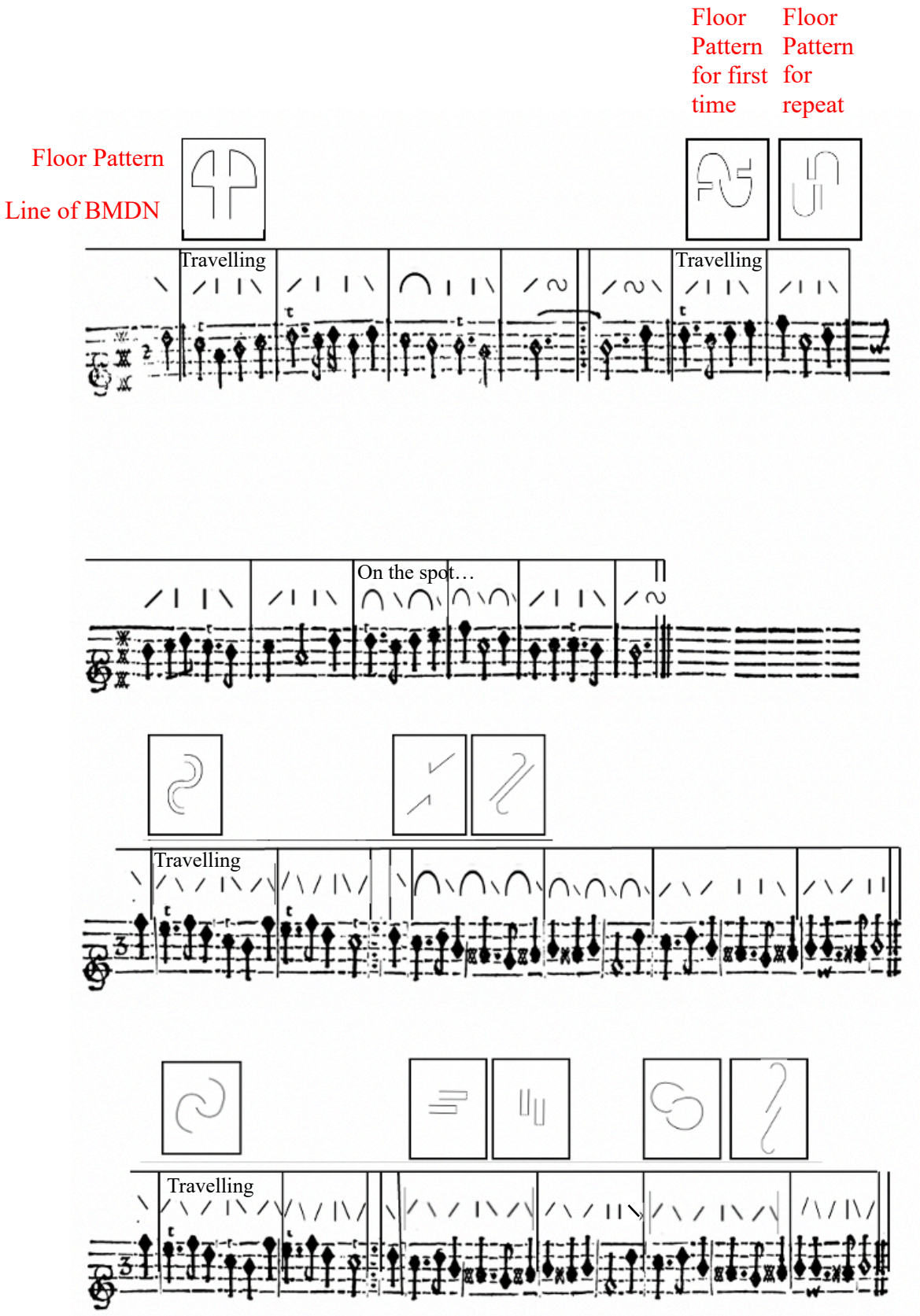


Figure 3.3 *La Bourée d'Achille* in BMDN[119]

[119] Jean Baptiste Lully, *Achille et Polixène* (Paris, France: Christophe Ballard, 1687), xx-xxi.

The *Sarabande pour une Femme* and *La Bourée d'Achille* demonstrate how the BMDN can vary greatly depending on the style of dance, as the *sarabande* has many holds and turns with the repeat of each phrase containing different steps. In comparison, *La Bourée d'Achille* uses repetitive steps consisting mostly of the essential steps and jumps. These contrasting dances assist musicians in seeing how one might make very different decisions based on the steps presented to them.

The two dances above were also applied to two other pieces of music, *Sarabande* from *Les Nations: Premier Ordre* by Francois Couperin, and *Bourée* and *Menuet* from *Gratitudo* by Georg Muffat, and presented to the musicians for the experiments. As I explain in Chapter 4, these additional pieces were used to assess how dance influences eighteenth-century dance music not intended to be danced to.

A Brief Recommendation for Musicians Using the BMDN

Below is the advice, based on my own experimentation, given to the musicians during the experiments regarding how to use the BMDN.

1. Play through the music to develop familiarity. The notation is easier to use if you are less distracted by difficult passages in the music.
2. Try to physically follow the notation with body movements, for example, rise up when you see an *élevé*, down when you see a *plié*. Jump when you see *a sauté* or *jetté*. See if you can move your body in time. See how fast or how slow you can perform each movement.
3. Look only at the notation and notice key features:
    a. Leaps
    b. Holds
    c. Phrasing
    d. Number of movements
    e. Distance of movements
    f. Changes to a new rhythm (*bourée* to *menuet*)
    g. Counter-rhythms
    h. Ornamental movements

4. Think how these might apply to the music: for example,
    a. Leaps - easier at a quicker tempo
    b. Holds and ornaments - grander dance, more controlled
    c. Lots of travelling - quicker movements
5. Play through the music, noticing the notation. This will be your natural reaction; you don't need to think about it too much.

These steps were presented to the musicians to guide them in how best to use the notation. Following these steps should prepare musicians to make informed decisions about tempo, affect and phrasing in the music. It should also provide a good basis for a discussion with the dancers to determine their personal needs. In Chapter 4, the theories presented here are put into practice to determine the influence the BMDN has on musical performance.

Chapter 4

Experimenting with Musicians and Dancers in using the Baroque Musical-Dance Notation

Methodology

Chapters 2 and 3 set out the development of my Baroque Musical-Dance Notation (BMDN) where I suggested ways in which the notation could influence musical performance. To test these hypotheses, a series of experiments were used. These are detailed below.

How the Experiments Unfolded

In January 2022, three musicians and two dancers participated in a series of experiments to test the influence the BMDN has on collaboration and performance.

Participants

1) Musicians

The Muffat Collective is a professional music ensemble based in Sydney, Australia which focuses on innovative historical performance practice. Due to their experience and willingness to experiment, they were ideal for this study. The three musicians, Matthew Greco, Anton Baba, and Kiseok Kim, are specialists in violin, viola da gamba and harpsichord, respectively. All three musicians were familiar with eighteenth-century French dance music, however only two had any significant experience working with dancers.

2) Dancers

The dancers, Dr Fiona Garlick and John Barnard are directors of The Early Dance Consort based in Sydney, Australia. They have more than two decades of experience in teaching historical dance and performing historical dance with musicians. Garlick and Barnard were invited to participate in this experiment as their expertise and ability to adapt would provide a basis for the most thoughtful consideration of the musicians' changing interpretations of the music.

Materials

1) Dances

Louis Pécour, *Sarabande Pour une Femme*[120]

Louis Pécour, *La Bourée d'Achille,*[121] *Bourée* and *Menuet*

The goal of this study was to bridge the gap that now exists between dancers and musicians, a gap that did not exist in the eighteenth century. The aim has been to recreate, as closely as possible, the experience of musicians in the eighteenth century by using historical choreographies. As noted, Feuillet's *Chorégraphie* (1700) is one of the most thorough guides to dancing in the baroque period and remains one of the most relied-upon manuals for early dance. The dances Feuillet published using his notation system, in which these dances were recorded, were used in these experiments because of their popularity, simplicity and continual performance at the time. There are many dances that exist in Feuillet notation, along with many different dance types. These include *bourée, menuet, sarabande, passacaille, chaconne, loure, gavotte, rigaudon, entrée, gigue, allemande*, and *canary*. It is not possible to cover all of these dance types and choreographies in this thesis, so I have chosen to focus on three. These were chosen because of their popularity and simplicity. They are also dances which frequently appear in musical dance suites and would be dances which musicians are most likely to encounter, therefore being the most useful for their own study. I explain below why I chose these particular choreographies. These choreographies are examples and do not represent every *menuet, bourée* and *sarabande*. The idea is that these will provide a meaningful exploration of how the BMDN affects musical choice.

The composer of both dances, Louis Pécour (c.1651-1729), was a dancer and choreographer. Pécour's dances appear frequently in Feuillet's collections, demonstrating his popularity at the time.[122]

120 Feuillet, *Recueil de dances... Entrées de Ballet de Mr. Pecour* (Paris, 1704), 1.
121 Feuillet, *Recueil de dances, composées par M. Pecour* (Paris, 1700), 1.
122 Meredith Ellis Little, "Pécour [Pécourt], Louis Guillaume," *Grove Music Online,* ed. by Deane Root, accessed 10 Dec 2022, https://www.oxfordmusiconline.com.

Sarabande pour une Femme

Published in 1704, *Sarabande pour une Femme* is a short dance for a solo female. It was chosen for this study because of its popularity amongst dance scholars, and reoccurring print at the time it was published, as well as the simplicity of the dance, as these experiments were limited in preparation time. The dance was originally performed in Jean-Baptiste Lully's comedy *Le Bourgeois Gentilhomme.*[123] Many versions of a dance to the same music were published and so it is not known which version may have been danced in the theatre.[124] Unlike *bourées* and *menuets*, *sarabandes* do not have a distinct step. I chose a *sarabande* as a third dance because it is more ornamental, allowing the dancer to experiment more expressively with the length and height of her movements. *Sarabande pour une Femme* is performed frequently as it is not too complicated but still carries the same air and character of some of the more ornamental *sarabandes*.

La Bourée d'Achille

Published in 1700, *La Bourée d'Achille* comprises two dances that are commonly found in musical dance suites—the *bourée* and the *menuet*. This dance was chosen because of its dual representation of two popular dance types, simplicity, representation of symmetry, and popularity at the time, evidenced by its reoccurrence in printing. It occurs in the prologue of Lully's opera tragedy, *Achille et Polixène.*[125] While the opera was written by Lully, it is speculated that the prologue was written posthumously by Pascal Collasse.[126]

La Bourée d'Achille is simple, the two dancers creating symmetrical floor patterns with repeated *pas de bourée* and *pas de menuet.* Hence, it is a good dance for musicians to become familiar with common step patterns. Additionally, as the *bourée* and *menuet* steps were also used in ballroom dances, the tools acquired from this study can be applied to other styles of dance. Familiarity with these steps would assist the musicians in playing both for theatrical and ballroom dance, as well as 'music in a dance style' written not for dancing but as a musical suite. In this way, the participating musicians would also gain something from the study.

123 Jean-Baptiste Lully, *Le Bourgeois Gentilhomme* (Versailles, France: André Danican Philidor, ca.1690).
124 Feuillet, *Recueil de Dance* (Paris, 1700), Sarabande pour Femme, 21, and Sarabande pour Homme, 25.
125 Jean-Baptiste Lully, *Achille et Polixène* (Paris, France: Christophe Ballard, 1687).
126 Géraldine Gaudefroy-Demombynes, "*Achille et Polyxène* (1687): the Trojan war and a plea for peace at the Académie royale de musique," *Early Music* 43, no. 3 (2015): 397.

2) **Music**

I experimented with each choreography using both the original music and alternative music in a similar style which fitted the phrasing and overall structure of the dance but was not necessarily intended for dancing.

The original music for each dance was:
Jean-Baptiste Lully, *Sarabande Pour une Femme* from *Le Bourgeois Gentilhomme*[127]
Jean-Baptiste Lully or Pascal Collasse, *La Bourée d'Achille* from *Achille et Polixène*[128]

The alternative music chosen was:
François Couperin, *Sarabande* in *Premiere Ordre* from *Les Nations*[129]
Georg Muffat, *Bourée* and *Menuet* in *Gratitudo* from *Florilegium Primum*[130]

The *sarabande, bourée,* and *menuet* listed above provided a good contrast of lively and expressive dances in triple and duple time signatures. The dances were written for the two pieces by Lully or Collasse. They are simple musical pieces which allowed the musicians to learn quickly and then focus on the BMDN. The pieces by Muffat and Couperin were chosen as they fit the same structure as the dances even though they are not pieces necessarily written to be danced to. They also allowed an exploration of playing dance-style music as if it were to be danced, which is a question long debated by musicologists. While the question of whether music composed in a dance style should be played as if it were to be danced lies beyond the scope of this study, using these examples provided another avenue for exploring how a musician's knowledge of dance can change the performance.

Scores used in experiments:

Lully, Jean Baptiste. *Achille et Polixène.* Paris, France: Christophe Ballard, 1687. Accessed on 01/01/2022. https://digital.library.unt.edu/ark:/67531/metadc50/m1/30/

Lully, Jean Baptiste. *Le Bourgeois Gentilhomme.* Versailles, France: André Danican

[127] Lully, *Le Bourgeois Gentilhomme*, 159.
[128] Lully, *Achille et Polixène,* xx-xxi.
[129] Francois Couperin, *Premier Ordre* from *Les Nations* (Paris, France: Boyvin, 1726).
[130] Georg Muffat, *Florilegium Primum III: Gratitudo,* ed. by Heinrich Reistch (Vienna, Austria, 1894), 67-68, 72-73.

Philidor, ca.1690. Accessed on 01/01/2022.
https://gallica.bnf.fr/ark:/12148/btv1b53155492w/f171.item.r=lwv%2043%20lully
Couperin, Francois. *Les Nations.* Edited by Gérard Billaudot. Paris, 1989.
Muffat, Georg. *Florilegium Primum für Streichinstrumente.* Edited by Hermann Reitsch. Graz: Akademische Druck- U. Verlagsanstalt, 1959.

Experimentation

Experimentation took place over two sessions, the first with only musicians, and the second with both musicians and dancers. The experiments were designed to capture authentic reactions from the musicians to the BMDN.

To begin, the dancers were sent excerpts of the dance in Feuillet notation four weeks before the first session. Then, the musicians were sent each score excerpt two weeks before the first session and were asked to use their professional experience and knowledge of French dance music to practise each piece. The dancers were provided with longer periods to prepare because they had the added challenge of memorising the dances. The musicians did not see my BMDN until after each excerpt of music was recorded once, as a control. The dancers were not shown my BMDN until after dancing to the recording in which the musicians used the notation. This was so that they would approach the dancing without assumptions regarding how the musicians might play, given their enlightened understanding of the dance based on the notation.

Session One

1) The first session took place at the Sydney Conservatorium of Music and ran for one and a half hours. Having previously practiced the music individually, the musicians were given ten minutes per piece to prepare as an ensemble before filming. They discussed amongst themselves how they would play each piece. I was present to film this session but made no comments. Each excerpt of music was video recorded. These recordings, without added notation, formed the control for the experiment and are hereafter referred to as **the Control Recordings**.

I then ran a forty-five-minute workshop with the musicians in which they were taught the symbols for each step (*plié, élevé, sauté/jetté, glissé, point, hold, tourné/pirouette*) in the BMDN with a demonstration from me of the individual steps. They were shown

common combinations, called step-units (*pas coupé, pas de bourée, pas de menuet, contretemps de menuet, contretemps,* and *coupé de deux mouvements*) in the BMDN and again given a short demonstration.[131] I suggested the steps which are most often accented with emphasised movement, such as the *élevé* or *sauté,* and those which are unaccented, relaxed movement, such as the *plié* or *glissé*. (Accented and unaccented movements were determined based on the treatises and modern scholarship as described in Chapter 2.) The musicians then physically tried the individual steps and step-units to understand some of the requirements of dancers' movements. The aim of this embodied process was to give the musicians enough information about the dance for them to be able to make meaningful decisions about tempo, tempo changes, accent and articulation, and ornamentation when playing. By offering a demonstration based on Feuillet's explanation and using the evidence of a wide range of primary and secondary sources to teach the notation, I was able to teach the movements in a way that would not be influenced by my personal style and hinder the musicians in their developing understanding of, and engagement with, the notation.

Following the workshop, the musicians were given two weeks to become acquainted with the BMDN. This was determined as an appropriate amount of time to learn the music but not to the point of mastery, lowering the risk of influencing the results through too much repetition.

2) The dancers, upon their request, were sent the Control Recordings two weeks before the second session and were asked to use these to rehearse. I did not want them to become too acquainted with the choices made in these recordings, for example, moments of slowing down and speeding up. Becoming too familiar with tempo changes would create the risk that the dancers would adjust to the recording, impacting my analysis. I was concerned that having the recorded music for a considerable length of time might allow the dancers to embody the expectation of the rhythmic changes, and that some of their adjustments in the Control Recording may not represent how they would react in a live situation. The dancers, therefore, were asked to rehearse only a few times to the recording.

[131] I acknowledge that because the demonstrations are done by me, the musicians' image of how to do a certain step would be influenced by my style of dancing. As I have extensive training in eighteenth-century dance styles from many different professionals, I combined all the different styles of dancing that I had been taught and demonstrated each step and step-unit as closely as I could to the way it is notated in Feuillet's *Chorégraphie*.

Session Two

1) The second session took place in a large performance hall at the Sydney Conservatorium of Music and ran for two hours. The musicians first played without the dancers but with the added notation. As they had already been given two weeks to prepare, they had just an additional five minutes to discuss amongst themselves some of the insights they had found. The musicians indicated that they would have appreciated more time for discussion; however, this short amount of time was given so that practice and discussion would not greatly influence the data recorded. A video recording was made of each piece being performed. This set of recordings, played with the added notation, will now be referred to as **the Notated Recording**. I was present to film at this stage of the experiment but did not offer any input or make any comments, which meant that all decisions about the music were made by the musicians.

2) In the next stage of the experiment, the dancers were asked to dance to the Control and Notated Recordings of each of the pieces. For this process, the musicians were invited to observe so they could get a better idea of how the dance looked.

3) The musicians and dancers were given fifteen minutes to discuss any adjustments for the final performance. Again, this short amount of time was given so that practice and discussion would not greatly influence the data recorded. They were then filmed performing each excerpt all together. This recording, with dancers in line of sight, will now be referred to as **the Danced Recording**.

   It should be noted that the nature of performance is that it is a once-occurring phenomenon. Each recording is treated as one possibility for the interpretation of the music and the notation. Some decisions may have occurred because of lack of rehearsal time rather than anything intrinsic to the BMDN. Occasionally, I have referred to circumstances where events may not have occurred, such as, with more practice time.

4) The musicians and dancers were then invited to participate in an interview to discuss their experience of playing with and dancing with the BMDN. I encouraged the performers to discuss the positives and negatives of the BMDN and its impact on their collaboration.

All involved found that the BMDN significantly influenced the musical performance. The musicians found that they adjusted their choice of tempo to better suit the dancers. Their tempo variation was reduced, and they changed articulation and accent placement to react to the intensity and energy of the steps with which they were presented. Their use of ornamentation was also occasionally adjusted to reflect the ornamental movement of the dance, and that the musicians sat and stood straighter when playing with the BMDN was universally observed.

How the Experiments were Analysed

The first aim of my analysis was to determine how and to what extent the BMDN influenced the musicians' decisions regarding, consciously and subconsciously, how they played the music. Secondly, I wanted to see if the changes the musicians made from the Control Recording to the Notated Recording positively affected the dancers' ability to follow the music and enhanced both musicians' and dancers' musicality and affect delivery.

The use of Melodyne 5 Editor in Analysis of Recordings

To analyse these experiments, I used the audio-visual software, Melodyne 5 Editor (hereafter, Melodyne). The use of this quantitative analysis added objective data to an otherwise very subjective analysis. I, and others before me, have found that audio visualisers such as Sonic Visualiser and Melodyne are effective tools for enhancing traditional approaches to performance analysis. Scholars such as Rector (2018)[132] and Cannam, Landone and Sandler (2010)[133] stress Sonic Visualiser's ability to add quantitative evidence to the analysis of recordings and performances.

Melodyne, a software application invented by Celemony in 2000, has added capabilities that extend the possibilities for which audio visualisers, such as Sonic Visualiser and Praat, laid the groundwork. Melodyne's intended purpose is as an editing software, however it is also a very effective tool for audio analysis. Its analytical capabilities include: automatic tempo

[132] Michael Rector, "Sonic Visualizer: A Tool for Closer Listening," *The American Music Teacher* 67, no. 5 (2018): 21–23.
[133] Chris Cannam, Christian Landone, and Mark Sandler. "Sonic Visualiser: An Open-Source Application for Viewing, Analysing, and Annotating Music Audio Files," *MM'10 - Proceedings of the ACM Multimedia 2010 International Conference*, 1467–1468, (2010).

mapping; generation of universal waveform, which shows the overall amplitudes of the recording; and pitch-splitting algorithms, which break down the waveform into individual notes. When a file is imported into Melodyne, a tempo map can be automatically generated showing a graph of the tempo at each millisecond of the recording. This eliminates the need for a click track or metronome analysis and allows for a much quicker extraction of data than traditional methods.

Like any other audio visualising software, Melodyne generates a universal waveform which shows the overall amplitudes of the recording; however, in addition, Melodyne can split the waveform into individual pitches, showing the amplitude and shape of each note. [134] This is most useful when two or three musicians are playing, allowing the user to see where, for example, the violin may have played louder, and the cello softer. A close listening of a recording could produce this same data but having the visualisation of individual note accents and articulation can highlight areas that may have been overlooked. The software also produces objective data which allows for an exact description of the accents and articulation. So, while traditional methods for performance analysis, such as close listening, can eventually achieve accurate tempo mapping and a detailed analysis of accent and articulation, Melodyne provides a more efficient method and having the added visualisation accounts for moments the performers or listeners may not have considered.

While the positives of Melodyne are numerous, it also has some limitations. For instance, some of the mechanisms rely on the quality of recording and the number of instrumentalists playing. These limit the kinds of recordings that can usefully be analysed using Melodyne. Recordings with more than a few performers would produce too many individual waveforms to assess any one performer. Additionally, the current software is unreliable when it comes to changes in time signature. This confuses the generated tempo map and can create glitches in the graph. Similarly, if the file is not imported correctly, or the timing alignment is manually adjusted, then there can be glitches.

[134] An example of the Melodyne graphs showing the polyphonic sustain algorithm can be viewed in Appendix B.

I have used Melodyne in the following analysis alongside practitioner experience, close watching and listening. These combined methods have meant the process for producing data has been thorough and efficient. This data is rich and complex and allowed me to assess the best overall view of the influence of the BMDN in music and dance performance.

Methodology

This analysis combined three methods: audio-visual analysis using Melodyne, my repeated listening and observing of videos at half speed, and the consideration of the practitioners' opinions during rehearsal and in post-performance interviews.

I began by listening to each recording multiple times to determine what aspects of the musicians' playing changed for each piece, from the Control Recording to the Notated Recording and, successively, to the Danced Recording. I determined that the categories most affected were tempo, extent and degree of tempo variation, accent and articulation, ornamentation and, more subtly, posture and body movement. I analysed each piece in relation to each of these categories before undertaking a comparative analysis of each category across the three recorded versions of all four pieces.

As noted in the experiment methodology, this experiment produced three musical recordings for each piece and three dance recordings, which may be summarised as follows:

1) **The Control Recording**: with no added notation – the musicians had the music for two weeks, then ten minutes to prepare the piece as an ensemble before recording.
2) **The Notated Recording**: with the added notation – the BMDN was added to the score, musicians had two weeks to become familiar with it, then five minutes per piece to rehearse together.
3) **The Danced Recording**: with dancers in sightline – the dancers joined the musicians to dance live. They had a discussion prior.

In the discussion to follow, the musical and danced aspects of the recordings are referred to together.

Please note that throughout the discussion, bar numbers begin from the first bar after the anacrusis. Repeats are referred to as such, for example, "repeat of bar 1."

Tempo

The most reliable equation for finding average tempo was to take the length of the recording, minus the anacrusis, divided by the number of bars, then divided by the number of crotchets per bar.

To calculate metronome markings, I used the following equation:

$$\text{crotchet } mm = \frac{1}{cl} \times 60$$

cl = crotchet length—the time between onsets of successive notes.

mm = metronome marking

The equation produced a metronome marking in beats per minute (bpm).

I first observed the level of synchronisation between dance and music in the recordings to assess if the tempo was appropriate for technical execution. Observations were also taken of the dancers' height and length of movements as well as posture, all of which indicate their energy and character. A comparison of the recordings was made with publicly available video recordings of other performances of the same musical pieces and choreographies, to determine whether the tempo reached in the Notated Recording was appropriate for dancing. I could then conclude what adjustments, if any, needed to be made to the BMDN for musicians to understand how to choose a tempo most suitable for dancing, using only the added notation.

Tempo Changes

To analyse tempo changes, each recording was imported into Melodyne. Melodyne generated a graph of all moments of slowing and speeding up by the musicians to the nearest two decimal points of a beat per minute. Due to glitches which often occurred when importing a file into Melodyne, the graph was not always accurate, so every moment generated was cross-checked with close listening or a metronome and the original recording. I then observed how the dancers reacted to each of these moments of tempo change, for instance, whether there was a loss of synchronisation, a stumble, or if the movement was enhanced. Ideally, this study of synchronisation would have been undertaken with motion capture software, but as this was not available at my institution at the time of the study, I relied on slow stopping and starting of the videos as well as close observation.

The analysis looked at three questions:

1. Why did the musicians alter the tempo?
2. Did the tempo change alter the dancers' ability to follow the music?
3. Did the tempo change reflect the phrasing or style of the movement?

These questions were used to determine whether the tempo change affected the dancers' ability to follow the music, and, if not, could it be considered appropriate for the type of movement in the dance, resulting in enhanced delivery of expression, accent, and character by the dancers.

Any changes in the dancers' ability to follow the music could be observed in the synchronisation between dancing and music. To analyse this, as noted above, I slowed the videos to half-speed and observed the connection between sound and visual image—that is, when I heard the note and when I could see the dancer move. The ideal is that a note sounds at the same time as the dancer moves. Some lack of synchronisation is expected but any significant delays can be counted as data signifying that the tempo change affected the danceability of the music. Additionally, according to eighteenth-century bar hierarchy, a tempo change occurring at the start of the bar was considered more significant, as opposed to one occurring in the middle of the bar. This consideration reduced the amount of data that needed to be analysed to a more valuable collection of moments.

To explore the use of tempo changes that enhance phrasing and style, I first looked at whether the dancers' movements were enhanced or inhibited by the changing tempo. This can be observed in the length of extension or height of the jump and gleaned from the dancers' comments post experimentation. I also looked back to the BMDN, asking whether, for example, the tempo change aligned with a moment in the choreography that could enhance the rhetorical expression of the movement. For example, a *glissé* at the end of a phrase may be seen as a relaxation and a moment when the musicians could slow down or pause momentarily. Through this, we can consider whether the tempo change could have been considered appropriate if the dancers had been able to adjust their movements.

Accent and Articulation

Accent (emphasising a note through alteration[135]) refers to the intensity and shape of the note and articulation to how the performer separates successive onsets of notes, *détacher* or *coulament*. These two elements of music are treated together because the way a note is described requires speaking about both. For instance, a strong accent with *détacher* describes the note more clearly than identifying just one element or the other.

To analyse accent and articulation I first listened to the recordings to observe overall changes in articulation by the musicians. I then imported each recording into Melodyne and selected the 'Polyphonic sustain' algorithm. This splits the recording into individual sounding pitches, which show the intensity of each note. I observed trends in the use of accents between repeats within each recording and stand-out moments of exaggerated accents or particularly soft accents. I compared the accent pattern between each recording and used the videos to observe how the dancers reacted to the changing emphasis, observing whether the movements were made larger or extended, any loss of synchronisation, and whether the accent reflected the type of step and character of the dance.

Due to time constraints, and for the sake of authenticity in capturing the musicians' first impression, only one full take was recorded of the Control, Notated, and Danced Recordings for each piece. This, however, makes a comparative analysis of which accents were intentional, based on the notation, and which were a consequence of more practice, more difficult. To alleviate this issue, I made a comparative analysis across repeats of each section to differentiate between more common accent placement within the piece, and accent placement more likely to be a consequence of the BMDN. Additionally, this method reduced the initially overwhelming amount of data that Melodyne produced to something more manageable, and potentially meaningful, for my research.

The harpsichord, in all recordings, had too many sounding pitches at once and too wide a range for Melodyne to generate meaningful data. Therefore, my accent and articulation analysis focused on the viola da gamba and violin. In future studies, I would like to use an individual microphone for the harpsichord, so that a separate graph can be generated. For this

[135] Thiemel, "Accent," in *Grove Music Online*.

study, the viola da gambist (hereafter, "gambist") and violinist produced sufficient information to allow some conclusions; however, I was able to ascertain, from listening to the recording and from viewing the universal waveform of amplitude generated by Melodyne, that the harpsichordist was regularly using the same accent placement and articulation as the other two instrumentalists. Also, in the final interviews, the harpsichordist provided comments regarding changes to articulation which helped assess the recordings.

Ornamentation

Ornaments are the embellishments which composers, musicians, or dancers place on certain beats, often for emphasis. Ornaments are used to highlight a phrase or note. Dancer, Fiona Garlick, expressed a preference for when the musical ornaments aligned with the larger, gestural, and often ornamental, movements in the dance. Musical ornaments can also add contrast to the dance and create deliberate cross-rhythms.

I first examined the written-in musical ornaments in the original musical and danced scores of *Sarabande pour une Femme* and *La Bourée d'Achille* to assess where the ornaments commonly aligned. This analysis helped to identify which positioning of ornaments might enhance the delivery of the dance.

I then observed the ornaments added by the violinist in each recording, which were not already written in the score by the composer, and notated each on a musical score. I also made note of those written ornaments removed by the violinist. My focus was on the violinist's ornaments as those added by the gambist were infrequent, and it was difficult to hear the harpsichordist's ornaments due to the recording quality. As mentioned, for future studies each musician would be individually set up with a microphone.

Working with the violinist's ornaments, I compared the added ornaments in each recording to the dance, noting whether they aligned with the dancers' ornamental movements, created deliberate cross-rhythms or if, in fact, they hindered the dancers' ability to follow the music. I then compared the differing use of ornamentation between each recording to assess whether the BMDN had a positive, if any, effect on the musicians' choice of ornaments.

A list of the ornaments that were used by the violinist is provided below. These ornament names will be used in the discussion of each piece.

List of ornaments:[136]

Tremblements – rapid movement between two notes beginning on the upper note.

Pincés – the addition of two notes, beginning on the note and adding the lower, then back to the main note.

Port de voix – the addition of a note below or above the note played either before the beat or on the beat. Used in this analysis as the note below.

Coulé – addition of a note above the note played either before the beat or on the beat.

Tour de gosier – the addition of three notes above, below, and on the pitch after the main note in the lead-up to the final note.

Posture and Body Movement

An analysis of the changing body movements of the musicians across the three different recordings was undertaken for the *Sarabande Pour Une Femme* to assess whether the musicians' body movements changed to reflect the step written in the notation. I hypothesised that if the musicians were moving together and with the dancer, there would be an increase in the synchronisation between notes and movements. The analysis involved watching the video recordings at half-speed to observe when the musicians were moving together or with the dancers. I found from this analysis that there was not a significant increase in synchronised body movement for the Notated Recording. This analysis was time-consuming and, compared to the increase in synchronisation due to accent and tempo changes, the correlation between body movement and synchronisation was too small to result in any significant change to the performance. Had I found that musicians greatly changed their body movements, and thus the synchronisation between musicians and dancers increased, then it may have justified continuing this study for the remaining three pieces. But as it stands, this analysis was not undertaken for the three other pieces. Instead, I observed the videos of the remaining pieces at half speed to make sure I had not missed anything important. From this I confirmed that there was not a significant increase in the correlation between body movements and synchronisation. If a motion capture software were available, I may have been able to capture details missed in

[136] As described by Monteclair in Robinson, *Principes de Musique.*

a visual observation and potentially produced more useful data. With the data available, body movement is only considered in the analysis below for the *Sarabande pour une Femme.*

Comparative analysis

The final aspect of the analysis looks at each piece compared with the others, to allow discussion of the same four categories (excluding posture and body movement) and conclusions to be drawn about the efficacy of the BMDN.

As an example of the data with which I was working, the Control, Notated and Danced Recordings of *Sarabande pour une Femme*, can be viewed via these links:
Control Recording: https://youtu.be/IKgN-Gv-iP0
Notated Recording: https://youtu.be/WXktaKxnD_8
Danced Recording: https://youtu.be/GT1fU-eZt-o
The dances were performed by Dr Fiona Garlick, Director of The Early Dance Consort.

Analysis of Experimental Recordings

To reiterate, the aim of these experiments was to explore how the use of the Baroque Musical-Dance Notation (BMDN) influenced musical performance and collaboration with dancers. The categories that changed most from recording to recording were overall tempo, tempo changes within individual dances, accent and articulation, and ornamentation. A summary of each piece as it relates to each category can be found in **Appendix A**. The following results are divided first by piece, then by category. Following, is a comparative analysis by category showing how the BMDN may assist musicians and dancers.

Sarabande pour une Femme

The musicians' interpretation of the music of *Sarabande pour une Femme* changed dramatically as their knowledge of the dance increased. Most notably, the tempo slowed from recording to recording. The BMDN added a sense of a steadier pulse to the music and the accent, articulation, and ornamentation chosen by the musicians changed to reflect the dancer's movements.

Sarabande pour une Femme is short and simple, both musically and choreographically. It consists of many *élevés, pointes* and holds, and often has an interplay of rhythms between dance and music, specifically in the *coupé de deux mouvements.* In these experiments, the dance was performed by Dr Fiona Garlick. The *Sarabande* appears in Lully's *Le Bourgeois Gentilhomme* as part of the Spanish section. The *Sarabande pour une Femme,* therefore, may be in a more Spanish style than a typical French *sarabande.* I will discuss later in Chapter 4 how this created an interesting comparison with the more French style *sarabande* chosen for experiments, Couperin's *Sarabande* from *Premiere Ordre* in *Les Nations.*

The following is a detailed exploration of the four categories - tempo, tempo changes, accent and articulation, and ornamentation - as they changed and developed across the Control, Notated and Danced Recordings of the piece. Additionally, the analysis of *Sarabande pour une Femme* includes a brief discussion of body movement and posture.

Tempo

Choice of tempo for baroque dance music is one of the most debated questions amongst musicians and musicologists. Many of the primary sources are difficult to interpret or give nothing beyond a single word, such as 'gaily.'[137] Dancers want musicians to choose a tempo that they will be comfortable dancing to; however, knowing what a comfortable tempo might be is not an obvious choice. I wanted the BMDN to be able to assist musicians in choosing an appropriate tempo for dancing, a tempo informed by the difficulty of the dance, the step types, and the number of steps. The ideal outcome from this experimentation would be that, guided by the BMDN, the musicians chose a tempo for the Notated Recording that could be considered appropriate for dancing. For *Sarabande pour une Femme*, this was achieved. The Notated Recording was at a tempo that the dancers considered comfortable, even if not their ideal.

Table 4.1 *Sarabande pour une Femme* Average Tempos[138]

Recording	**Tempo**
Control	Mm crotchet=173.41bpm
Notated	Mm crotchet=140.40bpm
Danced	Mm crotchet=107.52bpm

The Control Recording may be considered a fast tempo for a *sarabande*. When asked why they had initially chosen this tempo (average of crotchet=173.41bpm), the musicians responded that they are often told that their *sarabandes* are too slow, so their choice of tempo was a deliberate decision to anticipate the dancer's request to play faster. This is a recurring theme throughout the analysis, that the musicians' tempo choices for the Control Recordings tended to reflect their experience of being told how to play dance music. Ironically, the fast tempo they produced was too fast for the dancer to be able to fully extend through each movement and express the dance in a way they would expect of a *sarabande*, with, to quote Johann Mattheson, 'ambition.'[139]

[137] See **Chapter 2 Dance Music in Musical Treatises (1690-1750).**
[138] The average is the length of the recording divided by the amount of bars, further details are in the methodology section of this chapter.
[139] Mattheson, *Der Vollkommene Capellmeister*, 230.

The Notated Recording slowed down significantly from the Control Recording. To determine why this happened I looked at two elements: the musicians' decision-making process and elements of the BMDN which would indicate the tempo. Firstly, the musicians discussed the number of jumps, which in the case of a *sarabande* was lower than, say, for a *bourée*. They determined, from physically experimenting themselves, that many jumps, as a short movement which cannot be stopped at any time during the action, would be an indication of a livelier dance. Secondly, they observed the complicated steps within a *sarabande*, for example, *coupé de deux mouvements* and *point and hold*. They saw these movements as representative of a slower, more regal character and determined that the dancer would benefit from a tempo which would reflect the nature of the expressive and complicated steps. This decision was appropriate for the dancer's requirements and expressive choices. The musicians were able to determine that the dancer needed more time and the slowing down of the tempo meant that the Notated Recording gave the dancer time to extend and express, as is essential for the *sarabande* form to evoke an 'ambitious' affect.[140]

The Danced Recording was significantly slower again than the Notated Recording. This tempo (crotchet=107.52bpm) was specified by the dancer as her preferred tempo to suit her ability and interpretation of a *sarabande*. The significance of the Danced Recording in this study is that it indicates an ideal tempo, at least for this individual dancer.

The dancer requested that the tempo be changed from the Notated Recording to the Danced Recording, indicating that the Notated Recording was not yet her preferred tempo. Nevertheless, the tempo chosen for the Notated Recording was a comfortable speed for dancing and I wanted to explore whether it may be a tempo that could be chosen by another dancer with different preferences. I first danced the choreography myself and observed that the tempo of the Notated Recording was better suited to my style of dancing than the Control or Danced Recording. As a young dancer who was trained in the balletic style, my opinion and abilities would be different to a dancer with more years of experience and training in a different style. As the creator of the notation, my opinion would also be influenced by a desire for it to succeed. Because of this possible bias, the argument that I find the Notated Recording preferable for my

[140] Mattheson, *Der Vollkommene Capellmeister*, 230.

dancing, is not strong enough to warrant inclusion as a finding of the study, but also raises questions about dancers' differing preferences.

To explore the variation in dancers' abilities, styles, ages, and physique, I compiled and watched a range of publicly available video recordings of *Sarabande pour une Femme,* danced to the same music, however I was only able to identify recordings which used the choreography from 1700,[141] but as this is the same style and difficulty level, I determined that it would still be useful.[142] Here I observed that preference of tempo could be anywhere from mm crotchet=105bpm to mm crotchet=125bpm. This significantly wide range shows that each dancer (or musician, as it is impossible to know who chose the tempo) may have a different preference or expectation for their ideal tempo and execution of this dance. While the tempo chosen for the Notated Recording did not sit within this range, it was still considered comfortable by the dancers, and was much more danceable than the tempo offered initially by the musicians for the Control Recording. However, as it was not a tempo that others have considered for the piece, adjustments to the BMDN may be needed to guide musicians more precisely in choosing a tempo which is comfortable for all dancers. The inclusion of more ornamental steps, and exact direction and distance of dancers' movements in the BMDN will assist in improved choice of tempo, as I discuss in Chapter 5.

Tempo Changes

In performance preparation, dancers often request that musicians make no changes in tempo during the performance; however, George Muffat suggests that 'one somewhat alters and accommodates the values of certain notes for greater grace.'[143] The ideal would be a balance between the two, a constant and steady tempo with slight relaxation at the ends of phrases or a quickening to enhance a particularly energetic phrase. While the title of this category is 'tempo changes,' the discussion refers more to flexibility in the tempo within a bar. These may be

[141] Feuillet, *Recueil de Dances,* (Paris, 1700), 21-24.
[142] Christopher Jordi Lara, "Sarabande pour femme," YouTube Video, 2:05, March 30, 2014, https://www.youtube.com/watch?v=H4DZmgdl128. Tempo: mm crotchet=105bpm.
Dancilla, "Sarabande pour femme, from 1700," YouTube Video, 2:05, January 28, 2011, https://www.youtube.com/watch?v=4rDDxLvlI1g. Tempo: mm crotchet=108bpm.
Peter Hoffman, "Baroque Dance – Sarabande pour femme," YouTube Video, 1:40, October 21, 2013, https://www.youtube.com/watch?v=8Uf7gCwYH5o. Not live Tempo: mm crotchet=125bpm.
Natalia Kaidanovskaya, "Sarabande pour femme 1700 Feuillet/Time of danse," YouTube Video, 1:48, August 4, 2022, https://www.youtube.com/watch?v=tQPfshBYZIw. Tempo: mm crotchet=125bpm.
[143] Wilson, *Georg Muffat on Performance Practice*, 42.

intentional moments of slowing down or speeding up, or moments that are more akin to 'breath' and phrasing. My research aimed to establish whether the BMDN could effectively give musicians an idea of appropriate places to gently alter the tempo to add to the musicality of the performance, without hindering the dancers' ability to follow the music.

The musicians altered the tempo at certain points during each recording of *Sarabande pour une Femme*. In the Control Recording, the tempo changes were consistent with the musical phrasing, mostly slowing at the ends of phrases, based on the musicians' prior knowledge and preference of phrasing. The moments of tempo changes did not greatly alter the dancer's ability to follow the music. In contrast, in the Notated Recording, the tempo changes were different, and while they were more frequent, they were smaller and less noticeable, giving this recording the most consistent and steady tempo. These tempo changes accentuated moments of extension in the dance and had little effect on the dancer's ability to follow the music. For the Danced Recording, the tempo changes were more frequent and extreme; I will hypothesise why below. They caused a considerable loss of synchronisation between dancer and musicians and did not align with climactic or relaxed moments to enhance dancer expression.

The Control Recording had only three tempo changes but they each significantly impacted the dancer's ability to follow the music. All tempo changes in the Control Recording that were greater than two bpm are presented in **Table 4.2** alongside my observations regarding whether the dancer's ability to follow the music was altered by the decrease or increase of tempo.

Table 4.2 *Sarabande pour une Femme* Tempo Changes, Control Recording

Bar Numbers	**Dancer's Reactions**
3-4 (increase)	Visible adjustment of dancing but no loss of synchronisation
1-3, repeat (decrease)	Synchronised but dancer obviously adjusting in bar 3
5-8, repeat (increase)	Dancer slight delay on bar 5, otherwise synchronised

The issue with analysing the dancer's performance in the Control Recording was that she had time to prepare. She was already aware of the location of slight tempo changes, meaning she was able to adjust her dancing; however, whether the tempo change was appropriate for the step type can still be analysed, and moments lacking in synchronisation were made more

apparent. This was observed in bars 3-4, and the repeat of 1-3, where the dancer, being aware of the quickening in tempo, was able to adjust her movements. In bars 3-4, both times, the dancer was executing a *coupé de deux mouvements* and a *pas de bourée.* These two step-units involve a lot of steps; the *coupé de deux mouvements* pushes against the music with four steps within three counts and, as a result, an increase or decrease in speed obscures the counter-rhythm it creates.

The main issue with the danceability of the Control Recording was that, in general, the tempo was too fast, so when there was an increase in tempo, it was difficult for the dancer to follow, as was observed in the repeat of bars 5-8. The steps in these bars contain hops. A dancer cannot adjust the speed at which a hop lands once they have taken off, and any change in tempo will thus hinder the synchronisation between the landing and the musical note.

The Notated Recording had more, albeit smaller, tempo changes, causing fewer challenges to synchronisation between musicians and dancer (**Table 4.3**). The moments when the dancer was delayed were more subtle than those that occurred in the Control Recording; however, as with the Control Recording, there were tempo changes during the *coupé de deux mouvements* which caused problems with synchronisation. The tempo changes were smaller than those that occurred in the Control Recording.

Table 4.3 *Sarabande pour une Femme* Tempo Changes, Notated Recording

Bar Numbers	**Dance Steps**	**Dancer's Reactions**
2-4 (increase)	Coupé de deux mouvements	Synchronised
1-4, repeat (decrease)	Point and hold, coupé de deux mouvements	Slight loss of synchronisation
10-12 (decrease)	Pas de bourée, élevé and hold	Slight loss of synchronisation at the beginning
13-15 (decrease)	Tourné and hold, élevé and hold, tourné and hold	Synchronised
15-16 (increase)	Tourné and hold	Slight loss of synchronisation

In the interviews following these experiments, the musicians mentioned that the *coupé de deux mouvements* was difficult to understand and decipher in the BMDN. This was because they did not understand how the four steps aligned with the three beats in the bar. The change of tempo during the *coupé de deux mouvements*, therefore, may be attributed to hesitation and confusion. Such a change in tempo would not be appropriate for this step unit because of the aforementioned counter-rhythm of four steps against three beats. As such, the dancer's ability to stay synchronised during the tempo change in bars 2-4 would be an indication of her competency more so than it would be considered appropriate for the dance. Thus, musicians need further education into how the *coupé de deux mouvements* aligns with the music, in order to avoid tempo changes such as the ones in bars 1-4 and its repeat.

The musicians took additional time in moments when the dancer was holding (either on rise or on point), and occasionally this meant it was difficult for the dancer to judge when to lower her pointed foot in the air, or her heels from rise. However, two of these moments were synchronised and the step indicated that it was possible, if the musicians slowed during these moments, as occurred in bars 13-15, for the dancer to create a further extension through the movement. Speeding, as in bars 15-16, would take away from the dancer's expressive choice to extend through the *tourné*.

One of the main successes in the Notated Recording was the lack of significant tempo changes which meant that in general there was greater synchronisation between dancer and musicians. This suggests that the BMDN encouraged an awareness of the moving body and a regular rhythm.

