

Copyright

by

Alaina Diehl

May 2018

FLUTE PERFORMANCE PRACTICE IN THE TRAGÉDIES EN MUSIQUE OF
JEAN-PHILIPPE RAMEAU

An Essay

Presented to the Faculty of the

Moore School of Music

Kathrine G. McGovern College of the Arts

University of Houston

In Partial Fulfillment

of the Requirements for the Degree of

Doctor of Musical Arts in Performance

by

Alaina Diehl

May 2018

FLUTE PERFORMANCE PRACTICE IN THE TRAGÉDIES EN MUSIQUE OF
JEAN-PHILIPPE RAMEAU

Alaina Diehl

APPROVED:

Matthew Dirst, Ph.D.
Committee Chair

Paul Bertagnolli, Ph.D.

Aralee Dorough, B.M.

Peggy Russell, M.M.

Andrew Davis, Ph.D.
Dean, Kathrine G. McGovern College of the Arts

FLUTE PERFORMANCE PRACTICE IN THE TRAGÉDIES EN MUSIQUE OF
JEAN-PHILIPPE RAMEAU

An Abstract of an Essay

Presented to the Faculty of the

Moore School of Music

Kathrine G. McGovern College of the Arts

University of Houston

In Partial Fulfillment

of the Requirements for the Degree of

Doctor of Musical Arts in Performance

by

Alaina Diehl

May 2018

Abstract

Focusing on historically informed flute performance practice in an ensemble setting, this essay explores performance possibilities pertaining to rhythmic alteration, articulation, and ornamentation in the context of Jean-Philippe Rameau's *tragédies en musique*—*Hippolyte et Aricie* (1733), *Castor et Pollux* (1737), *Dardanus* (1739), *Zoroastre* (1749), and *Les Boréades* (1763). Rameau's *tragédies en musique* prominently feature the orchestra, and the variety of instrumental combinations within dance movements, vocal airs, and orchestral interludes provides numerous scenarios for the flutist to evaluate performance practice in relationship to other ensemble members. Historical considerations for this essay include the instrumentation, musical leadership, and rehearsal practices of the Académie Royale de Musique, the organization for which Rameau wrote these five-act operas. Additionally, this essay draws upon the advice of several eighteenth-century flute, violin, harpsichord, viol, and vocal treatises to inform the interpretation of musical elements such as *agréments* (*tremblements*, *ports de voix*, and *flattement*), over-dotted notes, *notes inégales*, and articulation. This study reveals that, although eighteenth century musicians and audience members valued a high quality of execution and uniformity in performance, factors such as the idiosyncratic tendencies of the flute and other instruments led to performance discrepancies, influencing the overall ensemble sound. Likewise, the modern performer will discover a variety of possible solutions to questions of ornamentation, articulation, and rhythmic alteration in the performance of these works.

Acknowledgments

I would like to thank my committee members—Dr. Matthew Dirst, Dr. Paul Bertagnolli, Aralee Dorrough, and Peggy Russell—for contributing their time and expertise to this essay. I would also like to thank Baroque flutists Colin St-Martin and Leela Breithaupt for discussing research ideas with me, inspiring this project. I am also grateful to the University of Houston Music Library—especially Stephanie Lewin-Lane and Timothy McGittigan—for assisting me in accessing the various resources used in this research.

Table of Contents

Abstract	v
Acknowledgements	vi
List of Figures	viii
List of Musical Examples	ix
Dedication	x
Historical Background	1
The <i>Tragédie en Musique</i> and Performing Forces at the Opéra	2
Musical Leadership and Rehearsals at the Académie Royale de Musique.....	5
The <i>Tragédies</i> in Performance.....	12
Rhythmic Alteration.....	12
Articulation	26
Ornamentation (Agréments)	29
Conclusion	43
Bibliography	45

List of Figures

1. Michel Pignolet de Montéclair's illustration of dotted rhythms	13
2. Eighth-note inequality table in Montéclair, <i>Principes de musique</i>	19
3. Slurred passages in Johann Joachim Quantz, <i>Solfeggi</i>	20
4. The <i>cadence appuyée</i> in L'Abbé le Fils, <i>Principes du violon</i>	37
5. <i>Port de voix</i> examples in François David, <i>Méthode nouvelle</i>	39

List of Musical Examples

1. <i>Castor et Pollux</i> , Act II, scene 5, mm. 1-6 of the “entrée”	15
2. <i>Zoroastre</i> , Act III, scene 7, mm. 1-3 of the “sarabande”	16
3. <i>Zoroastre</i> , Act I, scene 3, mm. 1-13 of “Air tendre en Rondeau”	21
4. <i>Castor et Pollux</i> , Act I, scene 4, mm. 1-9 of the “première gavotte”	22
5. <i>Les Boréades</i> , Act IV, scene 4, mm. 1-6 of the “premier rigaudon”	24
6. <i>Zoroastre</i> , Act III, scene 7, mm. 17-26 of the “sarabande”	26
7. <i>Hippolyte et Aricie</i> , Act V, scene 7, mm. 1-6 of “Vol des Zéphirs”	27
8. <i>Zoroastre</i> , mm. 1-11 of the “gigue”	28
9. <i>Zoroastre</i> , mm. 22-30 of the “gigue”	28
10. <i>Hippolyte et Aricie</i> , Act V, scene 8, mm. 19-25 of “Rossignols amoureux”	32
11. <i>Zoroastre</i> , mm. 1-7 of the “gigue”	32
12. <i>Zoroastre</i> , Act I, scene 3, mm. 1-5 of “Rassurez vous”	34
13. <i>Zoroastre</i> , Act I, scene 3, m. 11-14 of “Rassurez vous”	35
14. <i>Zoroastre</i> , Act I, scene 3, mm. 1-19 of “Rassurez vous”	35
15. <i>Zoroastre</i> , Act I, scene 3, mm. 31-40 of “Rassurez vous”	36
16. <i>Dardanus</i> , Act IV, scene 2, mm. 1-7 of “Ah! Que votre sort”	40

To my exceptional and supportive family

Jody, Gregory, and Elisa Diehl

Kristie, Ryan, Liam, and Oona McLin

Historical Background

As a musician of the Age of Enlightenment, theorist and composer Jean-Philippe Rameau (1683-1764) lived during a time of intellectual change and controversy, when aesthetics and artistic values were issues of national pride and continuous debate. At the heart of this debate were Rameau's *tragédies en musique*, which preserved the proud operatic traditions of the great Jean-Baptiste Lully (1632-1687) while igniting controversy with audiences and philosophers like Jean-Jacques Rousseau. A specific point of contention was Rameau's use of the orchestra, in which the flute plays an important role. These *tragédies*—*Hippolyte et Aricie* (1733), *Castor et Pollux* (1737), *Dardanus* (1739), *Zoroastre* (1749), and *Les Boréades* (1763)—represent the culmination of Rameau's experience as a composer and orchestrator, reflecting his musical training, the influence of previous composers, and his predilection for rich orchestral color. Additionally, with their variety of instrumentation, these *tragédies* offer the opportunity for the performing musician to evaluate important aspects of French Baroque performance practice, including rhythmic alteration, articulation, and ornamentation, as they pertain to flute playing in ensemble combinations within the opera orchestra of the Académie Royale de Musique. Using movements from Rameau's *tragédies* as representative examples, the aim of this research is to expand the scholarship of flute performance practice of the French Baroque to include performance practice within an ensemble setting. Evaluating the available evidence, this essay offers possible solutions to problems of rhythm, articulation, and ornamentation in Rameau's *tragédies en musique* in the context of historically informed ensemble performance.

The *Tragédie en Musique* and Performing Forces at the Opéra

Rameau's experiences as an organist, theorist, and composer of stage music culminated in the premiere of his first *tragédie en musique*, *Hippolyte et Aricie*, at the Académie Royale de Musique in 1733. Although this premiere sparked one of the era's most famous debates on the roles of tradition and innovation in French opera (the *Lullistes* versus the *Ramistes*), the form and instrumental practices of Rameau's *tragédies en musique* were heavily indebted to the practices of seventeenth-century composer Jean-Baptiste Lully, whose works laid the foundation for this genre of French Baroque opera.

In 1637 Lully created the very first *tragédie en musique*, *Cadmus et Hermione*, by combining elements from various theatrical genres such as the pastorale, court ballet, tragedy ballet, and Italian opera, with an overriding principle of "dramatic unity."¹ The typical *tragédie en musique* comprises a prologue and five acts, with a libretto on a mythological subject or a tale of chivalry.² Each act usually includes a *divertissement*, an interlude of songs and dances that prominently features the orchestra. Rameau expanded the length of the *divertissement* and used its elements in other parts of his *tragédies*, resulting in a greater variety of movements for orchestra and vocal airs with sophisticated orchestral accompaniment.³

The opera orchestra of the middle to late eighteenth century in France had greater responsibilities in representing and enhancing the meaning of the text. As musicologist John Spitzer explains, the modern concept of "orchestration" became manifest at this

¹ James R. Anthony, *French Baroque Music from Beaujoyeux to Rameau* (Portland, OR: Amadeus Press, 1997), 93-94.

² Graham Sadler and Albert Cohen, "Jean-Philippe Rameau," in *The New Grove French Baroque Masters*, ed. Stanley Sadie (New York: W. W. Norton & Company, 1986), 257.

³ Cynthia Verba, *Dramatic Expression in Rameau's Tragédie en Musique* (Cambridge: Cambridge University Press, 2013), 109.

time: the various instruments of the orchestra create various colors, timbres, and effects.⁴ According to Graham Sadler and Albert Cohen, Rameau's orchestration was "eclectic" and "imaginative" in both his vocal accompaniments and his instrumental movements. Rameau was concerned not with homogeneity and blend, but with creating a "counterpoint of timbres" through a varied combination of winds and strings.⁵

Rameau composed all five of his *tragédies en musique* for performance at the Académie Royale de Musique, or Opéra. This institution boasted an ensemble that was the first to permanently combine harpsichord, theorbos, strings, and winds on the same payroll.⁶ As the first group of its kind, it was the largest free-standing and most prestigious orchestra in France and Europe from 1715 until the Revolution of 1789.⁷ This opera orchestra, a creation of Jean-Baptiste Lully, maintained relatively conservative instrumentation well into the eighteenth century: strings from the violin family in five parts (until the 1740s, when it became four)—treble (*dessus*), alto (*haute-contre*), first tenor (*taille*), second tenor (*quinte*), and bass; winds—transverse flutes (alongside recorders until the 1730s), oboes, bassoons, trumpets; and kettle drums.⁸ During Rameau's decades of composing operas for performance by the Académie, the organization's inventories classified flutes and oboes together because, traditionally, the same musicians played both instruments.⁹ Typically, Rameau's orchestra consisted of

⁴ John Spitzer, "Orchestra and Voice in Eighteenth-Century Italian Opera," in *The Cambridge Companion to Eighteenth-Century Opera*, ed. Anthony R. DelDonna and Pierpaolo Polzonetti (Cambridge: Cambridge University Press, 2009), 136.