In the Danced Recording, there were more tempo changes than in the previous two recordings, often accompanied by a loss of synchronisation (**Table 4.4**). All tempo changes were larger than those that occurred in the Control and Notated Recordings.

Table 4.4 *Sarabande pour une Femme* Tempo Changes, Danced Recording

Bar Numbers	**Dance Steps**	**Dancer's Reactions**
1-4 (increase)	Point and hold, point and hold, coupé de deux mouvements	Slight loss of synchronisation

4-4, repeat (decrease)	Point and hold, point and hold, coupé de deux mouvements	Stumble because it slowed dramatically
5-8 (increase)	Élevé and hold, élevé and hold, tourné, tourné	Synchronised
5-7, repeat (decrease)	Jetté, jetté	Slight loss of synchronisation
11-15 (decrease)	Élevé and hold, tourné and hold	Loss of synchronisation
15-11, repeat (increase)	Tourné and hold, contretemps, contretemps, coupé de deux mouvements	Loss of synchronisation
11-13, repeat (increase)	Coupé de deux mouvements, contretemps, élevé	Synchronised
End (decrease)	Coupé de deux mouvements	Synchronised but dancer adjusting

Overall, there were many moments in the Danced Recording where the dancer and musicians were not synchronised. There are factors other than the tempo changes that could have affected the synchronisation, including dancer fatigue and not being able to listen to the music before dancing; however, the extent of the lack of synchronisation appeared to be due to more than these two factors. In the video, observing the musicians' sightlines, we can see that they followed the dancer's movements meticulously and adjusted to them.[144] This led to an unsteadiness in the tempo, suggesting that it would have been more helpful to the dancer for the musicians to keep a steady rhythm that the dancer could follow. Nevertheless, there are also advantages to the musicians watching the dancer's steps, such as adjusting the accent pattern to suit the type of step and allowing the dancer to add lengths of time before she lowers her feet from an extension. The BMDN allows for these observations while also encouraging a steady tempo.

There were two moments in the danced recording where the dancer and musicians were synchronised despite the speeding up. These occurred in bars 5-8 and the repeat of bars 11-13.

[144] An example of this can be viewed in "Sarabande pour une Femme" Danced Recording https://youtu.be/GT1fU-eZt-o

While the dancer was able to follow these tempo changes, there was no indication in the choreography that there could be an increase in tempo. All the steps are slow, graceful holds or a *jetté*. The *coupé de deux mouvements* especially, as discussed above, should not have a tempo change.

The BMDN encouraged the musicians to keep a consistent tempo throughout the piece while also revealing moments where there could be a slowing down of the tempo. This consistency in tempo meant that the dancer was more likely to be synchronised with the steps and, as dancers, Turocy and Waite (**Chapter 3**) suggest, dancers always prefer very little change in tempo. Thus, the best success of the BMDN in the experimentation with *Sarabande pour une Femme* was that the Notated Recording had the steadiest choice of tempo.

Accent and Articulation

Accent placement and articulation which reflect the danced movement can assist the intensity and energy of the dance. Appropriate choices in these areas allow for greater synchronisation between dancer and musician, and synchronisation of climactic moments can lead to enhanced rhetorical delivery (communicating affect to the audience) by both. I hypothesised that, firstly, increased knowledge of where accents lie in the dance would lead to a better correlation between danced accents and musical accents, either enhancing a large movement or creating a contrast of musical rhythm against rhythm in the dance. Secondly, danced steps can indicate the character of the dance which can be reflected in the choice of accent. Finally, if clearer articulation is used, it will generally be easier to achieve synchronisation between musician and dancer especially when there is less rehearsal time, this however is most relevant to the faster dances, such as the *bourée*. I found that the use of the BMDN achieved all of these potentials, however, improvements to the BMDN could assist in supporting even better correlation between danced and musical accents.

The musicians in the recordings of *Sarabande pour une Femme* adjusted their use of accent and articulation from being quite harsh and attacked in the Control Recording to a smoother but shorter and lighter series of notes with *messe di voce*—beginning soft, growing, and softening at the end—in the Notated and Danced Recordings. These changes assisted in

delivering the affect associated with a *sarabande* (ambition)[145] and increased the synchronisation between dancer and musicians.

In summary, the Control Recording had the sharpest articulation of the three. Most accents were characterised by an attack followed by a quick *diminué*. The accents were similar in every bar throughout the piece, possibly because of the fast tempo. This recording also had the most consistency in the accents used across repeats. The Notated and Danced Recordings had similar articulation to each other. The notes predominantly used a quick *messa di voce,* which while smooth, were clear and detached. The dancers made few comments regarding how they would prefer accent and articulation to be played after the Notated Recording. This suggests that the accents and articulation used in the Notated Recording were appropriate to assist dancing, and little further communication needed to be made. It should be noted, however, that during a performance, dancers do not often have the time to consider such fine details in the music.

The gambist changed the type of accent he used during extended and emotive steps, such as the point and hold, from the Control Recording to the Notated Recording. The changed accent, in turn, assisted the dancer in creating more extension through the movement, which helped achieve the 'ambitious' affect that is desired in a *sarabande.*[146] An example of this can be seen in bar 1, where on beat 1 the gambist played the Bb in the Control Recording with a quick *messa di voce,* shown by the Melodyne graph in **Figure 4.1**.

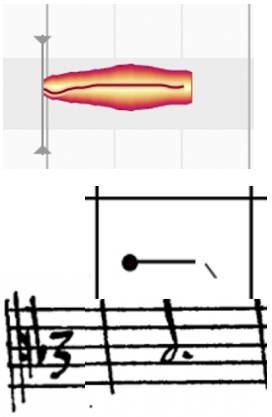


Figure 4.1 Bar 1 Control Recording Gamba

[145] Mattheson, *Der Vollkommene Capellmeister*, 230.
[146] Mattheson, *Der Vollkommene Capellmeister*, 230.

Here I introduce images captured from Melodyne. Each note is positioned by pitch on the vertical axis in relation to other notes in the recording. The notes have a waveform which shows the shape of the note over time, reading from left to right. The wider the waveform, the louder the note. The line running through the note represents the pitch, this can sometimes be used to determine whether the musician used vibrato; however, this very sensitive information can be influenced by exterior sounds, especially when the recording was made with one microphone and three instruments. Occasionally, the graph has vertical grey bars that show where the note begins; however, Melodyne was unable to detect this for every note. Finally, the colour of the waveforms is not relevant to this analysis.

In the Notated and Danced Recordings, the gambist played the Bb with a more gradual *messa di voce,* which continued through to the end of the bar (**Figures 4.2** and **4.3**). The gradual increase in volume, as seen in the Notated and Danced Recordings, mimics the slow, gradual rise and point of the dancer. Additionally, the dancer reached the most extension in this movement in the Notated Recording, enhancing the delivery of the dance as opposed to the rushed movement in the Control Recording. Interestingly, in the Danced Recording, the dancer reached less of an extension in the movement perhaps because of the faster *diminué* that the gambist used.

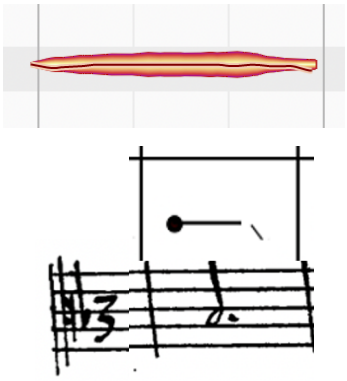


Figure 4.2 Bar 1 Notated Recording Gamba[147]

[147] Differences in recording quality made the Melodyne diagrams look different. The Notated Recording was more spaced out and appears as though each note had less intensity than the Control Recording; however, the size of the note does not matter so much as the shape of the note in comparison to those around it.

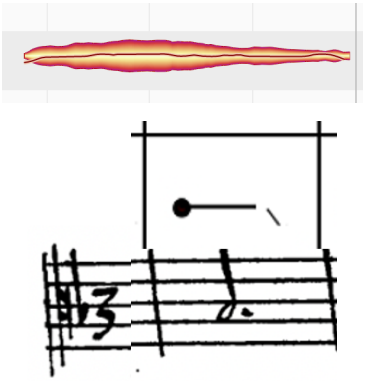


Figure 4.3 Bar 1 Danced Recording Gamba

Similarly, the gambist's changing type of accent better reflected the danced movements in bars 10-12. In the Control Recording, the gambist played *détacher*, as evidenced by the short tails in **Figure 4.4**. This created a tendency to speed up the music and for the dancer to become unsynchronised.

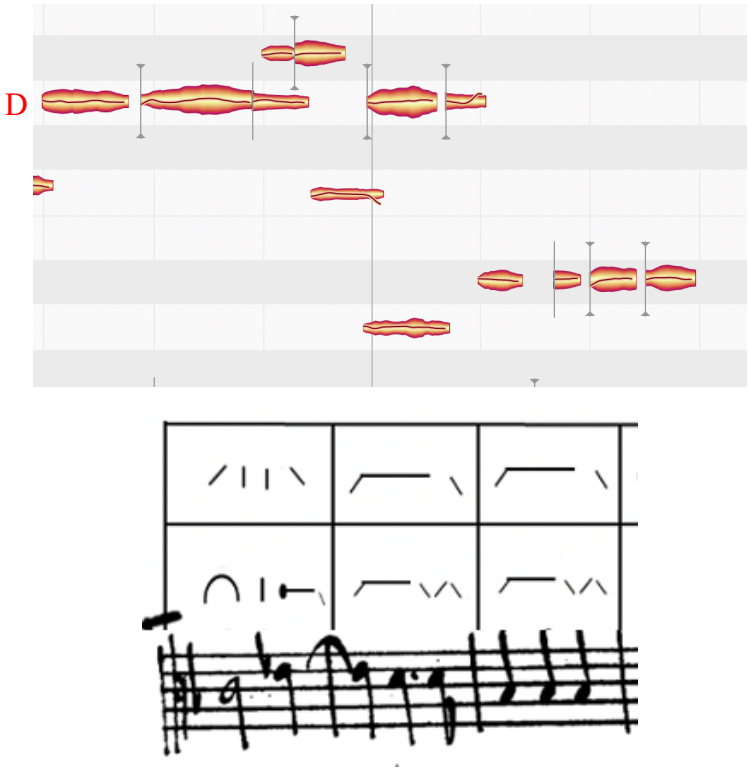


Figure 4.4 Bars 10-12 Control Recording Gamba[148]

[148] In most of the Melodyne graphs I have pointed out letter names which correspond to the notes in the score. The letters are in red.

The longer notes used in the Notated Recording (**Figure 4.5**) matched the dancer's smoother movements. Additionally, the downbeat of bar 10 was accented heavily and the dancer was synchronised.

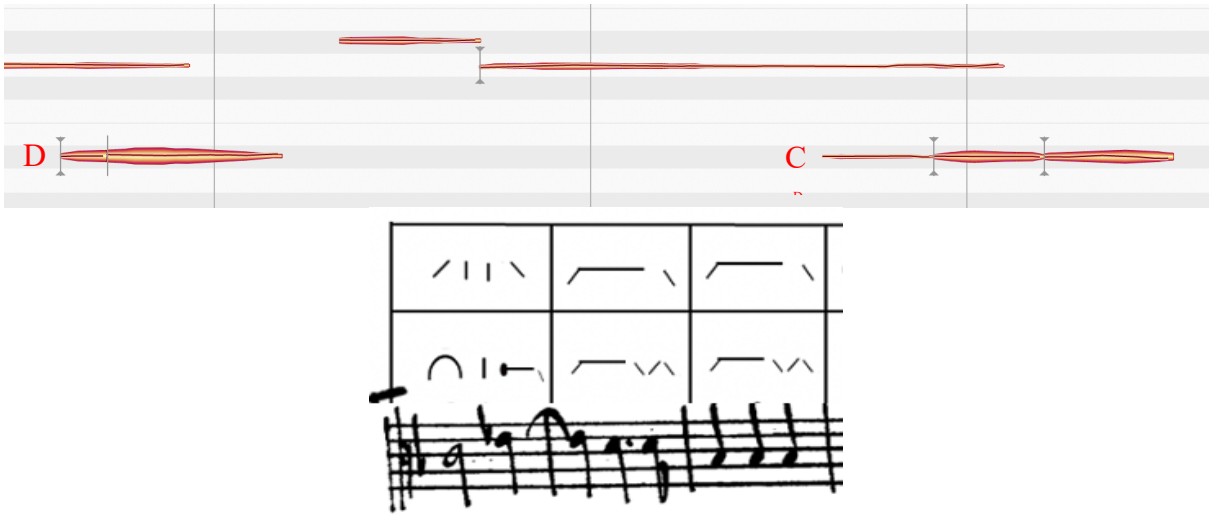


Figure 4.5 Bars 10-12 Notated Recording Gamba[149]

The violinist also changed the type of accent in some circumstances, from short and attacked in the Control Recording to a more gradual *messa di voce* in the Notated Recording, creating both positive and negative outcomes for the dancer. For example, in the repeat of bars 1-2, in the Control Recording, the violinist used short and crisp notes (**Figure 4.6**). The dancer, as a result, was exactly synchronised but the movements were short and not reflective of the character of a *sarabande*.

[149] In this circumstance, Melodyne did not detect that the D and C were different pitches. The Melodyne graphs are used as an example to show the intensity of each note rather than the pitch.

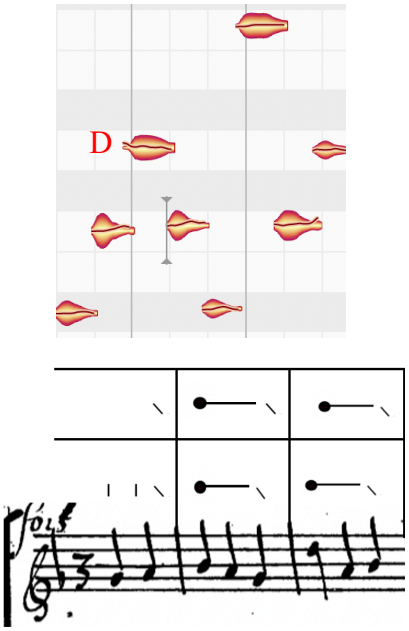


Figure 4.6 Bars 1-2, repeat Control Recording Violin

In the Notated Recording, the violinist used a gradual *enflé* or *messa di voce* for each note (**Figure 4.7**). The dancer was subtly less synchronised but used more extension through each movement. This change of accent created a different positive result than these bars played the first time, showing that accent and articulation usage can influence the dance in different ways.

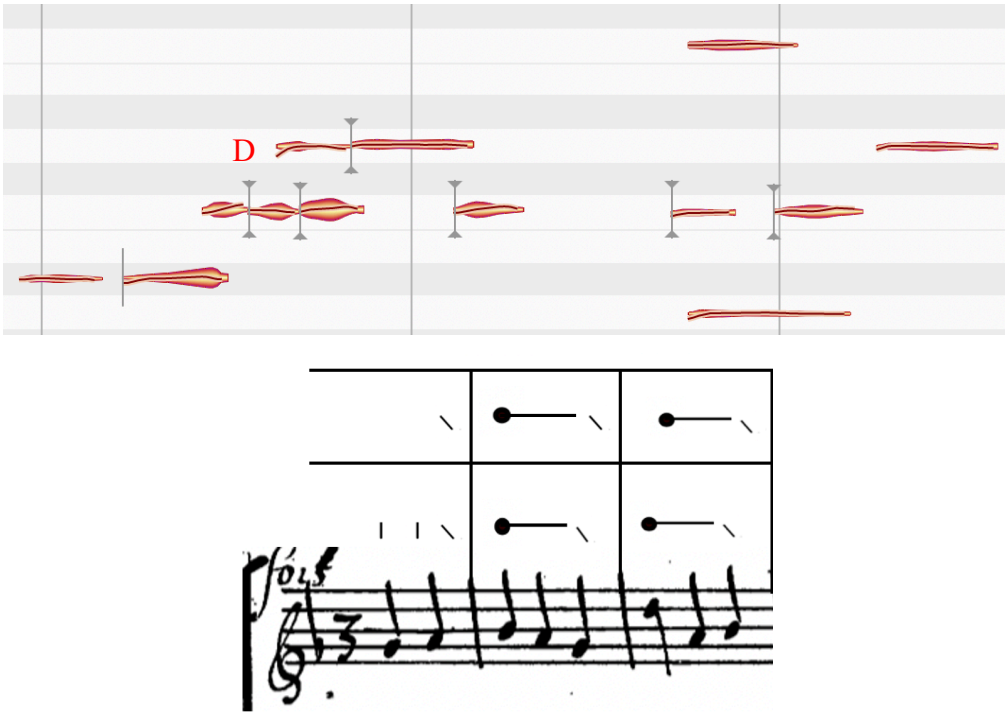


Figure 4.7 Bars 1-2, repeat Notated Recording Violin

Occasionally the violinist's lack of a firm accent resulted in the dancer losing synchronisation. This occurred particularly when the violinist added an ornament to the upbeat to bar 1 and the repeat, lessening the accent on the first beat of bar 1. This happened in the Control and Notated Recordings. In the Danced Recording, the violinist played a long, short, long pattern with three firm accents and, as a result, the dancer was synchronised with the music and her movements were accentuated; however, the use of *détacher* caused a loss of 'flow' in the dancer's movements, which is part of the character of the dance. From the evidence presented here, a better artistic result would be produced by a balance between clear articulation and types of accents that reflect the extension in the dance, such as *messe di voce*.

The violinist's placement of the accents with the highest amplitude changed across the recordings with varied results. An example occurred in bars 10-11. In the Control Recording, the violinist used loud *détacher* with the most accentuated note on the second beat of bar 11 (**Figure 4.8**). In what was somewhat of a coincidence, the danced ornament, a *rond* (the movement of one leg around the other in a circular motion), which was not notated in this bar, was on beat 2 and resulted in the dancer focusing on the climax of the rise and hold on the second beat of the bar, moving the accent from beat 1.

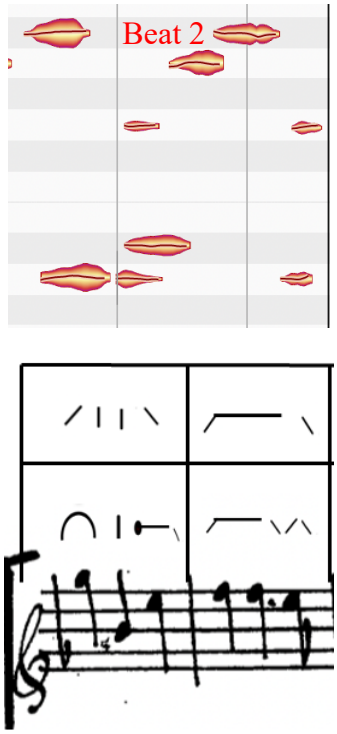


Figure 4.8 Bars 10-11 Control Recording Violin

In the Notated Recording, the note with the most accent was on the first beat of bar 11 (**Figure 4.9**). This bar would have benefited from the same use of accent as the Control Recording, but the musicians were not aware of the *rond* on beat 2 and, I imagine, this synchronisation was a coincidence in the Control Recording. This highlighted the need for *ronds* to be included in the BMDN, especially as in the Danced Recording, after seeing the *rond*, the gambist reinstated the stronger *enflé* on beat 2. In this circumstance, the alignment of accented movement with accents in the music enhanced the delivery of character as well as the climax of the bar.

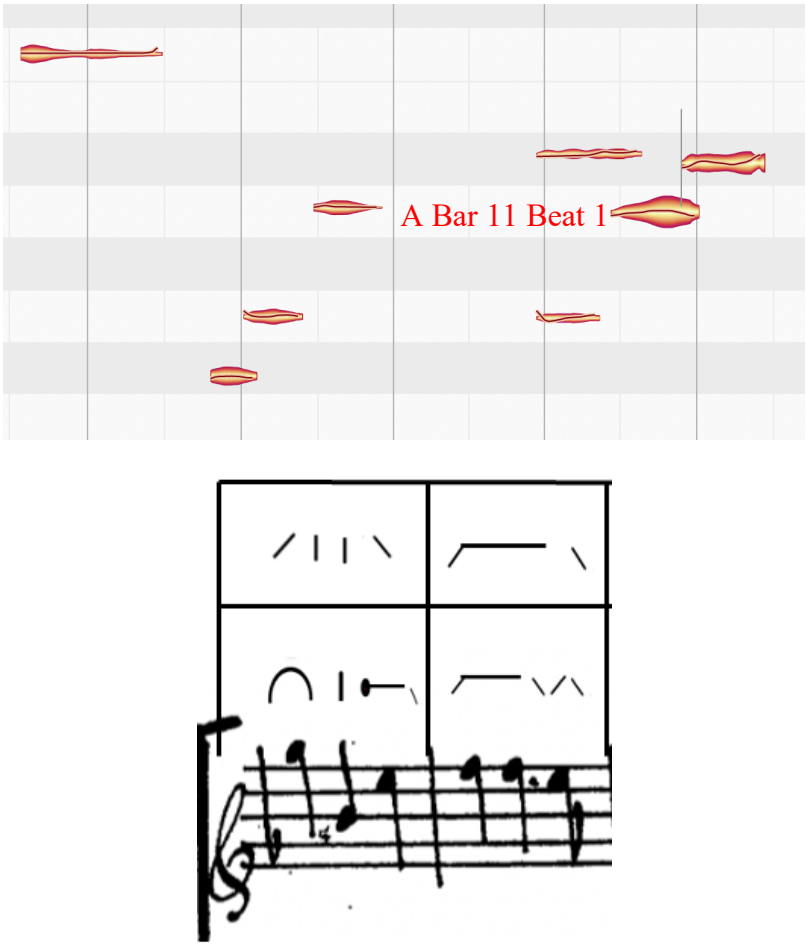


Figure 4.9 Bars 10-11 Notated Recording Violin[150]

All musicians adjusted their accents and articulation for the Notated Recording and again for the Danced Recording. The accents achieved in the Notated Recording were substantially reflective of the dancer's movements and, as a result, the dancer and musicians were more

[150] Note: the Bb in bar 10 was not identified by Melodyne. It is an accented but smooth note.

synchronised, and the movements had greater extension. This analysis also revealed elements of the BMDN that could be adjusted to enrich its effectiveness in enhancing accents in the dance, such as the inclusion of a *rond* symbol.

Ornamentation

Ornaments are the embellishments that composers, musicians or dancers place on certain beats, often for emphasis. In the interviews following the experiments, dancer, Fiona Garlick, mentioned that 'you can hear the ornaments on the slower, gestural steps, which help to make it feel like the dance and music are in agreement.' Her preference then, was that musical ornaments helped to emphasise gestural, ornamental movements. The violinist's choice of ornaments changed only a few times from the Control to the Notated Recording; however, a few of the ornaments chosen in the Notated Recording enhanced the dancer's delivery of the accented step.

For *Sarabande pour une Femme*, there are no ornaments written on the operatic score, which was the one provided to the musicians. The operatic, as opposed to the danced score, was provided to the musicians as the dance score only has the melodic line. In the danced score, there is a *tremblement* on the second beat of bars 7, 11 and 15 and their repeats. Of these *tremblements*, three align midway through a pirouette, and the repeats align with the held beat of a *coupé de deux mouvements.* The ornaments added in the dance score suggest that professional musicians in the eighteenth century would have been aware of appropriate places to add ornamentation, while the intended audience for a dance manual, namely dancers and masters, may not have been aware of such practices.

In the Control Recording of *Sarabande pour une Femme* the violinist added many *tremblements* on the first beats of phrases. These *tremblements* aligned with accented steps. As at this stage the musicians only had the unannotated score, these were purely musical decisions. This led me to consider that while performers who specialised in historical performance practice may get close to appropriate choice of ornamentation, based on their prior knowledge, the BMDN would confirm their choices, while for those less expert it would give them information they lack. This point will be revisited in the analysis of the other pieces and particularly considered regarding the music that was not written for dancing.

There was one compound ornament which occurred at different times in each recording and interfered with the dancer's ability to hear the musical beats. This was a *tremblement* and *tour de gosier,* as notated in **Figure 4.10**. This ornament was added in the Control and Danced Recordings on the upbeat to the repeat of the first phrase. In the Notated Recording, it was added to the initial upbeat. The ornament lessened the accent on beat 1 and, as a result, the dancer could not hear the downbeat and her step was not synchronised. As this ornament occurred at similar points in each recording, we can conclude that the BMDN did not influence the musician's decision in this regard. Thus, musicians will need to receive education regarding the importance of indicating the first downbeat of a phrase.

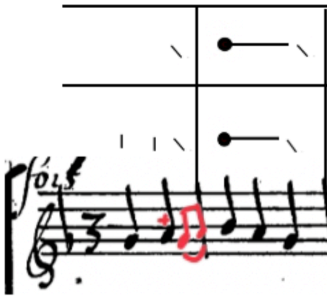


Figure 4.10 Bar 1 Ornament

Two additional ornaments in the Notated Recording aligned with ornamental movement in the dance, that being a *tour de gosier* on the *jetté* in the repeat of bar 5 (**Figure 4.11**), and the same figure which recurs in the repeat of bar 13. The addition of a *tour de gosier* on a *jetté* may have been a reaction to the notation, as the musicians were informed when introduced to the BMDN that *jettés* are often accented. As a result of these added ornaments, the dancer created a larger gesture.

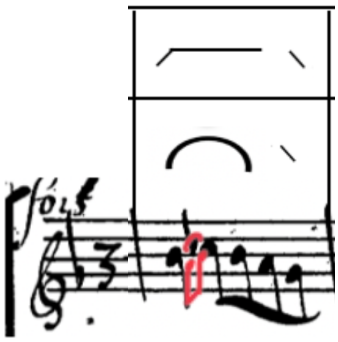


Figure 4.11 Bar 5 Ornament

There was one other ornament added in the Notated Recording which obscured the beat, causing a loss of synchronisation between dancer and musicians. This was in the repeat of bar 12 where the violinist added a *tremblement* on the second beat of the *coupé de deux mouvements* (**Figure 4.12**). This ornament obscured the beat, and the dancer did not lower her feet with the music; however, the notation of a *tremblement* on the second beat of the *coupé de deux mouvements* is not uncommon and was, in fact, included in the dance score. This suggests that the *tremblement* could have been appropriate if the dancer had been made more aware of it.

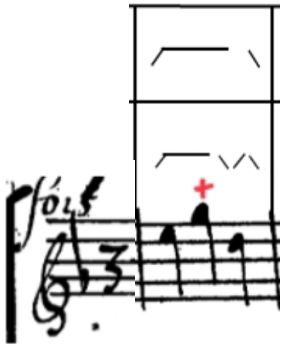


Figure 4.12 Bar 12 Ornament

Additionally, five *tremblements,* which were part of the Control Recording, were omitted in the Notated Recording. There are various reasons why the violinist may have removed these *tremblements;* two likely scenarios are that he was distracted by the BMDN, or that he felt the dancer needed more room to shine and did not want to obscure her steps with overly ornamented playing. The experiments indicated that where these *tremblements* occurred were at appropriate moments, for example, when the dancer was executing an ornamental movement, removing a *tremblement* for their sake is not necessary and conversely might detract from the dance. The decision to remove the *tremblements* may simply have been because the musician was too distracted in following the BMDN, however, each continued to also be omitted from the Danced Recording.

In the Danced Recording, the *pincé* added on the Eb in bar 3, and the *tremblements* added in bar 6 and the repeat of bar 12 (**Figures 4.13-4.15**), aligned with ornamental

movements which enhanced the dance and accentuated the step. It appears that here the visualisation of dance steps assisted in the consideration of appropriate ornaments.

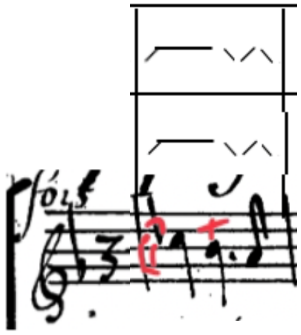


Figure 4.13 Bar 3 Ornaments

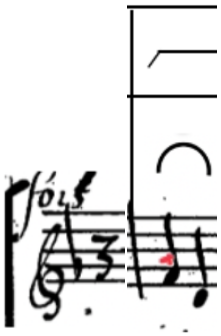


Figure 4.14 Bar 6 Ornaments

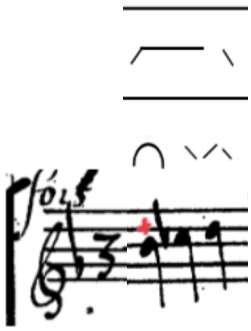


Figure 4.15 Bar 12 Ornament

The analysis of the ornamentation in *Sarabande pour une Femme* revealed both how the BMDN can assist in indicating ornamental steps and how it may need to be improved. The violinist made more ornamental choices which aligned with the dancer's ornamental and accented steps in the Notated and Danced Recording, than he made in the Control Recording. It can therefore be ascertained that the BMDN can assist the musician in choosing appropriate places to ornament; however, there were also many ornaments which caused a loss of

synchronisation. Thus, improvements to the BMDN, such as the addition of more ornamental steps, will assist musicians in choosing ornaments that align with the dance. An additional observation from this study showed that musicians' knowledge of the appropriate places to add ornamentation in the French style often aligned with accented steps in the dance and that a reliance on such knowledge, alongside a better understanding of the BMDN, may assist choice of appropriate ornaments.

Body Movement and Posture

I found that, when working with the BMDN, the musicians seemed to stand and sit with a straighter back, when compared to the posture they adopted in the Control Recording. This adjusted posture may have been due to a heightened awareness, through the BMDN, of the movement being executed by the dancer, thus bringing more awareness of the body to the musicians. This simple observation raised questions about the impact of body movement on the synchronisation between musicians and thus strengthened delivery of climactic moments. This effect was stimulated by the synchronisation the BMDN offered between the musicians' and the dancer's movements. As a result, when using the notation, the dancer and musicians felt part of a coherent ensemble. I will only discuss this element in relation to the *Sarabande pour une Femme,* which I analysed first and found the results not significant enough to repeat with analysis, as I describe below.

In all dances, I found little correlation between musicians' movements and the synchronisation and affect delivery of their performance, however I made an effort to explore this aspect using *Sarabande Pour Une Femme*. I played the videos at 1/2 speed and noted each time when the musicians moved together on the first beat of the bar. I looked only at the first beat as this was the beat most influenced by synchronisation. I found in the Notated Recording that on the first beat of each bar, half of the musicians' body movements were synchronised with the others' movements. During these synchronised moments, only half of the musical notes played were also synchronised, and with the dancer's steps. Compared to the Control Recording, the improvement in the synchronisation between musicians' body movements, the notes, and the dancers' movements, was approximately by 2%. This was not a significant finding but, with the use of motion capture it could be possible to measure this aspect of the effect of the BMDN more precisely. This is an aspect that I imagine would change more

dramatically, the more musicians became familiar with the dance and music. As they already had many aspects of the music to concentrate on, the musicians did not consciously focus on body movement during performance and thus did not comment, when interviewed, on this aspect. As the results of the *Sarabande pour une Femme* did not prove useful, I did not analyse the recordings of the other pieces in similar detail; however, to confirm that I had not missed something important, I observed each of the other pieces at 1/2 speed and again found no significant difference in the movements of each musician.

Conclusion

In the *Sarabande pour une Femme*, the BMDN assisted the musicians in choosing a tempo appropriate for dancing, which could be more adapted to suit many dancers' needs by increasing knowledge of the BMDN. The notation also assisted in helping the musicians to keep a steadier tempo and supported the dancer to stay synchronised by doing so. When the musicians were given the BMDN, the accent and articulation changed to be smoother and predominantly used *messe di voce,* which better reflected the holds and extensions in the dance. There were also many examples where the choice of accent and ornamentation placement reflected the danced accents and assisted the musicians in expressing the character of the dance; however, ensuring better choice of ornamentation requires additions to the BMDN.

While these elements indicate that the BMDN positively assisted the performance, the experiment also revealed aspects in which the system could be further enhanced. These are: increased education of musicians about the alignment of the steps in a *coupé de deux mouvements* with the beats in a bar, and the inclusion of more ornamental steps, such as the *rond*, in the notation may increase the alignment of ornaments in the music with ornaments in the dance. These are all addressed in Chapter 5.

La Bourée d'Achille

As with *Sarabande pour une Femme*, the musicians' interpretation of *La Bourée d'Achille* changed significantly across recordings. After viewing the BMDN, their choice of tempo increased in speed for both the *Bourée* and *Menuet* and again in the Danced Recording. The increase led to the dancers feeling more comfortable. The frequency of tempo changes did not decrease from one recording to the next; however, the intensity of the tempo changes decreased. This meant there was increased synchronisation between musicians and dancers in the Notated and Danced Recordings. The choice of accent and articulation moved from heavy and exaggerated in the Control Recording to much lighter notes in the Notated and Danced Recordings. This choice meant the dancers performed higher jumps and smaller, faster steps. There were no significant findings in the change in choice of ornamentation as there were few moments of hindrance or addition to the dance from added ornamentation. Following, is a detailed exploration of the same four categories analysed above for the *Sarabande pour une Femme*: tempo, tempo changes, accent and articulation, and ornamentation, as they changed over the Control, Notated and Danced Recordings.

La Bourée d'Achille consists of a short and simple *Bourée* and *Menuet*. The step-units are repetitive and there are many running and jumping steps. The *contretemps de menuet* is a step-unit of note as it creates a hemiola with the music. In these experiments, the dance was performed by Dr Fiona Garlick and John Barnard.

Tempo

As with *Sarabande pour une Femme*, the goal in this experiment was for the BMDN to assist the musicians to choose a tempo in the Notated Recording that the dancers considered appropriate for dancing, even if not entirely to their personal taste. The following results proved similar to those found for *Sarabande pour une Femme*: the Control Recording was played at a tempo too extreme for dancing comfortably, in this case too slow; the Notated Recording reached a comfortable tempo, though not one ideal for the dancers in this experiment; and the Danced Recording, upon the dancers' request, was an ideal tempo for these dancers.

Table 4.5 *La Bourée d'Achille* average tempos

Recording	**Bourée**	**Menuet**
Control	Mm crotchet=145.45bpm	Mm crotchet=124.22bpm
Notated	Mm crotchet=187.50bpm	Mm crotchet=180.18bpm
Danced	Mm crotchet=222.22bpm	Mm crotchet=194.80bpm

There was an obvious increase in tempo with each progressive recording. The Control Recording was taken at a cautious tempo, one that allowed the musicians time to understand the music; however, this was not a tempo entirely representative of their knowledge of these dance styles. The slow tempo resulted in difficulty for the dancers because typical *bourée* and *menuet* steps are fast-moving, small and simple steps.

The Notated Recording saw a significant increase in speed for both the *Bourée* and *Menuet*. This occurred because of familiarity with the music and the influence of the BMDN. The musicians mentioned, in the concluding interview and during rehearsal time, that the notation influenced their decision most emphatically due to the frequency of jumps. Their initial reaction to the *Bourée* was, as the violinist commented, 'This *Bourée* seems fast to me… because there's lots of jumps.' Indeed, the frequency of jumps was high, so the musicians chose a tempo which they felt they could execute a series of jumps to; they even tried it for themselves. As a result of this physical experimentation, the Notated Recording was more comfortable for the dancers, even though it was not their chosen tempo for these dance styles.

The Danced Recording was, of course, the dancers' ideal tempo; however, with an increase in tempo for this recording, I found there was a loss of synchronisation between dancers and musicians. This raises the question as to whether dancers' enjoyment should be valued more highly than synchronisation. I imagine with further practice that this would not have been such an issue but, nevertheless, it is something to consider. This is the same as the results found by Coorevitz and Moelants, that is, that there is a middle point of tempo whereby the dancers can enjoy themselves while not losing clarity in the alignment of steps and notes.[151] There is also a point where the tempo can be too fast for the dancer to enjoy themselves. The

[151] Coorevits and Moelants, "Tempo in Baroque Music and Dance."

Notated Recording was a tempo that was still considered comfortable for dancing but with minimal loss in synchronisation and therefore, in this circumstance, better than the tempo chosen for the Danced Recording.

Choice of tempo will vary depending on the dancer so, to determine whether the musicians reached a danceable tempo, I compiled a collection of tempos used in publicly available video recordings of *La Bourée d'achille,* which used the same choreography and music.[152] The tempos of the recordings ranged from crotchet=186bpm to crotchet=280bpm for the *Bourée,* and the *Menuet* ranged from crotchet=165bpm to crotchet=222bpm. This meant that the tempo chosen in the Notated Recording was at the lower end of the range of publicly available recordings for the *Bourée* (187.5bpm), and mid-range for the *Menuet* (180.18bpm). Therefore, they were not commonly chosen tempos but nevertheless ones that other dancers or musicians have previously considered. To reach a tempo comfortable for more dancers using the BMDN, musicians' understanding about the speed at which certain movements can be executed can be explained more in the education process of the notation.

It was found that the BMDN assisted the musicians in choosing a tempo more appropriate for dancing even if not one that was ideal for these specific dancers. The tempo chosen did, however, provide a middle ground between dancer enjoyment and loss of synchronisation. Further improvements to the BMDN, which are outlined in Chapter 5, will assist in helping musicians choose a tempo suited to more dancers' needs for a *menuet* and *bourée*.

---

[152] Dancilla, "La Bourré d'Achille." Youtube Video, 2:25, January 28, 2011, https://www.youtube.com/watch?v=9D2jBvY4LuY. Bourée mm crotchet=93bpm, Menuet mm crotchet=55bpm.
CELINE415, "Danse baroque – Bourrée et menuet d'Achille," Youtube Video, 2:04, November 2, 2008, https://www.youtube.com/watch?v=OVxatlZDOdQ. Bourée mm crotchet=120bpm, Menuet mm crotchet=74bpm.
Golden Forests Dance Video, "Bourre d'Achille," Youtube Video, 1:40, June 24, 2016, https://www.youtube.com/watch?v=MSaXOnx83o8. Bourée mm crotchet=140bpm, Menuet mm crotchet=60 bpm.
Maltizov, "La Bourée d`Achille from Baltic Baroque/Grigori Maltizov," Youtube Video, 2:06, May 22, 2007, https://www.youtube.com/watch?v=P3SMNkpnL-E. Bourée mm crotchet=120bpm, Menuet mm crotchet=74bpm.

Tempo Changes

As with *Sarabande pour une Femme*, the goal was for the musicians to be able to keep a steady tempo but also to alter the tempo at appropriate places, thereby enhancing the performance, without hindering the dancers' ability to follow the music. The frequency of tempo changes in *La Bourée d'Achille* did not substantially decrease from one recording to the next, however, the intensity of these tempo changes did and, in this way, the goal was achieved. The Control Recording had many tempo changes to which the dancers adjusted in the *Bourée*; however, in the *Menuet* these frequently inhibited the dancers' ability to follow the music, particularly during the *contretemps de menuet*. The Notated and Danced Recordings, on the other hand, had a similar number of tempo changes but these were smaller than the Control Recording and often did not inhibit the dancers' ability to follow.

La Bourée d'Achille consists of a *Bourée* and *Menuet,* which have different metres. For analysis, each recording was therefore split into the *Bourée* and *Menuet* sections so that each imported file in Melodyne only had one time signature, there being too many inaccuracies with the tempo detection if there was more than one metre. A consequence of this, however, was that I could not use Melodyne to detect the degree of tempo change during the transition from *Bourée* to *Menuet*. I instead used close listening and a comparison between the tempo in the last bar of the *Bourée* and the first bar of the *Menuet.*

In summary, for the Control Recording, there were many tempo changes in the *Bourée,* which the dancers were often able to follow because of previous rehearsal. In the *Menuet*, however, the tempo changes were not synchronised with the dancers. In contrast, in the Notated Recording, there were fewer moments of slowing and speeding. The *Bourée* and *Menuet* were mostly synchronised between musicians and dancers during these moments. Finally, in the Danced Recording, the *Bourée* was mostly synchronised during tempo changes, except at the end, and the *Menuet* had a delay during the beginning. The *contretemps de menuet* was not synchronised. Overall, the BMDN contributed to reducing the number of tempo changes and increasing synchronisation during these moments, but there is room for improvement.

Bourée

In the Control Recording of the *Bourée* there were many alterations of tempo (**Table 4.6**), especially at the ends of phrases; however, these moments were often synchronised, which may have been due to the amount of practice the dancers had with the music and not an indication that they were appropriate for the dance.

Table 4.6 *La Bourée d'Achille, Bourée* Tempo Changes, Control Recording

Bar and direction	**Dancers' reactions**
3-repeat of 3 (decrease)	Dancers hesitated but still synchronised
5-7 (decrease)	Synchronised but dancers noticeably adjusting
7-10 (increase)	Dancers noticeably speeding up but synchronised
5-6, repeat (decrease)	Synchronised
7-8, repeat (increase)	Synchronised

Overall, for the *Bourée,* there was no obvious lack of synchronisation but again this may be because of the dancers' practice time and not an indication that the tempo changes in the Control Recording would be appropriate. The moments of slowing caused the dancers' movements to be laboured; in contrast, the moments of speeding looked more like relief for the dancers. Neither of these situations enhanced the delivery of character or step type in the dance.

In the Notated Recording, there were fewer tempo changes, and some of these were appropriate for the dance (**Table 4.7**). For the *Bourée*, save for one moment of delay in bars 1-4, each moment of slowing and speeding was synchronised. The delay occurred because of a slight pause after the introduction. This is something that should either be removed or can be fixed with eye contact between musicians and dancers. When dancers are not present, the introduction should be played at the same speed as the rest of the piece with no pause between it and the start of the piece. The moments of changing tempo which were synchronised occurred either at the end of a phrase or at the end of a series of *pas de bourée*. This may indicate that these moments are appropriate for slowing or speeding and that musicians can use the ends of phrases as a moment of relaxation.

Table 4.7 *La Bourée d'Achille, Bourée* Tempo Changes, Notated Recording

Bar and Direction	**Dance Steps**	**Dancers' reactions**
1-4 (increase)	Pas de bourée x2, contretemps, coupé	Delay at beginning, synchronised by the end of the phrase
2, repeat-9 (decrease)	Continuous pas de bourée	Synchronised
12-7, repeat (increase)	Continuous pas de bourée	Synchronised
8-10, repeat (decrease)	Pas de bourée, leap, leap x 2, pas de bourée	Synchronised

The Danced Recording had the same number of tempo changes as the Notated Recording in the *Bourée* (**Table 4.8**). These were also mostly synchronised between dancers and musicians. The locations of tempo changes were similar to those chosen in the Notated Recording, predominantly at the ends of phrases. At these moments, the dancers were relatively synchronised, except during the hop in the repeat of bar 3. This suggests that such a moment should not change tempo.

Table 4.8 *La Bourée d'Achille, Bourée* Tempo Changes, Danced Recording

Bar and Direction	**Notation**	**Dancers Reactions**
1-2 (Increase)	Pas de bourée	Synchronised
2, repeat-11 (Decrease)	Contretemps, pas de bourée	Very slight loss of synchronisation
11-6, repeat (Increase)	Jetté, pas de bourée	Synchronised
6-11, repeat (Decrease)	Pas de bourée, jetté	Synchronised

From Bourée to Menuet

In the final bar of the Control Recording of the *Bourée*, the musicians' slowing down allowed the dancers to better follow the music; however, there was slight confusion as the dancers approached the *Menuet* because they were unsure about the tempo, but by beat 2 they were synchronised.

In comparison, in the Notated Recording, there was no slowing down at the end of the *Bourée*. This appeared to have the opposite effect on the dancers whereby they had to rush into the *Menuet* and it took a whole bar for them to settle into the beat. Dancer Fiona Garlick commented, 'It was certainly easier to dance to. The transition from *Bourée* to *Menuet* was easier to deal with even though it wasn't perfect.'

In the Danced Recording, there was no slowing down in the *Bourée* but because of the communication between musicians and dancers, there was no confusion regarding the tempo of the *Menuet*. From this piece, it appears that communication between musicians and dancers is the best way to achieve synchronisation during a metrical change. Further exploration as to how the BMDN may assist is addressed in chapter 5.

Menuet

In the Control Recording of the *Menuet* there were more than 50% of the occasions of tempo change when the dancers were not synchronised (**Table 4.9**). The dancers were adjusting to accommodate the musicians' playing but often at the ends of bars there was an obvious lack of synchronisation. Several elements may have contributed to the musicians' choice of tempo changes—fatigue, musical choice—but, because of the dancers' inability to follow the changes, they were not considered appropriate expressive choices. This especially applies to the *contretemps de menuet*, which I will discuss further in relation to the Danced Recording.

Table 4.9 *La Bourée d'Achille, Menuet* Tempo Changes, Control Recording

Bar and Direction	**Dancers' Reactions**
2-3 (increase)	Synchronised
6-10 (increase)	Slight loss of synchronisation
5-6, repeat (decrease)	Synchronised
6-7 repeat (decrease)	Synchronised
7-9, repeat (increase)	Slight loss of synchronisation
10-11, repeat (decrease)	Not synchronised
11, repeat-13 (increase)	Not synchronised
14, repeat-18 (decrease)	Not synchronised

22-19, repeat (increase)	Not synchronised
18- 22, repeat (decrease)	Not synchronised

Unfortunately, the Notated Recording of the *Menuet* could only be analysed in comparison to the dancers' reactions in the first half because, due to differing musical scores between the operatic score and Feuillet's score, the repeat structure of the second half was not communicated accurately to the musicians; however, the comparison in the first half, and a comparison with the dance steps in the second half, offers enough information to grasp an understanding of the musicians' changing use of tempo alterations.

Thus, only one tempo change in the Notated Recording could be compared to the dancers' reaction. This was the repeat of bars 2-3, which was mostly synchronised except for the end of bar 3 (**Table 4.10**).