⁵ Sadler and Cohen, 273-74.

⁶ John Spitzer and Neal Zaslaw, *The Birth of the Orchestra: History of an Institution, 1650-1815* (Oxford: Oxford University Press, 2004), 90.

⁷ *Ibid.*, 184.

⁸ *Ibid.*, 185; Jean-Philippe Rameau, *Treatise on Harmony*, trans. Philip Gossett (New York: Dover Publications, 1971), 196; Anthony, 123.

⁹ Youri Charbonnier, "Le Personnel Musical de l'Opéra de Paris Sous le Règne de Louis XVI," *Histoire, Économie et Société* 22, no. 2 (April-June 2004): 183.

strings, flutes, *petite flute* (piccolo), oboes, bassoons, trumpets, and timpani.¹⁰ He also sometimes incorporated natural horn, musette, tambourin, and flageolet for additional orchestral color, and he added the clarinet starting in *Zoroastre* (1749).¹¹ In 1750, toward the end of Rameau's career, the Académie's orchestra had forty-six players: thirty-four strings, eleven winds, and one harpsichord.¹²

Lully divided the orchestra's musicians into two groups, the *grand chœur* and the *petit chœur*, and his successors, including Rameau, retained this ensemble division into the 1790s. In the early eighteenth century, the *grand chœur* consisted of the larger group of violins, winds, and kettle drums, and the *petit chœur* formed a smaller ensemble around a harpsichord. In 1704 the *petit chœur* included two violins, two bass violins, two bass viols, *contrebasse*, harpsichord, theorbo, and a conductor (called *batteur de mesure*), and around 1712, it gained two *flûtes allemandes*, or transverse flutes.¹³ The musicians of this ensemble accompanied recitatives, *ritournelles*, and performed the more difficult movements, joining the *grand chœur* in performing the other symphonies, *ouvertures*, and dance movements.¹⁴

The 1738 inventory of the Académie's orchestra did not include flutists' names within the *petit chœur*; they instead fell into the *grand chœur* section under the general heading "hautbois."¹⁵ Nevertheless, the flute continued to play a dual role as solo and

¹⁰ Alessandro Di Profio, "The Orchestra," trans. Julia Grella O'Connell, in *The Oxford Handbook of Opera*, ed. Helen M. Greenwald (Oxford: Oxford University Press, 2014), 486.

¹¹ *Ibid.*, 486.

¹² Graham Sadler, "Rameau and the Orchestra," *Proceedings of the Royal Musical Association* 108 (1981-1982): 48.

¹³ Anthony, 123.

¹⁴ Mary Térey-Smith, "Orchestral Practice in the Paris Opéra (1690-1764), and the Spread of French Influence in Europe," *Studia Musicologica Academiae Scientiarum Hungaricae* 31, no. 1/4 (1989), 83.

¹⁵ Graham Sadler, "Rameau's Singers and Players at the Paris Opéra: A Little-Known Inventory of 1738," *Early Music* 11, no. 4 (October 1983): 462-64.

tutti instrument in the opera orchestra. Although musicologists Jürgen Eppelsheim and Graham Sadler point to the decreasing numbers in the *petit chœur* during the 1730s as a sign of decreasing emphasis on the *concertino* style, Mary Térey-Smith suggests that the traditional functions of the divided ensemble continued through Rameau's time. By studying the manuscript partbooks, which copyists prepared under Rameau's instruction for the musicians' use in performance, Térey-Smith found that composers such as Rameau used many words to possibly indicate the *petit chœur*, including *seul*, *récit.*, *doux*, and *accompagnement*.¹⁶ Likewise, the partbooks demonstrate that Rameau used a triple division of the ensemble, sometimes adding more instruments to the *petit chœur* for additional contrast.¹⁷ An example of this division occurs in the "Air tendre en Rondeau" from Act I, scene 3 of *Zoroastre*, which features a flute soloist. The score indicates first violins and second violins (multiple players per part), yet the partbooks clearly indicate the designation "petit chœur."

Musical Leadership and Rehearsals at the Académie Royale de Musique

Eighteenth-century German flutist Johann Joachim Quantz offers advice to ensemble performers in his 1752 treatise *On Playing the Flute*. Quantz had witnessed that there was "a great disparity in the manner of playing found among the musicians of the same chapel or orchestra," causing "considerable defects with regard to accompaniment."¹⁸ Citing a lack of excellent musical leadership, Quantz dedicates

¹⁶ Térey-Smith, 90-92; 113.

¹⁷ *Ibid.*, 99.

¹⁸ Johann Joachim Quantz, *On Playing the Flute*, trans. Edward R. Reilley (New York: Schirmer Books, 1966), 205.

several sections to the traits and responsibilities of a good leader. These sections also reveal the value of uniformity of execution within the orchestra. For example, he explains: “A good leader must try...to develop and maintain a good execution in the orchestra. Just as he himself must have good execution, he must also seek to make that of his colleagues alike, and always uniform with his own.”¹⁹ Primarily referring to the string section, Quantz instructs:

Should there be some among the ripienists whose execution differs from that of the others, the leader must undertake to rehearse them separately, lest one, for example, add a shake where others play without it, or slur notes that are attacked by others, or make a mordent, omitted by the others, after an appoggiatura; for the greatest beauty of performance stems from the uniformity with which all the members of the orchestra play.²⁰

Although eighteenth-century musicians were aware of the technical demands of playing in an ensemble and desired uniformity of execution within sections of the orchestra, it is also possible that the Académie Royale de Musique was one of the wanton ensembles that Quantz described, and its eighteenth-century audiences were accustomed to hearing articulation and ornamentation disparities in performances of Rameau’s *tragédies*.

After Lully the Opéra experienced several changes of leadership that affected the organization of the orchestra. When Lully took charge of the Académie Royale de Musique in the seventeenth century, he served as artistic director, conductor, and personnel manager. Due to this artistic monopoly, there was no one to take his place when he died in 1687.²¹ Instead, economics and politics were the forces that guided the

¹⁹ Quantz, 209.

²⁰ Ibid., 210.

²¹ Spire Pitou, *The Paris Opéra: An Encyclopedia of Operas, Ballets, Composers, and Performers*, Vol. 1, *Genesis and Glory, 1671-1715* (Westport, CT: Greenwood Press, 1983), 15.

Académie in the eighteenth century, and the Opéra went through several organizational changes before, during, and after Rameau's time.²²

King Louis XIV, French monarch during the time of Lully, became less concerned with the workings of the Opéra toward the end of his reign, causing the organization to experience financial, moral, and musical difficulties.²³ Nevertheless, he issued regulations in 1713 and 1714 to restore discipline at the Académie, appointing André Cardinal Destouches, a composer, as "inspecteur général" for running the Académie in both administrative and musical capacities. Destouches remained the *inspecteur générale* until 1728, at which point he became the *directeur*, and André Campra became *inspecteur*, a post which he retained through another administrative change in 1732.²⁴ Although the royal regulations from 1714 do not explicitly outline the inspector's musical responsibilities, they do offer insight into the musical structure of the Académie beneath him, including the roles of the *maître de musique*, *maître de ballet*, *maître de sale*, and the *batteur de mesure*.²⁵

An important figure for the orchestra, the *batteur de mesure* had responsibilities that extended beyond beating time, such as maintaining a degree of responsibility over the conduct of the members of the orchestra. Although the *batteur de mesure* may have been involved in making musical decisions, his power was limited; the composer of an opera could choose to replace the *batteur* as conductor if he pleased.²⁶ Article 12 of Louis XIV's royal decree reads: "The composer of an opera may on his own, if it seem good to

²² Pitou, 15.

²³ Ibid., 16.

²⁴ Lois Rosow, "From Destouches to Berton: Editorial Responsibility at the Paris Opéra," *Journal of the American Musicological Society* 40, no. 2 (Summer 1987): 287.

²⁵ Ibid., 289.

²⁶ Ibid., 289.

him, direct the rehearsals and may beat time even in the performances, without anyone else being able to join in except with his consent.”²⁷ Rameau exercised this privilege on at least one occasion, during the first run of *Dardanus*.

Madame de Graffigny, a playwright and novelist, attended a rehearsal before the premiere of Rameau’s *tragédie en musique Dardanus* (1739) and gave a detailed eyewitness account in a letter to Monsieur de Vaux, offering a vivid, possibly exaggerated, depiction of Rameau’s rehearsal at the Opéra.²⁸ She described the chaos of the scene: “Oh! What amusing and what ludicrous things rehearsals are! While one person was singing mournfully, a dozen people were dancing at the back of the stage, neither together nor with the music.”²⁹ Madame de Graffigny went on to describe a scene with Rameau and the rehearsal attendees: “Rameau, who has the manner and appearance of a great devil, sang to give the note. The *parterre*, where there were more than 150 people, clapped their hands at him in derision...and he clapped his hands back at the *parterre*.”³⁰

According to musicologist Graham Sadler, “Whether Rameau ever exercised these rights on other occasions—especially his right to conduct the actual performances—is not known.”³¹ However, the account in Hugues Maret’s 1766 *Eloge historique de M. Rameau* implies that he may have been present on other occasions.

²⁷ *Règlement au sujet de l’Opéra...1714*, quoted in Jacques-Bernard Durey de Noinville, *Histoire du théâtre de l’Académie royale de musique en France* (2nd ed., Paris, 1757), ii, 130, quoted in Graham Sadler, “Patrons and Pasquinades: Rameau in the 1730s,” *Journal of the Royal Musical Association* 113, no. 2 (1988): 332.

²⁸ Graham Sadler, “Patrons and Pasquinades: Rameau in the 1730s,” 331-32.

²⁹ English Showalter, Jr., “Voltaire et ses amis d’après la correspondance de Mme de Graffigny, I: 1738-1739,” *Studies on Voltaire and the Eighteenth Century*, 139 (Oxford: Voltaire Foundation, 1975), 198-99, quoted in Sadler “Patrons and Pasquinades: Rameau in the 1730s,” 331.

³⁰ *Ibid.*, 198-9, quoted in Sadler, “Patrons and Pasquinades: Rameau in the 1730s,” 331-32.

³¹ Sadler, “Patrons and Pasquinades: Rameau in the 1730s,” 332.

Maret claimed that Rameau “judged the execution of items in rehearsal with as much severity as taste and fairness.”³² The same account says that Rameau would sit alone in the parterre during rehearsals and that he would remain concealed within a small box during performances.

Unfortunately, there is little information about musical direction at the Opéra upon the premiere of Rameau’s first *tragédie en musique*.³³ However, the next notable musicians in charge of the Opéra were François Rebel, who became *inspecteur* in 1739 (the same year as the above eyewitness account), and François Francoeur, whom Louis XV appointed in 1743 to act as *inspecteur* in Rebel’s absence.³⁴ In their youth, these two men were violinists of the Opéra orchestra, and as *inspecteurs* they served as its musical directors until 1753. As such, Rebel and Francoeur were responsible for auditioning musicians and controlling the quality of the musicians in the ensemble.³⁵ Rebel was in charge of the members of the company, including the orchestra’s players, and he also conducted the orchestra as *batteur de mesure*.³⁶ Although these men retired in 1753, they returned in 1757 as its directors, holding the royal privilege to the Opéra until 1767, meaning that they were in charge of the Académie’s musical direction during much of Rameau’s opera-writing career.³⁷

When Rebel became a musical director, he did not remain as the *batteur de mesure*. One of the most notable *batteurs* during this time was Pierre-Montan Berton, who won the position through a competition in 1758, at which he bested several members

³² Hugues Maret, *Eloge historique*, quoted in Caroline Wood and Graham Sadler, *French Baroque Opera: A Reader* (Aldershot, UK: Ashgate Publishing, 2000), 146.

³³ Rosow, 294.

³⁴ *Ibid.*, 295.

³⁵ *Ibid.*, 296.

³⁶ *Ibid.*, 295.

³⁷ *Ibid.*, 301.

of the Académie's orchestra for this musical leadership position. During his tenure, the title of the conductor changed from *batteur* to *maître de musique*, and, according to musicologist Lois Rosow, one of Berton's most important accomplishments was to transform "the Paris Opéra orchestra into one of the best in Europe."³⁸

During the time of Louis XVI, there were additional changes to the structure of the Opéra. Regulations of 1776 and 1784 outlined the expectations of the musicians of the orchestra, giving insight into their day-to-day experience. There were four rehearsals per week, but a new opera could require as many as eight rehearsals if it proved particularly challenging.³⁹ Regulations also required that the orchestral musicians be in the orchestra pit, ready to perform, fifteen minutes before the performance was scheduled to begin. Tardiness for rehearsal and performance "call time" resulted in fines.⁴⁰ These rules under the reign of Louis XVI appear to reflect the need to enact tighter control upon the musicians of the ensemble in order to increase their performance level. Although there is no such information of rehearsal procedure from the time of Rameau (the organization did not keep a daily record until the nineteenth century⁴¹), royal and musical leaders of the mid-to-late eighteenth-century seemed to understand that regular and orderly rehearsal was a key ingredient in a quality performance.

Rehearsal time notwithstanding, the musicians of the Opéra during Rameau's time had extensive experience playing together as an ensemble. The orchestra performed in a year-round opera schedule, with three to five performances a week, except during

³⁸ Rosow, 302-4.

³⁹ Charbonnier, 186-87.

⁴⁰ Ibid., 187.

⁴¹ Pitou, 305.

times of royal illness, Lent, and the two occasions when the theater burned down.⁴² The Opéra's season was longer than that of other European theatres, due to the large number of aristocratic patrons living in Paris.⁴³

However, considering the continuous reorganization and change of leadership, it may come as no surprise that there were mixed reports about the precision of the orchestra. According to Hugues Maret's *Eloge historique de M. Rameau* from 1766, "When we remember the poor standard of the musicians who comprised the opera orchestra when Rameau first occupied the lyric stage, we can appreciate the patience he needed during rehearsals."⁴⁴ By this account, the Opéra orchestra had seemingly declined from its high performing standard in the time of Lully. This is perhaps to be expected, as Lully famously required musical and behavioral discipline from his company. In Rameau's time, however, no single person wielded the same power over the organization, and the ensemble's performance may have suffered. Yet Maret's account conflicts with the October 1733 issue of *Mercure de France*, which reports as follows about the premiere of *Hippolyte et Aricie*: "The music of this opera has proved a little difficult to perform. But as a result of the skill of the orchestral players and the other musicians, this difficulty has not prevented performance."⁴⁵ Likewise, the November 20, 1739 performance of *Dardanus* received a positive review: "At last the opera was performed, and very well. People were struck by the harmonic richness, but there's so much music that in three whole hours the orchestral players didn't have time for so much as a

⁴² William Weber, "La musique ancienne in the Waning of the Ancien Régime," *The Journal of Modern History* 56, no. 1 (March 1984): 63.

⁴³ Ibid., 62.

⁴⁴ Maret, *Eloge historique*, 72-73, quoted in Caroline Wood and Graham Sadler, *French Baroque Opera*, 146.

⁴⁵ *Mercure de France* (October 1733): 2233-49, quoted in Graham Sadler, "Rameau, Pellegrin and the Opéra," 533.

sneeze.”⁴⁶ Despite its various organizational and musical issues, there is no doubt this orchestra represents an outstanding history of performance tradition in France.

The *Tragédies* in Performance

Rhythmic alteration, articulation, and ornamentation are important musical features to consider in any historically informed performance of Rameau’s *tragédies en musique*. The following section of this essay will consider these aspects and how ensemble concepts may influence the performance of these musical features.





Rhythmic Alteration

Rhythmic alteration, which includes “over-dotting” and *notes inégales*, is an important aspect of French Baroque performance practice. The greatest challenge facing the modern performer is that composers did not always indicate rhythmic alteration in their scores, and written descriptions of the practice do not condense into a system of absolute rules. Rather, these rhythmic changes were conventions that an eighteenth-century ensemble performer would have understood and applied appropriately to a movement based on its dance type, tempo, and overall character. Modern disagreement over the situational appropriateness and degree of inequality results from conflicting information and vague instruction within eighteenth-century writings, and, ultimately, the shortcomings of musical notation.

⁴⁶ Charles Malherbe, “Commentaire bibliographique,” *Rameau: Oeuvres complètes* (Paris: A. Durand et Fils, 1895-1924; repr. New York: Broude Brothers, 1968), x, xlviii-li, quoted in Caroline Wood and Graham Sadler, *French Baroque Opera: A Reader*, 101-2.

Surprisingly, the best sources for the practice of French over-dotting—the lengthening of a long, dotted note to further delay the following short note, especially in *ouvertures* and *entrées*—come from Germany, as French treatises are seemingly silent on this convention. Perhaps one of the reasons is that many eighteenth-century French tutors of various instrument types do not thoroughly discuss rudiments of music, therefore descriptions of various note values are either absent or minimal. Michel Corrette’s flute treatise (ca. 1735) simply explains that, “A dot is half of the note which it precedes.”⁴⁷ Similarly, Michel Pignolet de Montéclair’s 1736 treatise *Principes de musique* clarifies that, “The dot, ●, augments the note that precedes it by half of the value of the original.”⁴⁸ His rhythm chart indicates that the dotted notes have the same value that they do in contemporary notation: the dotted quarter note is the value of three eighth notes, and the dotted eighth note is the value of three sixteenth notes (Figure 1).

Figure 1: Michel Pignolet de Montéclair’s illustration of dotted rhythms in *Principes de musique*.⁴⁹

<i>La Ronde pointée</i> <i>vaut trois Blanches.</i>		<i>La Blanche pointée</i> <i>vaut trois Noires.</i>	
<i>La Noire pointée</i> <i>vaut trois Croches.</i>		<i>La Croche pointée</i> <i>vaut trois double-croches.</i>	

⁴⁷ Carol Reglin Farrar, *Michel Corrette and Flute-Playing in the Eighteenth Century* (Brooklyn, NY: Institute of Mediaeval Music, 1970), 20.

⁴⁸ Michel Pignolet de Montéclair, *Principes de musique* (Paris: Chez L’Auteur, 1736; repr. Geneva: Minkoff Reprint, 1972), 22.

⁴⁹ *Ibid.*, 23.

Although Montéclair makes no mention of the stylistic execution of these notes, traces of the over-dotting practice do exist in the articulation section of Jean-Pierre Freillon Poncein's practical treatise *On Playing Oboe, Recorder, and Flageolet* (1700). In referring to the nature of tongue strokes, Poncein says:

It must be observed in general that in all meters with three or four quarter notes or eighth notes, the first must be taken *tu*, the second *ru*, and the others *tu*, passing over the last a little faster than the others, after having dwelt on the proceeding note, especially when it is a half note or of equal value.⁵⁰

As the translator Catherine Parsons Smith indicates, "This is often taken as an argument for over-dotting in the case of the half note, and for *notes inégales* when the notes are of equal value."⁵¹

Fortunately, Leopold Mozart's violin treatise (1756), Carl Philipp Emanuel Bach's keyboard treatise (1753), and Johann Joachim Quantz's flute treatise (1752) address the stylistic execution of dotted notes in greater detail. Carl Philipp Emanuel Bach says about the dotted figure:

Short notes which follow dotted ones are always shorter in execution than their notated length. Hence it is superfluous to place strokes or dots over them...Dots after long notes or after short ones in slow tempos, and isolated dots, are all held. However, in rapid tempos prolonged successions of dots are performed as rests, the apparent opposite demand of the notation notwithstanding. A more accurate notation would remove such a discrepancy. Lacking this, however, the content of a piece will shed light on the details of its performance.⁵²

Leopold Mozart echoes this treatment of the dotted note.

The dot should in fact be held at all times somewhat longer than its value...It would be a good thing if this long retention of the dot were

⁵⁰ Jean-Pierre Freillon Poncein, *On Playing Oboe, Recorder, and Flageolet*, trans. Catherine Parsons Smith (Bloomington, IN: Indiana University Press, 1992), 23.