Table 4.10 *La Bourée d'Achille, Menuet* Tempo Changes, Notated Recording

Bar and Direction	**Dance Steps**	**Dancers' reactions**
2-3, repeat (Decrease)	Pas de menuet	Begins synchronised, falls out
9-12, repeat (Increase)	Pas de menuet	
13-16 (Decrease)	Pas de menuet	
13-14, repeat (Increase)	Pas de menuet	
15-16, repeat (Decrease)	Pas de menuet	
16-19 (Increase)	Pas de menuet	
20-end (Increase)	Pas de menuet	

In the second half, the musicians only altered the tempo by about two crotchet bpm at a time, which would not have greatly affected the dancers' synchronisation; however, there seemed to be a tendency for the musicians to want to alter the tempo when there was a long period of *pas de menuets*. This may have been an effort to add interest to what looks like a repetitive element of the BMDN. The musicians were not aware that the interest in these passages is created by the floor patterns the dancers follow as well as the symmetry they make, and that tempo alteration is not necessary. The musicians were provided with floor patterns in

the experiment, but they remarked that it was difficult to see the correlation between floor pattern and steps. An alternative is suggested in Chapter 5.

There were also many tempo changes in the Danced Recording of the *Menuet*, many of which caused a loss of synchronisation (**Table 4.11**).

Table 4.11 *La Bourée d'Achille, Menuet* Tempo Changes, Danced Recording

Bar and Direction	**Notation**	**Dancers' reactions**
1-8 (including repeat) (Increase)	Pas de menuet, contretemps de menuet	Contretemps de menuet not synchronised
9-12 (Decrease)	Pas de menuet	Not synchronised
17-24 (Decrease)	Pas de menuet	Not synchronised
17-20, repeat (Increase)	Pas de menuet	Synchronised
End (Decrease)	Pas de menuet	Synchronised

It was found in the Danced Recording that the *contretemps de menuet* was not synchronised. The choice to increase speed may have been because the musicians saw jumps as a quick movement and, therefore, a section to be played faster; however, a series of jumps requires a steady tempo, as once in the air, a dancer cannot adjust when they land. As this was identified as a recurring issue it is a focus of the changes to the education of musicians discussed in Chapter 5.

The Danced Recording also had the same issue as the Notated Recording, whereby the musicians may have been seeking to add interest to the second half by adding tempo changes. As the musicians could see the dancers, unlike the Notated Recording, they had a point of reference for the patterns that the dancers were following on the floor. It should be said, though, that the musicians had very little time to notice these floor patterns, especially as they were not a feature of the BMDN, and their reaction may have been that floor patterns mattered less than steps. The tempo changes were small but some of them caused a loss of synchronisation. As discussed, this is addressed in Chapter 5.

It was found that steadiness in tempo was preferred by the dancers. Neither *Bourée* nor *Menuet* included many moments where tempo change could be added, except for the ends of phrases where a 'breath' (a small pause) would be appropriate; however, the tempo changes in the Notated Recording were mostly synchronised with the dancers and could therefore be considered appropriate, suggesting that the BMDN helped the musicians to make better decisions about tempo changes. Further education about the *contretemps de menuet*, the introduction before a piece of music, floor pattern and step correlation, and the changing of dance metre will enhance musicians' use of the BMDN. In Chapter 5, I consider improvements to the BMDN and an education process which will assist these.

Accent and Articulation

As with the recordings of *Sarabande pour une Femme,* I explored in *La Bourée d'Achille* how the musicians changed their use of accent and articulation as their knowledge of dance increased, and whether these changes assisted the dancers firstly in being synchronised with the music, and secondly in the delivery of more emphatic, or relaxed, steps.

In summary, in the Control Recording, the musicians used strong articulation, exaggerated accents, and many *enflés*. The choice of accents for the Control Recording reflected the choice of tempo, exaggerating accents to fill out the space left when using a slower tempo. As a result, the dancers appeared smooth and graceful but laboured and effortful. Dancer Fiona Garlick, commented that she did not like the consistent heavy accent on the downbeat of each bar, in every piece performed. While this approach may assist a beginner dancer, doing so for a more experienced dancer means it may be too regular and jarring.

For the Notated Recording, the musicians used lighter articulation. The harpsichordist commented that he found that he was playing 'much more articulation than normal,' the violinist adding that he 'wouldn't be surprised if we all played a bit shorter.' When playing for dancers, the musicians needed shorter articulation to assist the dancers in hearing each beat and executing each physical movement. The accents in the Notated Recording had a focus on the beginning of the note with an attack and quick *diminué*. As a result, the dancers looked lighter and more energetic, but the performance felt jagged. Interestingly, in the Danced Recording, the musicians used heavier articulation than the Notated Recording but lighter than the Control.

There was greater use of strong accents in the bass line, but the dancers tended to follow the accent pattern of the violinist as opposed to the gambist or harpsichordist. The dancers looked smoother and sprightlier.

Bourée

It was found often in the *Bourée* that the violinist's and gambist's changing accent and articulation patterns did not influence the synchronisation of the dancers with musicians; however, the lighter articulation and choice of accent style often contributed to the dancers executing their steps higher on the toe and with higher jumps. For example, in bars 1-2, the violinist, in the Control Recording, contrasted soft *coulament* with sharp *détacher.* He also added an *enflé* on the second beat of bar 2 (**Figure 4.16**). The dancers adjusted their style to suit this more exaggerated accent pattern, but these accents did not reflect the 'playful'[153] character of a *bourée,* rather, one might expect more consistently short and light articulation.

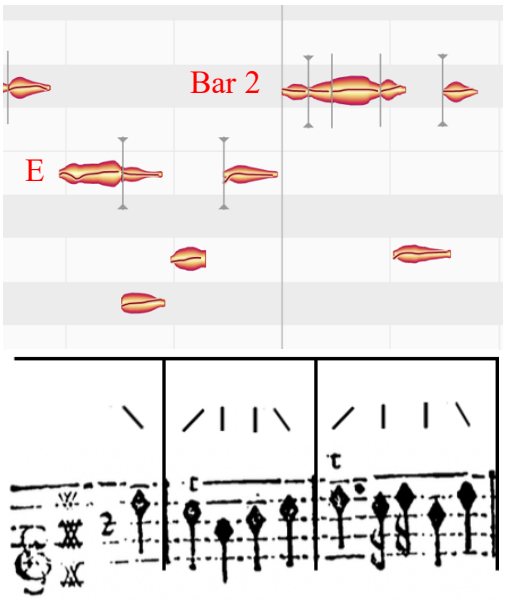


Figure 4.16 Bars 1-2 Control Recording Violin

In contrast, in the Notated Recording, the violinist used shorter and more regular articulation which had more attack (**Figure 4.17**). The accent pattern used in the Notated Recording better suited the dancers' interpretation and they adjusted their dancing to be higher on the feet and more energetic.

[153] Quantz, *Versuch*, 271.

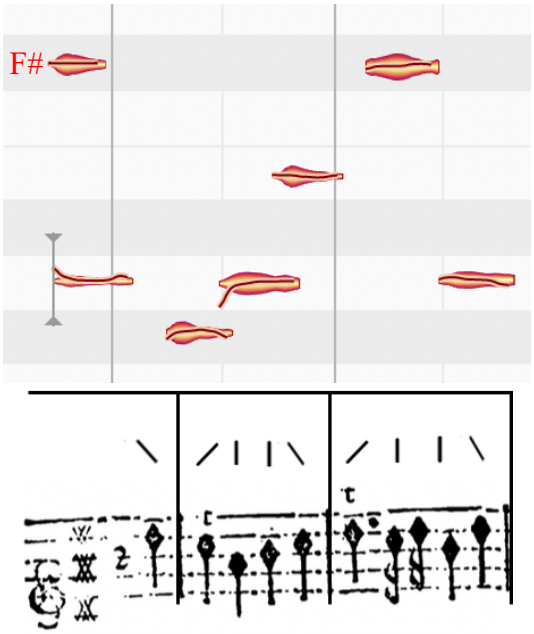


Figure 4.17 Bars 1-2 Notated Recording Violin

The Danced Recording had more coordination between danced and musical accents (**Figure 4.18**). None of the three recordings was completely synchronised but the dancers' steps, first in the Notated Recording, began to be more energetic while in the Danced Recording, the dancers used a lifted and higher series of movements which contributed to creating a more playful performance. [154]

[154] Quantz, *Versuch*, 271.

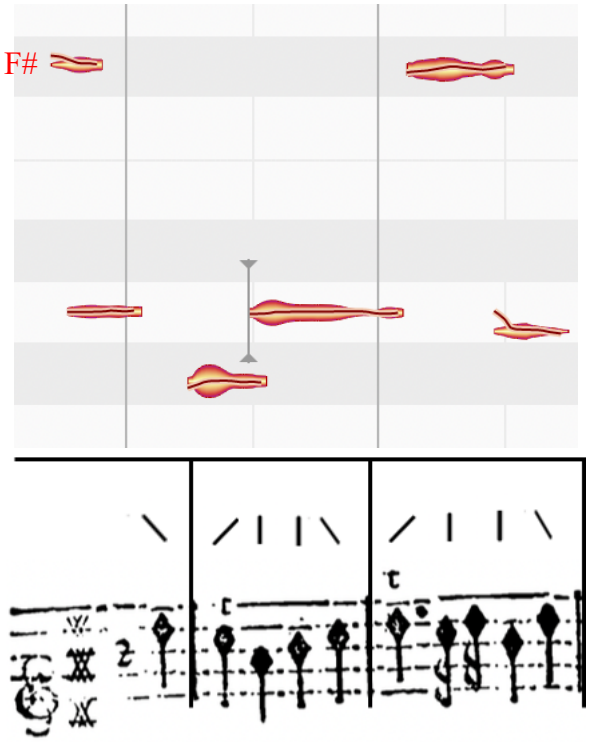


Figure 4.18 Bars 1-2 Danced Recording Violin

Another example of the height and energy increasing through the recordings occurred in bars 9-10 and the repeat. The dancers' jumps aligned with the accents in the Notated Recording, which used quick *messe di voce* (**Figures 4.19** and **4.20**).

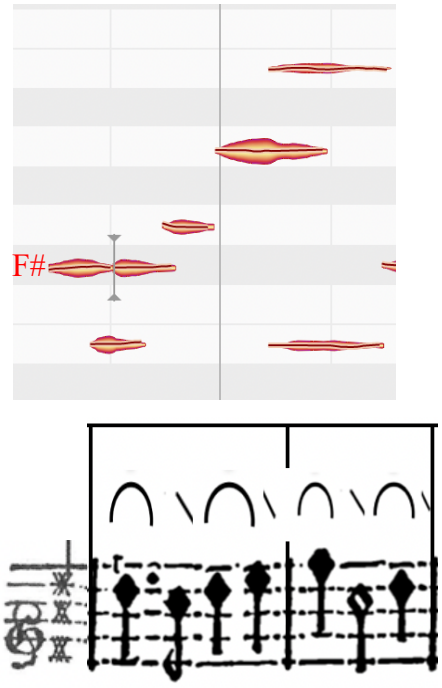


Figure 4.19 Bars 9-10 Notated Recording Violin

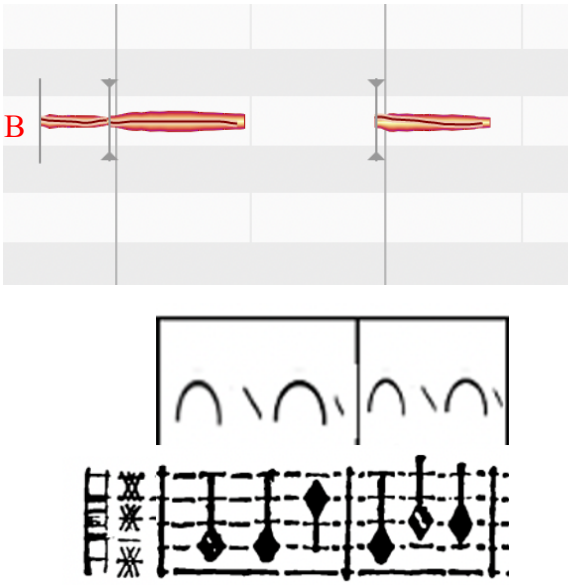


Figure 4.20 Bars 9-10 Notated Recording Gamba[155]

There was better synchronisation and more energetic jumps in the Notated Recording than the Control Recording, which emphasised notes which were not accented in the dance (**Figures 4.21 and 4.22**).

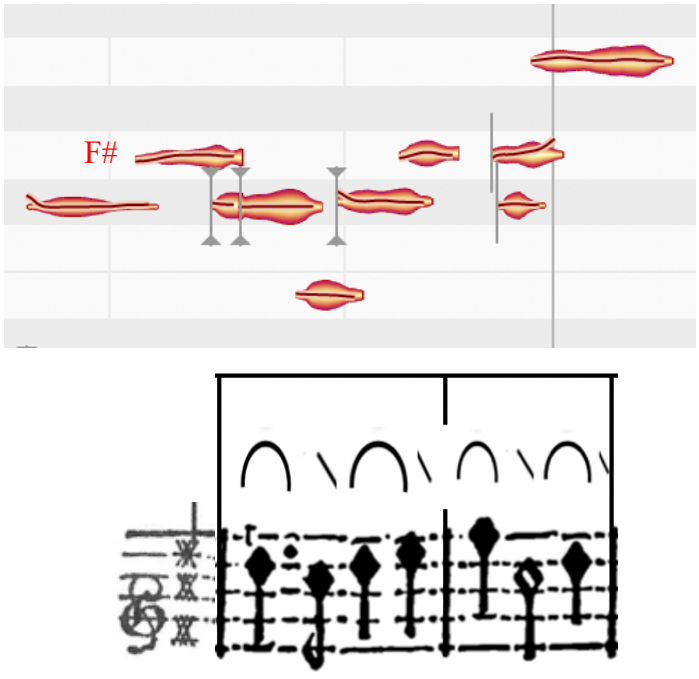


Figure 4.21 Bars 9-10 Control Recording Violin

[155] Melodyne graph shoes B only

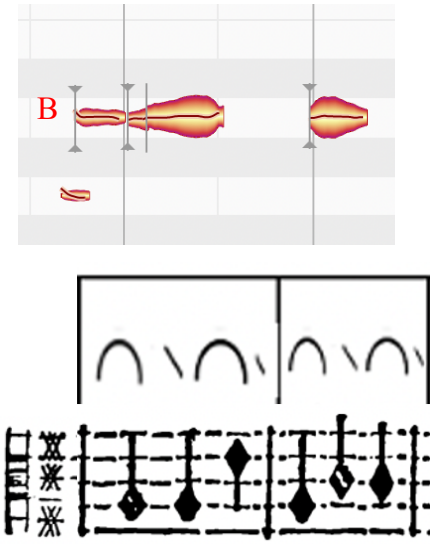


Figure 4.22 Bars 9-10 Control Recording Gamba

The Danced Recording also had lighter articulation from the violinist (**Figure 4.23**) but while the gambist's accent on bar 10 (**Figure 4.24)** was exciting, it aligned with the end of a series of jumps, and the end of the shorter phrase, feeling out of place.

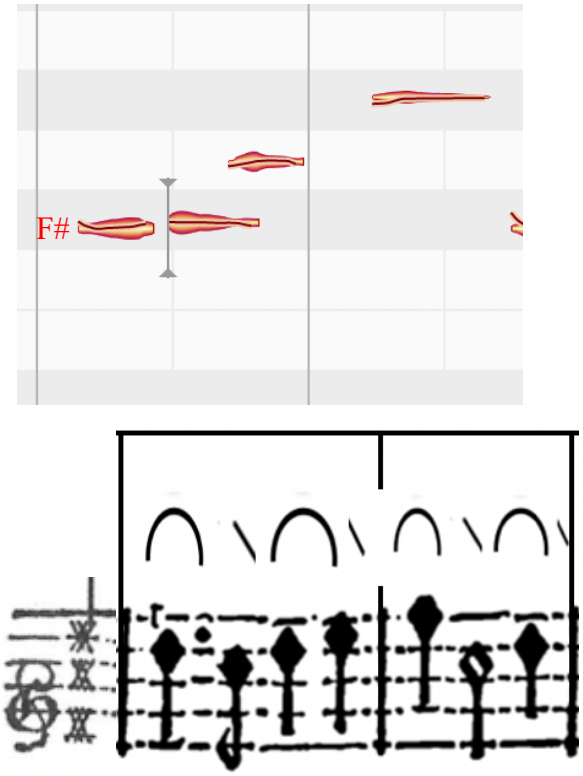


Figure 4.23 Bar 9-10 Danced Recording Violin

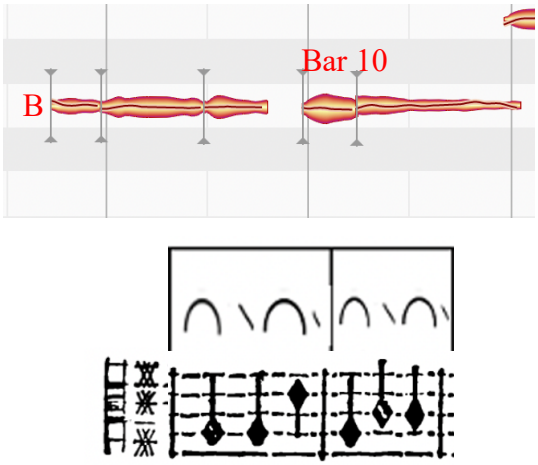


Figure 4.24 Bar 9-10 Danced Recording Gamba

Occasionally, the synchronisation between dancers and musicians increased, as well as the alignment of accented notes with accented steps, as seen in the repeat of bars 2-4 and bar 5. The intensity of the accents in the Control Recording of these bars was focused either at the start or end of the note for all instruments (**Figures 4.25** and **4.26**). In the repeat of bar 4 in the Control Recording, the dancers lengthen the *pas coupé* when the accent with the most emphasis was sounded in the music. The *pas coupé* marks a relaxed end to the phrase and, while the dancers were able to change their interpretation of this step, the exaggerated note did not suit it.

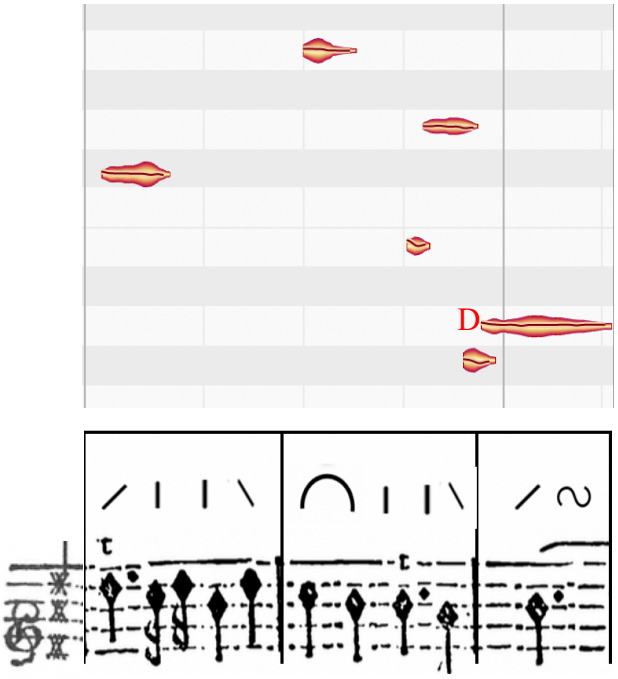


Figure 4.25 Bars 2-4, repeat Control Recording Violin

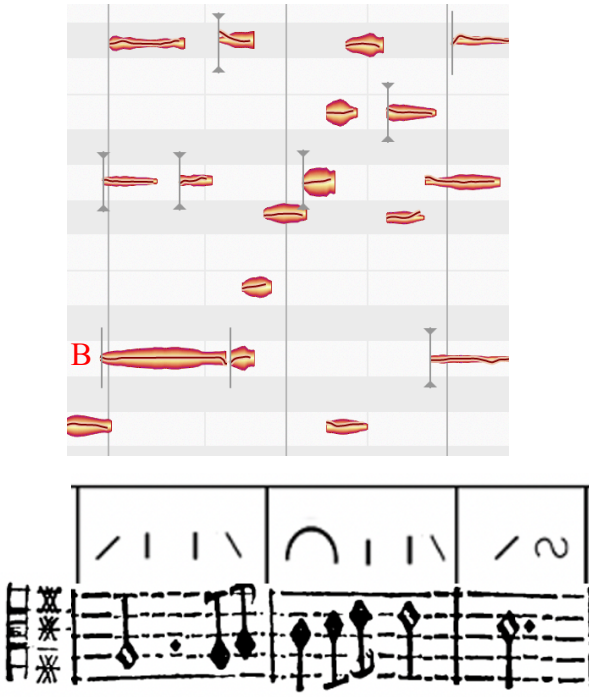


Figure 4.26 Bars 2-4, repeat Control Recording Gamba

In the Notated Recording, the dancers used more 'sprightly' movements which reflected the shorter articulation and faster tempo. The gambist also used subtle *messe di voce* (**Figure 4.27**), which reflected better the relaxed *pas coupé* in the repeat of bar 4. Overall, the dancers were more synchronised with the music than in the Control Recording.

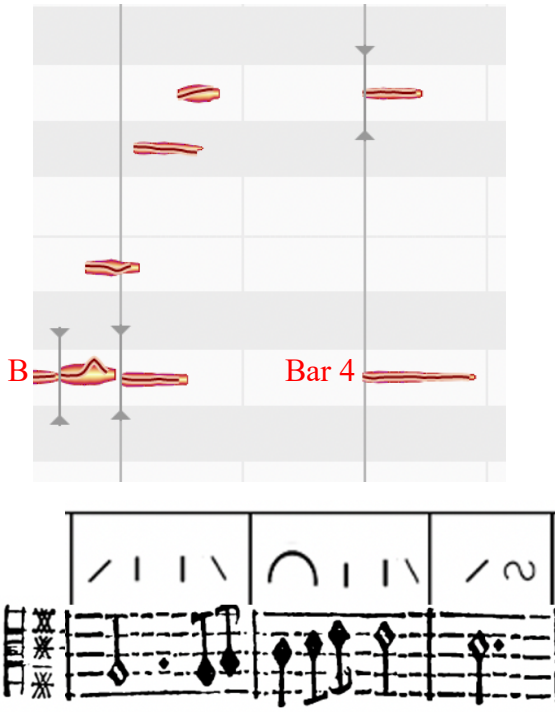


Figure 4.27 Bars 2-4, repeat Notated Recording Gamba

The Danced Recording had a contrast between both the mentioned types of accents (**Figure 4.28**). There was insignificant change in choice of emphasised notes compared with the other recordings but in the Danced Recording, the dancers executed a higher hop in bar 3 and in general were more synchronised than in the other recordings. In this example, the Danced Recording reached the most connection between dance and music, suggesting that, with further knowledge of the appearance of each step unit the musicians would be able to achieve this correlation using only the BMDN.

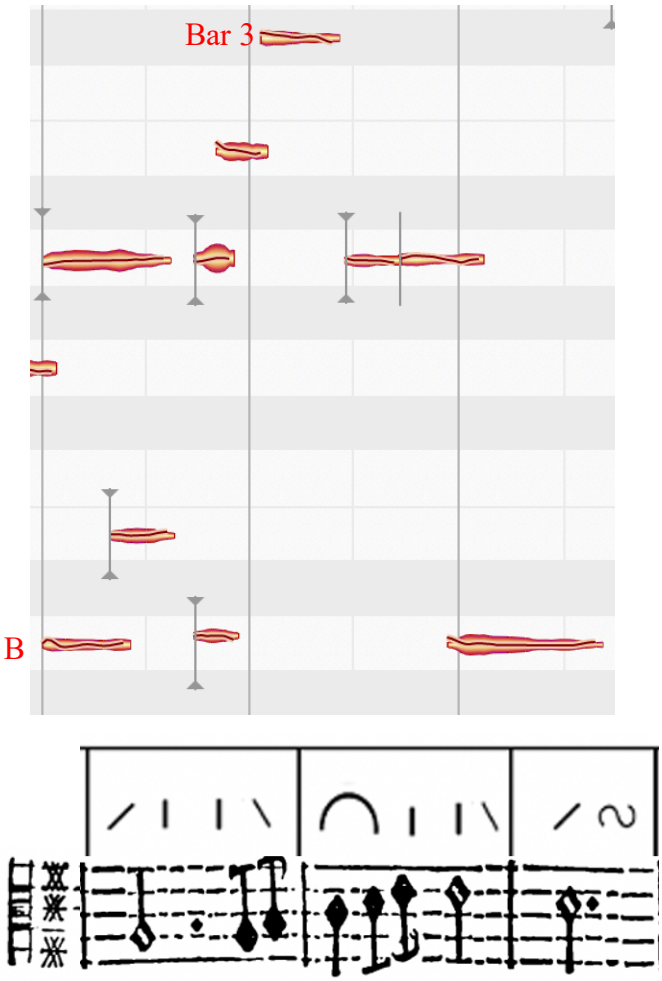


Figure 4.28 Bars 2-4, repeat Danced Recording Gamba

Menuet

Most significantly for the *Menuet*, the dancers' movements changed to be more energetic and livelier with the changes in accents and articulation. For example, in bars 1-3 (**Figure 4.29**), the violinist used strong accents in the Control Recording, with the most focus

being on the first beat of each bar. As a result, the dancers lingered on each of the heavily accented notes.

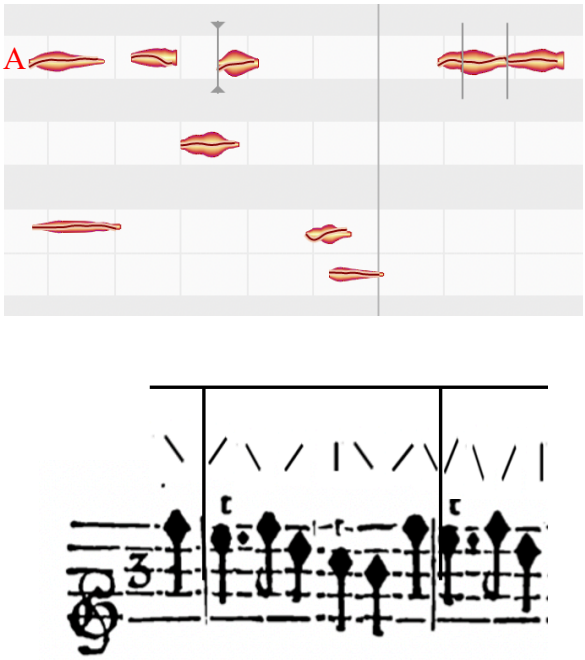


Figure 4.29 Bars 1-3 Control Recording Violin

In the Notated Recording, the violinist accented the same notes but with more *messe di voce* and less attack (**Figure 4.30**). The dancers were not synchronised with the music in the first bar but for the remaining bars, they achieved quicker and shorter movements with more height and energy.

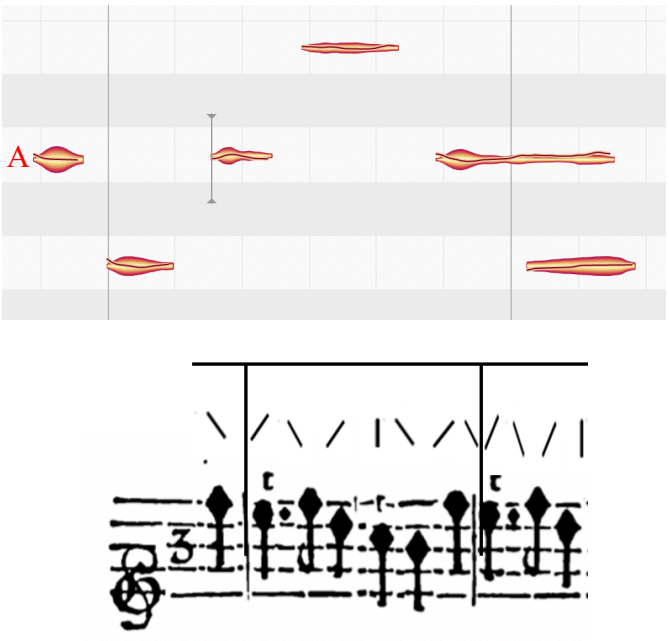


Figure 4.30 Bars 1-3 Notated Recording Violin

In the Danced Recording, the violinist played with attacked *détacher* on every bar and occasionally every half bar (**Figure 4.31**). The dancers again were not synchronised at the beginning but while the movements were smoother than the Notated Recording, they still exhibited a sprightly energy.

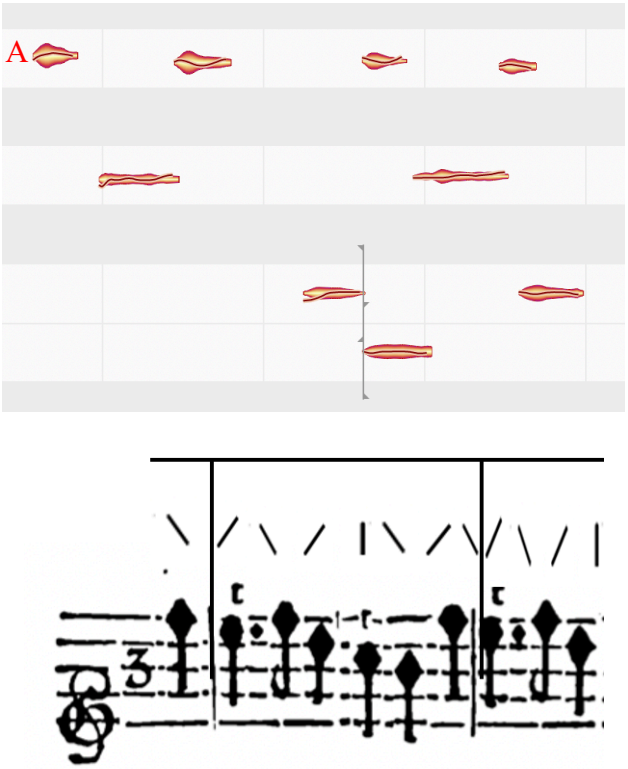


Figure 4.31 Bars 1-3 Danced Recording Violin[156]

A similar situation arose in bars 5-8 where the dancers' movements became more energetic with each recording. In the Control Recording, the accents for all instruments were strong with many *enflés* (**Figure 4.32**). As a result, the dancers appeared laboured and struggled to lift off the ground.

[156] Note: I have adjusted the placement of the notes G, E and D as the waveform Melodyne generated was not at the correct pitch

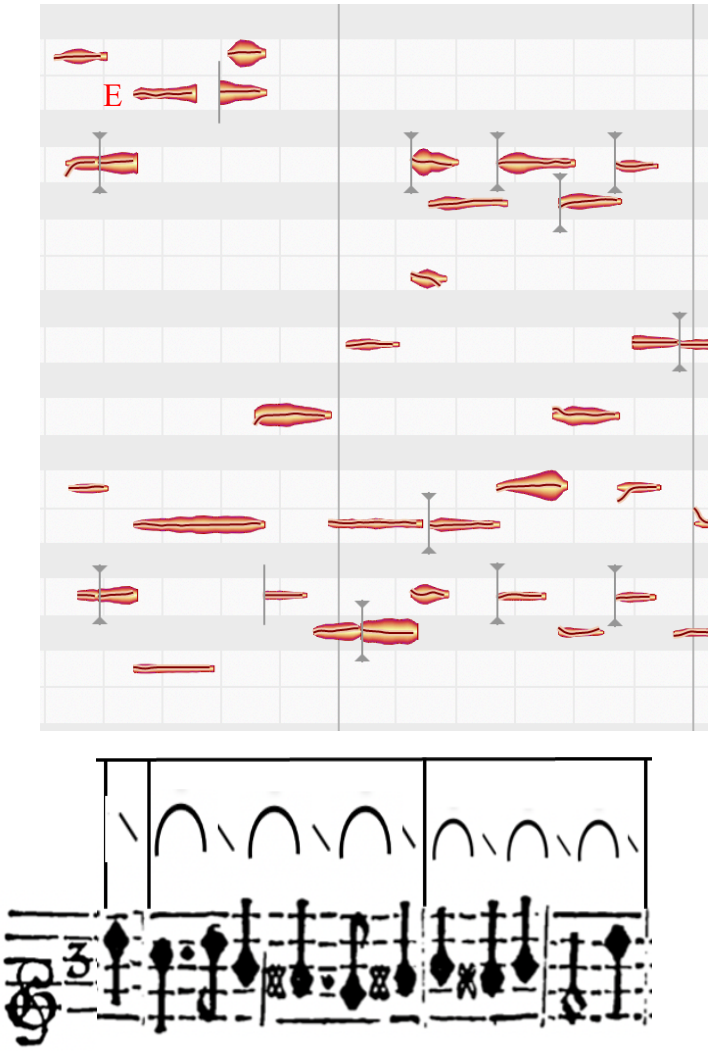


Figure 4.32 Bars 5-8 Control Recording All Instruments, Violin Score

The dancers' movements were lighter and less laboured in the Notated Recording as all musicians contrasted more between a strong accent on the first beat of the bar and lighter notes on the other beats (**Figure 4.33**). Additionally, the musical accents contrasted with the *contretemps de menuet,* which was beneficial because it highlighted the hemiola in the dance.

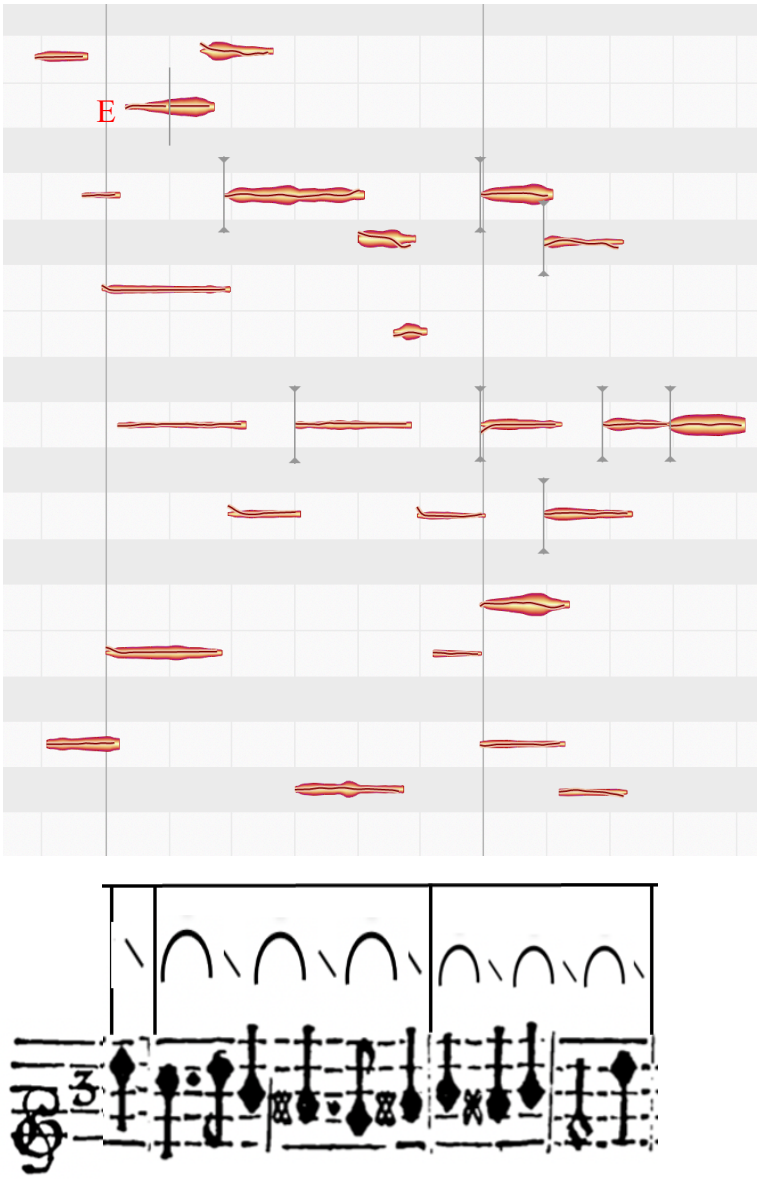


Figure 4.33 Bars 5-8 Notated Recording All Instruments, Violin Score

Similarly, the musicians' short and light articulation in the Danced Recording (**Figure 4.34**) contributed to the dancers achieving more height and energy. Also, the *contretemps de menuet* was accented as in the Notated Recording. In bars 5-8, the BMDN positively influenced the musicians' understanding of the *contretemps de menuet*.

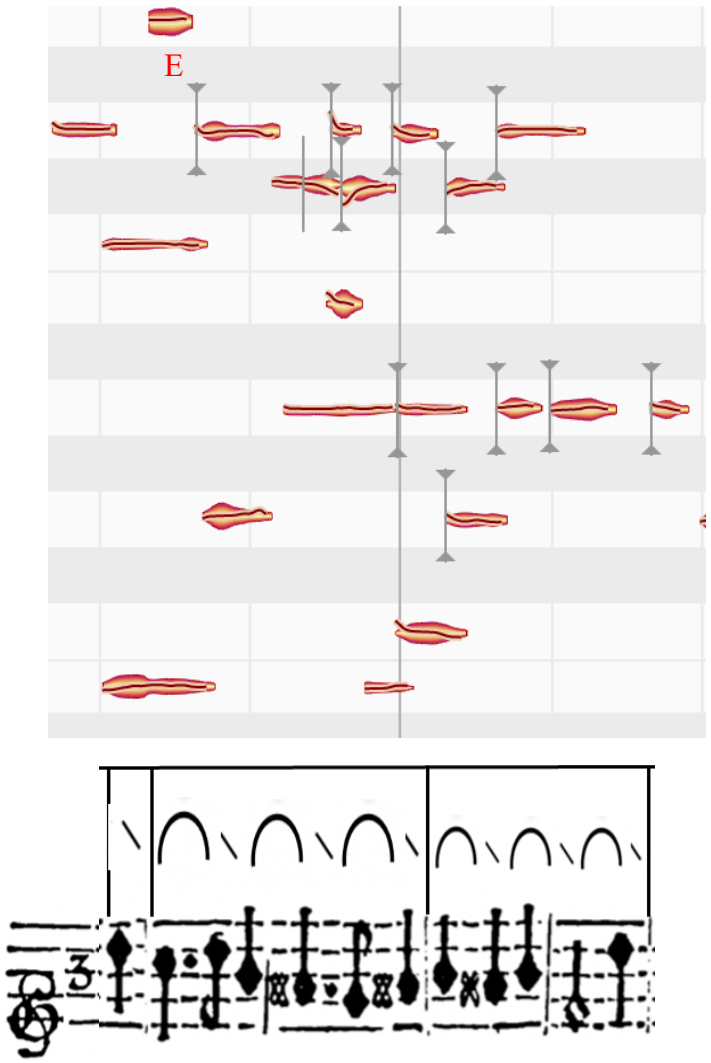


Figure 4.34 Bars 5-8 Danced Recording All Instruments, Violin Score[157]

The use of the BMDN achieved a choice of accent and articulation in *La Bourée d'Achille* that suited the dance in terms of enlivening the energy of physical movements; however, the lack of synchronisation at the beginning of the piece is still a problem and while it was a combination of the tempo changes and the accent patterns, it needs to be addressed and is in chapter 5.

[157] E not generated by Melodyne in the graph

Ornamentation

The alignment of musical and danced ornamentation can enhance the delivery of the step, but, as there are few ornamental steps in *La Bourée d'Achille,* the alignment of musical ornaments with accented dance steps instead enhances the dance. Additionally, I found in this analysis that ornaments added in places analogous to those already written in the score did not hinder the dancers' ability to follow the music and could enhance the music by adding interest.

In the Control Recording of the *Bourée,* the violinist frequently added ornaments; he added only a few to the first plays of the *Menuet* but heavily ornamented the repeats. There were no obvious hindrances or additions to the dance from these ornaments. The Notated Recording was similar, however there was a slight increase in the coordination between musical and danced ornaments. The Danced Recording had very few additional ornaments in the *Bourée* and the ornaments added to the *Menuet* appeared to be adding interest to what looked like a repetitive series of steps in the BMDN. Overall, I found from the experiments that communication about appropriate ornaments needed to be improved.

Unlike *Sarabande pour une Femme,* there are many *tremblements* written in the operatic score for *La Bourée d'Achille.* Of the seven ornaments written in the *Bourée*, four align with accented movements such as an *élevé* or a jump. The remaining three are on dotted crotchets at the ends of phrases which align with the middle of a *pas de bourée.* For the *Menuet*, four ornaments are written in the first four bars at the beginning or halfway through the *pas de menuet*. There is also an ornament in the last bar of the piece on the dotted crotchet which is also halfway through a *pas de menuet.*

Bourée

The ornamentation added in the Control Recording of the *Bourée* was frequent, especially in the repeats. Of the many ornaments, the *tremblement* in bar 3, the *tremblement* and *tour de gosier* in bars 9-10 and the *coulé* in the repeat of bar 11 (**Figures 4.35-4.37**) aligned with accented steps in the dance; however, the dancers had no obvious negative or positive reaction to any of the other additions.

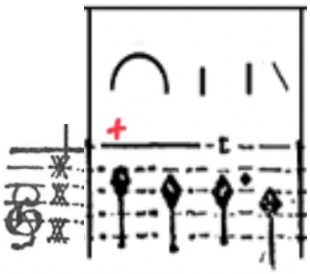


Figure 4.35 Bar 3 Ornament

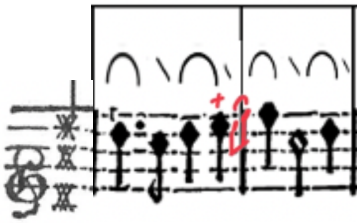


Figure 4.36 Bar 9-10 Ornament

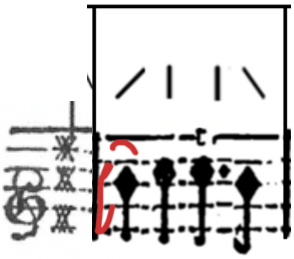


Figure 4.37 Bar 11 Ornament

The Notated Recording, on the other hand, included only two added ornaments, one of which aligned with accented movement, the other which did not. The former example occurred in bars 9-10 (**Figure 4.38**)**.** This was the same as the Control Recording, where the ornament, added to the series of *jettés,* enhanced this climactic moment.

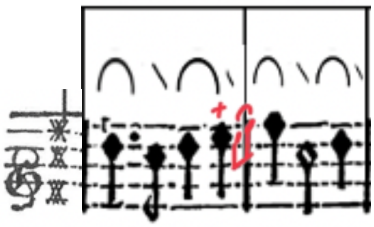


Figure 4.38 Bar 9-10 Ornament

The second example, which did not align with an accented step, occurred in the repeat of bar 4. Here, the violinist added a *port de voix* (**Figure 4.39**) while the dancer was executing a *pas coupé* with *glissé,* a relaxed step marking the end of a phrase. The ornament accented the movement which left no time for the dancers to breathe (a moment of pause) before the start of the next phrase. The remaining ornaments in the *Bourée* were those originally in the score. These, as expected, aligned with the dance.

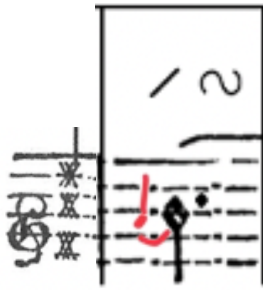


Figure 4.39 Bar 4, repeat Ornament

The Danced Recording had only one ornament added, a *tremblement* which aligned with a *jetté*. The lack of added ornamentation in the *Bourée,* and to a lesser degree in the Notated Recording, was perhaps because of the fast tempo; however, the dance and the accompanying music are quite simple and could benefit from ornamentation.

Menuet

The *Menuet* had more added ornaments to analyse in these recordings. The Control Recording had two added ornaments which aligned with accented movement, these being in bars 5 and 6 (**Figure 4.40**). These indicate that often the musicians' natural choice of ornamentation, based on their knowledge of these practices, aligns with the dance; however, the ornaments in bars 1-3 did not align with ornamental movement and felt out of place.

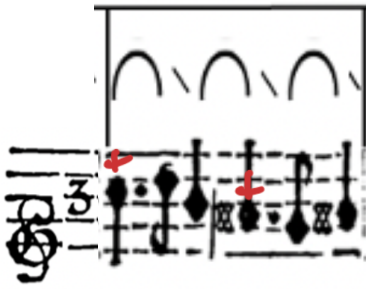


Figure 4.40 Bars 5-6 Ornaments

In the Notated Recording, the very few added ornaments did not align with accented steps. These were *tremblements* which fell midway through the *pas de menuet* (**Figure 4.41**). The ornaments did not align with accented movement, but they were added in the same manner as the ornaments already in the score. **Figure 4.41** shows an example where the addition of ornaments mid-phrase, as in the original score, if not hindering the dancers' ability to hear the beats, may be appropriate to add interest to the music.

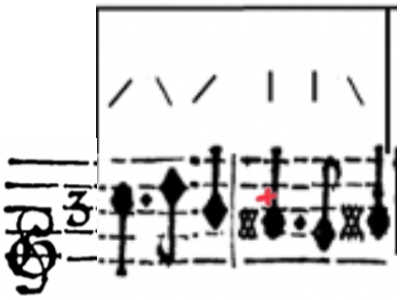


Figure 4.41 Bars 9-10 Ornament

Noticeable also in this piece was that an ornament, which was written in the score, caused a loss of synchronisation. This was the *tremblement* on the repeat of bar 3 (**Figure 4.42**). This may simply be fixed with added rehearsal time but it can also suggest that not all of the original ornaments need to be followed.