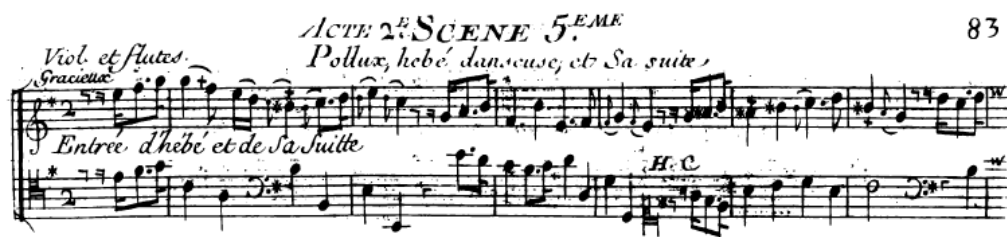
⁵¹ *Ibid.*, 23.

⁵² Carl Philipp Emanuel Bach, *Essay on the True Art of Playing Keyboard Instruments*, trans. and ed. William J. Mitchel (New York: W. W. Norton and Company, 1949), 157.

insisted on, and set down as a rule. I, at least, have often done so, and I have made clear my opinion of the right manner of performance by setting down two dots followed by a shortened one.⁵³

Of these mid-century German treatises, Quantz's flute treatise offers the most compelling evidence of this practice in French musical style. Quantz states that meter influences the execution of dotted rhythms, addressing this subject thoroughly in relationship with movements in the French style. For example, he explains about *alla breve* time: "The French make use of this metre in various types of dances, such as *bourrées, entrées, rigaudons, gavottes, rondeaux*, etc."⁵⁴ He continues, "In this metre, as well as in three-four time, the quavers that follow the dotted crochets in the *loure, sarabande, courante*, and *chaconne* must not be played with their literal value, but must be executed in a very short and sharp manner."⁵⁵ Based on this evidence, it seems like a viable option to delay the placement of the eighth note after the dotted-quarter-note figures and the sixteenth note after the dotted-eighth-note figures in Rameau's *entrées*, for example, as in Act II, scene 5 of *Castor et Pollux* (Example 1).

Example 1: Dotted figures in *Castor et Pollux*, Act II, scene 5, mm. 1-6 of the *entrée*.⁵⁶



⁵³ Leopold Mozart, *A Treatise on the Fundamental Principles of Violin Playing*, 2nd ed., trans. Editha Knocker (London: Oxford University Press, 1963), 41-42.

⁵⁴ Quantz, 290.

⁵⁵ Ibid., 290.

⁵⁶ Jean-Philippe Rameau, *Castor et Pollux* (Paris: Chez l'Auteur, Prault fils, la veuve Boivin, Leclair, and Duval, 1737).

Additionally, the first measures of the sarabande from Act III, scene 7 of *Zoroastre* would also support this style of rhythmic execution (Example 2). The sarabande, according to Quantz, has a different character than the *entrée*. He says, “The *entrée*, the *loure*, and the *courante* are played majestically, and the bow is detached at each crotchet, whether it is dotted or not....A sarabande has the same movement, but is played with a somewhat more agreeable execution.”⁵⁷ “More agreeable” is a vague description, so the difference in style will be a matter of taste. Nevertheless, because Quantz’s treatise also recommends uniformity of rhythmic execution, modern performers should agree as to the placement of the sixteenth note, according to the character of the movement, and perhaps play the dotted figures differently in the *entrée* and the sarabande movements.

Example 2: Dotted figures in *Zoroastre*, Act III, scene 7, mm. 1-3 of the sarabande.⁵⁸



Although any significant reference to “over-dotting” is apparently lacking within eighteenth-century French sources, the evidence for the use of *notes inégales* is decidedly

⁵⁷ Quantz, 291.

⁵⁸ Jean-Philippe Rameau, *Zoroastre* (Paris: La veuve Boivin, Castagniere et Chez l'Auteur, n.d. [1749]).

strong. One of the problems that arises in modern performance is determining which patterns of notes and rhythmic notations indicate the presence of *notes inégales*. As

François Couperin states in his treatise *L'Art de toucher le clavecin* (1716):

In my opinion, there are defects in our method of writing music which correspond to our manner of writing our language. We write differently from the way we play, which is the reason why foreigners play our music less well than we play theirs. On the contrary, the Italians write their music in the true note values in which it is to be played. For example, we dot several eighth notes in succession moving by conjunct degrees; however, we write them in equal time values. Our custom has enslaved us and we continue in it.⁵⁹

Couperin's observations seem to indicate that the eighteenth-century French performer would, as a matter of convention, "dot" conjunct eighth notes, although the notes might otherwise have had the appearance of rhythmic evenness. Other treatises, such as those of Michel de Saint-Lambert, Jacques-Martin Hotteterre and Michel Pignolet de Montéclair, support Couperin's assertions, demonstrating that this practice was pervasive in French music and pertained to the voice and to musical instruments, such as the flute.

Michel de Saint-Lambert explains the practice of *notes inégales* in his 1702 treatise, *Principles of the Harpsichord*:

The equality of movement that we require in notes of the same value is not observed with eighth notes when there are several in a row. The practice is to make them alternately long and short, because this inequality gives them more grace.⁶⁰

He continues to explain that the degree of inequality is a matter of taste and tempo.

When one must make the eighth or quarter notes unequal, it is a matter of taste to decide if they should be more or less unequal. There are some

⁵⁹ François Couperin, *L'Art de toucher le clavecin*, trans. and ed. Margery Halford (Port Washington, NY: Alfred Publishers, 1974), 49.

⁶⁰ Michel de Saint-Lambert, *Principles of the Harpsichord*, trans. and ed. Rebecca Harris-Warrick (Cambridge: Cambridge University Press, 1984), 46.

pieces in which it is appropriate to make them very unequal and others in which they should be less so. Taste is the judge of this, as is tempo.⁶¹

The inclusion of a passage regarding *notes inégales* in Jacques-Martin Hotteterre's *Principles of the Flute, Recorder, and Oboe* (1707) proves that the practice was also standard for the flute and other woodwind instruments from the beginning of the eighteenth century. Hotteterre explains:

It is well to note that all eighth notes should not always be played equally, but that in some time signatures one long and one short should be used. This usage is also governed by the number. When it is off, the opposite is done. This is called dotting. The times in which this method is ordinarily used are two-four, simple three and six-four.⁶²

Three decades after Hotteterre's treatise, and three years after the premiere of Rameau's first *tragédie en musique*, Michel Pignolet de Montéclair offers instruction to vocalists in his treatise *Principes de musique* (1736), showing that rhythmic inequality was in vogue during the early stages of Rameau's opera-writing career, including in vocal performance. He writes: "Eighth notes are sometimes sung equally and sometimes unequally. When we make them equal, we stay as much on the second as on the first. When one makes them unequal (*inégales*), one remains a little more on the first than on the second."⁶³ Montéclair demonstrates the principles he outlines in his writing with notated scenarios (Figure 2). The examples of equal notes (*égales*) include disjunct eighth notes or eighth notes in compound time (3/8). He represents passages of unequal eighth notes (*inégales*) as conjunct notes in 2/2, common time, 2/4, or 3/4. Although

⁶¹ Saint-Lambert, 46.

⁶² Jacques-Martin Hotteterre, *Principles of the Flute, Recorder and Oboe*, trans. Paul Marshall Douglas, (New York: Dover Publications, 1968), 37.

⁶³ Michel Pignolet de Montéclair, *Principes de musique* (Paris: Chez L'Auteur, 1736; repr. Geneva: Minkoff Reprint, 1972), 30.

otherwise very thorough, Montéclair's description lacks any qualification for slurred passages.

Figure 2: Eighth-note inequality table in Montéclair's *Principes de musique*.⁶⁴

Les croches se chantent quelque-fois également et quelque-fois inégalement. Quand on les fait égales, on reste autant sur la seconde que sur la première. Quand on les fait inégales, on demeure un peu plus sur la p^{re} que sur la seconde.

Exemple .

Croches pointées.

Chantez ce qui suit, comme s'il étoit noté de la manière précédente.

à 4 tems.

Les croches sont égales dans les mesures suivantes.

Les croches sont inégales, dans les leçons qui suivent.

Quand le compositeur veut que les croches soient égales dans la mesure à trois tems, marqué par 3, ou $\frac{3}{4}$, Il écrit au dessus. Croches Égales.

Les croches sont égales dans les mesures composées marquées par $\frac{6}{8}$, $\frac{9}{8}$ et $\frac{12}{8}$, parce- qu'elles dérivent de la mesure simple $\frac{3}{8}$, ou les croches sont égales.

Les croches sont inégales dans les mesures composées $\frac{6}{4}$, $\frac{9}{4}$ et $\frac{12}{4}$, parce-qu'elles dérivent de la mesure simple désignée par 3, ou $\frac{3}{4}$, ou les croches sont inégales.

En quelque mesure que ce puisse être, les notes dont il en faut quatre pour remplir un tems, sont toujours inégales.

In his *tragédies*, Rameau often slurred passages of conjunct eighth notes in pairs, a practice that modern musicologists suggest negates the *inégle* principle. Colin Lawson and Robin Stowell claim: “Inequality was never applied when notes were slurred or dotted.”⁶⁵ However, “never” is a dangerously strong word when discussing issues of

⁶⁴ Montéclair, 30.

⁶⁵ Colin Lawson and Robin Stowell, *The Historical Performance of Music: An Introduction* (Cambridge: Cambridge University Press, 1999), 67.

performance practice. In fact, musicologist Claire A. Fontijn has demonstrated, by observing Quantz's notes in his *Solfeggi pour la flute traversiere avec l'enseignement*, that passages of eighth-notes, slurred in pairs, could be either equal or unequal (Figure 3).⁶⁶ Quantz describes a passage of slurred eighth notes in 3/4 time: "These passages should neither be equal, nor should they be too unequal."⁶⁷

Figure 3: Slurred passages in Quantz's *Solfeggi* that are neither equal (egal) nor unequal (unequal).⁶⁸



Based on Quantz's advice, it seems that it would be appropriate to add a degree of *inégalité* to certain passages of Rameau's *tragédies* that have slurred eighth-notes in conjunct motion. An example of this possibility occurs in the "Air tendre en Rondeau" from Act I, scene 3 of *Zoroastre* (Example 3). There are further ensemble considerations, however. If the flutist plays eighth notes unequally in m. 6 of this air, the placement of these notes might conflict with the placement of the eighth notes in the second violin part. Although Montéclair wrote that disjunct eighth notes like the ones in the violin line should be equal, Quantz showed that slurred groups of thirds could have a degree of inequality. Therefore, taste, as Saint-Lambert would suggest, will guide the degree of

⁶⁶ Claire A. Fontijn, "Quantz's Unequal: Implications for the Performance of 18th-Century Music," *Early Music* 23, no. 1 (February 1995): 59.