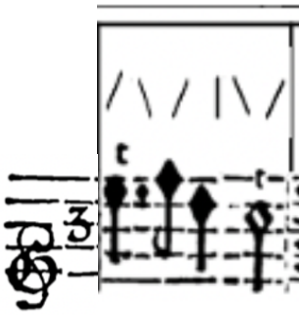


Figure 4.42 Bar 3 Ornament

The repeat of the *Menuet* in the Notated Recording was heavily ornamented which added interest to simple music; however, a lot of the interest in a danced *Menuet* comes from the floor patterns created by the dancers. Not being able to clearly see the correlation between floor pattern and steps, the violinist may have interpreted the repetitive *pas de menuet* as needing more interest in the form of ornamentation. Thus, he added ornaments in compensation, which

was not always appropriate for the steps. The final iteration of my notation addresses this issue and provides a solution for indicating the interest in the floor pattern.

In the Danced Recording, there were a lot of ornaments added in the *Menuet*, many of which did not align with accented steps in the dance. As in the Notated Recording, further education about the correlation between floor pattern and steps should improve this lack of appropriate alignment. Having said this, the musicians should have been able to see the dancers and observe their floor patterns in the Danced Recording but, perhaps because of the speed and lack of practice time, they did not have the time to observe intimately.

The ornamentation used in the Notated Recording had stronger correlation, albeit small, with the dance steps than had the Danced Recording. The BMDN indicated accented, and occasionally ornamental, steps to the musicians, which they, in turn, took as an opportunity to ornament; however, there are elements which can be improved, such as assisting musicians in understanding the length of the *pas de menuet,* and the correlation between floor patterns and steps.

Conclusion

The analysis of the recordings of *La Bourée d'Achille* presented an interesting new set of questions, such as: should the dancers' level of enjoyment be valued more highly than the synchronisation between step and sound? Also, which of these elements would enhance the audience's experience more? Overall, from an analytical perspective, I found that the Notated Recording achieved the best middle ground whereby the tempo was comfortable for dancing and enhanced the playful character of the dance while not significantly decreasing the dancers' synchronisation with the music. There is room within that to go a little faster to increase the dancers' enjoyment, and with more practice, synchronisation could be strengthened.

I found that the BMDN indicated moments where the musicians could slow down or pause at the ends of phrases; however, musicians' understanding of the need to not change tempo during a *contretemps de menuet* needs to be improved to assist the dancers in their execution of this step.

The changes that the musicians made in terms of accent and articulation assisted the dancers in, firstly, enhancing the character and affect of the dance, and secondly, staying synchronised. Lighter articulation and more appropriate accent placement in the Notated Recording meant that the dancers' steps were lighter and less laborious; however, with further education for musicians about what an accented movement looks like and how it feels within the body, the choice of accent will improve to better suit the dancers' needs. Similarly, the musicians chose more appropriate ornamentation for the Notated Recording; however, there were inconsistencies which could be improved with better education about what accented and ornamental movements look and feel like.

Premier Ordre from Les Nations: Sarabande

The analysis of the *Sarabande* in *Premier Ordre* from *Les Nations* (hereafter abbreviated as '*Les Nations: Sarabande')* raises new challenges because the dance, *Sarabande pour une Femme,* was not choreographed for this music. Therefore, *Les Nations: Sarabande* was explored as an example of the influence a dance in the same genre may have on the performance of a piece most likely not to have been written for dancing. The style of this piece and the *Sarabande pour une Femme* music are very different. As I explained when I introduced the experimentation with *Sarabande pour une Femme*, the piece is in a more Spanish style than Couperin's. While the two pieces may not be musically comparable, I found that comparing the same dance to different styles of music led to a more in-depth view of how the BMDN could influence musical performance in different, or similar, ways. Because it was performed as a musical piece, the Control Recording in this experiment was very uncomfortable for the dancer to dance to due to the tempo, frequent tempo changes, and exaggerated accents. The Notated Recording achieved a much more comfortable performance for the dancer as it had an increase in tempo, fewer tempo changes, and lighter articulation. This result was similar to the Danced Recording which had the same tempo but a higher number of tempo changes as well as the best correlation between musical and danced accents. Finally, there were no significant changes in choice of ornamentation as the piece already had many ornaments written in. In these experiments, the dance was performed by Dr Fiona Garlick.

Tempo

Les Nations: Sarabande needed to be treated differently from the other pieces because there is an indication of tempo '*Grave'*: heavy, serious, slow.[158] This indication of tempo allowed for an exploration of how '*grave'* musicians can play for the piece to still be a comfortable dancing tempo.

[158] David Fallows, "Grave," *Grove Music Online,* ed. by Dean Root, accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Table 4.12 *Les Nations: Sarabande* Average Tempos

Recording	**Tempo**
Control	Mm crotchet=49.79bpm
Notated	Mm crotchet=75.94bpm
Danced	Mm crotchet=75.37bpm

The dance was most difficult for the dancer when the music was very slow, which is partially due to the rather simple nature of the choreography. The dance could be ornamented to fill out the space but, as is, the choreography does not suit such a slow tempo. This meant that the Control Recording was far too slow to be comfortable. The Notated and Danced Recordings, while still slow, were more comfortable.

Most interesting, is that the musicians chose a tempo for the Notated Recording which did not need to be adjusted for the Danced Recording and, thus, was closer to the dancer's ideal tempo. This suggests that the BMDN gave the musicians enough information to allow them to choose an appropriate tempo. They used a similar process to *Sarabande pour une Femme* but factored in the '*grave*' tempo indication. The Notated Recording also sounded smoother and easier, and the dancer was much less laboured. In this circumstance, the indication of a tempo marking assisted the musicians in using the BMDN to choose a tempo suitable for dancing.

As the dance *Sarabande pour une Femme* was not choreographed to *Les Nations: Sarabande,* in order to explore the concept of an 'ideal' tempo for this piece, I compared the tempo of each recording to the same publicly available danced videos used for the *Sarabande pour une Femme*. As a reminder, in these videos I observed that preference of tempo could be anywhere from mm crotchet=105bpm to mm crotchet=125bpm.[159] The tempos of all recordings in my experiment were below this range. I viewed another video which was not

[159] Christopher Jordi Lara, "Sarabande pour femme," https://www.youtube.com/watch?v=H4DZmgdl128. Tempo: mm crotchet=105bpm.
Dancilla, "Sarabande pour femme, from 1700," https://www.youtube.com/watch?v=4rDDxLvlI1g. Tempo: mm crotchet=108bpm.
Peter Hoffman, "Baroque Dance – Sarabande pour femme," https://www.youtube.com/watch?v=8Uf7gCwYH5o. Tempo: mm crotchet=125bpm.
Natalia Kaidanovskaya, "Sarabande pour femme 1700 Feuillet/Time of danse," https://www.youtube.com/watch?v=tQPfshBYZIw. Tempo: mm crotchet=125bpm.

originally included in the comparison because it was danced in a different style. This final video, the dancer Mojca Gal says, was in the 'serious' balletic style based on reconstructive work by Edmund Fairfax. The video was at a tempo of mm crotchet=65bpm.[160] Gal used more ornamental steps with larger extensions and movements than the faster videos observed. As stated earlier in this section, a more ornamental dance could suit such a slow tempo, but *Sarabande pour une Femme* danced as it is normally reconstructed, as the initial four videos suggest, is too simple to be danced as slow as the Control Recording. *Les Nations: Sarabande* is a complicated piece of music because of the many ornaments written by Couperin. The slower tempos chosen allowed the musicians to play these ornaments clearly and precisely. So, while the dance may not have been ornamental enough for such a slow tempo, the music was. Having said this, the dancer was comfortable dancing at that tempo of crotchet=75bpm, which was 30bpm slower than the Danced Recording of *Sarabande pour une Femme,* suggesting that a dancer could accommodate the music and setting of a performance.

This experiment shows that the same choreography can produce different outcomes. If the musicians were to go as fast in this piece as in *Sarabande pour une Femme* then it would be too technically difficult, the sound would be rushed and a sense of '*grave*', lost. The dancer and musicians achieved a performance in the Notated Recording which they were both comfortable with. Of course, not every movement matched exactly with the music; however, many steps were synchronised and gave an affect of 'ambition'.[161]

Tempo Changes

In analysing the tempo changes in the recordings of *Les Nations: Sarabande* I was once again hoping for an increase in the stability of tempo with the use of the BMDN. By this, I mean fewer tempo changes, as well as a selection of appropriate moments for a slight easing or increase of the tempo, more closely aligned with the choreography. The initial slow speed of the Control Recording meant that any moments of slowing led to a loss of synchronisation, as the dancer was having to hold steps longer than would normally be comfortable. Moments of speeding up tended to shift the downbeat to misalign with the dance. On the other hand, the

[160] Mojca Gal, "Sarabande pour femme (excerpt)," YouTube Video, 0:54, June 3, 2021, https://www.youtube.com/watch?v=jzUK8zff4MU. Tempo: mm crotchet=65bpm.
[161] Mattheson, *Der Vollkommene Capellmeister*, 230.

Notated Recording had fewer tempo changes and therefore fewer moments when the dancer lost synchronisation. Lastly, the Danced Recording had more tempo changes than the Notated Recording and greater loss of synchronisation.

Listed in **Table 4.13** are all increases and decreases of tempo in the Control Recording as well as the dancers' reactions. Overall, the Control Recording was difficult to analyse as the initial tempo was much slower than the dancer's preference. In the pieces analysed previously, this slow tempo may have meant that there was more synchronisation between musicians and dancer; however, the dancer had to hold steps for longer than comfortable, and sometimes not physically possible, meaning that when the tempo slowed, many of the landings of her movements came before the musicians' notes. Alternatively, moments of speeding shifted the downbeat accent, causing a discrepancy between accents in the dance and in the music. Tempo changes also occurred during the *coupé de deux mouvements* in bars 3 and 7, resulting in difficulty for the dancer to land the counter-rhythmic steps synchronised with the music.

Table 4.13 *Les Nations: Sarabande* Tempo Changes, Control Recording

Bar and Direction	**Dancer's Reactions**
2-3 (increase)	Obvious struggle No loss of synchronisation but a shift in tempo made the downbeat sound like it was on the end of the second bar.
6-7 (decrease)	Similar
8-2, repeat (decrease)	Mostly synchronised but struggle
5-9, repeat (decrease)	Synchronised, but no sense of 'spring'
10-12 (increase)	Synchronised
12-13 (decrease)	Mostly synchronised
17-19 (decrease)	Not synchronised

The Notated Recording overall had fewer tempo changes and the dancer was more comfortable (**Table 4.14**). The dancer succeeded in staying synchronised during the *coupé de deux mouvements* despite the tempo change; however, as noted above, a tempo change during this step-unit lessens the effect of the counter-rhythm.

Table 4.14 *Les Nations: Sarabande* Tempo Changes, Notated Recording

Bar and Direction	**Dance Steps**	**Dancer's Reactions**
7-1, repeat (Decrease)	Coupé de deux mouvements, pas de bourée	Synchronised
15-18 (Decrease)	Tourné, pas coupé, contretemps	Synchronised but does not appear comfortable
20-23 (Increase)	Coupé de deux mouvements, contretemps	Slight loss of synchronisation
Last bar (Decrease)	Pas coupé	Synchronised but dancer had to wait for music

In bars 15-18, the dancer was synchronised but as previously discussed, a change in tempo during a hop could result in issues with the landing of the step, as was observed with the loss of synchronisation in bars 20-23. Similarly, in the last bar of the piece, the musicians slowed during the *pas coupé* and while the dancer was able to stay synchronised, there was a pause where she had to wait for the music. While none of the tempo changes were appropriate for the dance, in general, there was far less tempo variation and, consequently, the dancer was more comfortable.

The Danced Recording had more tempo changes than the Notated Recording and, therefore, more moments where dancer and musicians were not synchronised (**Table 4.15**). This was similar to the results from *Sarabande pour une Femme.* Moments when the musicians sped up by more than 10bpm significantly lost synchronisation with the dancers and there were moments of slight slowing where the dancer did not follow exactly, or, I suggest, perhaps the musicians followed the dancer too precisely. The evidence suggests that the Danced Recording was another situation where the musicians watched the dancer too closely and may have tried too hard to adapt to what they thought the dancer wanted and, thus, she did not have a steady beat to base her dancing on, causing the tempo to vary too much.

Table 4.15 *Les Nations: Sarabande* Tempo Changes, Danced Recording

Bar and Direction	**Dance steps**	**Dancer's Reactions**
2-4 (Decrease)	Point, coupé de deux mouvements, pas coupé	Synchronised
5-6 (Increase)	Point, point	Slight hesitation. Otherwise, synchronised
1-2 repeat (Increase)	Rise and hold	Not synchronised
12-13 (Decrease)	Rise and hold, tourné	Synchronised but hesitant
21-22 (Increase)	Contretemps	Synchronised
22-23 (Decrease)	Contretemps, coupé de deux mouvements	Synchronised

Despite the significant difference in overall tempo, the results regarding tempo changes from the experiments with *Les Nations: Sarabande* proved very similar to those produced in the experiments with *Sarabande pour une Femme*, in that the notation encouraged fewer and less intense moments of changing tempo; however, the BMDN did not indicate moments where tempo change may be appropriate and therefore a revision of how to indicate this using the notation is addressed in Chapter 5.

Accent and Articulation

As with the previously analysed pieces, I explored in *Les Nations: Sarabande* how the musicians changed their use of accent and articulation as their knowledge of dance increased and whether these changes assisted the synchronisation between dancers and musicians during climactic or relaxed moments. I did find, however, the following analysis difficult for a few reasons: firstly, because of the slow tempo of the Control Recording, the dancer had to extend almost all her movements beyond a comfortable time. Some of these steps could be extended in such a way, like a rise and point, but others, such as a jump, left an awkward pause in the music. Because of the frequency of these extensions, it was difficult to assess which of her reactions were influenced by the musical accent and not just a consequence of the tempo. Secondly, because of the highly ornamented music, it was difficult to distinguish between accentual choices influenced by the BMDN and those influenced by the written ornaments. These challenges were difficult to overcome in the analysis as the musicians were unable to

say which of the accents were intentional because of the BMDN; such is the nature of performance that often the decisions are spur of the moment and are not remembered afterwards. One solution I found was to assess the patterns in accents where, for example, they reoccurred during certain dance steps. When these reoccurrences were different from the Control Recording, I determined that these choices were more likely to be influenced by the BMDN, thus the following discussion focuses on these moments.

In summary, the articulation in the Control Recording was *coulament* with frequent strong accents. Most notes had long *messe di voce* with contrastingly short, intense *messe di voce*. As a result, the dancer extended many movements beyond comfort. Thankfully, in the Notated Recording, the musicians played less *coulament* and used strong accents less frequently. The accents were less forceful than the Control Recording, some with an *enflé* and others steady. As a result, the dancer was more comfortable and the alignment between musical and danced accent, more obvious. The dancer was most obviously more comfortable dancing to the accents in the Danced Recording, despite the more frequent tempo changes, in which the musical accents were more varied and the articulation lighter. Overall, in the experimentation with *Les Nations: Sarabande*, I found that the BMDN was most useful in preparing the musicians for collaboration with the dancer.

The high volume of ornaments in *Les Nations: Sarabande* meant that the intensity of each note as produced by Melodyne was difficult to assess, thus many of the accents that appeared in the generated graphs needed to be checked by listening to the recording repeatedly.

The most improvement in the synchronisation between dancer and musicians during accented steps was found in the Danced Recording. An example of this occurring can be observed in bars 1-4 where, in the Control Recording, the gambist's gentle *messe di voce* (**Figure 4.43**) were reacted to by the dancer in a lengthening of her movements, but it was difficult to hold an *élevé* for such an extended time and she had to lower before the gambist had reached the next note.

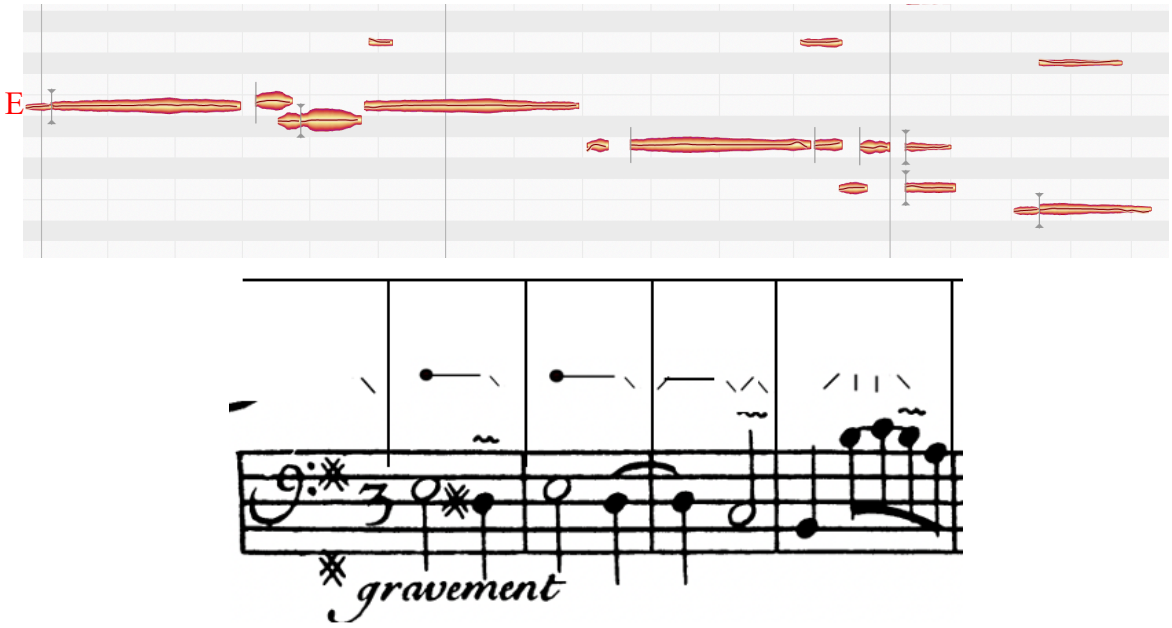


Figure 4.43 Bars 1-4 Control Recording Gamba

There was subtle improvement in the Notated Recording where the gambist used lighter articulation with a focus on the first note of the first bar (**Figure 4.44**). In response to this, the dancer's movements were more in time in the repeat, as well as being lifted throughout and having the appearance of using less effort.

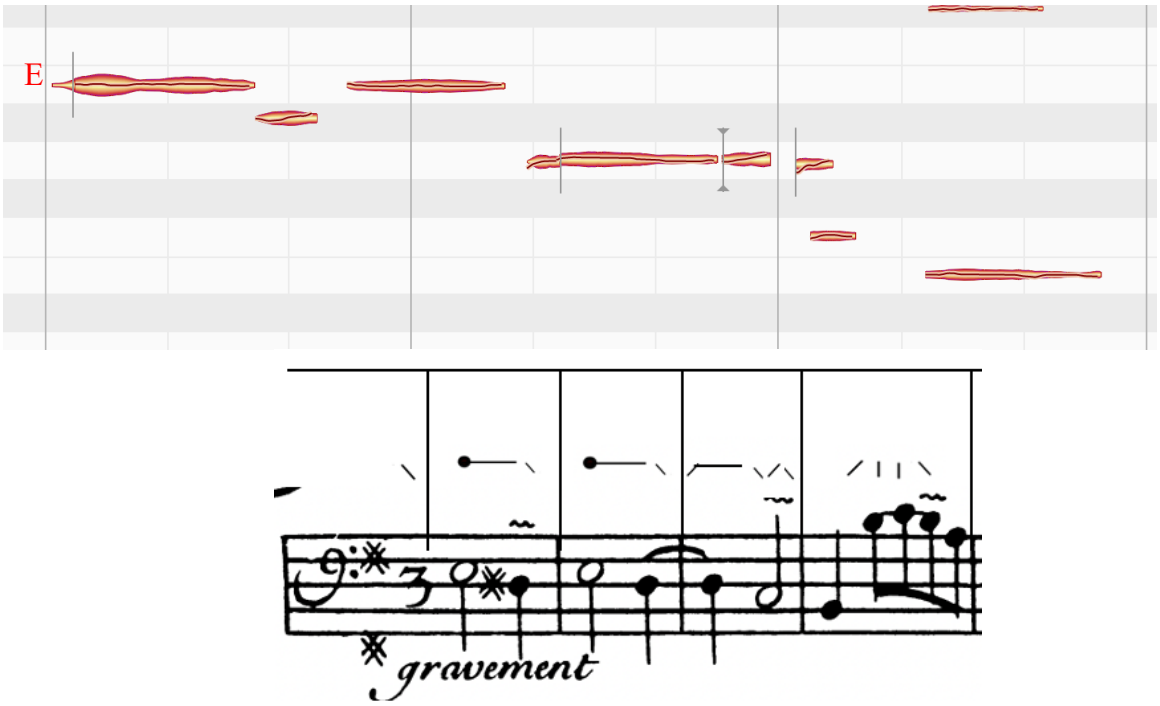


Figure 4.44 Bars 1-4 Notated Recording Gamba

The best correlation between accents was seen in the Danced Recording where the notes played by the gambist were lighter and shorter (**Figure 4.45**). The dancer used the *détacher* on the first note to bounce off and her movements appeared more intentional and graceful, and the repeat was synchronised. I will return to this discussion as I reach the next point in time in the recordings.

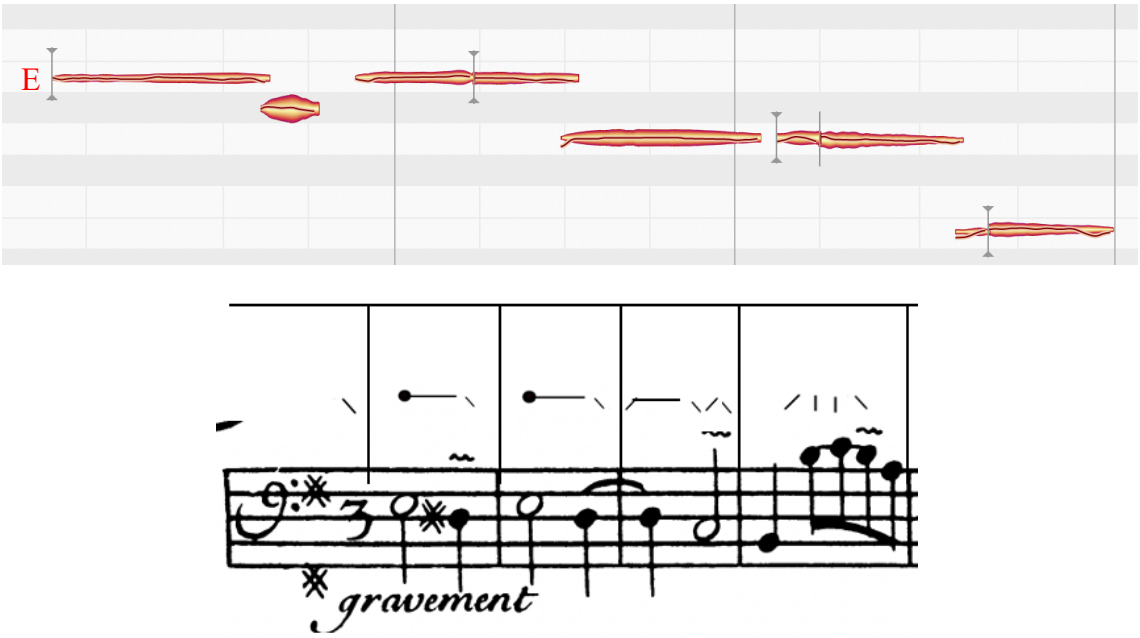


Figure 4.45 Bars 1-4 Danced Recording Gamba

An interesting example of the BMDN indicating an appropriate style of accent occurred in bar 8. Here, in the Control Recording, the gambist's long *messa di voce* (**Figure 4.46**) did not align with an extended movement as one would expect if the music was written for the dance. There were instead a few short steps and, after being aware of this in the Notated Recording, the gambist removed the *messa di voce* (**Figure 4.47**).

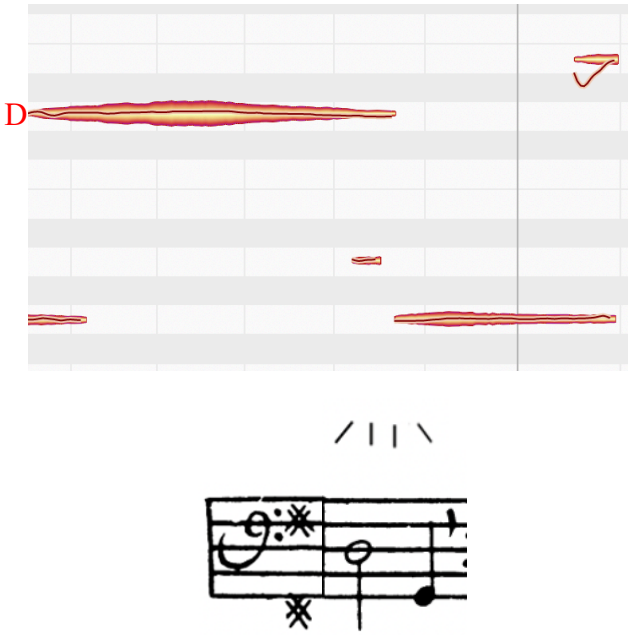


Figure 4.46 Bar 8 Control Recording Gamba

Figure 4.47 Bar 8 Notated Recording Gamba

Despite most improvement being in the Danced Recording, there were instances in the Notated Recording where the accent placement and type of accent changed to better coincide with the dance, thereby enhancing climactic moments. One of these can be observed in bars 9-11. In the Control Recording, the dancer's exaggerated movement reflected the gambist's strong accents and use of *coulament* (**Figure 4.48**). While the dancer adjusted her movements,

the agogic accent often continued after the movements had finished, causing the dancer to finish her steps before the musician had reached his final notes.

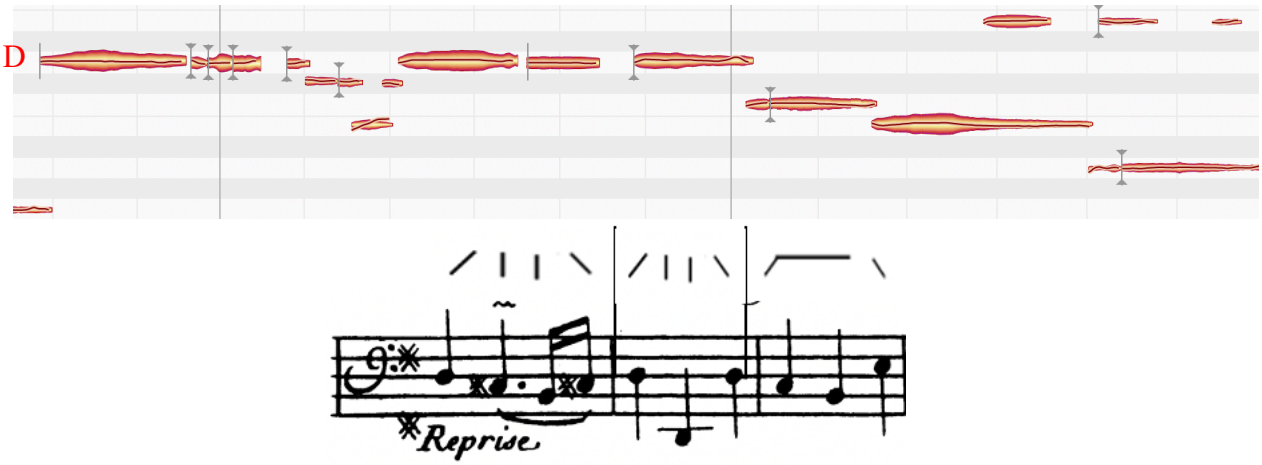


Figure 4.48 Bars 9-11 Control Recording Gamba

In contrast, in the Notated Recording, the gambist used more variation in his types of accents as well as, in general, more *détacher* (**Figure 4.49**). In bars 9-11, he alternated accented and unaccented notes during the *pas de bourée*. Then, the accent with the most intensity was on beat 1 of bar 11, which in the dance is an *élevé* and hold. The gambist's choice of accent in the Notated Recording assisted the dancer in executing first her shorter small movements, and then added emphasis to her accented rises.

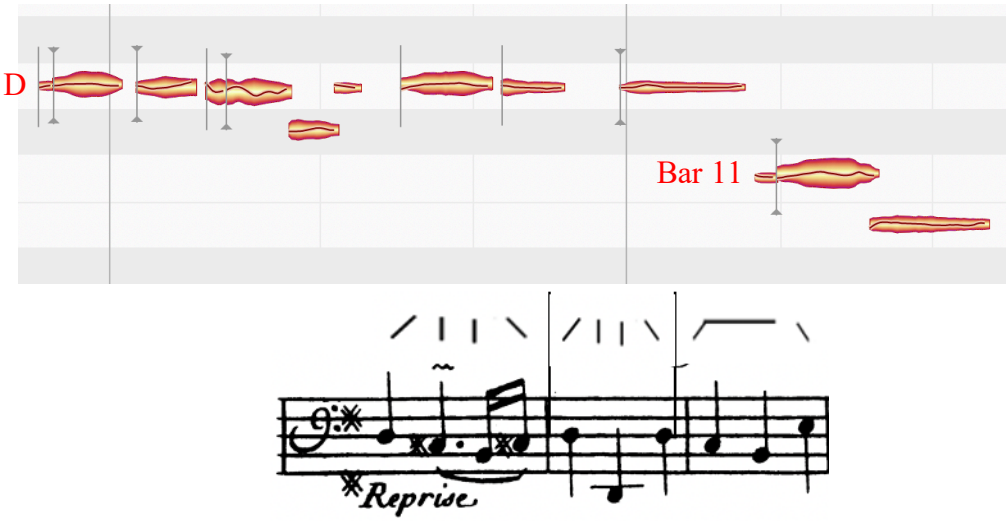


Figure 4.49 Bars 9-11 Notated Recording Gamba

In the final examples that I examined, the Danced Recording again had the best correlation between danced accent and musical accent. In both examples, the Control Recording had the most discrepancy between accents, and the Notated Recording had improvement, but some moments lost synchronisation because of the type of musical accents.

The first example looks at bar 17. Here, in both the Control and Notated Recordings, the violinist delayed the placement of the first beat because of the use of an *enflé*. This resulted in the dancer's jump losing synchronisation. In the Danced Recording, the dancer was synchronised because the note on bar 17 had less of an *enflé*. I have not provided examples from Melodyne for this bar as the data produced in the images did not match that gained by listening.

The last example looks at the end of the piece from bars 21-24. In the Control Recording, the gentle *coulament* played by the violinist (**Figure 4.50**) lacked the required articulation for the dancer to respond to with her hops.

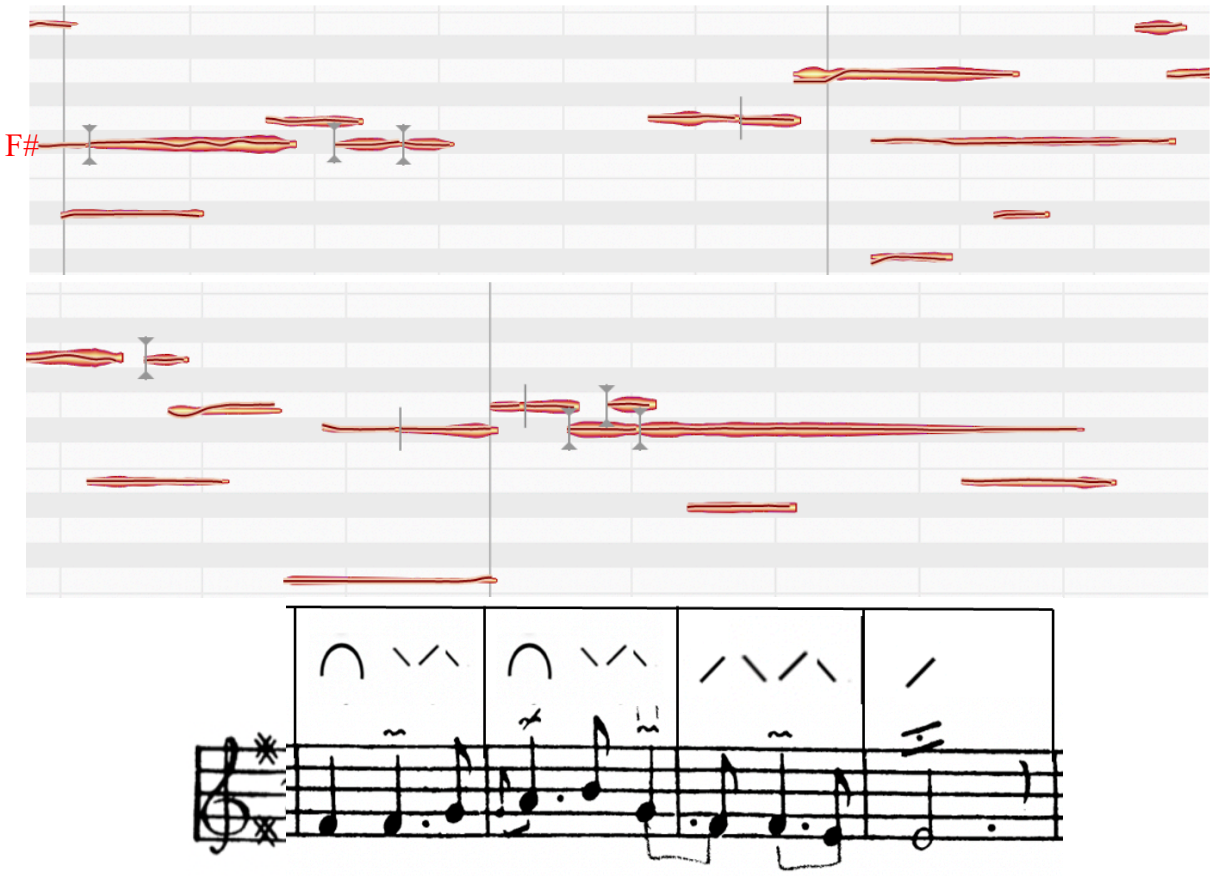


Figure 4.50 Bars 21-24 Control Recording Violin

In the Notated Recording, the gambist's light articulation in bars 21 and 22 better suited the small steps and hops (**Figure 4.51**); however, the violinist's *coulament,* and slowing down at the end of the piece, caused some loss of synchronisation.

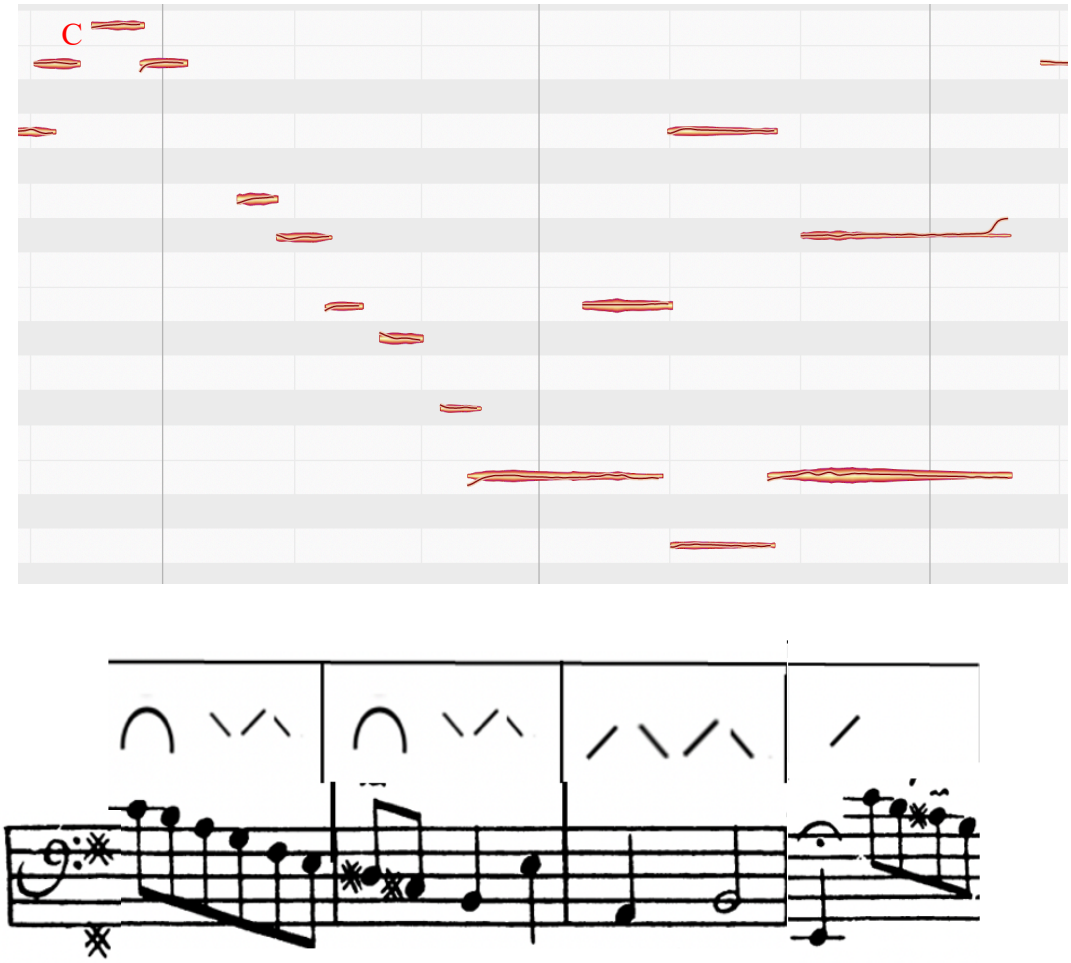


Figure 4.51 Bars 21-24 Notated Recording Gambist

In the Danced Recording, the dancer used higher movements to suit the gambist's heavier accents and the violinist's *détacher* (**Figures 4.52 and 4.53**). The dancer also relaxed at the end of the piece with the violinist's *diminué*. While the Notated and Danced Recordings of these bars had similar outcomes, the Danced Recording had more energy and the musical accents better reflected the lighter steps.

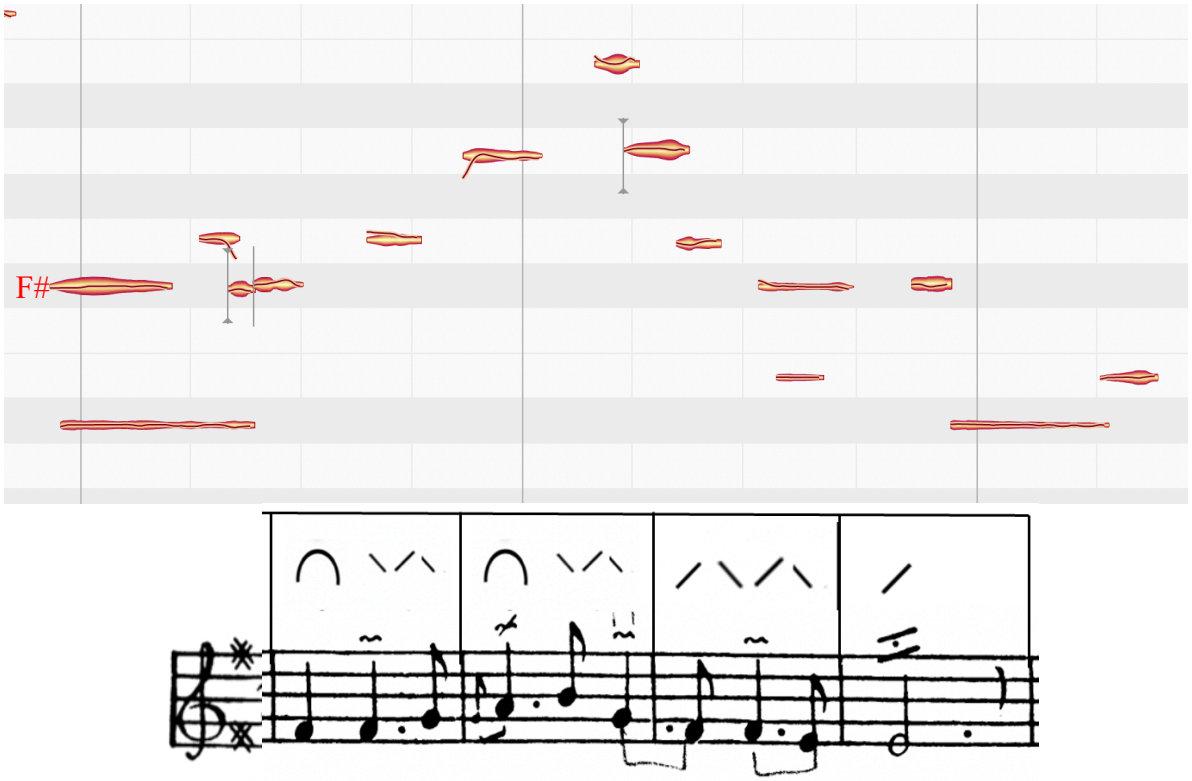


Figure 4.52 Bars 21-24 Danced Recording Violinist

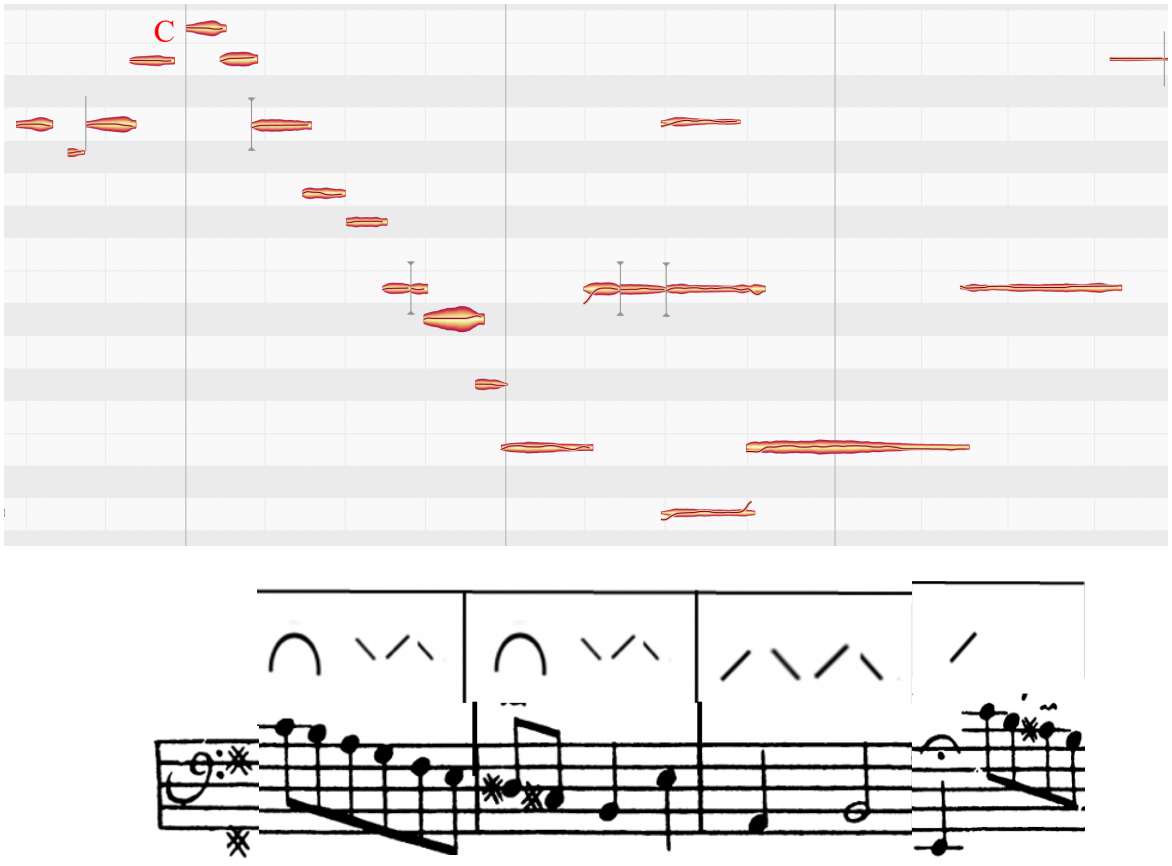


Figure 4.53 Bars 21-24 Danced Recording Gambist

This analysis showed, firstly, that the musicians changed their choice of accent and articulation when given the BMDN. Secondly, that, as a result, the articulation changed to be lighter and shorter in most circumstances. Thirdly, often the change in accent better matched the accents in the choreography; however, in most circumstances it was the Danced Recording that had the best correlation between music and movement, indicating that the musicians would benefit from better education about the dance steps and what they look like in order to have a better understanding of the accent.

Ornamentation

Les Nations: Sarabande has many ornaments written into the score by the composer, and studying the dancer's reaction to these ornaments would be another research project entirely. This project focuses on how the musicians changed their choice of ornaments based on the BMDN. Thus, the following analysis explores the few ornaments which were added beyond those already written and the removal of some others. Overall, there were very few additional ornaments in any recording; however, the few ornaments added in the Notated Recording were in line with ornamental movement in the dance, as were the ornaments added in the Danced Recording.

In the Control Recording, there were three ornaments added, a *pincé* in bar 2 and the repeat, and a *port de voix* at the end of beat 1 in bar 1 of the repeat (**Figure 4.54**). There was no obvious reaction from the dancer to these ornaments, despite two of these not aligning with an accented step; however, they were consistent with French ornamentation practices, whereby the second beat is often emphasised. The dance was very sparse compared to the music and, because of this, combined with the slow tempo, there did not seem to be coherence between the dance and music. Rather, the music overpowered the dance.

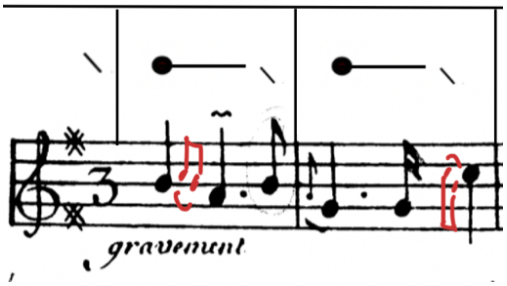


Figure 4.54 Bars 1-2 Ornaments

In the Notated Recording, there were only two additional ornaments. In the repeat of bar 2 on beat 3, the violinist added a *pincé*, as he did in the Control Recording (**Figure 4.55**). Despite this ornament aligning with a *plié,* the dancer used it in this instance to anticipate the rise in the next bar. In this way, as an unusual and outlying outcome, the ornament indirectly reflected the dance. As this situation did not occur in any other piece and was not reacted to in a similar way in the Control Recording, I suggest it is more a reflection of the dancer's ability to adapt to the music.

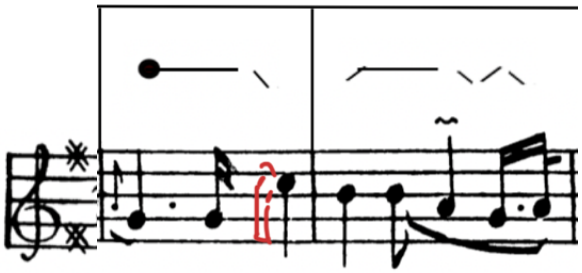


Figure 4.55 Bars 2-3 Ornament

The second ornament was a *coulé* in bar 15 on beat 1 (**Figure 4.56**). Here, the dancer's *tourné* was enhanced. These two ornaments do not vouch significantly for the use of the BMDN, especially as one of them was not an obvious choice of ornamentation; however, if the musicians were aware that they could adapt the written-in ornamentation more, then there could be better correlation between the music and dance.

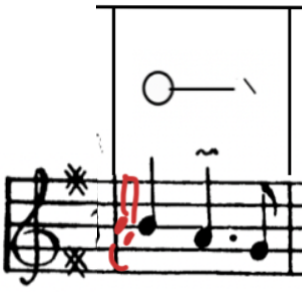


Figure 4.56 Bar 15 Ornament

In the Danced Recording, there were instances where the additional ornaments aligned with the dance and others where they did not. The ornament on the repeat of beat 1 of bar 1 (**Figure 4.57**) helped emphasise the movement, which was a point and hold; however, this was the same as the Control Recording, indicating that it perhaps was a musical choice and not influenced by the dance.

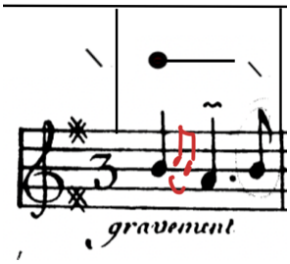


Figure 4.57 Bar 1 Ornament

The ornament in bar 15, as in the Notated Recording, aligned with a danced ornament, creating harmony between dancer and musicians (**Figure 4.58**).

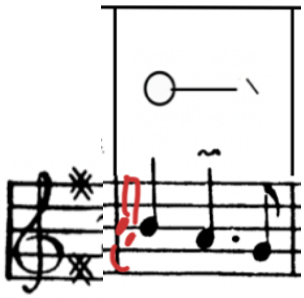


Figure 4.58 Bar 15 Ornament

Interestingly, the ornament in bar 23 on the second beat (**Figure 4.59**) emphasised the hemiola and created play between the rhythms of the dancer and the musicians.

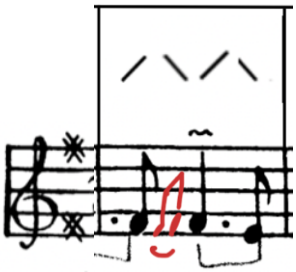


Figure 4.59 Bar 23 Ornament

In contrast, the change from a *pincé* to a slow *tremblement* in the repeat of bar 5 (**Figure 4.60**) added too much emphasis to the beat and the fluid movement in the dance was lost.

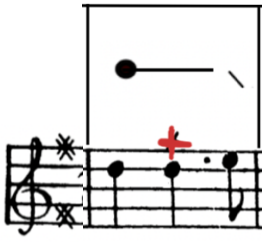


Figure 4.60 Bar 5 Ornament

The Danced Recording, in this instance, did not indicate that a visualisation of the dance assisted choice of ornamentation.

When studying the score and choreography from the previously analysed two pieces, it can be observed that the *tremblements* written in the score often aligned with an accented or ornamental movement in the dance. In the cases where it did not, often it was to create deliberate cross-rhythms. This raises questions about how we would deal with ornaments in these scores not written for dance. The results from these experiments suggest that, when playing music not composed specifically for a dance, it may be appropriate to modify the ornamentation in order to adapt to the needs of the dancers and choreography.

Conclusion

The use of the BMDN in the recordings of *Les Nations: Sarabande* saw some successes in the choice of tempo and lack of tempo variation but also some elements which need improvement, such as choice of accent. Firstly, the musicians achieved a tempo in the Notated Recording which the dancer did not want to adjust for the Danced Recording, suggesting that it was her ideal tempo. The number of tempo variations in the Notated Recording was also less than in both the Control and Danced Recordings. This lack of tempo variation meant the dancer was more synchronised with the music. I found that the choice of articulation and accent improved to correlate better to the ebb and flow of the dance in the Notated Recording, but the correlation was better in the Danced Recording. The BMDN did, however, better prepare the musicians to notice accented steps when they were joined by the dancer. Finally, there were no significant reactions from the dancer to the changes in ornamentation but the additional ornaments in the Notated Recording did correlate to what may be considered ornamental movements such as the *tourné.* The analysis of ornamentation also suggested that musicians could adapt the written ornaments in a piece not written for the dance to improve the correlation between dance and music.

Florilegium Primum, Gratitudo: Bourée and Menuet

The dance, *La Bourée d'Achille,* was applied to the *Bourée* and *Menuet* titled 'Gratitudo' from Muffat's *Florilegium Primum* (hereafter *'Gratitudo'*) as it matched the structure of the choreography. The following analysis explores how an example of a dance in the BMDN can influence the musical performance of a piece not written for the dance.

Gratitudo, of all the pieces, revealed most profoundly how the BMDN can influence the musicians' decision-making. The choice of tempo in the Notated Recording was very close to a speed comfortable for dancing but, as the tempo increased, the synchronisation between the dancers' steps and the musicians' notes decreased. I found in these recordings that the *Bourée* saw little improvement in choice of tempo alteration from the Control Recording to the Notated Recording; however, the *Menuet* improved dramatically in stability in tempo and synchronisation between dancers and musicians during tempo changes. The choices of accents and articulation coincided better with the dancers' accents and the character of the dance in the Notated Recording; however, the Danced Recording was greatly improved again in these areas. There were also no significant observations in the choice of ornamentation and the effect it had on the dance in the Control and Notated Recordings, but the Danced Recording had many ornaments removed from the piece which resulted in a less exciting performance. *Gratitudo* was danced by Dr Fiona Garlick and John Barnard.

Tempo

Once again, the goal was to reach a tempo comfortable for dancing in the Notated Recording. The dancers found the Control Recording to be slower than comfortable, the Notated Recording more comfortable and more playful, and the even faster Danced Recording, the dancers' ideal tempo. This analysis questions again the line between dancer enjoyment and loss of synchronisation between steps and notes.

Table 4.16 *Gratitudo* Average Tempos

Recording	**Bourée**	**Menuet**
Control	Mm crotchet=162.16bpm	Mm crotchet=122.95bpm
Notated	Mm crotchet=178.95bpm	Mm crotchet=157.89bpm
Danced	Mm crotchet=201.34bpm	Mm crotchet=175.43bpm

In the Control Recording, at the slower tempo for both *Bourée* and *Menuet*, while the dancers synchronised with the music, they were more laboured, especially in the jumps. In the Notated Recording, the *Bourée* was more enjoyable for the dancers but there was some loss of synchronisation. Conversely, the increase in speed for the *Menuet* meant that the dancers' movements were smoother and less jagged than in the Control Recording. In the Danced Recording, the *Bourée* increased in speed and there was more synchronisation, perhaps due to more practice having been undertaken. The higher jumps and livelier steps also indicated that it was more enjoyable for the dancers. In the *Menuet,* the increase in speed meant that there was a significant loss of synchronisation; however, the dancers' movements were again higher and livelier.

Initially, the interesting thing about these recordings was that in the Control Recording, the musicians did not make the same choice of tempo as they did for the Control Recording of *La Bourée d'Achille*. In *Gratitudo,* the *Bourée* was 18bpm faster than the *Bourée* in *La Bourée d'Achille*, but the *Menuet* was only 2bpm faster. This may, however, be a result of familiarity with the music, rather than a conscious aesthetic decision, as the musicians had played this piece previously in their careers, while they had not played *La Bourée d'Achille*.

As with *La Bourée d'Achille*, with an increase in tempo came a loss of synchronisation but a gain in the dancers' enjoyment; however, in these pieces the *Bourée* in the Danced Recording was faster and mostly synchronised, which leads to a speculation that such an issue would not arise after practice.

As I was not able to identify any public video recordings of *Gratitudo* with dancers, the tempo of each version was compared to the common tempos found in publicly available video

recordings of *La Bourée d'Achille*.[162] The recordings of the *Bourée* ranged from crotchet=186bpm to crotchet=280bpm. The *Menuet* ranged from crotchet=165bpm to crotchet=222bpm. In a comparison with these recordings, the Control Recording was slower, as was the Notated Recording, and the Danced Recording was in the middle of the range of tempos. As the Notated Recording was close to the dancers' ideal tempo, reaching a tempo as chosen in the Danced Recording using just the BMDN, I believe is achievable with some adjustments to the notation, as suggested in Chapter 5.

Tempo Changes

It was discussed in relation to *La Bourée d'Achille* that, while there are circumstances in which the tempo can be flexible in a short *bourée* and *menuet*, such as those in *Gratitudo*, it is preferable that there is minimal alteration of tempo within each dance.

Overall, the Control and Notated Recordings of the *Bourée* had few tempo changes but, when they occurred, those changes were large and influenced the synchronisation. Those in the Notated Recording were smaller than in the Control Recording. The Gambist also felt in the Notated Recording of this piece, that 'we did not take nearly as much time as we normally do.' The Danced Recording, however, had many small tempo changes, creating an unsteady basis for the dancers. In the *Menuet*, the Control Recording had the most tempo changes and the Notated and Danced Recordings relatively few moments, suggesting that the BMDN influenced the musicians' understanding of the music.

Bourée

In the Control Recording of the *Bourée,* there was only one tempo change, which was synchronised (**Table 4.17**). This was in bars 8-9 where the musicians slowed at a phrase ending. The dancers in the recording adjusted to the tempo change and while the slowing may be

[162] Dancilla, "La Bourré d'Achille," https://www.youtube.com/watch?v=9D2jBvY4LuY. Bourée mm crotchet=93bpm, Menuet mm crotchet=55bpm.
CELINE415, "Danse baroque – Bourrée et menuet d'Achille," https://www.youtube.com/watch?v=OVxatlZDOdQ. Bourée mm crotchet=120bpm, Menuet mm crotchet=74bpm.
Golden Forests Dance Video, "Bourre d'Achille," https://www.youtube.com/watch?v=MSaXOnx83o8. Bourée mm crotchet=140bpm, Menuet mm crotchet=60bpm.
Maltizov, "La Bourée d`Achille from Baltic Baroque/Grigori Maltizov," https://www.youtube.com/watch?v=P3SMNkpnL-E. Bourée mm crotchet=120bpm, Menuet mm crotchet=74bpm.

appropriate for bar 8, where there was a *glissé*, the musicians did not pick the speed up again in bar 9 so the *pas de bourée* appeared laboured. The dancers also had time to rehearse and could adjust, meaning their reaction to the slowing was not necessarily because it was appropriate.

Table 4.17 *Gratitudo, Bourée* Tempo Changes, Control Recording

Bar and Direction	**Dancers' reactions**
8-9 (Decrease)	Synchronised

The Notated Recording had three small tempo changes (**Table 4.18**). I found that one of these moments, in bars 11-13, enhanced the performance delivery. In bars 11-13, the dancers were synchronised with the music and the tempo change helped elevate the climactic moment. This is quite a significant finding, that is, that the BMDN assisted in showing the musicians a moment where tempo change could enhance the dance.

In bars 5-6, the speeding in the music left the dancers slightly behind. The speeding occurred quickly and sounded unintentional, nevertheless it was not reacted to well by the dancers. In bars 7-10, however, the dancers were synchronised with the music. Here, the dancers were performing a series of *pas de bourée,* which can easily be adjusted.

Table 4.18 *Gratitudo, Bourée* Tempo Changes, Notated Recording

Bar and Direction	**Dance Steps**	**Dancers' reactions**
5-6 (Increase)	Pas de bourée	Slight delay
7-10 (Decrease)	Pas de bourée	Synchronised
11-13 (Increase)	Pas de bourée, jumps	Synchronised and more powerful

The Danced Recording had significantly more tempo changes than the Notated Recording, half of which led to a loss of synchronisation between dancers and musicians (**Table 4.19**). While the musicians changed the tempo a lot in the Danced Recording, these were all minor changes. In bars 1-4 the dancers were slightly unsteady because, as mentioned before, jumps cannot be changed mid-air. Similarly, in bars 13-16, the decrease in speed aligned with

a series of jumps. Within bar 5, during the small tempo change, the dancers stayed synchronised with the music. In bars 6-11 the dancers are synchronised with the music, most likely because a series of *pas de bourée,* where the tempo decreased most, can be easily adjusted. For the Danced Recording, moments, when the dancers stayed synchronised during a tempo change, were when it was a basic *pas de bourée* either within the bar or as a series. The most impactful moments where the tempo change hindered the dance were in the jumps.

Table 4.19 *Gratitudo, Bourée* Tempo Changes, Danced Recording

Bar and Direction	**Dance Steps**	**Dancers' reactions**
1-4 (Decrease)	Pas de bourée, contretemps, glissé	Unsteady
5 (Increase)	Pas de bourée	Synchronised
6-10 (Decrease)	Contretemps, glissé, pas de bourée	Synchronised
11 (Increase)	Pas de bourée	Synchronised
13-16 (Decrease)	Jumps	Slight hesitation
16-21 (Increase)	Pas de bourée, jumps	Unsteady

From Bourée to Menuet

As with *La Bourée d'Achille*, the tempo change during the transition from *Bourée* to *Menuet* needed to be assessed using close listening. In the Control Recording, the musicians slowed dramatically at the end of the *Bourée* and then paused. This meant that the dancers began the *Menuet* before the musicians had started playing because they had predicted the next note.

In the Notated Recording, there was no slowing at the end of the *Bourée* but there was a little pause before the *Menuet*. The dancers were able to follow this better than the Control Recording; however, their first step of the *Menuet* was slightly delayed.

In the Danced Recording, there was a little anticipation at the end of the *Bourée* of the tempo of the *Menuet*; however, the dancers' reaction was similar to that in the Notated Recording, where there was a slight delay on the first beat of the *Menuet*. It thus appears that in *Gratitudo* the BMDN assisted the musicians in playing the transition between metres, although the result was not an ideal one. Additionally, the added opportunity to communicate,

as in the Danced Recording, did not assist the transition. These results, and those from *La Bourée d'Achille,* are discussed in Chapter 5 to seek a solution to the reoccurring issues with transitions between metres.

Menuet

The *Menuet* had almost the opposite results to the *Bourée,* with the Control Recording having the most tempo changes, and the Notated and Danced Recordings having fewer and smaller tempo changes.

The Control Recording had many tempo changes, leading to a loss of synchronisation, especially during the *contretemps de menuet* (**Table 4.20**). In bars 6-8, the dancers hesitated at the beginning, as the musicians slowed down; however, the end of the phrase was synchronised. The slowing down at the end of the phrase may have been appropriate in the repeat as there was a phrase ending in the dance not evident in the first time. In bars 9-12, the dancers stayed synchronised despite the musicians speeding; however, the *contretemps de menuet* did not suit a change in tempo as it obscured the counter-rhythm. Similarly, in bars 21-24, the dancers were synchronised but found the *pas de menuet* difficult to land each step because of the slowing down. Also, in the repeat of bars 11-14, the dancers had to rush to stay synchronised. From the repeat of bar 17 to the end of the piece there was slight hesitation by the dancers at the start of each phrase. Overall, the Control Recording had many tempo changes, which led to a loss of synchronisation.

Table 4.20 *Gratitudo, Menuet* Tempo Changes, Control Recording

Bar and Direction	**Dancers' Reaction**
6-8 (decrease)	Hesitation at beginning, synchronised 7-8
9-12 (increase)	Synchronised but inappropriate
15-16 (decrease)	Synchronised
21-24 (decrease)	Synchronised but inappropriate
11-14, repeat (increase)	Synchronised but rushed
17-20, repeat (increase)	Slight hesitation
Ending (decrease)	Slight hesitation

The Notated Recording had only two tempo changes, which appeared to cause no loss of synchronisation nor hesitation from the dancers (**Table 4.21**). There was a small slip of memory, but this was not a reaction to the changing tempo. Also, the tempo change in bars 16-23 was very small and, over a long phrase, in my analysis, it would have gone unnoticed if I had been determining the tempo changes through listening and not using Melodyne. Thus, in these circumstances, the BMDN appeared to assist in keeping a steady tempo.

Table 4.21 *Gratitudo,* Menuet Tempo Changes, Notated Recording

Bar and Direction	**Dance Steps**	**Dancers' Reactions**
Bars 15-16 (Pause)	Pas de menuet	Synchronised
Bars 16-23 (Decrease)	Contretemps de menuet, Pas de menuet	Synchronised

In the Danced Recording, there were again only two tempo changes which caused no loss of synchronisation (**Table 4.22**). In bars 15-16, the dancers had the same slip of memory as the Notated Recording but, again, these bars were synchronised. Similarly, in bars 17-19, the change is small and caused no loss of synchronisation.

Table 4.22 *Gratitudo, Menuet* Tempo Changes, Danced Recording

Bar and Direction	**Dance Steps**	**Dancers' Reactions**
Bars 15-16 (Pause)	Pas de menuet	Synchronised
Bars 17-19 (Decrease)	Contretemps de Menuet	Synchronised

The Notated Recording of the *Menuet* improved from the Control Recording because of the lack of tempo changes and chosen moments, causing no loss of synchronisation; however, as is a recurring issue, the use of slowing or speeding during a *contretemps de menuet* can cause a loss of synchronisation as well as obscure the counter-rhythm. Again, I address the education about *contretemps de menuet* in Chapter 5.

Accent and Articulation

Of the four pieces analysed, the musicians changed their use of accent and articulation most in the Notated Recording of *Gratitudo*, where the synchronisation of accented notes with accented steps often increased. It was found, overall, that in the Control Recording, the musicians used *inegalité* and they often leaned on the upbeat. The piece was also *coulament* but with a lot of strong accents, resulting in a very effortful performance by the dancers. In the Notated Recording, the *inegalité* was subtler, as was the lean on the upbeat. As a result, the dancers had more lift in their movements and did not look as laboured. In the Danced Recording, the musicians used more *détacher* with gentler *inegalité,* which again lifted the dancers' movements. The following analysis looks at specific moments when there was a correlation between musical accent and articulation, and danced accent, to demonstrate how the BMDN influenced and could influence musical performance.

Bourée

The use of accent and articulation in both the Notated and Danced Recordings changed to reflect the dance in differing ways, showing that each performance can still be unique while equally enhancing the dance. Here I provide two examples of this occurring. One such example happened in bars 1-4, where, in the Control Recording, the gambist used strong accents and attacked articulation on the first beat of the second, third and fourth bars while the violinist accented almost every second beat with a sharp accent (**Figures 4.61** and **4.62**). The dancers' smooth movements negatively contrasted the harsh articulation and there was a delay into the first beat of bar 1.

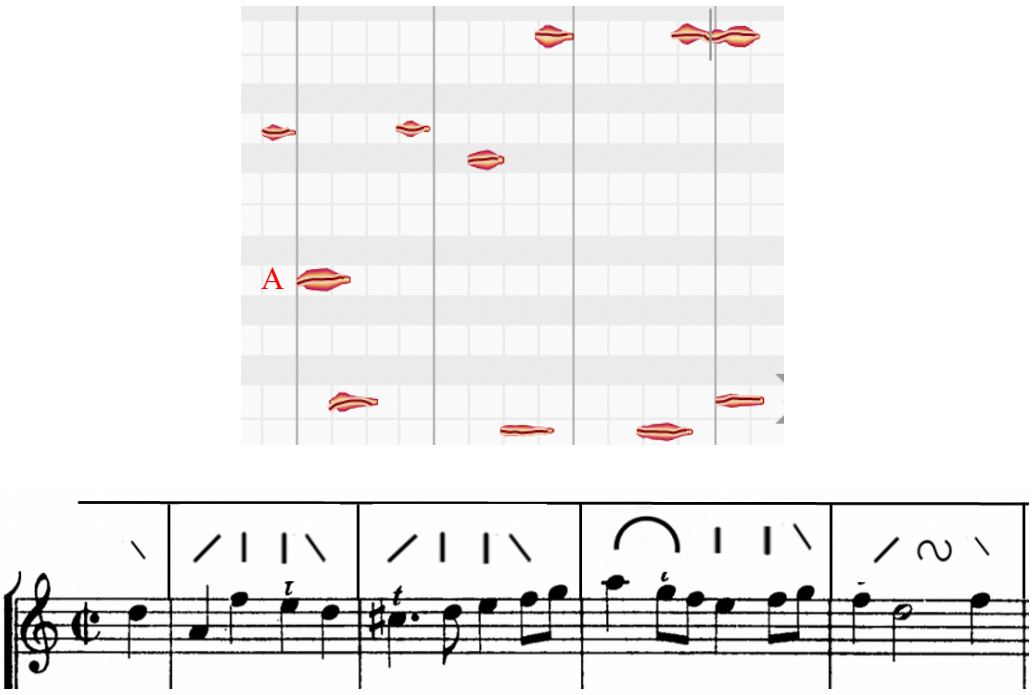


Figure 4.61 Bars 1-4 Control Recording Violin

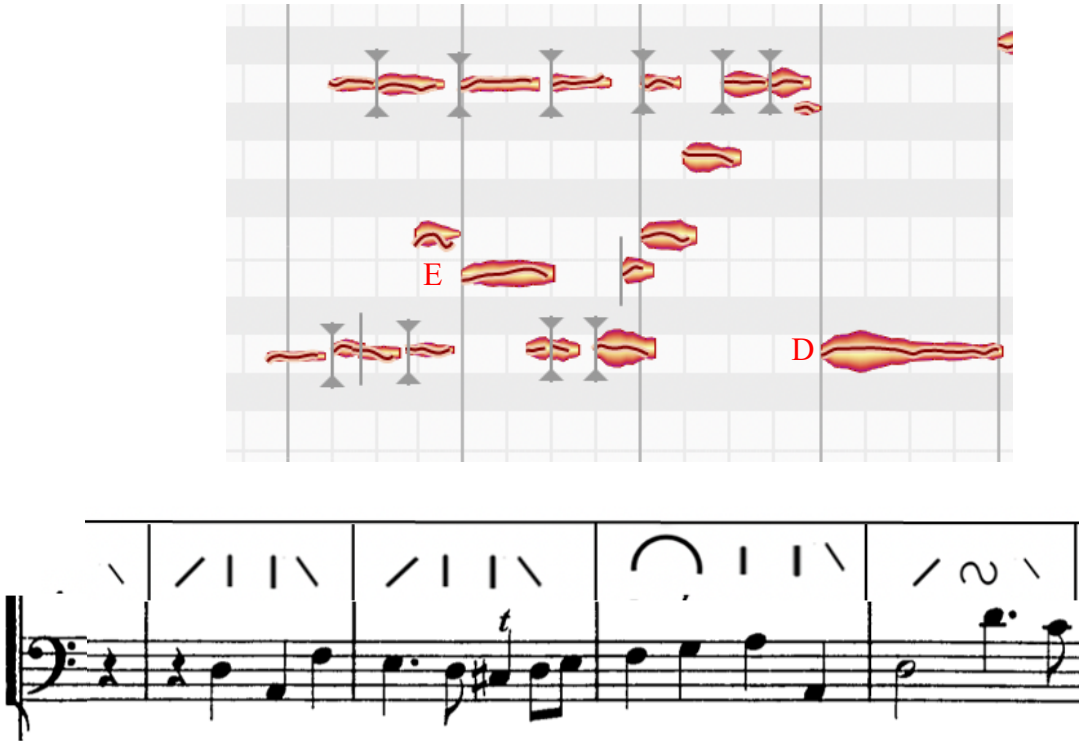


Figure 4.62 Bars 1-4 Control Recording Gamba

In comparison, the Notated Recording was much less attacked and used more *coulament*, the gambist heavily accenting bar 3 and the violinist using an ornament to accent the same

(**Figures 4.63** and **4.64**). The dancers were synchronised with the music and the accent on bar 3 aligned with a hop, emphasising the step. The final step, however, a moment of respite in the dance, was not reflected in the music and appeared off balance.

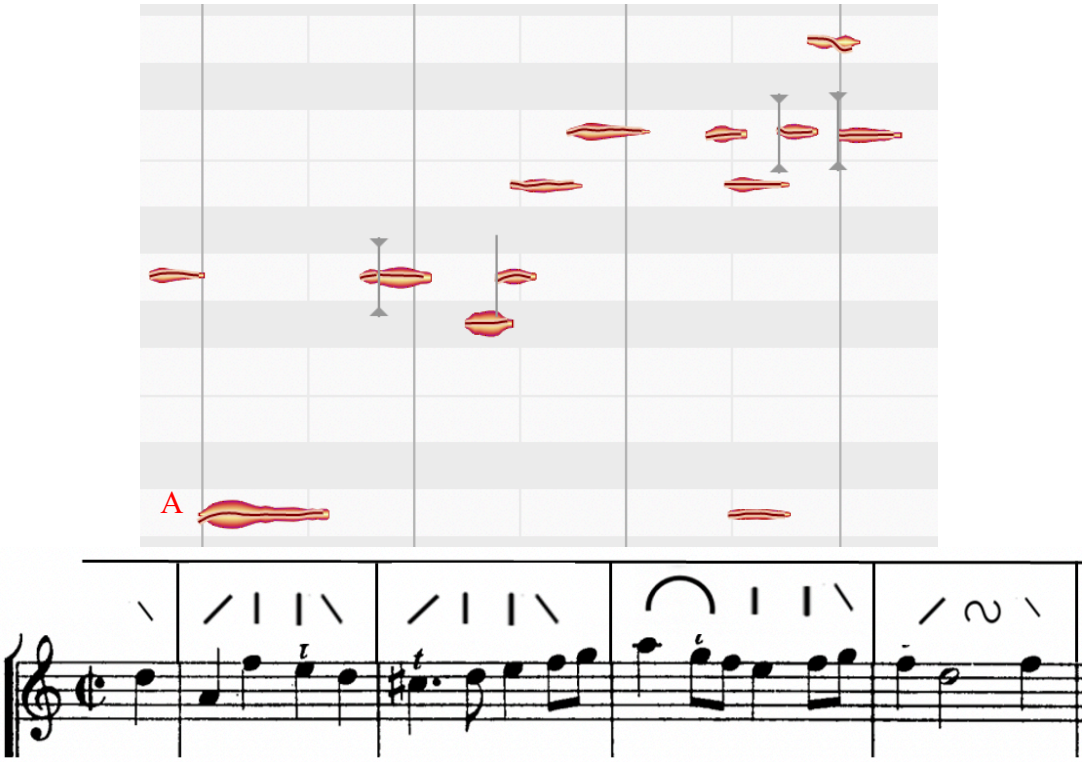


Figure 4.63 Bars 1-4 Notated Recording Violin

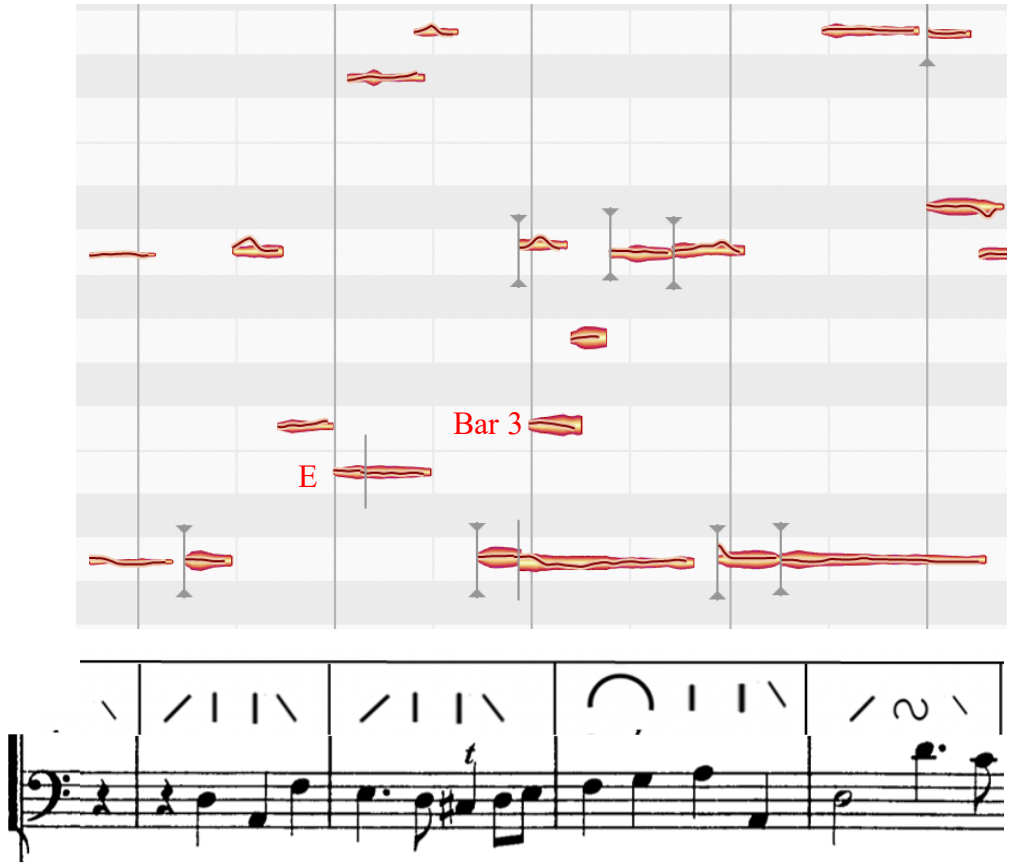


Figure 4.64 Bars 1-4 Notated Recording Gamba

In the Danced Recording, in contrast, the gambist used an attacked accent on bar 4, and, interestingly, also on the second half of the third bar. The violinist accented almost every half bar; however, this was more *détacher* than in the Control Recording (**Figures 4.65** and **4.66**). The dancers' steps directly corresponded to the music and they bounced off the sharper accents. The accent on bar 2, however, seemed out of place because of the repeated *pas de bourée*. Interestingly, the dancers requested that there be less of an accent on every bar; however, they appeared to be most comfortable in the Danced Recording where each bar was accented more than in the Notated Recording.

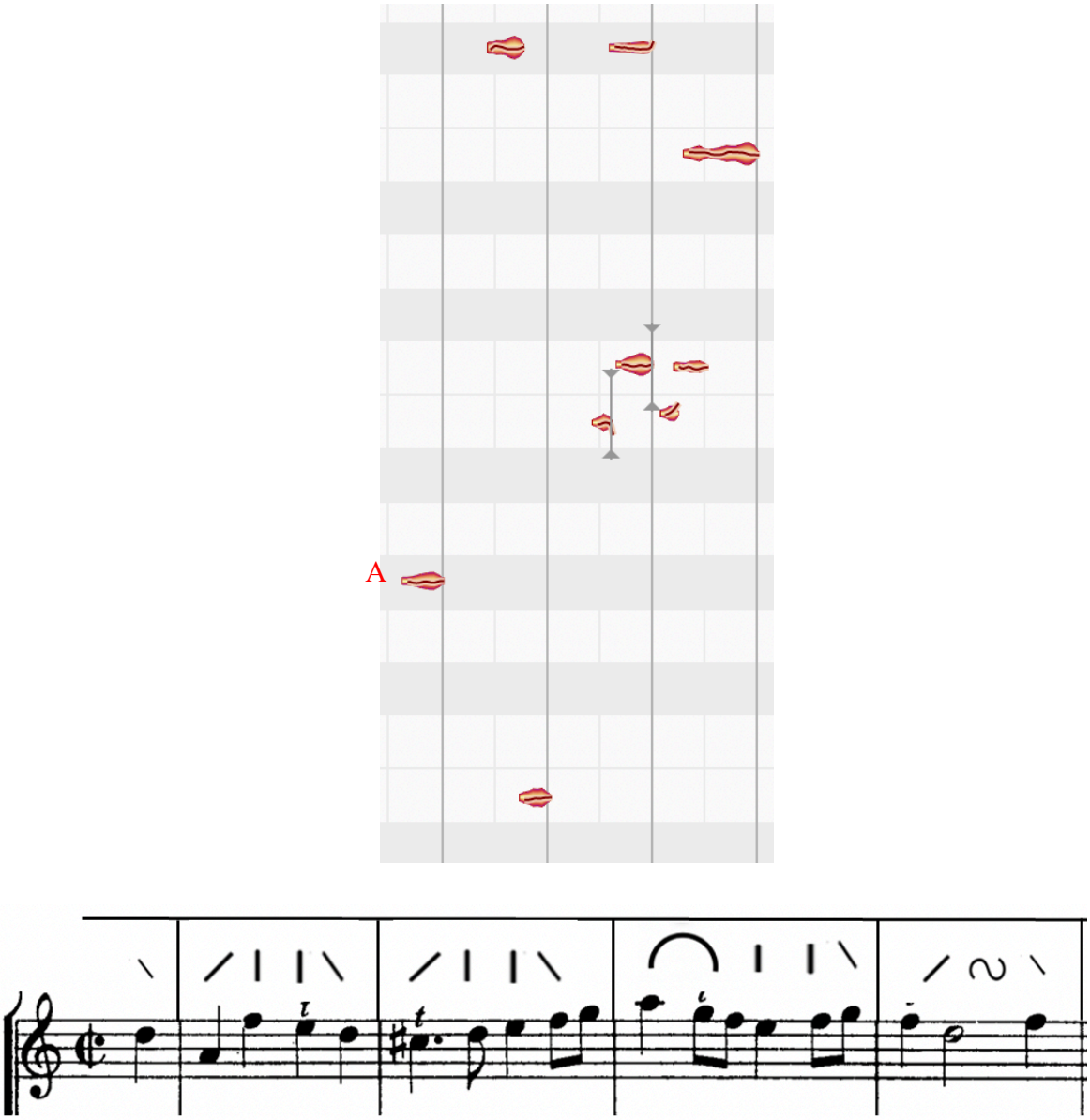


Figure 4.65 Bars 1-4 Danced Recording Violin

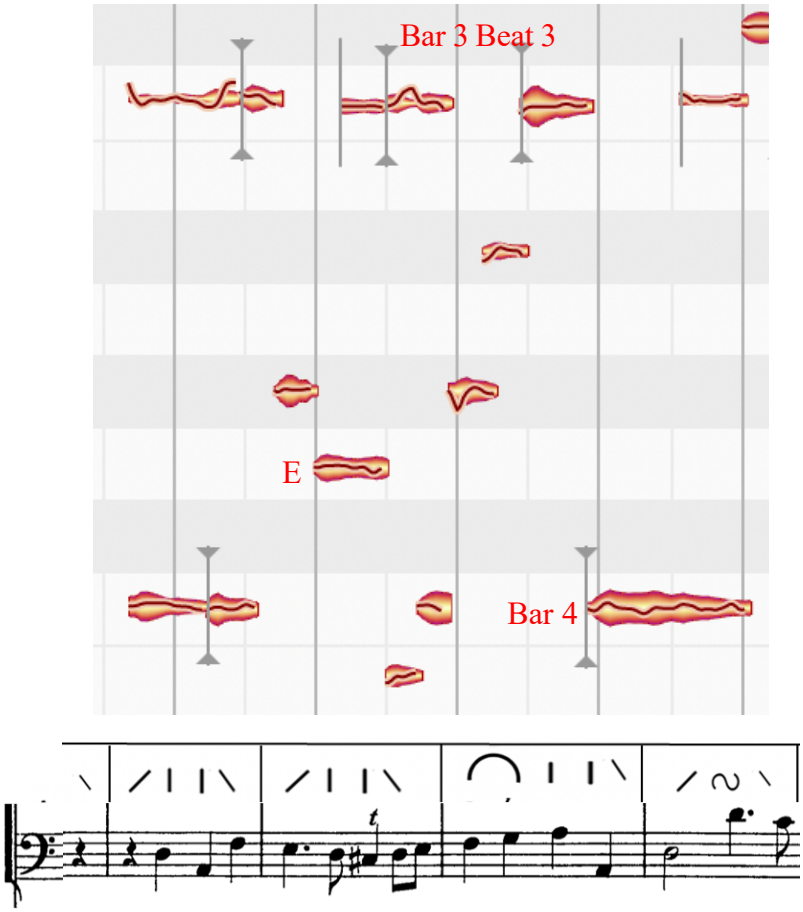


Figure 4.66 Bars 1-4 Danced Recording Gamba

A second example of the accents and articulation changing to reflect the dance steps in different ways can be observed in bars 11-15. In the Control Recording, the gambist increased the intensity of volume and attack with each bar, with the climax reached at bar 14. The violinist's ornaments in bars 11 and 12 created high intensity, with his highest points of intensity of amplitude being in bars 13 and 15 (**Figures 4.67** and **4.68**). The build-up to bar 12 was appropriate as the dancers began *jettés* in bars 13 and 14; however, the steps may have been more synchronised if there had been sharper attack in bars 13 and 14.

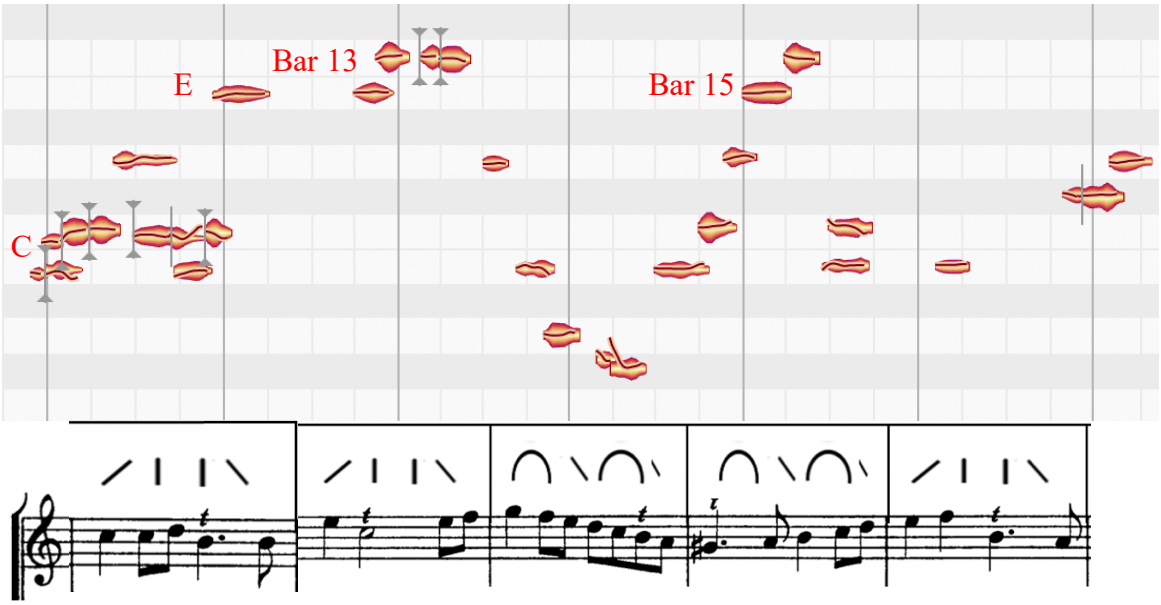


Figure 4.67 Bars 11-15 Control Recording Violin

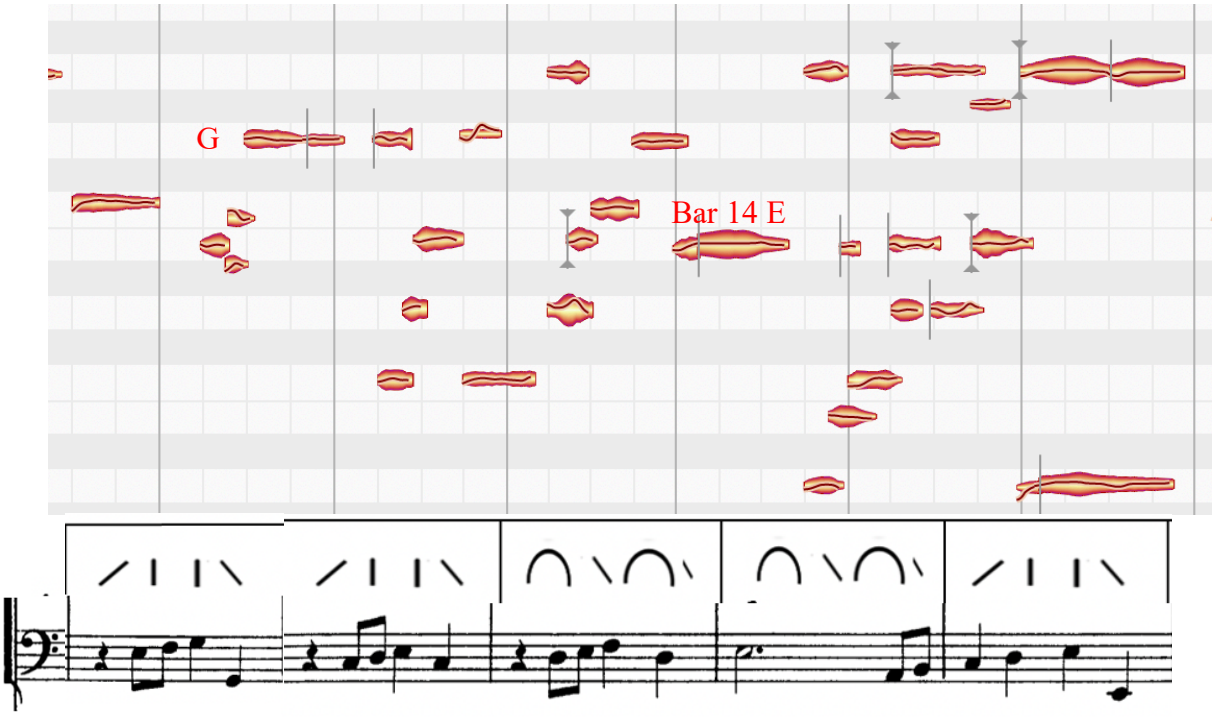


Figure 4.68 Bars 11-15 Control Recording Gamba

In the Notated Recording, the gambist played a subtler *enflé*, with a gentler note on bar 14, while bars 15 and 16 were much stronger. The violin was also much smoother, with some attacked articulation in bar 15 (**Figures 4.69** and **4.70**). The smoother notes suited the *pas de*

bourée; however, the jumps would again have benefitted from a sharper attack as they were slightly unsynchronised. Also, the end of the phrase was accented more by the dancers to suit the accents played by the musicians.