⁶⁷ *Ibid.*, 59.

⁶⁸ Johann Joachim Quantz, *Solfeggi pour la flute traversiere avec l'enseignement* (Winterthur, Switzerland: Amadeus Verlag, 1978), 55.

inequality. The second violinist could synchronize his or her pattern to the flutist, who is the soloist of this movement, and possibly apply that same degree of inequality in m. 8, where the violin figure imitates the previous flute gesture. Otherwise, the flutist may choose to limit the amount of inequality in the solo line to accommodate a steady character in the violin line.

Example 3: Slurred eighth-notes in pairs in the flute and violin two parts, Jean-Philippe Rameau, *Zoroastre*, Act I, scene 3, mm. 1-13 of “Air tendre en Rondeau.”



Within Rameau’s *tragédies*, there are also dance movements with running eighth-note patterns, slurred in pairs, that might match Quantz’s recommendation for “unequal.” The first gavotte in Act I, scene 4 of *Castor et Pollux* is a useful example (Example 4).

Example 4: Slurred eighth-notes in pairs in Jean-Philippe Rameau, *Castor et Pollux*, Act I, scene 4, mm. 1-9 of the première gavotte.



In this gavotte, Rameau groups eighth notes, descending by thirds, in pairs, throughout the flute, violin, and bass lines. The character of this gavotte, and the tempo, will have the greatest impact on the amount of inequality that musicians will be inclined to add, if any. At a sprightly, fast tempo this movement might have, at most, the “neither equal nor unequal” quality that Quantz describes. Even eighth notes would also be acceptable, as Baroque treatises do not necessarily recommend *inéga*le for disjunct intervals.

Belgian Musicologist Dirk Moelants recently conducted a study of the performance of *notes inégales* by sixteen modern Baroque specialists—eight violinists and eight harpsichordists. Observing the performance of excerpts from late seventeenth-century and early eighteenth-century French gavottes, he measured the influence of tempo upon the ratio of eighth-note inequality. Moelants chose the gavotte because it lacks a characteristic tempo, and this dance movement often involves eighth notes played *inéga*le. The instrumentalists played each excerpt at a free tempo, MM = 40, MM=60,

and MM=80 to the half-note pulse. Moelants provided his participants with the following instructions: “Always play expressively....Don’t think too much about how to perform the ‘notes inégales’ but make sure the music sounds natural, following your own ‘bon gout.’”⁶⁹ Although he found that the “global ratio of inequality,” which was close to 5:3, decreased as the tempo increased, he noted that “the differences between performers were especially striking,” making it “necessary to examine the individual interpretations.”⁷⁰ Individual results revealed that, “Players 4 and 9 did not show a significant effect of tempo. Players 1, 2, 7, 11, 14 & 15 show a gradual decrease with increased tempo, but players 5 and 10 show the exact opposite tendency, increasing the inequality ratio when tempo increased.”⁷¹ In his final discussion and conclusion, Moelants observes, “On the one hand, it is a confirmation that tempo influences expressive timing, but on the other hand, the influence is radically different depending on the performer....Performers adapt their timing under the influence of the tempo, but do so according to their personal taste.”⁷² In the case of this particular gavotte from *Castor et Pollux*, the tempo, intervals, and articulation markings will influence the rhythmic execution of the eighth-note patterns. As the movement is largely homorhythmic, the group of performers may gravitate toward equality, as that seems to be a common tendency according to this study, for the sake of ensemble uniformity.

The rhythmic scenario is slightly different in the rigaudon from Act IV, scene 4 of *Les Boréades* (Example 5). Here Rameau writes slurred pairs of eighth notes, which the

⁶⁹ Dirk Moelants, “The Performance of Notes Inégales: The Influence of Tempo, Musical Structure, and Individual Performance Style on Expressive Timing,” *Music Perception: An Interdisciplinary Journal* 28, no. 5 (June 2011): 452.

⁷⁰ *Ibid.*, 453.

⁷¹ *Ibid.*, 453.

⁷² *Ibid.*, 457.

orchestra passes among violins, flutes, and bassoons. This does not fit the profile of *notes inégales* that Montéclair illustrates in his treatise. The rigaudon, originally a provincial dance, is likewise very fast and gay.⁷³ Modern musicians might find in this movement that a fast tempo naturally lessens any temptation to play these two-note gestures unequally.

Example 5: Even eighth-notes in *Les Boréades*, Act IV, scene 4, mm. 1-6 of the premier rigaudon.⁷⁴

Premier Rigaudon

[P.C.]

Flutes
Flute I
Flute II
Bassoon I
Violin I
Violin II
V.cello
B.C.

In addition to eighth notes, musicologist David Fuller has made an interesting argument that dotted figures can indicate *notes inégales*, as they often do in the Baroque

⁷³ Betty Bang Mather, *Dance Rhythms of the French Baroque: A Handbook for Performance* (Bloomington, IN: Indiana University Press, 1987), 228.

⁷⁴ Jean-Philippe Rameau, *Orchestral Dances from the Opera, Abaris ou Les Boréades* (1764), ed. Mary Térey-Smith (Victoria, B.C.: Jeu Music, 1986), 17.

treatises that instruct performers in how to play this rhythmic alteration.⁷⁵ He summarizes:

There are countless examples of continuous written dotting in French baroque music *and* in foreign music imitative of French styles which, played or sung with any musical sensitivity, will be indistinguishable to the ear from *notes inégales* as taught in French manuals.⁷⁶

Taking Fuller's findings into account, under certain circumstances, a performer might choose to soften conjunct dotted-eighth-sixteenth-note rhythms into *notes inégales* rather than over-dot them.

The sarabande movement from Act III of Rameau's *Zoroastre* demonstrates this principle, as a contrasting alternative to the previous discussion of over-dotting. The eighteenth-century sarabande is usually a slow dance in 3/4 time in which eighth notes are usually played *inégalement*.⁷⁷ In this movement there are no conjunct eighth notes, only conjunct combinations of dotted-eighth-sixteenth-note figures that are sometimes unmarked in articulation and sometimes slurred (Example 6). This notation possibly represents a written realization of *notes inégales*, and the performer might entertain the possibility that the character of the piece could support something less stringent than a strict subdivision of these figures. However, the player might be tempted, in the absence of a slur, to displace the sixteenth note in the opposite direction, creating an over-dotted figure. Noting the meticulous indication of slurs within the original published score, the players could consider realizing the figures differently when they appear with different articulations.

⁷⁵ David Fuller, "Notes and Inégales Unjoined: Defending a Definition," *The Journal of Musicology* 7, no. 1 (Winter 1989): 21-8.

⁷⁶ *Ibid.*, 25.

⁷⁷ Mather, *Dance Rhythms of the French Baroque*, 293.

Example 6: Combinations of slurred, conjunct dotted-eighth-sixteenth-note figures in Jean-Philippe Rameau, *Zoroastre*, Act III, scene 7, mm. 17-26 of the sarabande.



Articulation

Articulation is another important aspect of performance practice that an ensemble must address in a historically informed interpretation of Rameau's *tragédies*. The flute parts within Rameau's eighteenth-century published scores are largely thorough in the marking of slurs, and eighteenth-century flute treatises describe the execution of the slur in the same manner: the first note of the slur is tongued, and the rest are not. However, this is just one aspect of articulation, as a wind player may choose, in the absence of slurs, to articulate with a variety of styles and syllables.

Articulation indicates, for the flutes, the movement of the tongue, and, for the violins, the movement of the bow. Many historic flute players compare the articulation of the flute to that of the bow. For example, Michel Corrette's flute treatise (c. 1735) states that, "The tongue attacks made on the flute are like the bow strokes made on the violin."⁷⁸ It would seem fitting, then, for the flutes to match the articulation of the violins when the flutists and violinists are playing the same part, as they are in "Vol des Zephirs" in Act V, scene 7 of *Hippolyte et Aricie* (Example 7).

⁷⁸ Farrar, 34.

Example 7: Flutes and violins in unison in Jean-Philippe Rameau, *Hippolyte et Aricie*, Act V, scene 7, mm. 1-6 of “Vol des Zéphirs.”⁷⁹



Articulation decisions in the gigue from *Zoroastre* prove more challenging, however, with counterpoint between the various voices and rapid articulation in the flute parts (Examples 8 and 9). Early in the eighteenth century, flutists used the syllables “tu” and “ru” for articulation variety, but this practice was out of vogue by the time of Rameau’s *tragédies*. Antoine Mahaut’s treatise *A New Method for Learning to Play the Transverse Flute* (c. 1760) suggests that “each player should attempt to develop the most precise articulation possible, according to his natural ability and without worrying too much about various syllables.”⁸⁰ However, flutists required a wider variety of syllables to facilitate articulation in faster passages. Mahaut also relates that “many people rely on what is called double tonguing: it is used in very rapid passages and articulated with the two syllables *Di Del*.”⁸¹ Eighteenth-century flutist Charles de Lusse likewise recommends a version of double tonguing in his flute treatise, using the syllable “LOUL,” but only in passages of caprice, or with wind or storm-like characters.⁸²

⁷⁹ Jean-Philippe Rameau, *Hippolyte et Aricie* (Paris: Montule, la veuve Boivin, and Le Clerc, n.d. [1733]).

⁸⁰ Antoine Mahaut, *A New Method for Learning to Play the Transverse Flute*, trans. and ed. Eileen Hadidian (Bloomington, IN: Indiana University Press, 1989), 21.

⁸¹ *Ibid.*, 21.

⁸² Charles De Lusse, *L’Art de la flûte traversiere* (Paris: Chez l’Auteur, n.d. [1760]), 4.