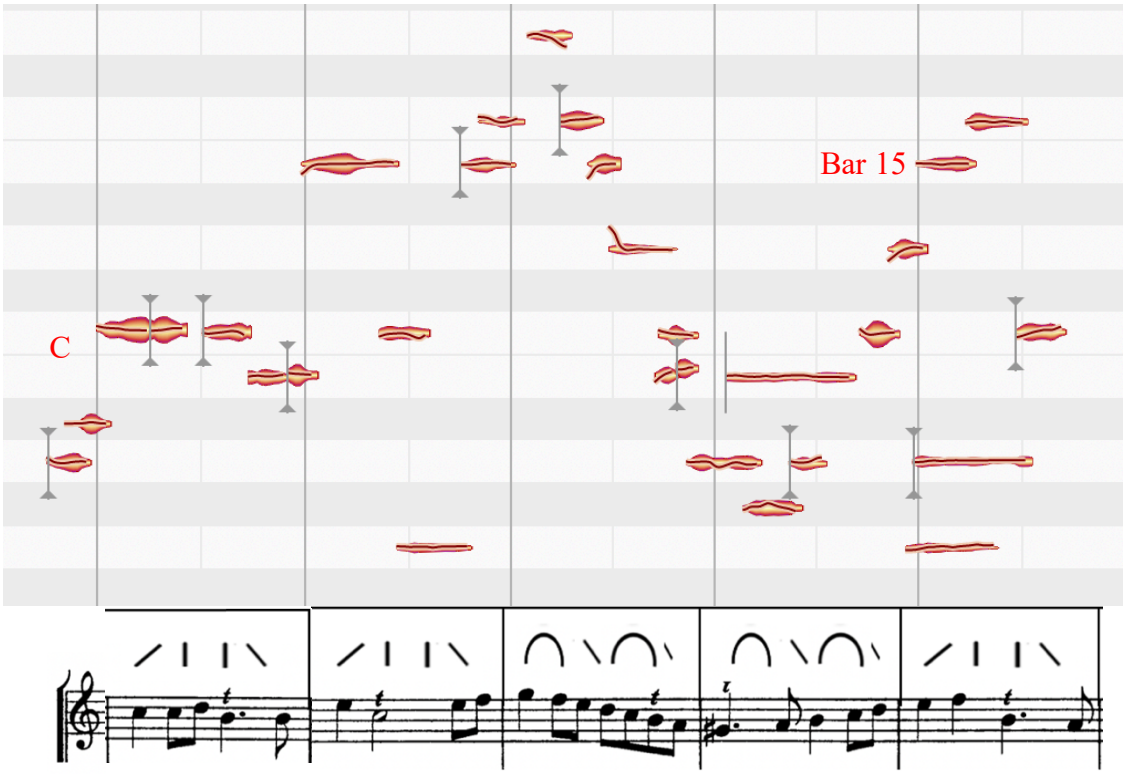


Figure 4.69 Bars 11-15 Notated Recording Violin

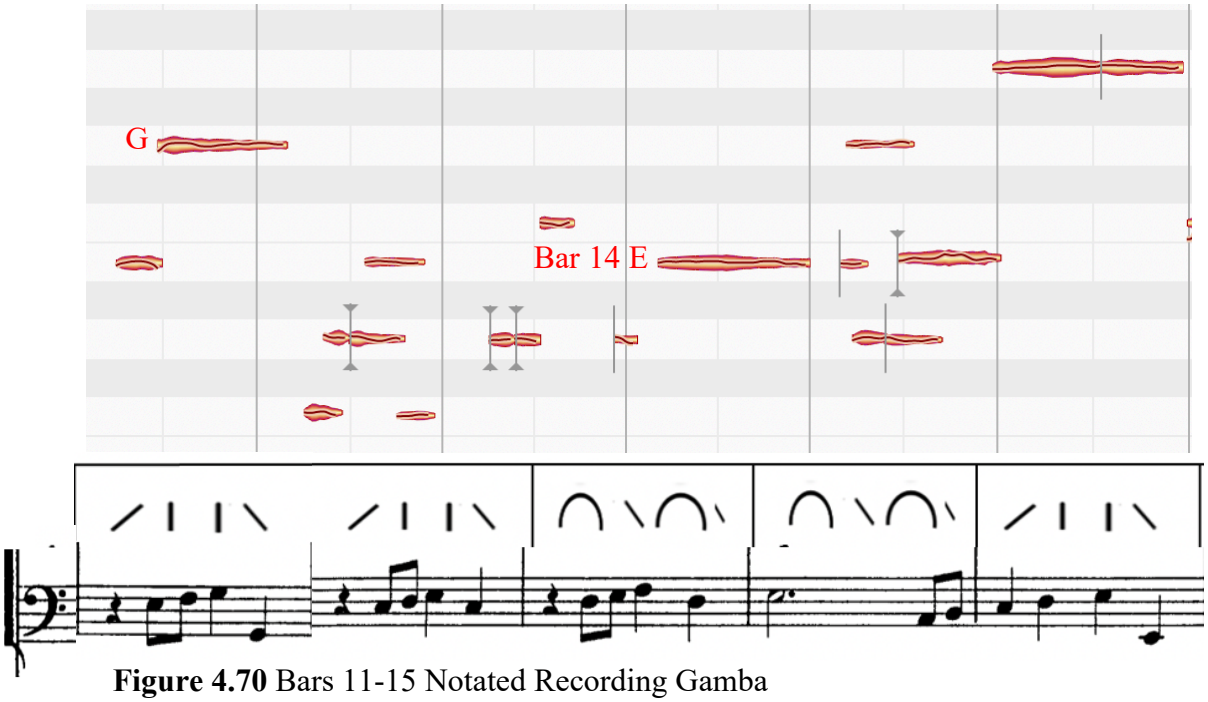


Figure 4.70 Bars 11-15 Notated Recording Gamba

In the Danced Recording, the gambist played as in the Notated Recording except, overall, he played strong accents more frequently. In contrast, the violinist used less accented notes and shorter articulation. He also focused on accenting bars 14 and 15 (**Figures 4.71** and **4.72**). In reaction to this, the dancers achieved higher jumps, which appeared more energetic; however, the dancers were slightly delayed at the start of bar 11.

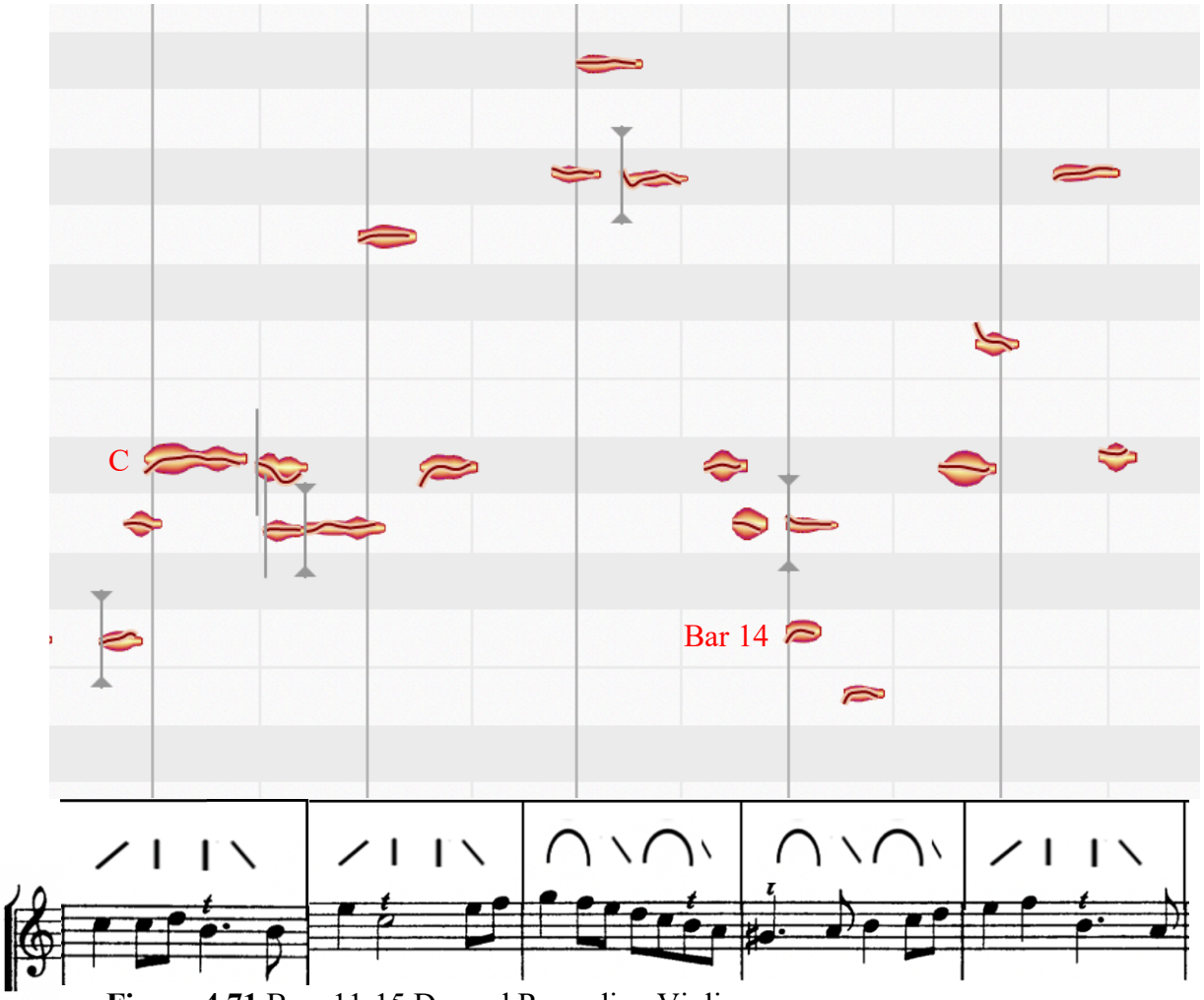


Figure 4.71 Bars 11-15 Danced Recording Violin

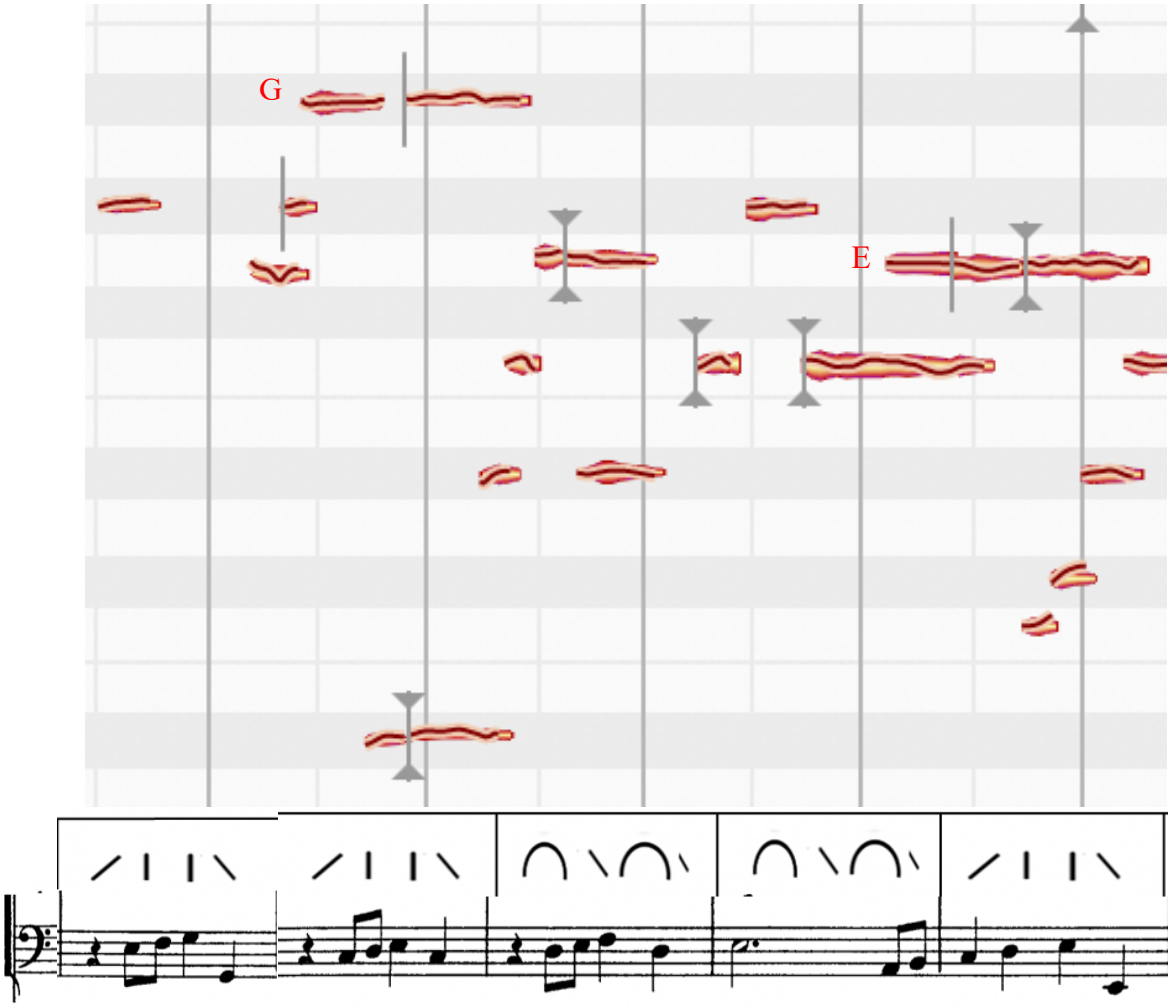


Figure 4.72 Bars 11-15 Danced Recording Gamba

There was one circumstance in the *Bourée* where the Control Recording achieved synchronisation and correlation between music and movement. This was interesting to look at because it showed how the BMDN did not always need to assist in achieving a good outcome. This example was in bars 5-8. In the Control Recording, the gambist used short, attacked articulation with extra emphasis on bar 8. The violinist placed a strong accent on bar 5 and beat 1 of bar 6, as well as beats 2 and 3 of bar 7, which were accented with an ornament. He then played the end of the phrase gently (**Figures 4.73** and **4.74**). Throughout this phrase, the dancers are synchronised and the *pas coupé* at the end of the phrase was well suited to being gentle. This example suggests that often the phrasing and natural accent of a piece of music suit the dance, and musicians' instincts about how to accent the phrase will naturally correlate to the dance.

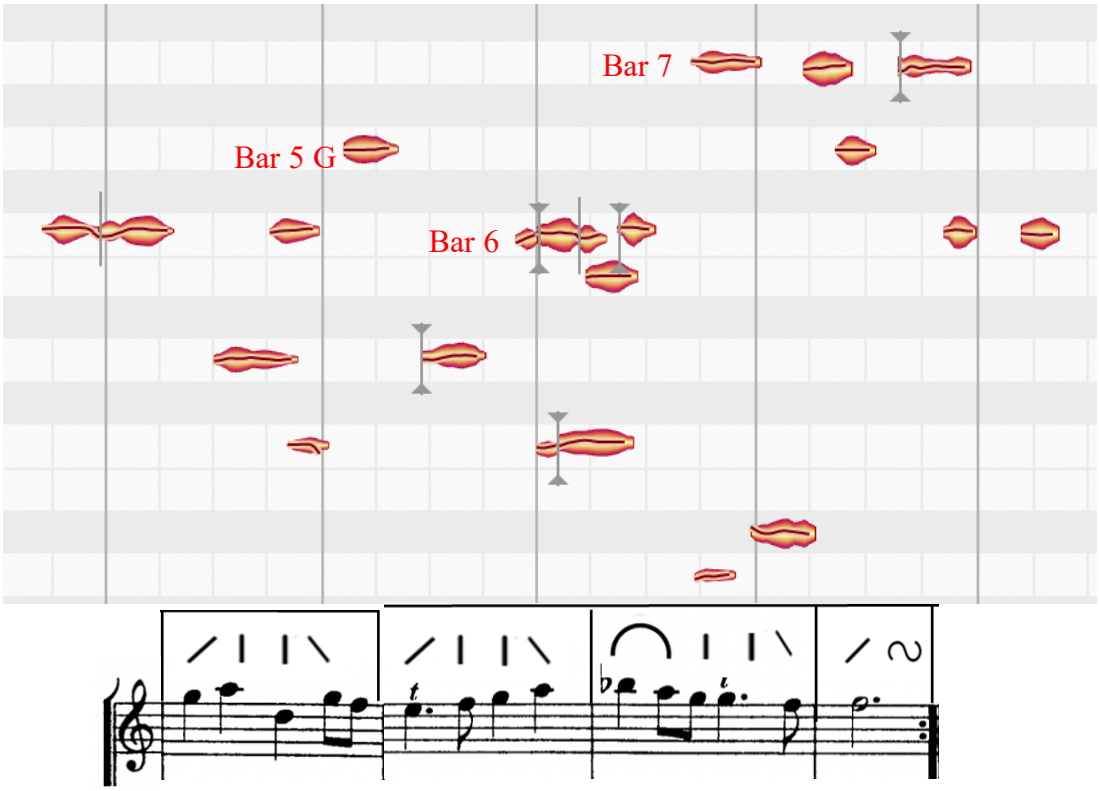


Figure 4.73 Bars 5-8 Control Recording Violin

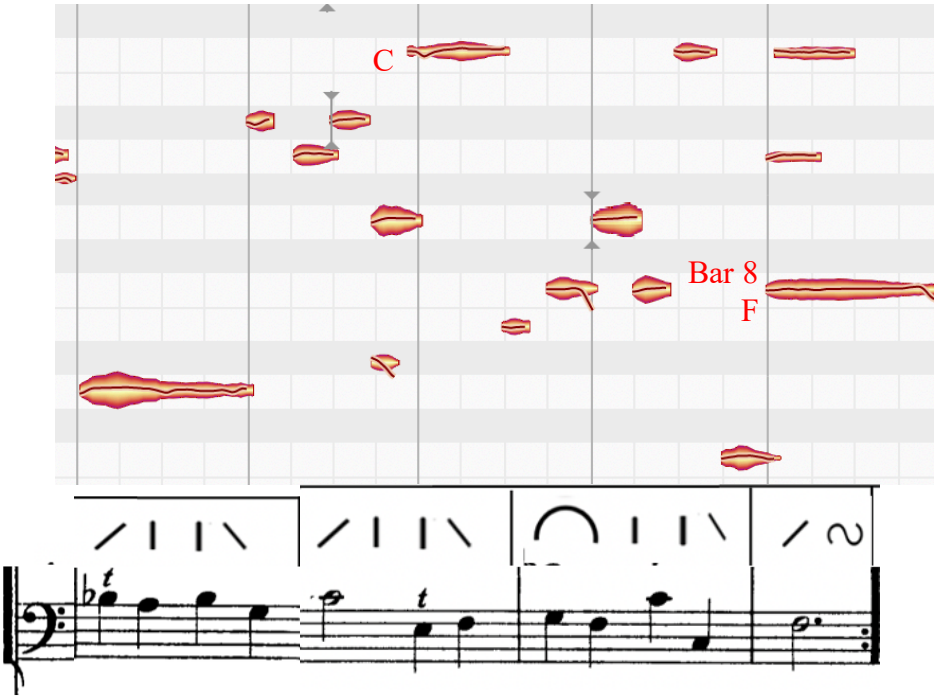


Figure 4.74 Bars 5-8 Control Recording Gamba

Menuet

As in the case of the *Bourée,* I found in the *Menuet* that often the Notated and Danced Recordings had different positive outcomes. The Notated Recording was smooth but lively while the Danced Recording used *détacher* with a significant variety of accents. An example of this can be observed in bars 1-8. In the Control Recording, the continuous *pas de menuet* of the dancers looked jagged because of the frequent musical accents on the first beat of many, but not all, bars from both the violinist and gambist (**Figures 4.75** and **4.76**). The jagged appearance occurred because of the disparity between the length of the *pas de menuet*, which occurs over two bars, and the shortening of this in the music to only one bar.

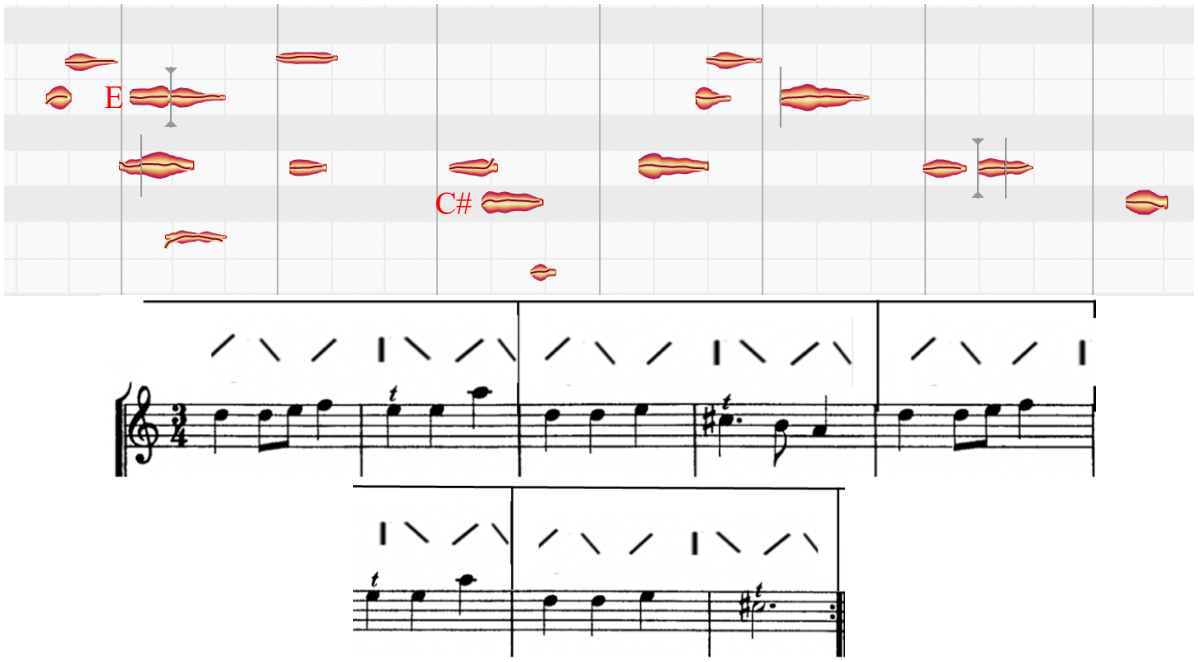


Figure 4.75 Bars 1-8 Control Recording Violin

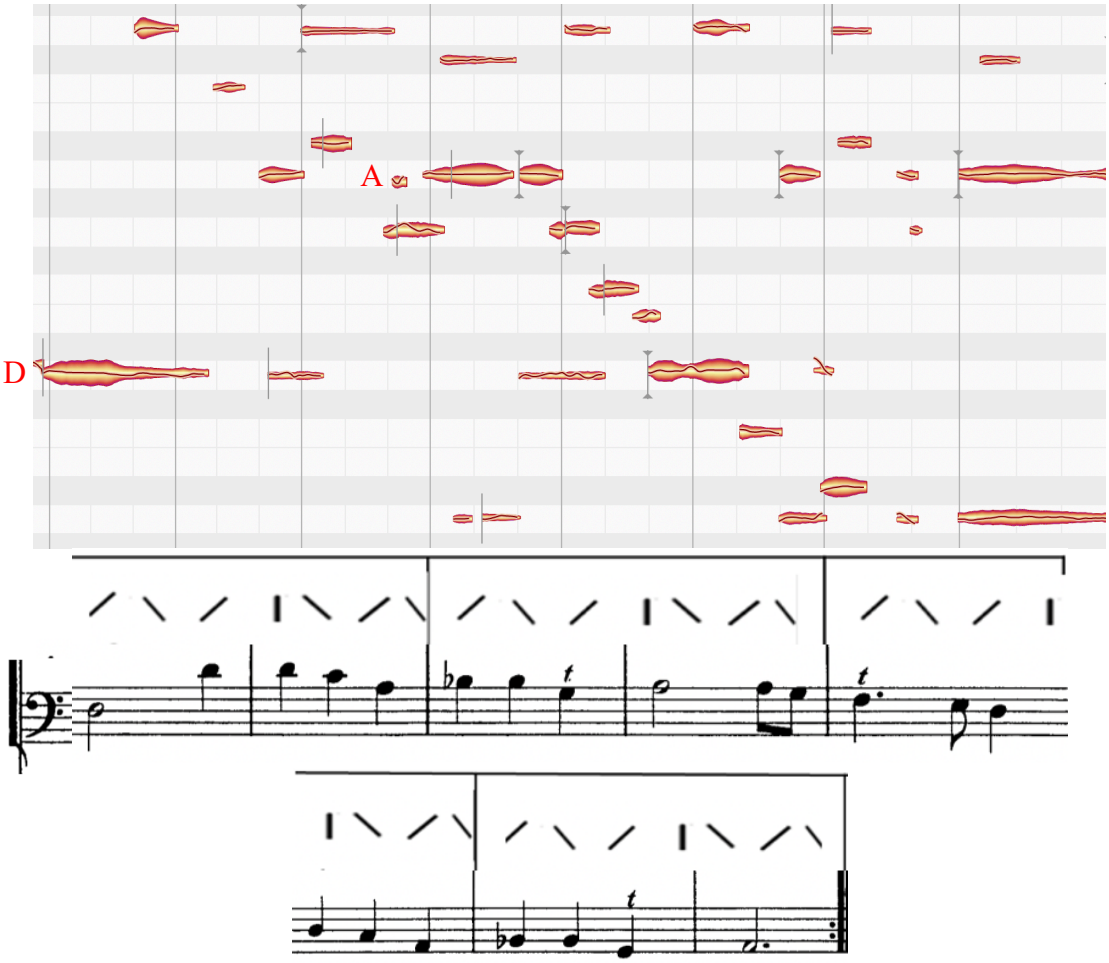


Figure 4.76 Bars 1-8 Control Recording Gamba

This improved in the Notated Recording because the gambist's strong accents were more regular—every second bar. Both the violinist and the gambist also played more *coulament* at the end of the phrase (**Figures 4.77** and **4.78**). This regularity and *coulament*, combined with a lighter articulation in general, led the dancers to have more fluid and lively movements; however, because of the unclear beats in the *coulament* passages, they were frequently not synchronised.

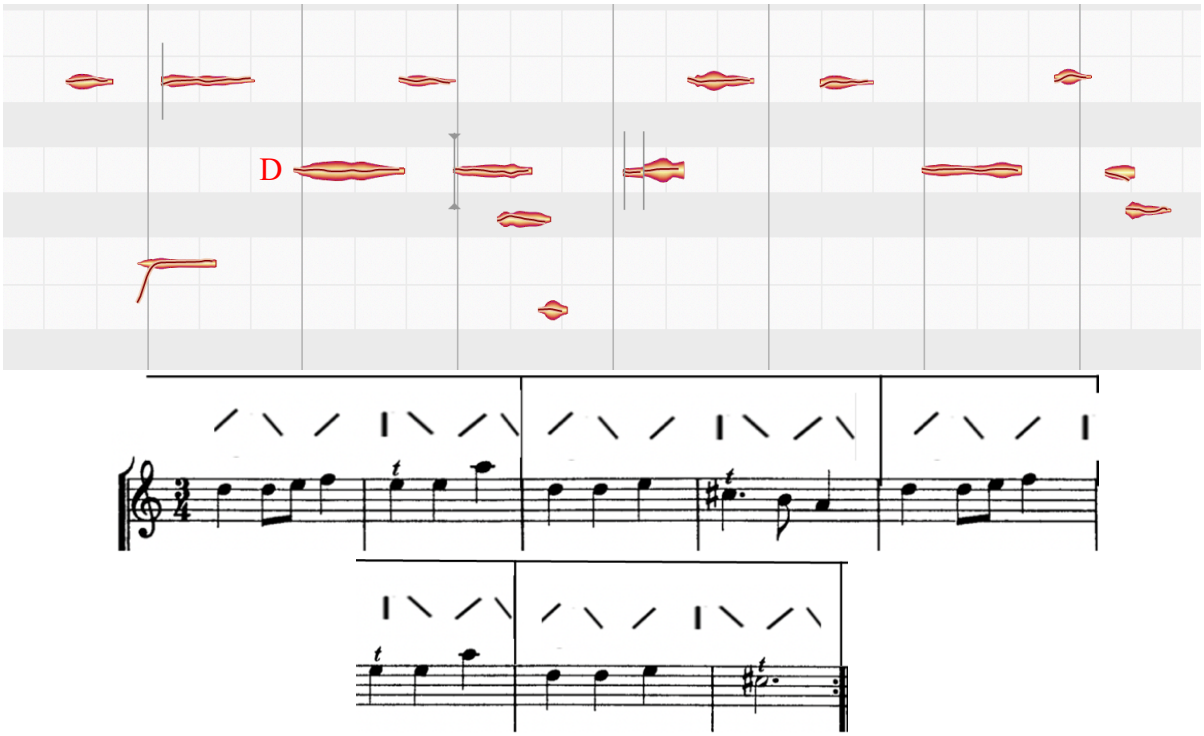


Figure 4.77 Bars 1-8 Notated Recording Violin

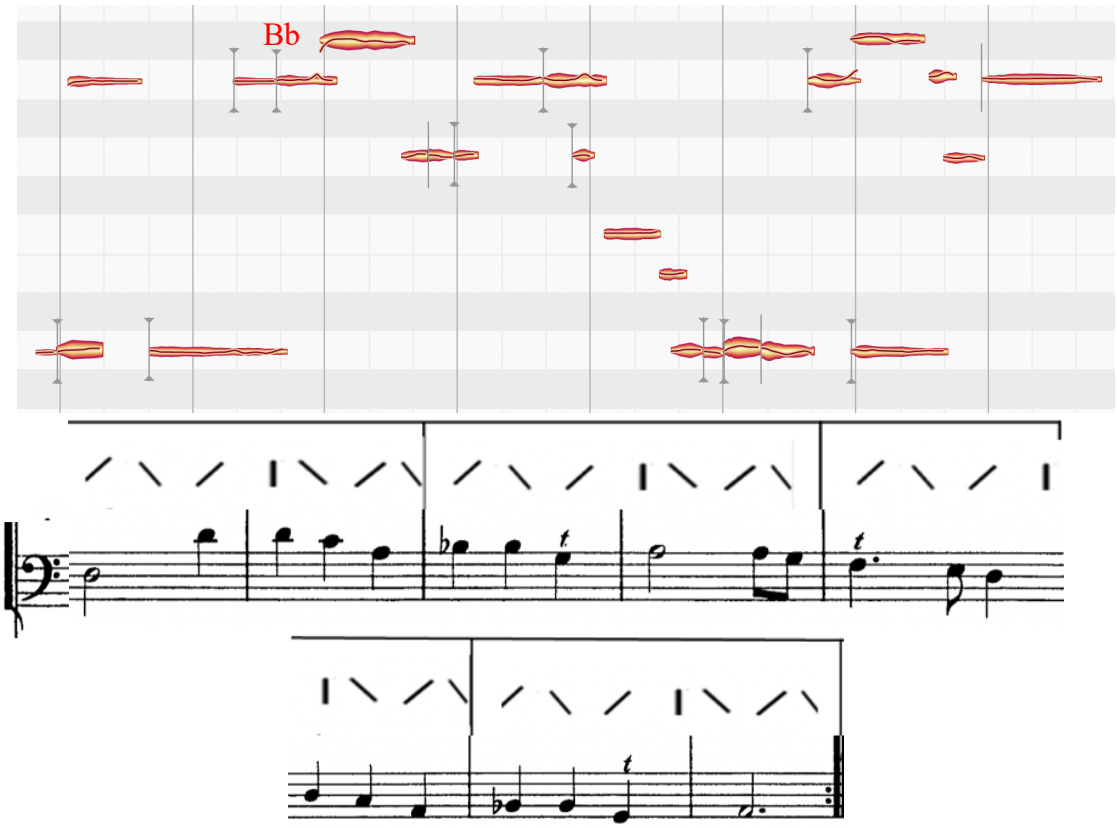


Figure 4.78 Bars 1-8 Notated Recording Gamba

The dancers' performance was most emphatically enhanced in the Danced Recording where both the gambist and violinist strongly accented every bar from bars 1 to 8 (**Figures 4.79** and **4.80**). As it was a regular accent and not uneven, as in the Control Recording, the performance appeared exciting and synchronised between dancer and musician. The dancers initially did not respond to this accent but by bar 2 they were performing more exaggerated and lively movements.

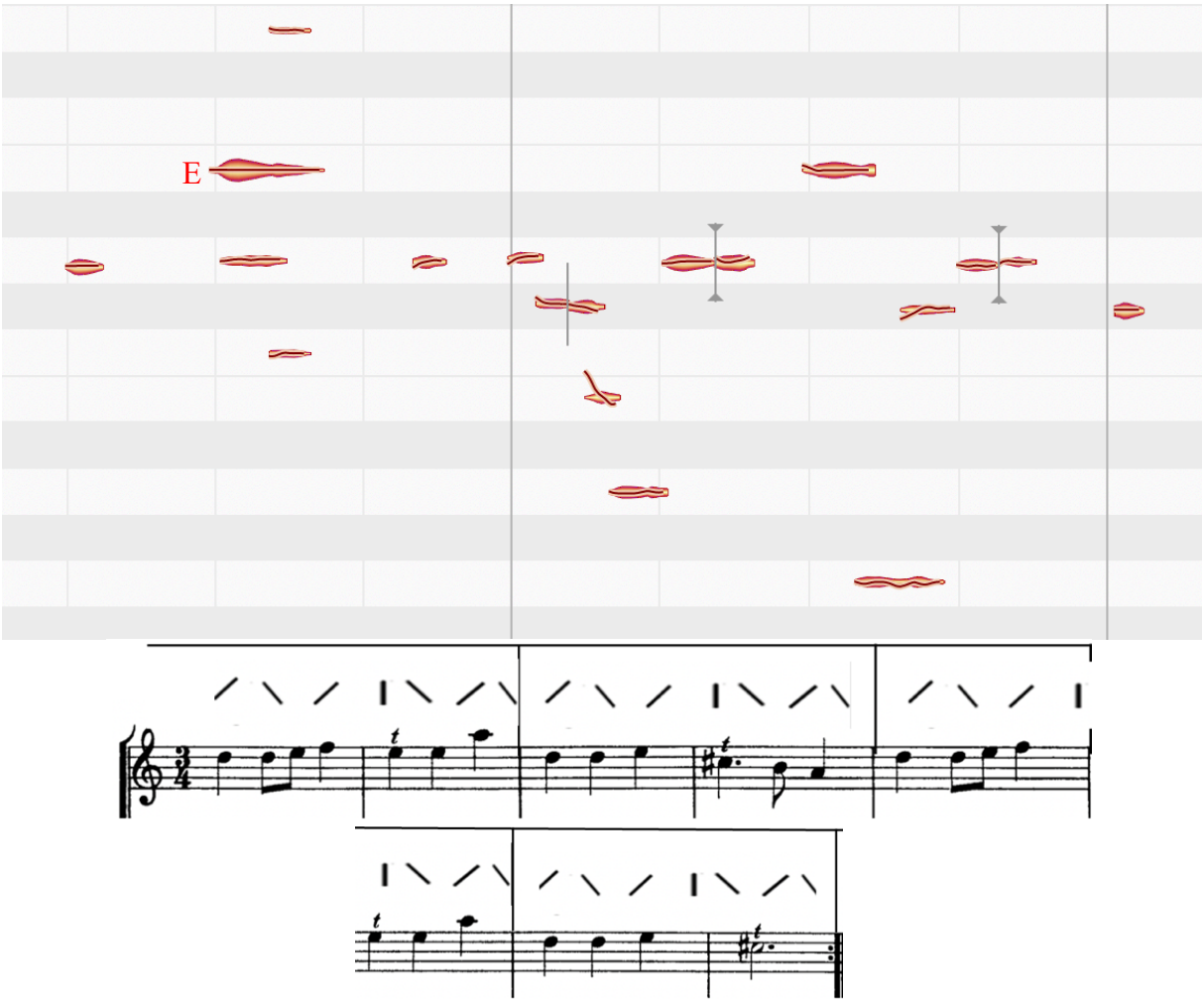


Figure 4.79 Bars 1-8 Danced Recording Violin

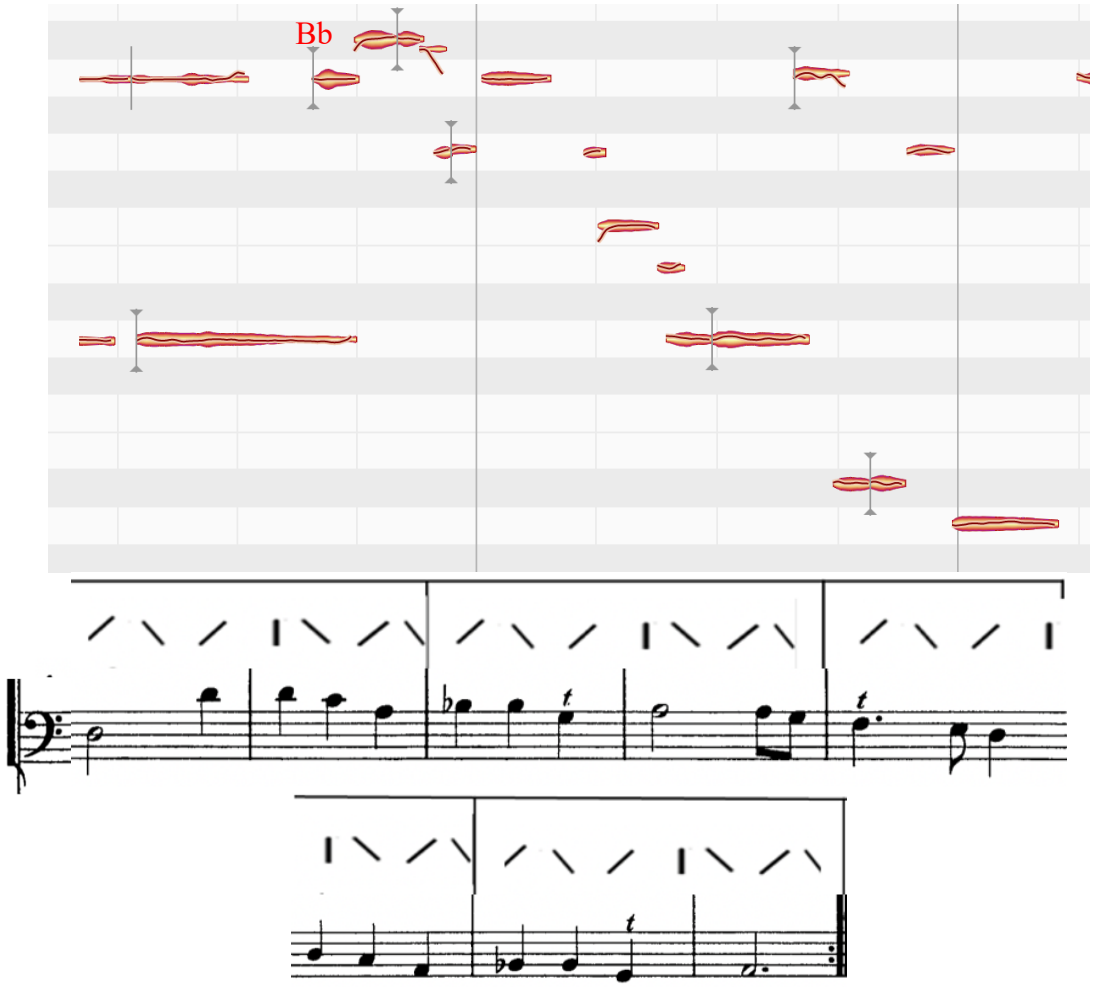


Figure 4.80 Bars 1-8 Danced Recording Gamba

In the Notated Recording, bars 9-15 were accented in a way that contrasted with the accents of the dance, thereby enhancing the performance in a different way from when the accents aligned. Specifically, in bars 9-12, the violinist accented every third beat (**Figure 4.81**) while the dancers were performing the *contretemps de menuet* then, in bars 13-15, the gambist accented the hemiola—beats 1 and 3 and 5 (**Figure 4.82**), while the dancers were performing a *pas de menuet*. These eight bars highlighted the counter-rhythms within the music and dance. It shows an element of the music which can be highlighted through the BMDN.

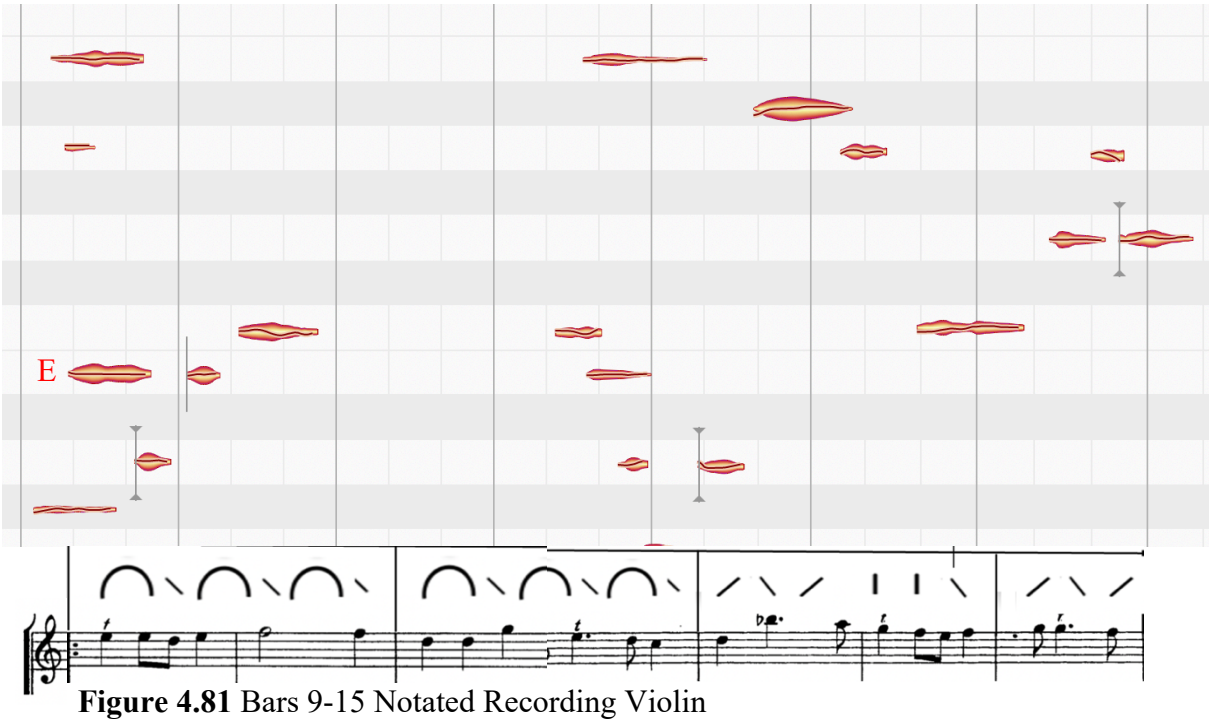


Figure 4.81 Bars 9-15 Notated Recording Violin

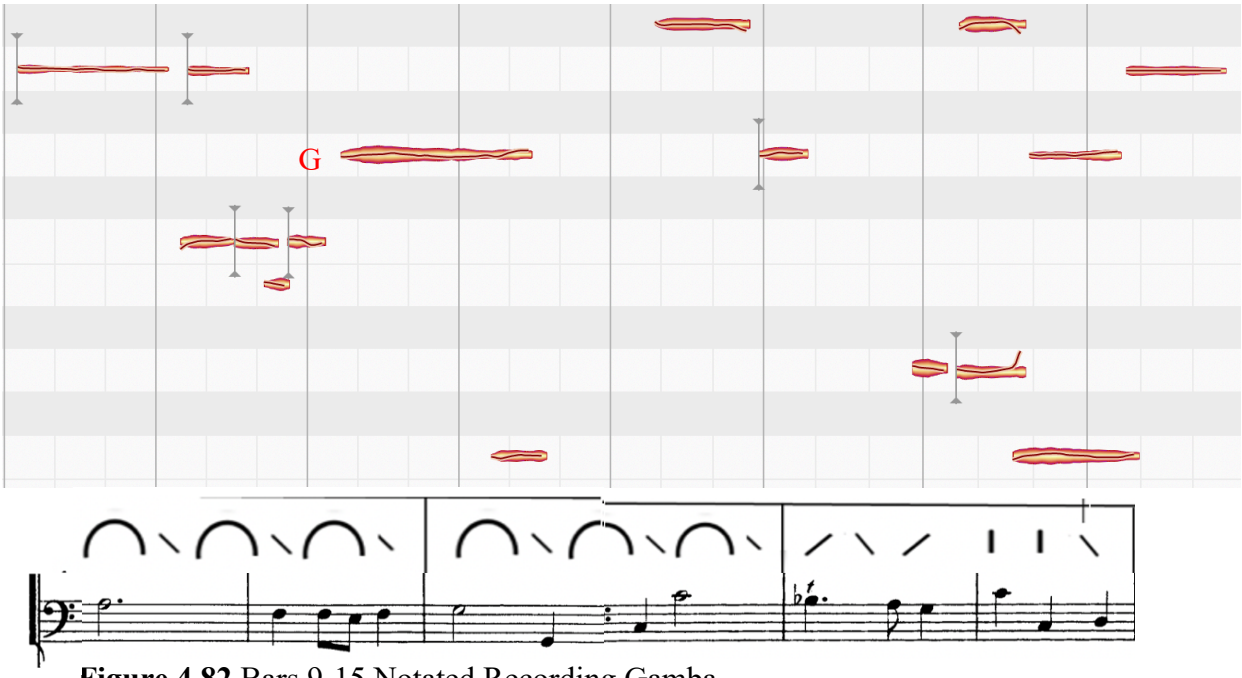


Figure 4.82 Bars 9-15 Notated Recording Gamba

There was a circumstance in this *Menuet* where the Notated Recording was better synchronised and reflective of the character of the dance than the Danced Recording. This occurred in bars 17-24, where the dancers were exactly in time in the Notated Recording and were livelier because of the *détacher* and slight emphasis on each bar from the gambist and violinist. In contrast, the Control Recording was heavily accented by the gambist and lightly

by the violinist and, while the dancers were synchronised, there was struggle on the *contretemps de menuet*. Similarly, in the Danced Recording, the violinist's smooth articulation and frequent *enflés* caused the dancers to lose synchronisation.

It was found in *Gratitudo* that the BMDN influenced choice of accent and articulation with musicians tending to make more appropriate choices in the Notated Recording. Some elements need to be improved, such as the education about the *contretemps de menuet*, that are discussed and incorporated in Chapter 5.

Ornamentation

As with all other pieces analysed, the musical ornaments can enhance danced ornaments, however, as I explained in *La Bourée d'Achille*, this dance does not have many ornaments, therefore the accented steps are analysed in place. The Notated Recording had some, albeit minimal, improvement in this regard but the most surprising outcome in *Gratitudo* was that in the Danced Recording, the violinist removed many of the written-in *tremblements,* leading to a loss of excitement in the performance.

Bourée

In the Control Recording of the *Bourée*, the violinist added four ornaments. Of these ornaments, two aligned with an accented step, which was the start of a *pas de bourée*. The other two occurred midway through a step and did not correlate with an accented beat.

There was little change in the Notated Recording, with only one ornament aligning with the dance. The *pincé,* which was a *coulé* in the Control Recording, on beat 1 of bar 18 (**Figure 4.83**) aligned with an accented *élevé* and the start of a *pas de bourée* in the dance.

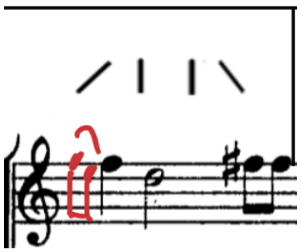


Figure 4.83 Bar 18 Ornament

In contrast, the *tremblement* on the second beat of bar 7 (**Figure 4.84**) did not have any correlation to the movement, occurring as the dancers were landing a step; however, there was no loss of synchronisation between the dancers' landings and the violinist's note.

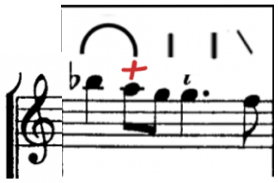


Figure 4.84 Bar 7 Ornament

Similarly, the *tremblement* on the first beat of bar 13 (**Figure 4.85**) was slower than the jump in the dance and, as a result, there was a loss of synchronisation. The positioning of the ornament was appropriate but a faster ornament such as a *pincé* may have caused no synchronisation loss.

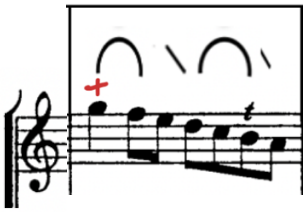


Figure 4.85 Bar 13 Ornament

Also, the *tour de gosier* between beats 1-2 of bar 19 (**Figure 4.86**) did not coincide with a danced accent. This ornament raised the issue again that the musicians were not aware of the interest that the floor pattern creates in the dance and therefore may have been compensating for what appeared to be a lack of interest in the repetitive step patterns. This is addressed in Chapter 5.

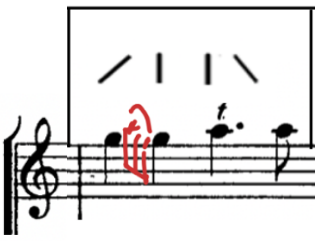


Figure 4.86 Bar 19 Ornament

Most interestingly in the Danced Recording, the violinist removed all the *tremblements* in bars 1-4, 10, and 12-13. Of those *tremblements*, the ones in bars 1, 3, 12 and 13 all fell on unaccented movements, meaning they were possibly removed because they did not enhance the step in any way; however, the violinist was unable to confirm as he did not remember why he removed the *tremblements*, such is the nature of performance that decisions can be spur of the moment. The *tremblements* removed in bars 2, 4 and 10 fell on accented beats. The evidence shows that the removal of the *tremblements* in the Danced Recording was not because of the BMDN but rather because of the speed of the piece. I found overall that, because this dance is so simple, the ornamentation was needed to add interest. The removal of so many ornaments in the Danced Recording meant it was lacking.

Menuet

For the *Menuet*, in the Control Recording, the violinist only heavily ornamented the repeat of the second section. This was likely executed to add interest to a simple piece of music; there were no obvious hindrances or benefits that were observed in the videos of the dancers from these additions.

In the Notated Recording, the violinist added only one ornament to the first section on its first playing but four to the repeat. The ornament on beat 2 of bar 7 (**Figure 4.87**) led into the end of the phrase and emphasised the ending; however, the dancer was halfway through a *pas de menuet* and the choice to add ornamentation did not seem to correlate with the dance. This may have been because of a lack of knowledge about the *menuet* step occurring over two bars of music.

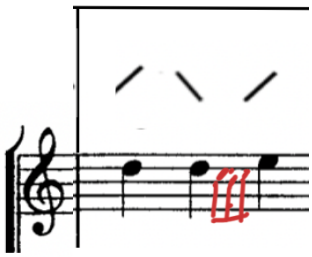


Figure 4.87 Bar 7 Ornament

I had mistaken the alignment of the dance with the music and as a result, from my accidental mis-instruction, only the coda was repeated so the ornaments in the second section

could not be compared to the dancers' reactions; however, most of these ornaments did not have much correlation to the BMDN but fit well with the musical phrase.

The ornamentation in the Danced Recording of the *Menuet* was the most appropriate. The *tremblements* removed in bars 2 and 6 both fell on unaccented steps, so their removal avoided emphasis on unaccented steps which may have caused an unbalance between dancer and musicians. The composer's written *tremblement* on bar 8 was changed to a *coulé*, marking the end of the phrase more subtly; however, the ornaments added in the repeat of the second half did not have any correlation to the danced steps. The musicians showed a better understanding of the dance in the Danced Recording, suggesting that further education about what the steps look like and feel like within the body will assist musicians in using the BMDN to determine appropriate ornamentation.

Overall, it was found that the BMDN did not heavily influence choice of ornamentation in *Gratitudo,* as the Notated Recordings did not have many additional ornaments that aligned with the danced accents.

Conclusion

The experimentation with *Gratitudo* revealed how the BMDN can positively influence choice and steadiness of tempo as well as choice of accent and articulation. It also raised many issues which will help to greatly improve the BMDN and its dissemination amongst early music musicians. The choice of tempo achieved for the Notated Recording was close to a speed comfortable for the dancers. Despite some loss of synchronisation, the synchronisation in the faster *Bourée* of the Danced Recording suggests that additional practice will assist synchronisation during faster tempos.

The *Bourée* in these recordings did not improve greatly from the Control Recording to the Notated Recording, in terms of synchronisation between dancers and musicians during tempo changes, and it did not see a decrease in the number of tempo changes. The Danced Recording had more appropriate choices and a reduced number of tempo changes. The musicians needed to visualise the movement in order to make a more informed decision about tempo alteration. This is addressed in Chapter 5.

The choices of accents and articulation in the Notated Recording coincided more appropriately with the danced accents and the character of the dance than they did in the Control Recording. The correlation between danced and musical accents in the Danced Recording, however, was better. The Control Recording created a very jagged and effortful performance, while the Notated Recording was smoother and lighter, meaning the dancers were more comfortable. The Danced Recording had much lighter articulation and the dancers achieved higher jumps and had more energy. Interestingly, the Notated Recording had the best correlation between counter-rhythmic accents in the *contretemps de menuet.* The experiments revealed that while choice of accent improved in the Notated Recording, there could be an even better correlation with improvement to the BMDN, as addressed in Chapter 5.

Finally, I did not find there to be any significant improvement in choice of ornamentation in the Notated Recording. The Danced Recording had many ornaments removed which resulted in a less exciting performance because of the simple nature of the dance and music. As a common thread throughout all the pieces analysed, choice of ornamentation when using the BMDN needs to be improved and I believe this can be achieved by the introduction of more ornamental steps which, again, is explored in Chapter 5.

Comparative Analysis of all Recordings

The following section considers, through a comparative analysis, how the BMDN influences musical performance and, consequently, dance performance. It is divided into the same categories as above: tempo, tempo changes, accent and articulation, and ornamentation. The purpose of this comparison is to see how the BMDN influenced performance across a range of styles and between music intended for dance, and music not intended for dance. I discuss not only the positives that sprang from these experiments but also the elements which can be improved upon.

Tempo

It was found that the BMDN assists musicians in choosing an appropriate tempo for comfortable dancing. This conclusion was determined by using careful consideration of dancers' comments as well as observations of the synchronisation between dancers and musicians, and energy of movement in the videos. Additionally, the musicians needed to be comfortable playing at that tempo. The musicians used assistive clues, such as the number of jumps, to choose a tempo they felt was appropriate. As a result, the tempo chosen for the Notated Recording of every piece was at a comfortable dancing speed, if not always the dancers' ideal tempo.

Through comparison with existing video recordings, it was found that sometimes the tempos of each Notated Recording were within the range of those chosen by other performers, implying that these tempos could be considered ideal by some dancers. All this suggests that the BMDN assisted musicians to choose a comfortable dancing tempo but that musicians need to be educated further about how to read step-units for indicative tempo clues, in order to achieve a tempo comfortable for most dancers.

While the tempo chosen for the Notated Recording was a comfortable tempo for dancing, most often it was a starting tempo which could be adjusted to suit the dancers' preference. The dancers requested a change of tempo for all pieces except for *Les Nations: Sarabande.* This implies that the tempi chosen for *Sarabande pour une Femme, La Bourée d'Achille* and *Gratitudo* in the Notated Recording, were not their ideal; however, in some cases, for example *La Bourée d'Achille*, the tempo of the Danced Recording was so fast that there was a loss of

synchronisation between dancers and music. So, while the tempo was an enjoyable speed for the dancers, it did not deliver the most 'together' performance.

The evidence from this experiment thus suggests that tempo choice would be improved by educating musicians further about the feel and look of steps so that they can achieve a tempo closer to a dancer's ideal and not just one that is more comfortable for dancing.

Tempo Changes

The Notated Recordings of each piece were, in general, more stable in tempo than the Control and Danced Recordings. That is, there were fewer moments of slowing and speeding. In the interviews, before experimentation (**Chapter 3**), dancers Turocy and Waite mentioned that the most important thing for musicians to provide for the dancer is stability in tempo. This is akin to Muffat's recommendation to "hold to that [the ascribed] tempo with constant steadiness for as long as the piece is played, becoming neither slower nor faster," while noting that, "one somewhat alters and accommodates the values of certain notes for greater grace."[163] The next step was to explore how the BMDN could influence decisions about where these slight alterations could occur that enhanced climactic passages or provided moments for the dancer to relax.

There were a few tempo changes that enhanced the climactic dance step or provided the dancers with a moment to relax. These were mostly at the ends of phrases. During these moments, the dancers stayed synchronised with the music and were able to use the slowing or speeding in the music to enhance their steps. For example, a *pas coupé* with *glissé* at the end of the phrase could have a slight slowing or pause to allow a moment for the dancer to breathe, physically or metaphorically, and regather for the next phrase. These moments showed how the BMDN can indicate appropriate occasions for tempo changes.

Occasionally, there were instances where the dancers stayed synchronised despite the tempo change; however, the steps did not indicate that these changes would enhance the expression of the dance but instead may create technical challenges. These tempo changes occurred mainly in the Control Recording where the dancers had more time to practice and

[163] Wilson, *Georg Muffat on Performance Practice*, 42.

become familiar with the recording and were therefore adjusting to accommodate. When these occurred during the Notated or Danced Recordings, it was often during a *contretemps* step-unit, which involves a jump, and as described throughout the analysis, the landing of a jump cannot be adjusted to accommodate a tempo change. To avoid the potential for issues occurring, musicians will receive more education about the execution of a *contretemps* movement in the process of learning the next iteration of the BMDN.

The final common tempo changes in the experiments occurred in repetitive passages of step-units. I speculated from the evidence that the tempo changes were to add interest to what appeared to be a repetitive series of movements. On the contrary, interest in these passages is created by the figures the dancers follow on the floor. Thus, as the musicians found the floor pattern provided in the experiments difficult to read, they were often unaware of the floor pattern created by the dancers. To improve musicians' understanding of the correlation between steps and floor patterns, an alternative is offered in Chapter 5.

Overall, the BMDN promoted reduced use of tempo changes and helped indicate some moments where the tempo could be altered; however, as explained, musicians' understanding of tempo variation can be improved.

Accents and Articulation

Accents and articulation, in general, moved from being strong, *coulament*, and attacked in the Control Recording, to lighter, less *coulament,* and with the use of *messe di voce* in the Notated Recording. The harpsichordist mentioned that he found he needed to use lighter articulation to make the music clearer for the dancer. The dancers, in turn, found this change in accent and articulation helpful for hearing the distinction between beats. The musicians' decision to use lighter articulation in the Notated Recording suggests that the BMDN indicated appropriately that this was preferable.

Also, I found that the BMDN frequently assisted musicians in choosing accents which correlated to danced accents. The musicians responded to *jettés* and *élevés* with accented notes which enhanced the steps. On the other hand, they responded to more relaxed steps, such as

the *pas coupé* at the end of a phrase, with a *diminué*, allowing the dancers to take a moment to 'breathe' and prepare for the next phrase.

I found that when the musical accent correlated to an accented step, such as those mentioned above, the dancers' delivery of the step, as well as the character of the dance, was enhanced. This was observed both in extended movements, such as a rise and hold, where the musicians used an *enflé* through the note and the dancer extended her movements to suit, thus pushing the technical demands of the dance and inspiring an 'ambitious' affect.[164] Similarly, on a series of jumps, where the musicians played with more attack, the higher jumps that the dancers were able to execute created a more joyful and playful character, which reflects Quantz when he observed that,

> Fast pieces must be played in a gay, hopping, and springing manner with a very short bow-stroke, always marked with an interior stress. In this fashion the dancers are continually inspired and encouraged to leap...[165]

The goal of music in France in the eighteenth century was to evoke these affects and the experiments found that knowledge of the character and steps of a dance enhanced the musicians' understanding of how to create these affects within the music by using different types of accents.

The goal of the BMDN is not to be entirely prescriptive, for example, instructing musicians on how exactly an accent should sound, based on the look of the step. The musicians were told only what an accented step, as opposed to a preparatory step, looks like. This means that every performance can be unique and that a musician still has room for their own taste and style. As Turocy and Waite remarked (**Chapter 3**), the beauty lies in each performance being unique. The goal was that the changing accents would correlate more to the ebb and flow of the movement and, while they may not be the same every time, the BMDN can assist musicians in choosing where the accents may fall.

---

[164] Mattheson, *Der Vollkommene Capellmeister*, 230.
[165] Quantz, *On Playing the Flute*, 290.

Many of the types and placement of accents in the Notated Recording were changed from the control to suit the accents and steps in the dance; however, there were also many examples where these accents did not correlate to accented or relaxed steps and thereby caused a loss of synchronisation between dancers and musicians. This is not to say that every accent needs to be the same as the dance, as often the push and pull of the music against the dance is what gives it interest such as in the *contretemps de menuet*. The accents that hindered synchronisation often occurred during repetitive step units or moments in the BMDN which appeared to be stagnant movements. These findings suggest that the choice of accent placement by musicians could be improved. I suggest that the inclusion of a clearer indication of the floor-pattern-to-step correlation in the BMDN would improve musicians' understanding of the interest created by the figures the dancers follow. The inclusion of the ornamental steps accompanying movements which appear stagnant, and a general education about the continuous movement involved in such a step, such as through a physical workshop, should improve the shaping of accents. This discussion is continued in the ornamentation section below.

Ornamentation

Of all categories, the BMDN needs to be most improved in how it indicates ornamentation. While the BMDN assisted the musicians in choosing moments where melodic ornamentation could be added, ornaments in the Notated Recording that aligned with danced accent or created positive contrast, were rare. Positively, accented steps, such as *jettés*, were often considered an ornamental movement by the violinist and thus he frequently added an ornament. Dancer, Garlick, noticed these moments, especially in the *sarabandes,* preferring when the musical ornaments aligned with the gestural danced ornaments.

Most frequently, however, the added ornaments either did not enhance the dance in any way or hindered the synchronisation. Also, the violinist frequently ornamented the repeats in the *Menuets.* While this added some interest to what appeared to be a repetitive series of steps, the violinist was unaware that interest in the dance was created by the floor pattern.

Ornamentation is the category where coordination between danced and musical ornaments and accents can be most improved upon by adjusting the BMDN. The inclusion of more ornamental steps, and the education of musicians further in what an ornamental

movement is, holds the potential to improve this aspect. The ornamental steps added are discussed in Chapter 5 as well as changes to the notation of floor patterns.

The purpose of this study was to explore ways of improving musicians' understanding of eighteenth-century French repertoire and to increase coordination with dancers. The experiments outlined in this Chapter allowed an exploration of how my proposed solution, the BMDN, could enhance musicians' and dancers' experience of working together. While there were lots of variables in these experiments that meant it could not produce definitive results, it was clear the BMDN supported musicians already expert in the musical style to adapt their skills more effectively to dance accompaniment. The experiments also showed several areas where the BMDN could be further developed to provide better support to musicians, as I explore in Chapter 5.

Chapter 5

Conclusion

From all the research and experimentation undertaken throughout this project, I have found that the Baroque Musical-Dance Notation (BMDN) significantly impacts musical decision-making. The BMDN changes musical interpretation and allows musicians to achieve a performance that makes the music comfortable for dancing. The areas most influenced by the notation are choice of overall tempo, stability in keeping a consistent tempo, choice of accents and articulations which reflect danced movements, and choice of ornamentation.

My experimentation explored three types of performance—with no BMDN, performance with the BMDN, and performance with dancers in sightline. Most surprisingly, from an analytical perspective, the second, performance with the BMDN, was often shown in the recording to have achieved the best correlation between danced and musical accents, choice of overall articulation, and choice (or lack of) tempo changes. The Notated Recording also demonstrated that the BMDN allowed for the most originality from the musicians. They were influenced by the dance steps but not prescribed by the dancers to execute anything in a certain way. Often this meant that the dancers reacted to the choices in the recording and created fresh approaches to the dances.

The experiments and interviews within my research revealed that the BMDN better prepared the musicians for collaboration with dancers, as the Danced Recording was often found to be the most enjoyable for the dancers. Further knowledge about the look and feel of each notated step could lead to the notation successfully communicating the most important aspects of a dance, which can then have an impact on collaboration between dancers and musicians.

The BMDN assisted musicians in choosing an appropriate tempo and in steadying that tempo. It also indicated moments that could be relaxed and those that could be sped up to enhance a climactic moment. With this steadying of tempo, and correlation between danced and musical accents, the synchronisation between dancers and musicians increased. Finally,

the BMDN highlighted moments where extra ornamentation could be added to the music. The application of all these aspects created a strong basis for the process of collaboration.

Improvements to the Baroque Musical-Dance Notation

As noted throughout Chapter 4, there are elements of the notation which can be changed to improve musical decision-making to better suit the dance and the dancers' needs. In the experiments, the BMDN did not achieve the ideal outcome in these areas:

- accurate choice of tempo;
- indications of moments of relaxation and exhilaration in the dance steps;
- the importance of a steady tempo during a *contretemps de menuet* and *coupé de deux mouvements*;
- indications as to the type of accent used to reflect the danced steps;
- understanding of the correlation between steps and floor pattern;
- choice of appropriate ornamentation to reflect the steps more accurately; and
- understanding of the transition between different dance metres.

The following section offers, firstly, suggested changes to the BMDN to improve these aspects and, secondly, proposed changes to the education process for musicians.

Changes to the Baroque Musical-Dance Notation

Excerpts of the floor pattern

To increase musicians' understanding of the correlation between steps and floor pattern, the floor pattern of the dance should be divided into sections and included at the beginning of a musical phrase. It was found in the experiments that the entire floor patterns of the phrase were difficult to understand and notice. Also, because the musicians were unaware that often the symmetry in the floor pattern adds interest to a passage of repetitive steps, there was a tendency for them to overcompensate by adding interest using tempo changes or ornamentation which did not suit the dance or dancers. The musicians also found it difficult to understand how far a dancer was moving, which may indicate how quickly the music needs to be played. By

dividing the floor pattern into small, manageable sections, I suggest that musicians will be able to quickly see if there is a) symmetry in the dance between dancers and b) which direction the dancer/s are moving, and how far.

The new excerpts of the floor pattern will appear at the start of each shorter phrase in a small box. Examples are offered below (**Figure 5.2**); the image shows the beginning of *Sarabande pour une Femme*. The dancer begins upstage, which is shown at the bottom of the rectangle, and moves forward to the front of the stage; the dotted line, as in Feuillet Notation, does not represent movement. The dancer then moves backwards, then forwards again. In the broken-up floor pattern the graph shows how, in the second half of the phrase, the dancer begins by moving slightly further forward.

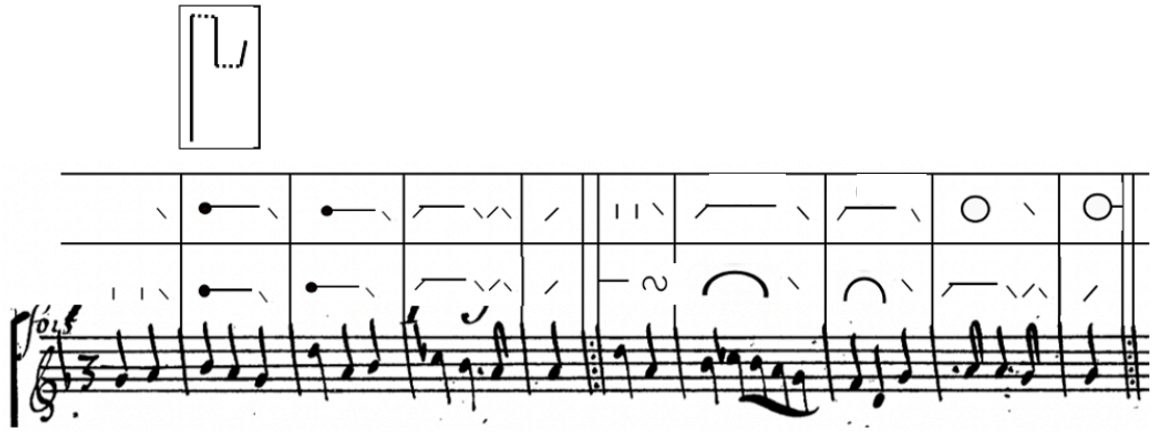


Figure 5.1 Excerpt of floor pattern as originally included, entire phrase[166]

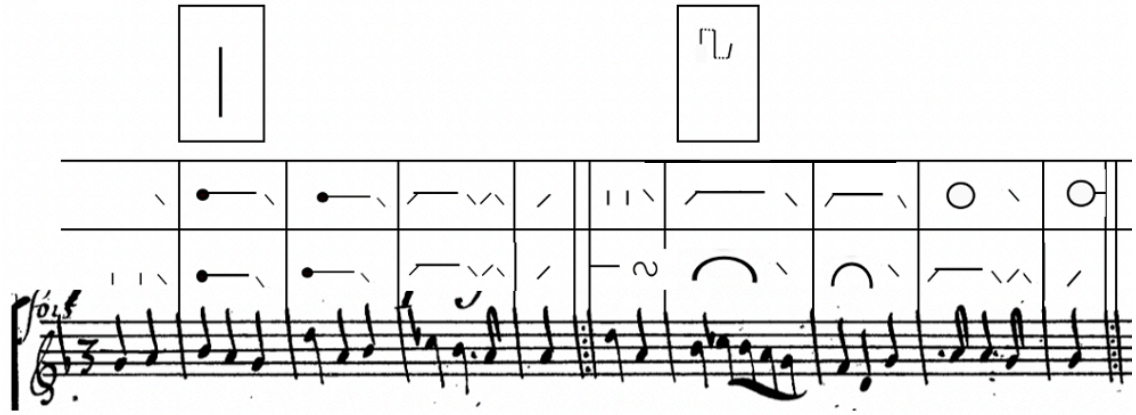


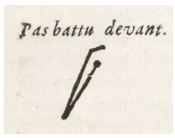
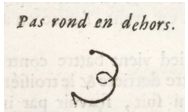
Figure 5.2 Entire phrase broken into two shorter phrases

[166] Music from: Lully, *Le Bourgeois Gentilhomme,* 159.

Additional steps

To increase musicians' understanding of where ornamental movements occur in the dance, I think it best to add two steps to the notation: *rond* and *battu* (**Table 5.1**). During my experimentation it was found that, with so few ornamental steps included, the musicians were unaware where ornamental steps occurred in the dance. Also, they were occasionally unaware of the continuous movement of an extension, such as the rise and hold with *rond*, the violinist remarking that 'the marking for hold is just a line. When I see a line, I thought that was static when there's still a fair amount of movement.' Ideally, I would like to see the ornaments better reflect the type of movement, such as a short *pincé* on a jump, or a slower *tremblement* on an extended movement. Knowledge of the additional ornaments and, consequently, being able to correlate musical ornamentation with danced ornamentation, will increase the accentuation of these steps by the musicians.

Table 5.1 Two new ornamental steps in the BMDN

Step	**Feuillet Notation**	**BMDN Symbol**	**Justification of the Symbol**	**Explanation**	**Application**
Battu (beat)			An arrow in the direction of movement to show the quick out and in of the leg. The symbol is attached to a hold	Hitting one leg against the leg	This is an ornamental movement. It can add emphasis to a step
Rond (Round)			A spiral for the movement of the leg in a circular motion	The circling of one leg around the other. Often in the air	This is an ornamental movement. Often occurs while on hold

Changes to the Education of Musicians in using the Baroque Musical-Dance Notation

Most issues that arose in the research and experiment were a consequence of the musicians not understanding how a dancer may execute a certain step. As established early on in this thesis, in the past musicians and dancers were more intimately familiar with each other's practice, while in the contemporary early dance field, this dual knowledge and skill is hard to find and develop. As such, users of the BMDN should be instructed and encouraged to experiment with physically trying certain steps for themselves.

The *contretemps de menuet*, in particular, needs more detailed instruction, especially concerning the necessity for musicians to maintain a consistent, stable tempo. The instruction will include a demonstration of this step as well as encouragement for musicians to attempt it themselves. No matter the success in the preliminary execution of the step by musicians, this practice should lead to an understanding that the execution of three consecutive jumps cannot be slowed or sped up during a performance. Additionally, there will be further explanation about the counter-rhythmic nature of the *contretemps de menuet* and that the music needs to contrast each dominant beat against the dance. This means musicians should accentuate the first beat of each musical bar, while dancers create a hemiola by emphasising beats 1, 3 and 5 of the danced bar, or beats 1 and 3 of the first musical bar and 2 of the second musical bar.

Similarly, further instruction on the look and feel of the *coupé de deux mouvements* will assist musicians in understanding where the beats lie in the bar and that the steps are best executed as a counter-rhythm with the music—four movements against three notes when in a triple time signature.

In the revised version of the education process of the BMDN, musicians will also receive a better explanation about the correlation between steps and floor pattern through a demonstration of how far one might move and how quickly a step might be executed while still demonstrating the affect of the dance. This will already be enhanced by the inclusion of excerpts of floor pattern. This embodied experience will assist musicians in choosing a tempo appropriate for the amount of movement.

The initial iteration of the BMDN included some shoulder movements (**Figure 5.3)**, to indicate to musicians that the dancer's whole body was moving.

Figure 5.3 Initial BMDN shoulder movements

The musicians did not notice these notations, nor did the videos show a subconscious acknowledgement of them. As a result, I have decided to take them out of the final notation. Instead, musicians will need to explore the extent to which the whole body can move during a certain step. While the only notated steps are those that the feet execute, the whole body moves with each step and the musicians should be encouraged to feel that movement with their whole body, aiding them to notice how the whole dancer's body reacts to a move, the move not only having a response in the feet. The arms (beyond a handhold) and body were not originally notated by Feuillet in his collections of dances and I thought to follow this tradition and not include these elements in my notation.[167] Instead, I believe a simple understanding about the whole body movement of the dancers will now be a useful addition to the notation training for musicians—I would even suggest that musicians' instruments replaces the arms and body of the dancer, in that, for a dancer their expression comes from their arms, body and face, but for a musician, their expression is within the music and, therefore, their instrument. There is further experimentation that can be undertaken around this aspect of the notation's structure and its inclusion of the body parts but, as the musicians were unaffected by the notation of shoulders in the experiment, they could be analysed but prove little. I look forward to exploring this aspect further in the future.

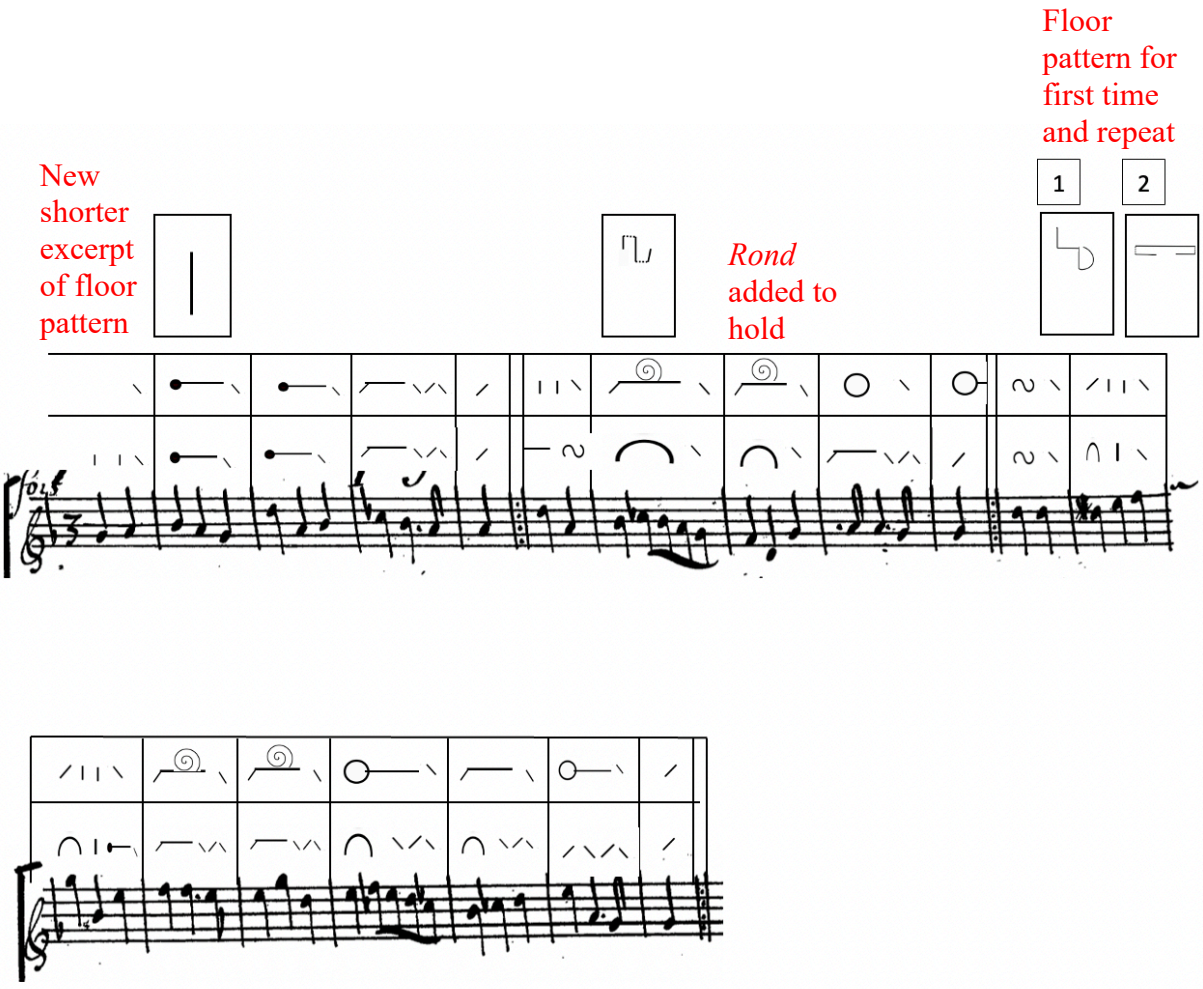
It may be suggested that notating the type of accent which would suit the step may assist in increasing the correlation between musical and danced accents; however, I have decided not to include this in the education of the musicians. Part of the reason for using this notation, and not having the dancer decide every element, is to allow for some freedom in musicians' choices which should result in a fresh and interesting performance each time. Prescribing the type of

[167] Dances later in this period include the notation of arms, if the BMDN is used to notate such dances, the inclusion of arms may be appropriate. As this experiment focused on a particular decade, Feuillet notation of arms does not apply.

accent the musicians can use on certain movements, takes away the freedom of musical decision-making which leads to profound outcomes.

Figure 5.4 is an example of the revised BMDN with the addition of shorter floor patterns and more ornamental steps.

Figure 5.4 Example of the New Baroque Musical-Dance Notation



Future studies

While there was an overwhelmingly positive response to the BMDN by the musicians and dancers, there is still room for improvement and further considerations of what the notation should include, how much education the musicians should have in dance, and in reading the notation.

I found in the experiments that, while the transition from one dance metre to the next improved in the Notated Recording, there still needed to be a better understanding about how to indicate the new metre. Unfortunately, I found this could only be done through communication via a head nod, or similar, from the musicians to the dancers. Thus, the suggestion would be to discuss the transition with the dancers and, if dancers are not present, then to have no slowing or speeding at the end of the first dance metre and only a slight pause before the next. These elements cannot be written into the BMDN, and thus may form part of the education process. This element needs to be explored further through experimentation with various approaches to the metre change. The experiments conducted in my study here did not provide results which may indicate a better solution.

The experiments I engaged with in this Masters by Research project would benefit from being explored with a wider array of dance and musical capabilities, with participants from a variety of skill levels, and an increased number of participants. I look forward to replicating these experiments in future. I would also like to work with my BMDN in relation to more dance styles from around 1700-1725—dances like the chaconne, gavotte, rigaudon—as I believe after the success of this work with *Sarabande pour une Femme* and *La Bourée d'Achille*, applying the BMDN to other styles of French historical dance will benefit the field.

In the opening paragraph of this thesis, I spoke of an 'ideal moment,' a rare moment when musicians and dancers come together, playing and dancing in synchronisation—performing as one. As I claimed, these moments greatly enhance the experience of dancers, musicians, and spectators in the performance of eighteenth-century French dance and music. Music and dance were deeply connected in the eighteenth century, and I offer through my research on, experimentation with, and development of a new notation system, a move toward

reinvigorating that connection and enhancing the experience of performing historical dance and music.

Bibliography

Primary Sources

Cochin, Charles Nicolas II. *Decoration de la salle de spectacle construite a Versailles pour la representation de la Princesse de Navarre*. ca. 1745. Etching. The Elisha Whittelsey Collection, Metropolitan Museum of Art, New York. https://www.metmuseum.org/art/collection/search/371440.

Corrette, Michel. *Méthode Raisonnée Pour Apprendre Aisément À Joüer De La Flûte Traversiere.* Paris, 1753. Accessed on 01/09/2022. https://gallica.bnf.fr/ark:/12148/bpt6k11689650.image.

Couperin, Francois. *Les Nations.* Edited by Gérard Billaudot. Paris, 1989.

Feuillet, Raoul-Anger. *Per. Recüeil de Danses de Bal pour l'Année 1703. De la Composition de M. Pecour.* Paris: Feuillet, 1702. Accessed on 01/01/2022. https://gallica.bnf.fr/ark:/12148/bpt6k859948h/f1.image.

Feuillet, Raoul-Anger. *Choregraphie, ou l'Art de De'Crire la Dance.* Paris, 1700. Accessed on 01/01/2022. https://gallica.bnf.fr/ark:/12148/btv1b86232407/f1.item.

Feuillet, Raoul-Anger. *Orchesography, or the Art of Dancing.* Translated and Edited by John Weaver. London: H. Meere, 1706. Accessed on 01/01/2022. https://www.libraryofdance.org/manuals/#18th.

Feuillet, Raoul-Anger. *Recüeil De Dances… Entrées de Ballet de Mr. Pecour.* Paris: Feuillet, 1704. Accessed on 01/01/2022. https://www.loc.gov/resource/musdi.198.0/?sp=1&st=image.

Feuillet, Raoul-Anger. *Recueil de Dance*. Paris, 1700. Accessed on 01/01/2022. https://gallica.bnf.fr/ark:/12148/btv1b86232422/f1.item.

Gaudrau, Michel. *Nouveau Recüeil de Dance de Bal et Celle de Ballet… Entrées de Ballet de la Composition De Mr. Pecour.* Paris: Gaudrau, c.1713. Accessed on 01/09/2022. https://gallica.bnf.fr/ark:/12148/btv1b8623248j/f7.item.

Grassineau, James. *A Musical Dictionary*. London: J. Wilcox, 1740. Accessed on 01/03/2022. https://www.loc.gov/item/04005601/.

Lully, Jean Baptiste. *Achille et Polixène.* Paris, France: Christophe Ballard, 1687. Accessed on 01/01/2022. https://digital.library.unt.edu/ark:/67531/metadc50/m1/30/.

Lully, Jean Baptiste. *Le Bourgeois Gentilhomme.* Versailles, France: André Danican Philidor, ca.1690. Accessed on 01/01/2022. https://gallica.bnf.fr/ark:/12148/btv1b53155492w/f171.item.r=lwv%2043%20lully.

Mattheson, Johann. *Der Vollkommene Capellmeister.* Hamburg, 1739. Accessed on 01/03/2022. https://www.digitale-sammlungen.de/de/view/bsb10212373?.

Mattheson, Johann. *Johann Mattheson's Der Vollkommene Capellmeister.* Translated by Ernest C. Harris. Michigan: UMI Research Press, 1981.

Mattheson, Johann. "Suite Premiere Pour Le Clavecin." London: I.D. Fletcher, 1714. Performer's Facsimiles, New York. Accessed via University of Sydney Library.

Monteclair, Michel Pignolet. *Principes de Musique.* Paris, 1736.

Muffat, Georg. *Florilegium Primum für Streichinstrumente.* Edited by Hermann Reitsch. Graz: Akademische Druck- U. Verlagsanstalt, 1959.

Quantz, Johann Joachim. *Versuch einer Anweisung die Flöte traversier zu spielen*. Berlin: Johann Friedrich Voß, 1752.

Quantz, Johann Joachim. *Johann Joachim Quantz On Playing the Flute*. Translated by Edward Reilly. London: Faber and Faber, 1966.

Rameau, Pierre. *Le Maître a Danser.* Paris, 1725. Accessed on 01/01/2022. https://gallica.bnf.fr/ark:/12148/btv1b8623292z.

Rameau Pierre. *The Dancing Master: or, The art of dancing explained.* Translated and Edited by John Essex. London: J. Essex, 1728. Accessed on 01/01/2022. https://www.loc.gov/resource/musdi.143.0/?sp=1&st=image.

Trouvain, Antoine. 'Fourth Room of the Apartments at Versailles.' 1696. Engraving. The Minnich Collection the Ethel Morrison Van Derlip Fund, Minneapolis, 1966. *The Sun King.* https://collections.artsmia.org/art/77489/fourth-room-of-the-apartments-at-versailles-antoine-trouvain.

Weaver, John. *A Small Treatise of Time and Cadence in Dancing*. London: H. Meere, 1706. Accessed on 01/02/2022. https://www.libraryofdance.org/manuals/#18th.

Weaver, John. *Anatomical and Mechanical Lectures Upon Dancing*. London: J. Brotherton and W. Meadows, 1721. Accessed on 01/02/2022. https://www.libraryofdance.org/manuals/#18th.

Weaver, John. *An Essay Towards an History of Dancing*. London: Jacob Tonson, 1712. Accessed on 01/02/2022. https://www.libraryofdance.org/manuals/#18th.

Secondary Sources

Adshead-Lansdale, Janet. "The Dance History Literature." In *Dance History: An Introduction,* edited by Janet Adshead-Lansdale and June Layson, 32-41. London: Routledge, 1994.

Andrijeski, Julie. "Baroque Dance for Musicians: The Magazine of Historical Performance." *Early Music America* 24, no. 1, January 2018, 10-14.

Boyden, David D. "Lourer." *Grove Music Online*. Edited by Deane Root. Accessed 18 Mar. 2024. https://www.oxfordmusiconline.com.

Buelow, George J. "Affects, theory of the." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Cannam, Chris, Christian Landone, and Mark Sandler. “Sonic Visualiser: An Open-Source Application for Viewing, Analysing, and Annotating Music Audio Files.” *MM’10 - Proceedings of the ACM Multimedia 2010 International Conference*, 1467–1468 (2010)

Chew, Geoffrey. "Articulation and phrasing." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Chew, Geoffrey. "Legato." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Chew, Geoffrey, and Clive Brown. "Staccato." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Coorevits, Esther, and Dirk Moelants. "Tempo in Baroque Music and Dance." *Music Perception: An Interdisciplinary Journal* 33, no. 5 (2016): 523-545.

Devero, Lisa Christianna. "The Court Dance of Louis XIV as Exemplified by Feuillet's "Chorégraphie" (1700) and How the Court Dance and Ceremonial Ball Were Used as Forms of Political Socialization." Ph.D. diss., New York University, 1991.

Donington, Robert. "Crescendo." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Ellis, Helen Meredith. "The Dances of J.B. Lully (1632-1687)." PhD diss., Stanford University, 1967.

Fallows, David. "Diminuendo." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Fallows, David. "Grave." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Ford, Terence, and Andrew Green. *Inventory of Music Iconography*, *no. 3 The Piermont Morgan Library Medieval and Renaissance Manuscripts*. New York: Research Center for Musical Iconography, 1988.

Fuller, David. "Notes inégales." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Gal, Mojca."Matching Music and Dance in the 18th Century: Aesthetic Issues in Historically Informed Performance Practice." Paper presented at the Tanz als Musik - Zwischen Klang und Bewegung, Schola Cantorum Basiliensis, 2021.

Gaudefroy-Demombynes, Géraldine. "*Achille et Polyxène* (1687): the Trojan war and a plea for peace at the Académie royale de musique." *Early Music* 43, no. 3 (2015): 397–415.

Hammond, Susan Lewis. *Music in the Baroque World: History, Culture, and Performance.* United Kingdom: Routledge, 2018.

Harris, Ellen T. "Messa di voce." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Harris-Warrick, Rebecca. "Interpreting Pendulum Markings for French Baroque Dances." Historical Performance 6/1 (1993): 9-22.

Hilton, Wendy. *Dance of Court & Theater: The French Noble Style 1690-1725.* London: Dance Books, 1981.

Jerold, Beverly. "The French Time Devices Revisited." *Music Performance Issues: 1600-1900* (2016): 193-214.

Jerold, Beverly. “Mystery in Paris, the German Connection and More: the Bérard-Blanchet Controversy Revisited.” *Eighteenth-Century Music 2/1* (2005): 91-112.

Jerold, Beverly. “Numbers and Tempo: 1630-1800.” *Music Performance Issues: 1600-1900* (2016): 229-242.

Kreitner, Kenneth, Louis Jambou, Desmond Hunter, Stewart A. Carter, Peter Walls, Kah-Ming Ng, David Schulenberg, and Clive Brown. "Ornaments." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Little, Meredith Ellis. “Dance under Louis XIV and XV: Some Implications for the Musician.” *Early Music* 3, no. 4 (1975): 331-340.

Little, Meredith, and Natalie Jenne. *Dance and the Music of J. S. Bach, Expanded Edition.* Bloomington: Indiana University Press, 2001.

Little, Meredith Ellis. "The Contribution of Dance Steps to Musical Analysis and Performance: "La Bourgogne".” *Journal of the American Musicological Society* 28, no. 1 (1975): 112-124.

Little, Meredith Ellis. "Pécour [Pécourt], Louis Guillaume." *Grove Music Online.* Edited by Deane Root. Accessed 10 Dec 2022. https://www.oxfordmusiconline.com.

Mather, Betty Bang. *Dance Rhythms of the French Baroque: A Handbook for Performance.* Bloomington: Indiana University Press, 1987.

Needham, Maureen. "Beauchamps [Beauchamp], Pierre." *Grove Music Online.* Edited by Deane Root. Accessed 10 December 2022. https://www.oxfordmusiconline.com.

Nettl, Bruno, Rob C. Wegman, Imogene Horsley, Michael Collins, Stewart A. Carter, Greer Garden, Robert E. Seletsky, Robert D. Levin, Will Crutchfield, John Rink, Paul Griffiths, and Barry Kernfeld, "Improvisation," in Grove Music Online. Edited by Deane Root. Accessed 18 Mar. 2024. https://www.oxfordmusiconline.com.

Olsson, Dorothy. "Dance." In *A Performer's Guide to Seventeenth-Century Music*, edited by Stewart Carter, 397-432. Indiana University Press, 2012.

Osés, C. Rico. “French Dance in Eighteenth-Century Spain.” *Dance Chronicle*, *35*(2), (2012): 133–172.

Penley, Miranda C. "Interpreting Musical Character in the Dances of Seventeenth-Century Ballets De Cour." Master Diss., The Florida State University, 2020.

Pierce, Ken. "Dance Notation Systems in Late 17th-Century France." *Early Music* 26, no. 2 (1998): 287-99.

Piper, Jennifer. "Meaning in Movement." *The Flutist Quarterly* 45, no. 3, Spring, 2020.

Rector, Michael. “Sonic Visualizer: A Tool for Closer Listening.” *The American music teacher* 67, no. 5 (2018): 21–23.

Robinson, Andrew, ed., *Les Agréments – French Baroque Ornamentation, Monteclair's descriptions of the ornaments taken from for his Principes de Musique 1739.* Translated by Gilles Aufray. Hebden Bridge, United Kingdom: Peacock Press, 2008.

Rushton, Julian. "Hemiola." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Schwartz, Judith L. "The Passacaille in Lully's "Armide": Phrase Structure in the Choreography and the Music." *Early Music* 26, no. 2 (1998): 301-319.

Tarling, Judy. *Baroque String Playing for Ingenious Learners.* Hertfordshire, United Kingdom: Corda Music, 2001.

Thiemel, Matthias. "Accent." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Walls, Peter. "Bowing." *Grove Music Online.* Edited by Deane Root. Accessed 2 Nov 2023. https://www.oxfordmusiconline.com.

Wilson, David, ed. *Georg Muffat on Performance Practice: The Texts from Florilegium Primum, Florilegium Secundum, and Auserlesene Instrumentalmusik: A New Translation with Commentary.* Bloomington: Indiana University Press, 2000.

Witherell, Anne Louise. "Louis Pecour's 1700 "Recueil De Dances"." Ph.D. diss., Stanford University, 1981.

Zbikowski, Lawrence M. "Dance Topics I: Music and Dance in the *Ancien Régime*." In *The Oxford Handbook of Topic Theory,* edited by Danuta Mirka, 142-163. Oxford University Press, 2014.

Videos

CELINE415. "Danse baroque – Bourrée et menuet d'Achille." Youtube Video, 2:04. 2 November 2008. https://www.youtube.com/watch?v=OVxatlZDOdQ.

Christopher Jordi Lara. “Sarabande pour femme.” YouTube Video, 2:05. 30 March 2014. https://www.youtube.com/watch?v=H4DZmgdl128.

Dancilla. "La Bourré d'Achille." Youtube Video, 2:25. 28 January 2011. https://www.youtube.com/watch?v=9D2jBvY4LuY.

Dancilla. “Sarabande pour femme, from 1700.” YouTube Video, 2:05. 28 January 2011. https://www.youtube.com/watch?v=4rDDxLvlI1g.

Golden Forests Dance Video. "Bourre d'Achille." Youtube Video, 1:40. 24 June 2016. https://www.youtube.com/watch?v=MSaXOnx83o8.

Maltizov. "La Bourée d`Achille from Baltic Baroque/Grigori Maltizov." Youtube Video, 2:06. 22 May 2007. https://www.youtube.com/watch?v=P3SMNkpnL-E.

Mojca Gal. “Sarabande pour femme (excerpt).” YouTube Video, 0:54. 3 June 2021. https://www.youtube.com/watch?v=jzUK8zff4MU.