Flutists performing rapid articulated passages in Rameau's *tragédies*, such as the gigue from *Zoroastre*, may choose from a variety of syllables. The authors of eighteenth-century flute tutors largely aimed their writings at amateur flutists, so they offer no advice for an orchestral flutist who will join one or even three other musicians in playing a single part. The best option will sound precise, according to Mahaut, and uniform, according to Quantz.

Example 8: Articulated passages in Jean-Philippe Rameau, *Zoroastre*, mm. 1-11 of the gigue.



Example 9: Articulated passages, flutes with violins, in Jean-Philippe Rameau, *Zoroastre*, mm. 22-30 of the gigue.



Ornamentation (Agréments)

According to Jean Rousseau's *Traité de la viole* (1687):

Embellishments (*agrémens*) are to the voice and instruments what ornaments are to an edifice, and as ornaments are not necessary to the subsistence of the building, but they only serve to make it more agreeable to the eye; thus a vocal air and an instrumental piece may be regular in substance but not satisfying to the ear if they do not adorn suitable embellishments. And, also, as too great a quantity of ornaments produces a kind of confusion that renders the edifice less pleasant; thus a confusion of embellishments in airs and in pieces serves only to diminish their beauty. That is why, in architecture, one distributes ornaments with order and rules. In the same way, it is necessary to practice embellishments in airs and pieces with order and rules...⁸³

Ornamentation is an essential facet of Baroque performance, and a flutist must consider its practice, or “rules,” as both a soloist and an orchestral musician when performing Rameau's *tragédies*. The purpose of the *agréments* is to ornament the melody, making it smooth or more graceful, serving either a melodic or harmonic function.⁸⁴ Such *agréments* include *tremblements* (*cadence* or trill) and *ports de voix*, which Rameau's publishers and copyists marked in the eighteenth-century scores and parts of the *tragédies*, and *flattement*, which performers added at their discretion.

In *Principles of the Flute, Recorder, and Oboe*, flutist Jacques-Martin Hotteterre explains the trill as follows: “For the benefit of those who do not know what trills are, they can be described as an agitation of two sounds, either a step or a half step apart, which are played alternately in rapid succession.”⁸⁵ Although Rameau's publishers and copyists almost always labeled this gesture with a plus sign or little cross (+), this does not imply that the musicians performed trills homogenously. The 1772 French violin

⁸³ Jean Rousseau, *Traité de la viole* (Paris: Christophe Ballard, 1687), 74-75. (Punctuation added)

⁸⁴ Betty Bang Mather, *Interpretation of French Music from 1675 to 1775* (New York: McGinnis and Marx, 1973), 51.

⁸⁵ Hotteterre, 20.

treatise *Principes du violon* by l'Abbé Le Fils offers detailed performance instruction for four different types of trill, or *cadence*: prepared trill (*cadence appuyée*), which begins on the printed upper note, indicated by a slur to the trilled note; sudden trill (*cadence subite*, unprepared trill), which lacks a preparation, having a quick upper appoggiatura before the trilled pitch; fake trill (*cadence feinte*), which only has one beating; and the *cadence tournée*, which ends on a two-note turn. As he explains, each trill is marked with a plus sign.⁸⁶

According to François David's singing method (1737), the trill always begins from the upper note, yet this upper note has a flexible value. The trill generally increases in speed toward its end, and note value, tempo, and vocal syllable influence the execution of the trill. The musician can also combine the trill with other ornaments and passing tones to add additional grace to the vocal line.⁸⁷ Various instrumental treatises echo David's views, including the notion that the trill should accelerate toward the end of the figure. Michel de Saint-Lambert's *Principles of the Harpsichord* (1702) instructs: "When the *tremblement* must be long, it is more beautiful to strike it slowly at first, and to speed it up only at the end, but when it is short it must always be quick."⁸⁸ Likewise, L'Abbé le Fils observes that the player can make the alternations quicker toward the end of the trill, except in the case of the quick, fake trill.⁸⁹

⁸⁶ L'Abbé le Fils, *Principes du Violon* (Paris: Chez l'Auteur and Le Clerc [1761]; repr. Geneva: Minkoff Reprint, 1976), 14.

⁸⁷ François David, *Méthode nouvelle ou principes généraux pour apprendre facilement la musique et l'art de chanter* (Paris: Chez Boivin and Le Clerc, 1737), 133.

⁸⁸ Saint-Lambert, 77.

⁸⁹ L'Abbé le Fils, 14.

Although the eighteenth-century flutist would have emulated many aspects of vocal, string, and harpsichord practice to achieve a level of ensemble uniformity, the mode of producing trills using the finger holes of the flute produced a unique effect, often intentionally. Unlike eighteenth-century vocal, string, and harpsichord treatises, flute treatises offer trill fingering charts, and the player must produce many of the intervals artificially by modern standards. These treatises demonstrate that eighteenth-century ears welcomed a certain flexibility of intonation in the *tremblement*. There is an explanation of an intentionally widened trill in Jacques-Martin Hotteterre's flute treatise:

The trill from E-natural to F-sharp...is started by opening the fifth, sixth and seventh holes to play F-sharp, which acts as appoggiatura, and finished by restopping the fifth and shaking on the fourth. This *widens the interval* and *brings out* the trill more successfully than it would if the shake were on the fifth hole, which would not produce a sufficiently brilliant effect.⁹⁰

This trill happens repeatedly in Rameau's movements for transverse flute, as the F-sharp to E-natural trill belongs to the instrument's favored keys. "Rossignols amoureux" from Act V, scene 8 of *Hippolyte et Aricie*, demonstrates Hotteterre's interesting principle (Example 10). In m. 24 the first flutist has an accelerating gesture from F-sharp to E-natural that speeds into a trill. The suggested fingering of all eighteenth-century flute treatises produces a widened trill by raising the pitch of the F-sharp. Although this could be an obtrusive effect, the flute is an obbligato instrument with a soloist role here, so this widened trill will add extra brilliance without disrupting the ensemble sound. Rameau uses the colors of the various instruments to create a forest full of chirping birds.

⁹⁰ Hotteterre, 31. (Emphasis added)

Example 10: The flutist speeds into a trill from F-sharp to E in *Hippolyte et Aricie*, Act V, scene 8, m. 24 of “Rossignols amoureux” (mm. 19-25).

The image shows a musical score for a flute part. The top staff features a complex trill passage, with notes marked with a '+' sign. The bottom staff is labeled "Rossignols amoureux Répon=" and contains a simpler melodic line. The key signature has two sharps (F# and C#), and the time signature is 3/4.

Another example of this trill occurs within the gigue from *Zoroastre* (Example 11). In m. 6 the flutes trill against the moving violin line, adding extra energy to the gesture. Ensemble flutists will use the same fingering—eighteenth-century flute tutors only offer one fingering—but this trill will sound out of tune against other ensemble members to a listener expecting a pure major second.

Example 11: Flutes trill from F-sharp to E-natural in Jean-Philippe Rameau, *Zoroastre*, m. 6 of the gigue (mm.1-7).

The image shows a musical score for a gigue from Zoroastre. The top staff is labeled "188. Gigue. Flutes." and features a trill passage. The middle staff is labeled "Viol." and the bottom staff is labeled "Basses." The key signature has two sharps (F# and C#), and the time signature is 3/8. The title "Zoroastre." is written above the flute staff.

In addition to Hotteterre's advice regarding trills, many other eighteenth-century flutists' trill charts suggest fingerings that produce intervals peculiar to the modern ear. Perhaps the best way to experience this phenomenon is to try the trills on replicas of period instruments. Although a modern player can experiment to find fingerings that are better in tune and that create purer intervals, these fingerings often do not appear on the charts of eighteenth-century tutors.

Musicologist Beverly Jerold claims: "By our standards, most [early] wind and brass instruments obstructed successful music execution...For a unified ensemble, good intonation for every instrument is essential, but this was nearly impossible to achieve."⁹¹ She explains:

Also affecting intonation...was the fact that some musicians were taught to play flats higher than sharps...Others, however, followed the dictates of their ear, which produces sharps higher than flats in most cases. When an orchestra includes both types of players, poor intonation is inevitable.⁹²

Although this may have been the case, eighteenth-century musicians were nevertheless aware of intonation problems; many early eighteenth-century treatises offered written instructions for adjusting troublesome trills. Mahaut's treatise offers multiple fingering options for some trills, and the flutist can decide which to use, based on the quality of intonation, to match others in the ensemble, if she desires. Mahaut admonishes: "I especially recommend that you move the fingers as little as possible when playing trills, so as to keep them from going out of tune."⁹³

The *choeur gracieux* "Rassurez vous, tendre Amélite" from Act I, scene 3 of *Zoroastre* provides several examples of trills among flutes, violins, and basses, with a

⁹¹ Beverly Jerold, *The Complexities of Early Wind Instruments* (Turnhout, Belgium: Brepols, 2015), 8.

⁹² *Ibid.*, 9.

⁹³ Mahaut, 11.

choir of unison soprano voices (Example 12). In m. 5 the first flutists play a trill from B-flat to A with the same fingering one might use to trill from B-natural to A. The flutists must minimize the movement of the fingers to improve, or hide, the intonation, as the fingering will not provide a pure interval. By contrast, the trill of G to F-sharp in the second flutes is a rapid alternation of two clear notes. Rameau's orchestra at the Opéra would have had at least two flutes on each part, creating a unique color and, possibly, a jarring agitation, if the players did not align or balance the parts. The desired level of uniformity or discord may have been another matter of taste.

Example 12: First flutes trill from B-flat to A while second flutes trill from G to F-sharp in Jean-Philippe Rameau, *Zoroastre*, Act I, scene 3, m. 5 of the *choeur gracieux* “Rassurez vous tendre Amélie” (mm.1-5).

The image shows a musical score for Example 12, which is a musical score for Jean-Philippe Rameau's *Zoroastre*, Act I, scene 3, m. 5 of the *choeur gracieux* “Rassurez vous tendre Amélie” (mm.1-5). The score is written for four staves: 1^{re} Fl. (First Flute), 2^e Fl. (Second Flute), Viol. d^e (Violoncelle), and Chœur gracieux. The 1^{re} Fl. staff shows a trill from B-flat to A, marked with a “+” indicating a trill. The 2^e Fl. staff shows a trill from G to F-sharp, marked with a “+” indicating a trill. The Viol. d^e staff shows a trill from G to F-sharp, marked with a “+” indicating a trill. The Chœur gracieux staff shows a trill from G to F-sharp, marked with a “+” indicating a trill.