Natalia Kaidanovskaya. “Sarabande pour femme 1700 Feuillet/Time of danse.” YouTube Video, 1:48. 4 August 2022. https://www.youtube.com/watch?v=tQPfshBYZIw.

Peter Hoffman. “Baroque Dance – Sarabande pour femme.” YouTube Video, 1:40. 21 October 2013. https://www.youtube.com/watch?v=8Uf7gCwYH5o.

Appendix A: Summary of the Results in the Experiments

Piece/Version	Tempo	Tempo Changes	Accent and Articulation	Ornamentation
Sarabande pour une Femme – Control Recording	Mm crotchet=173.41. Very fast for dancer	Few but caused loss of synchronisation	Attacked and strong. Every bar accented on downbeat. Did not reflect style of the dance	A few ornaments added by the violinist. These did not align with ornamental movements
Sarabande pour une Femme – Notated Recording	Mm crotchet=140.40 More comfortable for dancer but still fast	Fewer, rarely caused loss of synchronisation	Notes with *Messe di voce*. More *détacher*. Aligned better with physical movements in the dance	Many ornaments removed. Ornaments added aligned with *jettés*
Sarabande pour une Femme – Danced Recording	Mm crotchet=107.52 Dancer's chosen tempo	Many changes, resulted in loss of synchronisation	Reduction of accent on the downbeat. *Messe di voce.* Frequently *détacher.* Reflective of steps in the dance	Removal of many ornaments
La Bourée d'Achille – Control Recording	*Bourée*: mm crotchet=145.45bpm *Menuet*: mm crotchet=124.22bpm Both considered slow by the dancers	Many changes which the dancers followed in the *Bourée* as they were aware of the changes. The *Menuet* was not synchronised during moments of the tempo changing	Strong and exaggerated frequent accents. Lots of *enflés*. Dancers reacted with laboured movements	Frequent additions in the *Bourée*, heavily ornamented repeats in the *Menuet*. No obvious effect on the dancers

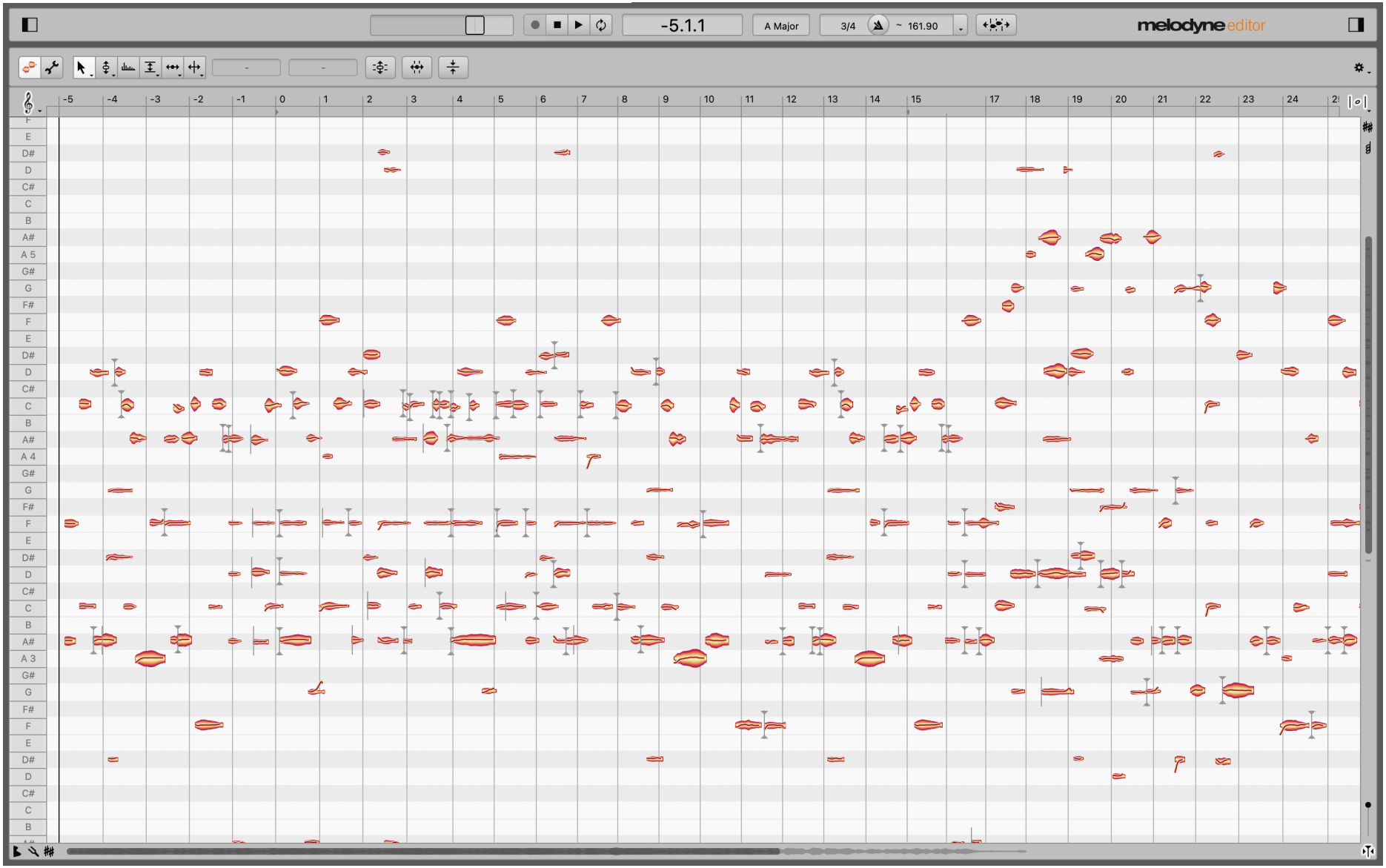
La Bourée d'Achille – Notated Recording	*Bourée*: mm crotchet=187.50bpm *Menuet:* mm crotchet=180.18bpm Still considered slow but comfortable for dancing	Less moments of slowing and speeding. *Bourée:* mostly synchronised during moments. *Menuet:* mostly synchronised except during the *contretemps de menuet*	Lighter articulation, more attacked accents. More jagged	Decrease in added ornamentation. Increase in ornaments which aligned with ornamental movements
La Bourée d'Achille – Danced Recording	*Bourée:* mm crotchet=222.22bpm *Menuet:* mm crotchet=194.80bpm Most comfortable for dancers, slight loss of synchronisation.	Same as Notated Recording. *Bourée:* mostly synchronised except at the end. *Menuet:* had a delay on the start of most phrases. *Contretemps de menuet* was again not synchronised	Heavier than the Notated Recording but lighter than the Control Recording. Dancers followed violinist's accents. Smoother but sprightly	Less added ornamentation in the *Bourée*. Many ornaments added in the *Menuet* which did not correlate to danced ornaments
Les Nations Premier Ordre: Sarabande Control Recording	MM crotchet=49.79 Very slow, dance too simple for this tempo	Frequent tempo changes, always resulting in difficulty dancing, especially during *coupé de deux mouvements*	*Coulament* and frequent accents. Lots of *messe di voce* and some very *détacher* notes. Dancer did not feel comfortable	Few additional ornaments. No obvious reaction from the dancer
Les Nations Premier Ordre: Sarabande Notated Recording	MM crotchet=75.94, comfortable for dancing	Few tempo changes which caused loss of synchronisation	Lighter articulation and less accents. Dancer more comfortable and there was more obvious alignment between musical accent and danced accent	Few additional ornaments but they aligned with ornamental movement

Les Nations Premier Ordre: Sarabande Danced Recording	MM crotchet=75.37 Same as Notated Recording, comfortable for dancing	More tempo changes than Notated Recording, less than control. Loss of synchronisation	More varied musical accents. Lighter articulation. Dancer was most comfortable with the accents in this recording	Few additional ornaments which aligned with ornamental movement
Florilegium Primum, Gratitudo: Bourée and Menuet Control Recording	*Bourée:* mm crotchet=162.16 *Menuet:* mm=122.95 Slower than comfortable	*Bourée:* Few tempo changes. *Menuet:* many tempo changes. Loss of synchronisation	Heavy *inégalité*. Accented upbeat and *coulament.* Dancers were laboured	Many additional ornaments. Little dancer reaction
Florilegium Primum, Gratitudo: Bourée and Menuet Notated Recording	*Bourée:* mm crotchet=178.95 *Menuet:* mm crotchet=157.89 More comfortable	*Bourée:* Few tempo changes, less severe than Control Recording. *Menuet:* few moments	Subtler *inégalité* and less accent on the upbeat. The dancers' movements were more lifted	Less ornaments added but repeats heavily ornamented. Little dancer reaction
Florilegium Primum, Gratitudo: Bourée and Menuet Danced Recording	*Bourée:* mm crotchet=201.34 *Menuet:* crotchet=175.43bpm Most comfortable but with loss of synchronisation	*Bourée:* Many small tempo changes. Loss of synchronisation. *Menuet:* few moments	More *détacher* and gentler *inégalité*. More exaggerated movements	Many ornaments removed. Little dancer reaction but loss of interest

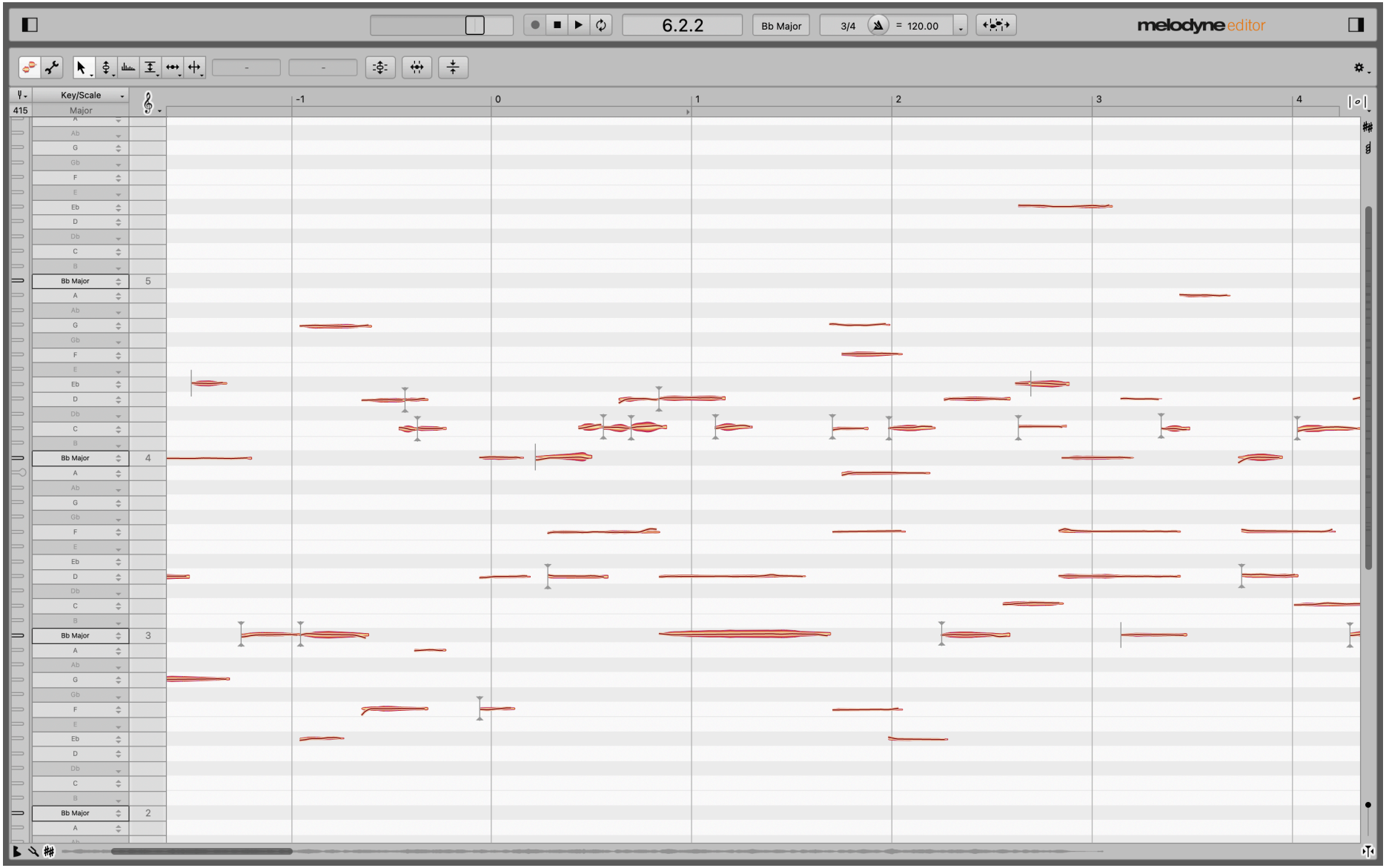
Appendix B: Example Graphs from Melodyne

On the following three pages are screenshots from Melodyne to show the data with which I was working. These show the ‘polyphonic sustain’ algorithm. The bar numbers are the numbers along the top of the graph, these are not always correctly aligned but show the length of the bars. The pitch is along the left side. The tempo at place of click is displayed next to the metronome symbol. The top half of the graph is often the violin and the bottom the viola da gamba.

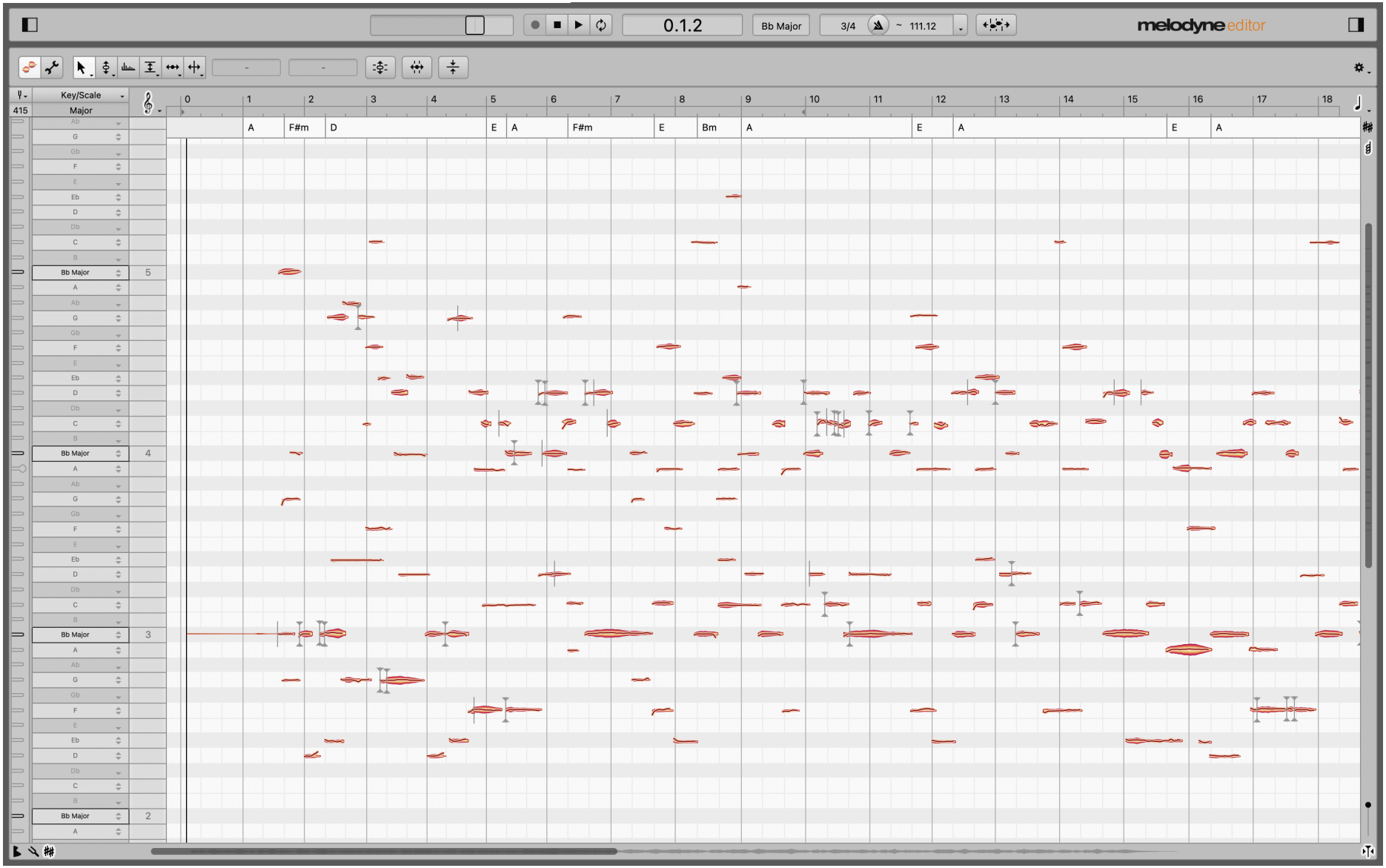
***Sarabande pour une Femme* Control Recording**



***Sarabande pour une Femme* Notated Recording**



***Sarabande pour une Femme* Danced Recording**



Appendix C: Ethics Documents

Monday, 15 November 2021

Dr Alan Maddox
Musicology Unit; Sydney Conservatorium of Music
Email: alan.maddox@sydney.edu.au

Dear Alan,

The University of Sydney Human Research Ethics Committee (HREC) has considered your application.

I am pleased to inform you that after consideration of your response, your project has been approved.

Details of the approval are as follows:

Project No.:	**2021/734**
Project Title:	**A new notation system for baroque dance music**
Authorised Personnel:	**Maddox Alan; Card Amanda; Brown Aimee;**
Approval Period:	**15/11/2021** to **15/11/2025**
First Annual Report Due:	**15/11/2022**

Documents Approved:

Date Uploaded	Version Number	Document Name
04/11/2021	Version 2	PIS S2G1 Clean
25/10/2021	Version 2	PIS S2G2 Clean
25/10/2021	Version 2	PCF S2G1 Clean
25/10/2021	Version 2	PCF S2G2 Clean
25/10/2021	Version 2	PIS S1 Clean
10/09/2021	Version 1	Covid Safe Protocols
10/09/2021	Version 1	Interview Questions Part 2
10/09/2021	Version 1	Invitation to musicians Part 2
10/09/2021	Version 1	Invitation to dancers Part 2
10/09/2021	Version 1	Invitation to dancers Part 1
10/09/2021	Version 1	Invitation to musicians Part 1
10/09/2021	Version 1	Interview Themes Part 1

Condition/s of Approval

- Research must be conducted according to the approved proposal.
- An annual progress report must be submitted to the Ethics Office on or before the anniversary of approval and on completion of the project.
- You must report as soon as practicable anything that might warrant review of ethical approval of the project including:
  - Serious or unexpected adverse events (which should be reported within 72 hours).
  - Unforeseen events that might affect continued ethical acceptability of the project.

- Any changes to the proposal must be approved prior to their implementation (except where an amendment is undertaken to eliminate *immediate* risk to participants).
- Personnel working on this project must be sufficiently qualified by education, training and experience for their role, or adequately supervised. Changes to personnel must be reported and approved.
- Personnel must disclose any actual or potential conflicts of interest, including any financial or other interest or affiliation, as relevant to this project.
- Data and primary materials must be retained and stored in accordance with the relevant legislation and University guidelines.
- Ethics approval is dependent upon ongoing compliance of the research with the *National Statement on Ethical Conduct in Human Research*, the *Australian Code for the Responsible Conduct of Research*, applicable legal requirements, and with University policies, procedures and governance requirements.
- The Ethics Office may conduct audits on approved projects.
- The Chief Investigator has ultimate responsibility for the conduct of the research and is responsible for ensuring all others involved will conduct the research in accordance with the above.

This letter constitutes ethical approval only.

Please contact the Ethics Office should you require further information or clarification.

Sincerely,

Associate Professor Helen Mitchell
Chair
Conservatorium Review Committee (Low Risk)

The University of Sydney of Sydney HRECs are constituted and operate in accordance with the National Health and Medical Research Council's (NHMRC) National Statement on Ethical Conduct in Human Research (2018) and the NHMRC's Australian Code for the Responsible Conduct of Research (2018)

Invitation for Interview - Dancers

Dear (Insert name)

I would like to invite you to participate in an interview to discuss your experience working with musicians.

I am currently undertaking my Masters of Music in Musicology at Sydney Conservatorium of Music. I am looking into how to improve a musician's experience of performing French baroque dance music.

I am developing a dance notation system that allows musicians to follow the dance as they play. As a practicing historical dancer, I am interested in your experience of working with live musicians. I would like to invite you to participate in an informal interview with me. Your contribution will help me to further develop this notation and form new ways of assisting musicians in playing for dancers.

I have attached a Participant Information Statement which contains more information about the project and a set of themes that the questions will be based on. If you are interested in participating, please respond to this email.

Kind Regards,

Aimee Brown (abro5382@uni.sydney.edu.au)

Invitation for Experiments - Musicians

Dear (Insert name)

I would like to invite you to participate in an experiment to try a new system of dance notation for musicians.

I am currently undertaking my Masters of Music in Musicology at Sydney Conservatorium of Music. I am looking into how to improve a musician's experience of performing French baroque dance music.

I have developed a dance notation system that allows musicians to follow the dance as they play. As a practicing historical musician, I would like to invite you to participate in a workshop to test this new notation. Your contribution will help me to further develop the notation and form new ways of assisting musicians in playing for dancers.

I have attached a Participant Information Statement which contains more information about the project. If you are interested in participating, please respond to this email.

Kind Regards,

Aimee Brown (abro5382@uni.sydney.edu.au)

Invitation for Experiments - Dancers

Dear (Insert name)

I would like to invite you to participate in an experiment to try a new system of dance notation for musicians.

I am currently undertaking my Masters of Music in Musicology at Sydney Conservatorium of Music. I am looking into how to improve a musician's experience of performing French baroque dance music.

I have developed a dance notation system that allows musicians to follow the dance as they play. As a practicing historical dancer, I would like to invite you to participate in a workshop to test this new notation. Your contribution will help me to further develop the notation and form new ways of assisting musicians in playing for dancers.

I have attached a Participant Information Statement which contains more information about the project. If you are interested in participating, please respond to this email.

Kind Regards,

Aimee Brown (abro5382@uni.sydney.edu.au)

Participant Information Statement

Section 1: Interviews

Research Study: Baroque Dance for Musicians: A New Notation System

Dr Alan Maddox

alan.maddox@sydney.edu.au

Musicology, Sydney Conservatorium of Music

Aimee Brown

abro5382@uni.sydney.edu.au

(Masters of Music (Musicology)

---

1. What is this study about?

We are developing a new system of notation to assist musicians in playing 18th Century music for dancers. This notation is an added line written above the musical stave which allows musicians to follow the dance as they play.

To establish the difficulties currently of playing 18th Century dance music and develop new ways of addressing them, you are being invited to participate in an interview to discuss your experiences working with musicians/dancers.

Please read this sheet carefully and ask questions about anything that you don't understand or want to know more about.

2. Who is running the study?

The study is being carried out by the following researchers:

- Dr Alan Maddox, Senior Lecturer in Musicology, Program Leader (Bachelor of Music (Musicology), Master of Music (Musicology)
- Dr Amanda Card, Senior Lecturer, Department of Performance and Theatre Studies
- Aimee Brown, Master of Music (Musicology) student

Aimee Brown is conducting this study as the basis for the degree of Master of Music (Musicology) at The University of Sydney.

3. Who can take part in the study?

We are seeking musicians and dancers who have expertise in historical performance, if a musician, preferably some experience with playing for dancers. You must be over 18 years old.

4. What will the study involve for me?

If you decide to take part in this study, you will be asked to participate in an interview over zoom, phone or skype to discuss your experiences with baroque dance music. The interview will take no more than an hour and will be with the student researcher.

This interview can take place at a time suitable to you, before January 2022.

Interview questions are designed to allow for discussion, your opinion is valuable to us. The interview will be audio recorded so it can be transcribed.

If you wish to receive a transcript of the interview, please tick the appropriate box on the Participant Consent Form.

5. Can I withdraw once I've started?

Being in this study is completely voluntary and you do not have to take part.

Your decision will not affect your current or future relationship with the researchers or anyone else at The University of Sydney.

If you decide to take part in the study and then change your mind you can withdraw by contacting one of the researchers at any time. There will be no consequences.

If you take part in an interview you may refuse to answer any questions that you do not wish to answer.

If you decide to withdraw, we will not collect any more information from you. Any information that we have already collected from the interview will be deleted.

6. Are there any risks or costs?

Aside from giving up your time, we do not expect that there will be any risks or costs associated with taking part in this study.

7. Are there any benefits?

This study is a valuable chance to advance the performance of baroque music and dance. The results of the study could provide the potential to advance your own playing and understanding of dance music.

8. What will happen to information that is collected?

By providing your consent, you are agreeing to us collecting information about you for the purposes of this study.

Any information you provide us will be stored securely and we will only disclose it with your permission, unless we are required by law to release information. We are planning for the study findings to be published.

Results from this study may be used in future university research projects.

Your contribution to this study is valuable, if you would like to be identified please select the appropriate box on the consent form.

Audio recordings and transcriptions of interviews will be electronic copies only will be securely stored on University of Sydney Research Data Store. Any forms signed will be kept as electronic copies only.

The audio recordings and transcriptions will be analysed and the data used to discuss the difficulties in playing dance music and the ways this can be improved.

9. Will I be told the results of the study?

You have a right to receive feedback about the overall results of this study. If you wish to receive feedback, please provide you contact details on the consent form.

The feedback will be a summary of the results, and if you like you can be sent a copy of the final thesis.

10. What if I would like further information?

When you have read this information, the following researchers will be available to discuss it with you further and answer any questions you may have:

- Dr. Alan Maddox, alan.maddox@sydney.edu.au
- Aimee Brown, abro5382@uni.sydney.edu.au

11. What if I have a complaint or any concerns?

The ethical aspects of this study have been approved by the Human Research Ethics Committee (HREC) of The University of Sydney [Approval No. 2021/734] according to the *National Statement on Ethical Conduct in Human Research (2007).*

If you are concerned about the way this study is being conducted or you wish to make a complaint to someone independent from the study, please contact the University:

Human Ethics Manager
human.ethics@sydney.edu.au

+61 2 8627 8176

This information sheet is for you to keep

Participant Consent Form

Interviews

Research Study: Baroque Dance for Musicians - A New Notation System

Dr Alan Maddox

alan.maddox@sydney.edu.au

Musicology, Sydney Conservatorium of Music

Aimee Brown

abro5382@uni.sydney.edu.au

(Masters of Music (Musicology)

Participant Name _____

I agree to take part in this research study. In giving my consent, I confirm that:

- The details of my involvement have been explained to me, and I have been provided with a written Participant Information Statement to keep.
- I understand the purpose of the study is to investigate the benefits of an added notation system in playing baroque dance music.
- I acknowledge that the risks and benefits of participating in this study have been explained to me to my satisfaction.
- I understand that in this study I will be required to participate in a discussion-based interview.
- I understand that my participation may be audio and video-taped.
- I understand that my information may be used in future research.
- I understand that being in this study is completely voluntary.
- I am assured that my decision to participate will not have any impact on my relationship with the research team or the University of Sydney.
- I understand that I am free to withdraw from this study at any time and that some of the information I have provided will be withdrawn.
- I have been informed that the confidentiality of the information I provide will be protected and will only be used for purposes that I have agreed to. I understand that information about me will only be told to others with my permission, except as required by law.

- I understand that the results of this study may be published, but these publications will not contain my name or any identifiable information about me unless I consent to being identified using the 'Yes' checkbox below.

  ☐ **Yes**, I am happy to be identified

  ☐ **No,** I do not want to be identified. Please keep my identity confidential.

- I confirm the following:

I consent to recordings (audio/video)	Yes ☐	No ☐
I would like to review my interview transcripts	Yes ☐	No ☐
I consent to being contacted for future studies	Yes ☐	No ☐
I consent to my data being used in future research	Yes ☐	No ☐
I would like feedback on the overall results of this study	Yes ☐	No ☐

If you answered **yes**, please provide your preferred contact details (email/telephone/postal address):

_____

_____

_____

_____

- I understand that after I sign and return this consent form it will be retained by the researcher, and that I may request a copy at any time.

Participant Name _____

Signature _____

Date _____

Participant Information Statement

Section 2, Group 1: Musicians

Research Study: Baroque Dance for Musicians: A New Notation System

Dr Alan Maddox

alan.maddox@sydney.edu.au

Musicology, Sydney Conservatorium of Music

Aimee Brown

abro5382@uni.sydney.edu.au

(Masters of Music (Musicology)

---

1. What is this study about?

We have developed a new system of notation to assist musicians in playing 18th Century music for dancers. This notation is an added line written above the musical stave which allows musicians to follow the dance as they play.

To assess the benefits of this added notation system, you are being invited to participate in an experiment with dancers.

As a musician, you may find that having direct knowledge of what is happening in the dance will change your approach to the music, in terms of your idea of phrasing, articulation, accent and cadence.

Please read this sheet carefully and ask questions about anything that you don't understand or want to know more about.

2. Who is running the study?

The study is being carried out by the following researchers:

- Dr Alan Maddox, Senior Lecturer in Musicology, Program Leader (Bachelor of Music (Musicology), Master of Music (Musicology)
- Dr Amanda Card, Senior Lecturer, Department of Performance and Theatre Studies
- Aimee Brown, Master of Music (Musicology) student

Aimee Brown is conducting this study as the basis for the degree of Master of Music (Musicology) at The University of Sydney.

3. Who can take part in the study?

We are seeking musicians who have familiarity with 18th Century French music. You must be over 18 years old.

You have been invited to take part in this study because you have expertise in historical performance.

4. What will the study involve for me?

If you decide to take part in this study, you will be asked to attend two workshop sessions to trial a new system of playing music for dancers. Both workshops will take place between November 2021 and March 2022, you will be consulted as to the best times that suit you.

Prior to the first workshop you will be given 4 excerpts of baroque dance music, you will be given time to rehearse these before meeting for the workshop.

The first workshop will run for approximately one hour and you will participate in a program to learn a new notation system. This system is a simple line above the musical stave describing the dance. The workshop will run as below:

1. You will be asked to rehearse and perform the 4 excerpts of music you were given prior to attending; these will be video recorded.
2. You will then be taught the new notation. You will be given a background on why knowledge of dance is important
3. You will then be introduced to Feuillet-Beauchamp notation which is the base of the new notation system
4. You will then be given a key and demonstration of steps and step-units
5. You will then be given new scores of the music you previously learned which now contain 2 dances written in the new notation system, you will be taught how to follow the notation.
6. You will be given approximately two weeks to familiarise yourself with the 4 pieces of music with added notation.

(In the case that covid restrictions are still in place, you will be asked to record yourself performing each excerpt of music prior to the workshop. The workshop will instead take place on zoom)

In the second workshop, you will be asked to perform each piece multiple times.

1. You will be gathered with fellow musicians to rehearse each piece at a recital hall at Sydney Conservatorium of Music.
2. When you feel ready, the excerpts will be filmed twice.
3. You will then be joined by dancers to rehearse the same pieces with them.

4. Once both groups feel comfortable, each excerpt will be filmed twice.

You will then be invited to join an interview, either as a group or individually if you feel more comfortable. You will be asked questions such as how you felt playing with the added notation. The questions are designed to allow for discussion, your opinion is valuable to us. The interview will be audio recorded so it can be transcribed.

If you wish to receive a transcript of the interview and a video copy of the performance, please tick the appropriate box on the Participant Consent Form.

5. Can I withdraw once I've started?

Being in this study is completely voluntary and you do not have to take part.

Your decision will not affect your current or future relationship with the researchers or anyone else at The University of Sydney.

If you decide to take part in the study and then change your mind you can withdraw by contacting one of the researchers at any time. There will be no consequences.

You will receive an honorarium on completion of the rehearsals and filming session.

If you take part in an interview you may refuse to answer any questions that you do not wish to answer.

If you decide to withdraw, we will not collect any more information from you. Any information that we have already collected from the interview will be deleted; however the videos from the performance will be kept in our study records and may be included in the study results. If you wish to stay anonymous, your face can be pixelated.

6. Are there any risks or costs?

Aside from giving up your time, we do not expect that there will be any risks or costs associated with taking part in this study.

7. Are there any benefits?

This study will be a valuable opportunity to work with dancers, your contribution has the potential to lead to a significant new development in Historical Performance practice of dance music. You will also be able to apply technique that you learn in this study to your own playing.

8. What will happen to information that is collected?

By providing your consent, you are agreeing to us collecting information about you for the purposes of this study.

Any information you provide us will be stored securely and we will only disclose it with your permission, unless we are required by law to release information. We are planning for the study findings to be published.

Data collected in this study may be used in future university research projects.

Your contribution to this study is valuable, if you would like to be identified please select the appropriate box on the consent form.

Video and audio recordings and transcriptions of interviews will be electronic copies only will be securely stored on University of Sydney Research Data Store. Any forms signed will be kept as electronic copies only.

Your contribution to this study is valuable, as video footage cannot be fully unidentifiable, we ask permission to name you. Please tick the appropriate box in the consent form. If you would like your face to be pixelated in the final video footage, please also indicate on the consent form.

If you wish to remain anonymous you must be aware that the video footage may be included in the thesis which will be made publicly available. The video footage may also be used in conference papers, or instructional videos.

Interview recordings and transcriptions will be analysed by primary researchers to assess the advantages and disadvantages of the new notation system and any improvements. They will be included in the results section of the final thesis.

Video footage of the experiments will be analysed to assess the non-verbal connections between music and dance. There will be a bar by bar analysis of synchronicity between musicians and dancers articulations, phrasings and musician's subconscious movements.

9. Will I be told the results of the study?

You have a right to receive feedback about the overall results of this study. If you wish to receive feedback, please provide you contact details on the consent form.

The feedback will be a summary of the results, and if you like you can be sent a copy of the final thesis.

10. What if I would like further information?

When you have read this information, the following researchers will be available to discuss it with you further and answer any questions you may have:

- Dr. Alan Maddox, alan.maddox@sydney.edu.au
- Aimee Brown, abro5382@uni.sydney.edu.au

11. What if I have a complaint or any concerns?

The ethical aspects of this study have been approved by the Human Research Ethics Committee (HREC) of The University of Sydney [Approval No. 2021/734] according to the *National Statement on Ethical Conduct in Human Research (2007).*

If you are concerned about the way this study is being conducted or you wish to make a complaint to someone independent from the study, please contact the University:

Human Ethics Manager
human.ethics@sydney.edu.au
+61 2 8627 8176

This information sheet is for you to keep

Participant Information Statement

Section 2, Group 2: Dancers

Research Study: Baroque Dance for Musicians: A New Notation System

Dr Alan Maddox

alan.maddox@sydney.edu.au

Musicology, Sydney Conservatorium of Music

Aimee Brown

abro5382@uni.sydney.edu.au

(Masters of Music (Musicology)

---

1. What is this study about?

We have developed a new system of notation to assist musicians in playing 18th Century music for dancers. This notation is an added line written above the musical stave which allows musicians to follow the dance as they play.

To assess the benefits of this added notation system, you are being invited to participate in an experiment with musicians. The musicians will be playing while you dance both with and without this added notation system.

Please read this sheet carefully and ask questions about anything that you don't understand or want to know more about.

2. Who is running the study?

The study is being carried out by the following researchers:

- Dr Alan Maddox, Senior Lecturer in Musicology, Program Leader (Bachelor of Music (Musicology), Master of Music (Musicology)
- Dr Amanda Card, Senior Lecturer, Department of Performance and Theatre Studies
- Aimee Brown, Master of Music (Musicology) student

Aimee Brown is conducting this study as the basis for the degree of Master of Music (Musicology) at The University of Sydney.

3. Who can take part in the study?

We are seeking dancers who have good knowledge of 18th Century French dance, preferably also Feuillet-Beauchamp notation.

You have been invited to take part in this study because of your expertise as an early dancer.

4. What will the study involve for me?

If you decide to take part in this study, you will be asked to attend a workshop to trial a new system of playing music for dancers. This will take place between December 2021 and March 2022, you will be consulted as to the best times that suit you.

You will be asked to learn two excerpts of dances taken from manuals from 1700-1704.

Prior to the workshop, you will be sent four excerpts of recorded music which match the two dances. You will be asked to video record yourself dancing each dance to the music.

In the workshop, you will be asked to perform each piece multiple times.

1. You will be gathered with musicians to rehearse each dance to two different excerpts of music.
2. Following rehearsal, each dance will be filmed with both excerpts of coinciding music.

You will be invited to join an interview, either together or individually if you feel more comfortable. You will be asked questions about the experience of dancing when the musicians did or did not use the new shorthand choreographic notation to follow what was happening in the dance. The questions are designed for discussion and your opinion is valuable to us. The interview will be audio recorded so it can be transcribed.

If you wish to receive a transcript of the interview and a video copy of the performance, please tick the appropriate box on the Participant Consent Form.

5. Can I withdraw once I've started?

Being in this study is completely voluntary and you do not have to take part.

Your decision will not affect your current or future relationship with the researchers or anyone else at The University of Sydney.

If you decide to take part in the study and then change your mind you can withdraw by contacting one of the researchers at any time. There will be no consequences.

You will receive an honorarium on completion of the rehearsals and filming session.

If you take part in an interview you may refuse to answer any questions that you do not wish to answer.

If you decide to withdraw, we will not collect any more information from you. Any information that we have already collected from the interview will be deleted; however the videos from the performance will be kept in our study records and may be included in the study results. If you wish to stay anonymous, your face can be pixelated.

6. Are there any risks or costs?

A dance space with appropriate flooring and space will be chosen to avoid any risk of injury. Aside from this and giving up your time, we do not expect that there will be any other risks or costs associated with taking part in this study.

7. Are there any benefits?

This study is a valuable chance to advance the collaboration between musicians and dancers, your contribution has the potential to lead to a significant new development in Historical Performance practice of dance music. You will also be able to apply technique that you learn in this study to your own dancing.

8. What will happen to information that is collected?

By providing your consent, you are agreeing to us collecting information about you for the purposes of this study.

Any information you provide us will be stored securely and we will only disclose it with your permission, unless we are required by law to release information. We are planning for the study findings to be published.

Data collected in this study may be used in future university research projects.

Your contribution to this study is valuable, if you would like to be identified please select the appropriate box on the consent form.

Video and audio recordings and transcriptions of interviews will be electronic copies only will be securely stored on University of Sydney Research Data Store. Any forms signed will be kept as electronic copies only.

Your contribution to this study is valuable, as video footage cannot be fully unidentifiable, we ask permission to name you. Please tick the appropriate box in the consent form. If you would like your face to be pixelated in the final video footage, please also indicate on the consent form.

If you wish to remain anonymous you must be aware that the video footage may be included in the thesis which will be made publicly available. The video footage may also be used in conference papers, or instructional videos.

Interview recordings and transcriptions will be analysed by primary researchers to assess the advantages and disadvantages of the new notation system and any improvements. They will be included in the results section of the final thesis.

Video footage of the experiments will be analysed to assess the non-verbal connections between music and dance. There will be a bar by bar analysis of synchronicity between musicians and dancers articulations, phrasings and musician's subconscious movements.

9. Will I be told the results of the study?

You have a right to receive feedback about the overall results of this study. If you wish to receive feedback, please provide you contact details on the consent form.

The feedback will be a summary of the results, and if you like you can be sent a copy of the final thesis.

10. What if I would like further information?

When you have read this information, the following researchers will be available to discuss it with you further and answer any questions you may have:

- Dr. Alan Maddox, alan.maddox@sydney.edu.au
- Aimee Brown, abro5382@uni.sydney.edu.au

11. What if I have a complaint or any concerns?

The ethical aspects of this study have been approved by the Human Research Ethics Committee (HREC) of The University of Sydney [Approval No. 2021/734] according to the *National Statement on Ethical Conduct in Human Research (2007).*

If you are concerned about the way this study is being conducted or you wish to make a complaint to someone independent from the study, please contact the University:

Human Ethics Manager
human.ethics@sydney.edu.au
+61 2 8627 8176

This information sheet is for you to keep

Participant Consent Form

Section 2, Group 1: Musicians

Research Study: Baroque Dance for Musicians - A New Notation System

Dr Alan Maddox

alan.maddox@sydney.edu.au

Musicology, Sydney Conservatorium of Music

Aimee Brown

abro5382@uni.sydney.edu.au

(Masters of Music (Musicology)

Participant Name _____

I agree to take part in this research study. In giving my consent, I confirm that:

- The details of my involvement have been explained to me, and I have been provided with a written Participant Information Statement to keep.
- I understand the purpose of the study is to investigate the benefits of an added notation system in playing baroque dance music.
- I acknowledge that the risks and benefits of participating in this study have been explained to me to my satisfaction.
- I understand that in this study I will be required to participate in a workshop to learn a new notation system, rehearse and film 4 pieces of music.
- I understand that my participation may be audio and video-taped.
- I understand that my information may be used in future research.
- I understand that being in this study is completely voluntary.
- I am assured that my decision to participate will not have any impact on my relationship with the research team or the University of Sydney.
- I understand that I am free to withdraw from this study at any time and that some of the information I have provided will be withdrawn.

- I have been informed that the confidentiality of the information I provide will be protected and will only be used for purposes that I have agreed to. I understand that information about me will only be told to others with my permission, except as required by law.

- I understand that the results of this study may be published, but these publications will not contain my name or any identifiable information about me unless I consent to being identified using the 'Yes' checkbox below.

  ☐ **Yes**, I am happy to be identified

  ☐ **No,** I do not want to be identified. Please keep my identity confidential.

- I confirm the following:

I consent to recordings (audio/video)	Yes ☐	No ☐
I would like to review my interview transcripts	Yes ☐	No ☐
I consent to being contacted for future studies	Yes ☐	No ☐
I consent to my data being used in future research	Yes ☐	No ☐
I would like feedback on the overall results of this study	Yes ☐	No ☐

  If you answered **yes**, please provide your preferred contact details (email/telephone/postal address):

  _____

  _____

  _____

  _____

- I understand that after I sign and return this consent form it will be retained by the researcher, and that I may request a copy at any time.

Participant Name _____

Signature _____

Date _____

Participant Consent Form

Section 2, Group 2: Dancers

Research Study: Baroque Dance for Musicians - A New Notation System

Dr Alan Maddox alan.maddox@sydney.edu.au

Musicology, Sydney Conservatorium of Music

Aimee Brown

abro5382@uni.sydney.edu.au (Masters

of Music (Musicology)

Participant Name

_____

I agree to take part in this research study. In giving my consent, I confirm that:

- The details of my involvement have been explained to me, and I have been provided with a written Participant Information Statement to keep.
- I understand the purpose of the study is to investigate the benefits of an added notation system in playing baroque dance music.
- I acknowledge that the risks and benefits of participating in this study have been explained to me to my satisfaction.
- I understand that in this study I will be required to learn 2 dances and rehearse and perform them.
- I understand that my participation may be audio and video-taped.
- I understand that my information may be used in future research.
- I understand that being in this study is completely voluntary.
- I am assured that my decision to participate will not have any impact on my relationship with the research team or the University of Sydney.
- I understand that I am free to withdraw from this study at any time and that some of the information I have provided will be withdrawn.
- I have been informed that the confidentiality of the information I provide will be protected and will only be used for purposes that I have agreed to. I understand that information about me will only be told to others with my permission, except as required by law.

- I understand that the results of this study may be published, but these publications will not contain my name or any identifiable information about me unless I consent to being identified using the 'Yes' checkbox below.

  ☐ **Yes**, I am happy to be identified

  ☐ **No,** I do not want to be identified. Please keep my identity confidential.

- I confirm the following:

I consent to recordings (audio/video)	Yes ☐	No ☐
I would like to review my interview transcripts	Yes ☐	No ☐
I consent to being contacted for future studies	Yes ☐	No ☐
I consent to my data being used in future research	Yes ☐	No ☐
I would like feedback on the overall results of this study	Yes ☐	No ☐

If you answered **yes**, please provide your preferred contact details (email/telephone/postal address):

_____

_____

_____

_____

- I understand that after I sign and return this consent form it will be retained by the researcher, and that I may request a copy at any time.

Participant Name **Signature** **Date**

_____

_____

_____

Section 1: Interview Themes

The interviews are designed to be a discussion, we are looking for a general understanding of their experience with baroque dance music and how they feel performance could be improved. This is a list of themes to direct the conservation.

- Experience working with live musicians
- Difficulties
- Positives
- Elements you'd like the musicians to notice
    - eg. Certain steps, phrasing

Section 2: Interview Questions

The interviews following performances are designed to be open-ended to allow for discussion. These questions are initial questions to open-up discussion.

MUSICIANS:

1. Personal experience Prompt Questions:

- Can you tell me about your overall experience of playing the music with the added notation?
- Can you talk about your experience reading the notation while you played?
- How likely are you to use the notation for your own practice?
- Can you tell me about your experience with dance music and whether you are likely to learn more about dance after this experiment?
- How did you feel working with other musicians?

2. Interpretation Prompt Questions:

- Can you talk about how your approach to the music changed after adding the notation (eg.phrasing, articulation, accent, tempo)?
- What is your understanding now of each dance?

3. Communication Prompt Questions:

- Can you talk about how your awareness of the dancers presence changed?

4. Improvements Prompt Questions:

- Is there anything else about the dance that you'd like to know?
- Is there anything in the notation that you think is unnecessary for you to know?

DANCERS:

1. Personal experience Prompt Questions:

- How did it feel dancing to the music with added notation?
- Can you talk about how the ease of following the music changed with the notation added? (eg. Phrasing, tempo, articulation)

2. Interpretation Prompt Questions

- Can you talk about how the musician's playing changed to suit the dancing?

3. Improvement Prompt Questions

- Is there anything else you'd like the musicians to know that you think might improve how they play?