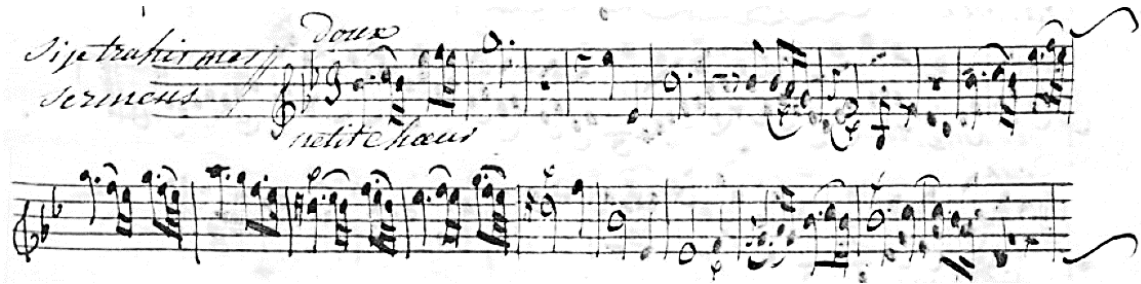
Another interesting case is m. 11 (Examples 13 and 14), in which the choir of women trill with only the bass line. The flutes and violins have no such *agrément*, but this is not an anomaly: the handwritten parts for the violins also lack the “+” indication. As Rameau's publisher and copyist both used the “+” to indicate these trills that the

composer desired, it might not be ideal to add one in its absence. There is a purity to the sound of the unison chorus that the instrumentalists might not choose to obscure with extra *tremblements*.

Example 13: Trill on “jeux” against a trill in the basses in Jean-Philippe Rameau, *Zoroastre*, Act I, scene 3, m. 11 of the *choeur gracieux* “Rassurez vous tendre Amélite” (mm. 11-14).



Example 14: No trill notated in Jean-Philippe Rameau, *Zoroastre*, Act I, scene 3, m. 11 of violin part of the *choeur gracieux* “Rassurez vous tendre Amélite” (mm. 1-19). Copied by Durand, 1758-1776. Bibliothèque nationale de France. gallica.bnf.fr.



A third trill example (Example 15) occurs in the penultimate bar of “Rassurez vous,” where flutes and violins have a prepared trill. According to Rameau’s instructions in his *Pièces de clavecin*, an upper note tied to a note with a trill sign serves as the start of the ornament.⁹⁴ L’Abbé le Fils calls this a *cadence appuyée*, or a supported trill. Le Fils explains: “To support or prepare a trill, before beating it, remain a certain time on the borrowed [upper] note.”⁹⁵ Although his written instructions are vague, his musical example depicts the movement of the trill beginning on beat two after the held upper note (Figure 4). Conflicting information, even within a single source, is not unusual. Both language and notation often fall short in capturing the aesthetic of this music, so eighteenth-century French writers often suggest that taste (*le goût*) will guide the players and singers in shaping ornaments.

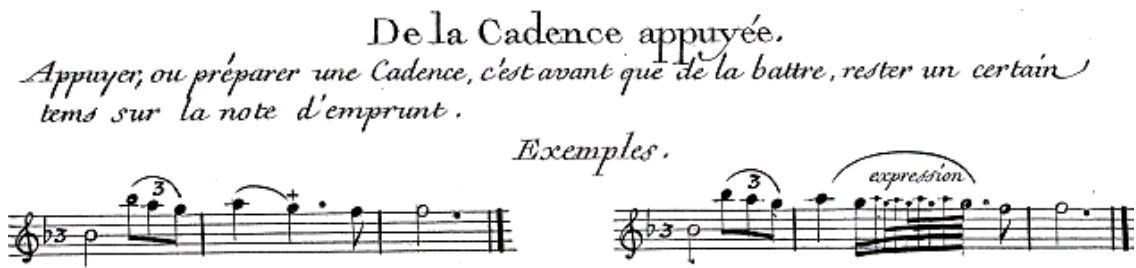
Example 15: Prepared trill in the penultimate measure of Jean-Philippe Rameau, *Zoroastre*, Act I, scene 3, *choeur gracieux* “Rassurez vous tendre Amélite” (mm. 31-40).



⁹⁴ Jean-Philippe Rameau, *Pièces de Clavecin: Complete Keyboard Works I*, ed. Siegbert Rampe (Kassel: Bärenreiter, 2004), 16.

⁹⁵ Le Fils, 14.

Figure 4: The *cadence appuyée* in L'Abbé le Fils, *Principes du violon*.⁹⁶



The *port de voix*, a French term describing a figure similar to the Italian *appoggiatura*, “carries the sound” from one note to the next.⁹⁷ Although eighteenth-century French musicians generally apply this term to the ornament between two ascending notes, there is also a *port de voix* between descending figures that they sometimes call a *coulé*. Mahaut’s flute treatise offers specific advice concerning the realization of the *port de voix*:

The *appoggiatura* [*port de voix*] is indicated by a small note articulated with the same tongue stroke as the note which follows it. Usually the *appoggiatura* moves step-wise. The Italians use it both ascending and descending, and give the small note half the value of the note before which it appears. If the principal note is three beats long, the *appoggiatura* gets two.⁹⁸

Other treatises do not describe the length of the “small note” so specifically, often leaving the length to the performer’s taste. According to Michel Corrette’s *L’Art de se perfectionner dans le violon* (1738 and 1782), the player should hold the *port de voix* in the *adagio* longer than the note that follows it, but, for other situations one must

⁹⁶ Le Fils, 14.

⁹⁷ Mather, *Interpretation*, 53.

⁹⁸ Mahaut, 20.

determine according to its use and good taste.⁹⁹ According to L'Abbé le Fils in *Principes du violon*, "Taste (*Le goût*) dictates the length of the *port de voix* before playing the note that follows."¹⁰⁰

In addition to flute, violin, and harpsichord treatises, it is important to explore vocal writings as well, since eighteenth-century musicians often recommended a vocal model for embellishments. In his viol treatise, Jean Rousseau claims that, "The voice practices [embellishments] perfectly, [so] it is surely on this model that instruments must conform."¹⁰¹

François David explains the practice in his *Méthode nouvelle ou principes generaux pour apprendre facilement la musique et l'art de chanter* (1737):

The prepared and sustained *port de voix* is made of, and it originates from, the note below the one that one will hold, either by a tone or a half tone below; and when the sound has been held, it will be necessary to spin it gently on the first of the three parts, which must be given to the duration of the [second] note, to imperceptibly inflate the sound on the second part, and to make it die as it was born, in the third part. This is the proper *port de voix*.¹⁰²

This cumbersome language follows a notated realization that illustrates a precise rhythmic value: the *port de voix* is one-quarter the duration of the figure, and the principal note, which occupies the remaining three-quarters of the figure, has a swell that David depicts with a darkened wedge (<>) (Figure 5). David not only offers a concrete rhythmic indication of the ornament, placing the *port de voix* on the beat, but also suggests a dynamic treatment of the figure. Additionally, his treatise coincides with the

⁹⁹ Michel Corrette, *L'Art de se perfectionner dans le violon* (Paris: Chez l'Auteur, Boivin, et Le Clerc, 1782; repr. Geneva: Reprint, 1972), 4.

¹⁰⁰ Le Fils, 15.

¹⁰¹ Jean Rousseau, 74-75. (Punctuation added)

¹⁰² David, 135.

production of *Castor et Pollux* at the Opéra, so it is particularly relevant to the interpretation of Rameau's *tragédies*.

Figure 5: *Port de voix* examples in François David, *Méthode nouvelle ou principes généraux pour apprendre facilement la musique et l'art de chanter*.¹⁰³



The issue of *port de voix* duration is pervasive in the performance of Rameau's *tragédies*. “Ah! Que votre sort est charmant” from Act IV, scene 2 of the 1739 score of *Dardanus* serves as an excellent case study. Two separate flute lines and continuo accompany the soprano in this air. The musicians must determine the realizations of various *ports de voix*, sometimes together, and sometimes against different ornaments, such as a trill. Likewise, the *ports de voix* may occur on the same beat in the bar, but on different note values. The performers must decide whether it is more appropriate to align the ornaments or to enhance the expressive disturbance by executing each line differently.

The first example occurs in the second full bar, where both flutes have a *port de voix* between their respective ascending intervals (Example 16). The soprano note and the bass note (F-sharp and A, respectively) remain the same for the first two beats. According

¹⁰³ David, 132.

to Mahaut, the flutists should hold the *port de voix* for two beats, with the main note occupying the last beat of the bar. However, the musicians must consider the effect of the movement of these notes upon the harmony. A two-beat *port de voix* would create a dissonant two-beat suspension, with the ensemble moving together to an A minor chord on beat three. The soprano's trill on beat one draws further attention to the word "sort" (fate), yet it may also lessen the intensity of the suspension. If the flutists decide to release the *port de voix* on beat two, after the soprano trill, it would create an F-sharp diminished chord, with the third in the bass. In either case, the flutists must move together, or they could potentially create an undesirable split third.

Example 16: Prominent *port de voix* in the second full measure of *Dardanus*, Act IV, scene 2, "Ah! Que votre sort est charmant" (mm. 1-7).¹⁰⁴

The image shows a musical score for three parts: Flute 1, Flute 2, and Soprano. The title is "Dardanus." and the scene is "Act IV, scene 2". The lyrics are "Ah! que votre sort est charmant, l'Amour même a formé vos chaînes, l'Amour". The score is in 3/4 time. The Flute parts show a prominent port de voix in the second full measure (measure 5). The Soprano part has a trill on beat one. The lyrics are "Ah! que votre sort est charmant, l'Amour même a formé vos chaînes, l'Amour".

The *ports de voix* in the first flute part and the soprano part of m. 5 pose a different problem. Following Mahaut's rule once more, the flutist can hold the F-sharp for two beats, but this time it will be against B-flat in the soprano's line, which flows from the singer's own *port de voix*, of a different value, into a melisma. The two voices

¹⁰⁴ Jean-Philippe Rameau, *Dardanus* (Paris: Chez l'Auteur, la veuve Boivin, Leclair, and Monet, 1739).

can resolve together to G on beat three. The foremost consideration in this case will be, aside from the character of the piece, not to disrupt the soprano line, using the ear to make the most suitable harmonic movement. This example demonstrates that there will not always be a uniform execution of simultaneous elements within a movement. The flutist and soprano have different rhythmic indications, so it will be impractical in some cases to attempt to unify the ornaments.

In addition to using various *ports de voix* and *tremblements*, French Baroque musicians applied the technique *flattement* in both vocal and instrumental performance. Although Rameau did not mark instances of *flattement* within his scores, musicians may have added this intentional pitch variation as an ornament. In a Baroque violin section, according to period violinist Robin Stowell, vibrato was “executed with the fingers and wrist but not with the lower arm,” therefore it was “necessarily somewhat narrower, tighter and less intense, due to the types of violin hold then in vogue.”¹⁰⁵ *Flattement* on the flute was likewise an ornament that players produced, usually, by special fingerings, rather than the breath, as with modern vibrato.

Flute treatises are largely consistent in explaining that *flattement* mainly belongs on long notes. According to Corrette’s flute treatise, “The flattement is done to swell and diminish the tone. This ornament (*agrément*) is extremely moving in tender pieces on long notes.”¹⁰⁶ Mahaut, who describes *flattement* as “finger vibrato,” echoes Corrette, explaining that, “This ornament is most often used on a long note on which you want to crescendo or decrescendo.”¹⁰⁷ Likewise, Hotteterre explains, “On the whole it can be said

¹⁰⁵ Robin Stowell, *The Early Violin and Viola: A Practical Guide* (Cambridge: Cambridge University Press, 2001), 65.

¹⁰⁶ Farrar, 43.

¹⁰⁷ Mahaut, 19.

that vibrati are frequently introduced on long notes: as on whole notes, on half notes, on dotted quarter notes...Taste and experience, rather than theory, teach their proper use.”¹⁰⁸

De Lusse offers unique advice, suggesting that the flutist produce what he calls the “*tremblement flexible*” using the thumb or, possibly, the breath. He also suggests that the flutist use it with considerable frequency:

To execute it, it is necessary that the left thumb acts by gradation of speed, by rolling the body of the flute, without losing the embouchure. When this *tremblement* is continuous in gradually swelling the sound and ending with force, it expresses gravity, fright; making it shorter, sweeter, it expresses sorrow, languor; and when it is done on short notes, it helps to make the melody more pleasant and more tender. It must be put into use as often as possible; it is for this reason that it is never marked in music, taste alone inspires it. Another kind of *tremblement flexible* is what the Italians call Tremolo, which lends itself well to melody, when it is used appropriately. It is only made by an active movement of the lungs by blowing these syllables Hou, hou, hou, hou, etc.¹⁰⁹

De Lusse does not specify, however, the appropriate use of this ornament in an ensemble.

Likewise, the concepts that he expresses are not consistent with Michel Pignolet

Montéclair’s advice to singers in *Principes de musique* (1736):

The *Flaté* is a sort of swaying (*balancement*) that the voice makes by several small soft aspirations, on a note of long duration, or on a note of rest, without raising or lowering the sound. This *agrément* produces the same effect as the vibration of a held string that one shakes with the finger. It has not had, until the present, a character to designate it; it could be marked by a wavy line. If the *flatté* was practiced on all strong notes, it would become unbearable, in that it would render the song trembling and make it too uniform.¹¹⁰

From these sentences, the musician can determine that *flattement* was a pervasive practice in singing and violin playing, in addition to flute playing. Likewise, it was an *agrément*, and not a continuous, uniform addition to the musical sound. However, early

¹⁰⁸ Hotteterre, 47.

¹⁰⁹ De Lusse, 9.

¹¹⁰ Montéclair, 85.

flute treatises offer no information on its use in an ensemble. The reason for this might be that the authors intended these tutors for musical amateurs, not people who would perform in an ensemble with at least three other flutists, dozens of violinists, and various vocal soloists. As contemporaneous accompaniment treatises and the writings of Quantz suggest, taste and sensitivity to other voices must guide the musician.

Conclusion

Through the study of various historical treatises, the modern flutist can find a range of possible solutions for the performance of rhythmic alteration, articulation, and ornamentation in Jean-Philippe Rameau's *tragédies en musique*. Although Baroque flute tutors instruct the player in possible treatments of musical features, an ensemble flutist must extend research beyond the solo context to consider the effects of flute performance upon the complete ensemble sound. Expanding the study to include vocal, string, and harpsichord treatises offers the musician a broader perspective of the idiosyncratic features of the instrument and an understanding of how these features influenced eighteenth-century performance practice. Likewise, the consideration of both the general aesthetics of eighteenth-century ensembles and the specific practices of court ensembles such as the Académie Royale de Musique brings the modern musician closer to achieving a sound that the composer or an eighteenth-century audience may have expected. The modern performer of historical music faces many performance practice decisions, but the necessities of ensemble performance and "good taste" can inform these decisions.

Extending beyond the *tragédies en musique* of Jean-Philippe Rameau, these concepts of rhythmic alteration, articulation, and ornamentation pertain to contemporaneous French music and music in the French style from other countries. Additionally, concepts of historically informed ensemble performance apply to various styles of Baroque music. This survey of opinions of Quantz, C. P. E. Bach, Leopold Mozart, and various eighteenth-century French musicians and composers serves to inform the performer of aesthetics and ideals of the era and inspire further research and discussion on these musical topics.

Bibliography

- Anthony, James R. *French Baroque Music from Beaujoyeux to Rameau*. Portland, OR: Amadeus Press, 1997.
- Bach, Carl Philipp Emanuel. *Essay on the True Art of Playing Keyboard Instruments*. Translated and edited by William J. Mitchell. New York: W. W. Norton and Company, 1949.
- Charbonnier, Youri. "Le Personnel Musical de l'Opéra de Paris Sous le Règne de Louis XVI." *Histoire, Économie et Société* 22, no. 2 (April-June 2004): 177-206.
- Corrette, Michel. *L'Art de se perfectionner dans le violon*. Paris: Chez l'Auteur, Boivin, et Le Clerc, 1782. Reprint, Geneva: Minkoff Reprint, 1972.
- Couperin, François. *L'Art de toucher le clavecin*. Translated and edited by Margery Halford. Port Washington, NY: Alfred Publishers, 1974.
- David, François. *Méthode nouvelle ou principes généraux pour apprendre facilement la musique et l'art de chanter*. Paris: Chez Boivin and Le Clerc, 1737.
- De Lusse, Charles. *L'Art de la flûte traversière*. Paris: Chez l'Auteur, n.d. [1760].
- Di Profio, Alessandro. "The Orchestra." In *The Oxford Handbook of Opera*, 480-509. Translated by Julia Grella O'Connell. Edited by Helen M. Greenwald. Oxford and New York: Oxford University Press, 2014.
- Farrar, Carol Reglin. *Michel Corrette and Flute-Playing in the Eighteenth Century*. Brooklyn, NY: Institute of Mediaeval Music, 1970.
- Fontijn, Claire A. "Quantz's unegal: Implications for the Performance of 18th-Century Music." *Early Music* 23, no. 1 (February 1995): 54-62.
- Fuller, David. "Notes and Inégales Unjoined: Defending a Definition." *The Journal of Musicology* 7, no. 1 (Winter 1989): 21-28.
- Hotteterre, Jacques-Martin. *Principles of the Flute, Recorder and Oboe*. Translated by Paul Marshall Douglas. New York: Dover Publications, 1968.
- Jerold, Beverly. *The Complexities of Early Wind Instruments*. Turnhout, Belgium: Brepols, 2015.
- Lawson, Colin, and Robin Stowell. *The Historical Performance of Music: An Introduction*. Cambridge: Cambridge University Press, 1999.

- Le Fils, L'Abbé. *Principes du Violon*. Paris: Chez l'Auteur and Le Clerc [1761]. Reprint. Geneva, Minkoff Reprint, 1976.
- Mahaut, Antoine. *A New Method for Learning to Play the Transverse Flute*. Translated and edited by Eileen Hadidian. Bloomington, IN: Indiana University Press, 1989.
- Malherbe, Charles. "Commentaire bibliographique." In *Rameau: Oeuvres complètes*. Paris: A. Durand et Fils, 1895-1924. Reprint. New York: Broude Brothers, 1968.
- Maret, Hugues. *Eloge historique de M. Rameau*. Paris: Chez Delalain, 1766.
- Mather, Betty Bang. *Dance Rhythms of the French Baroque: A Handbook for Performance*. Bloomington, IN: Indiana University Press, 1987.
- . *Interpretation of French Music from 1675 to 1775*. New York: McGinnis and Marx, 1973.
- Mercure de France* (October 1733): 2233-49.
- Moelants, Dirk. "The Performance of Notes Inégales: The Influence of Tempo, Musical Structure, and Individual Performance Style on Expressive Timing." *Music Perception: An Interdisciplinary Journal* 28, no. 5 (June 2011): 449-60.
- Montéclair, Michel Pignolet de. *Principes de musique*. Paris: Chez L'Auteur, 1736. Reprint. Geneva: Minkoff Reprint, 1972.
- Mozart, Leopold. *A Treatise on the Fundamental Principles of Violin Playing*. 2nd ed. Translated by Editha Knoch. London: Oxford University Press, 1963.
- Pitou, Spire. *The Paris Opéra: An Encyclopedia of Operas, Ballets, Composers, and Performers*. Vol. 1, *Genesis and Glory, 1671-1715*. Westport, CT: Greenwood Press, 1983.
- Noinville, Jacques-Bernard Durey de. *Histoire du théâtre de l'Académie royale de musique en France*. 2nd ed. Paris: Chez Joseph Barbou, 1757.
- Poncein, Jean-Pierre Freillon. *On Playing Oboe, Recorder, and Flageolet*. Translated by Catherine Parsons Smith. Bloomington, IN: Indiana University Press, 1992.
- Quantz, Johann Joachim. *On Playing the Flute*. Translated by Edward R. Reilly. New York: Schirmer Books, 1966.
- . *Solfeggi pour la flute traversiere avec l'enseignement*. Winterthur, Switzerland: Amadeus Verlag, 1978.

- Rameau, Jean-Philippe. *Castor et Pollux*. Paris: Chez l'Auteur, Prault fils, la veuve Boivin, Leclair, and Duval, 1737.
- . *Dardanus*. Paris: Chez l'Auteur, la veuve Boivin, Leclair, and Monet, 1739.
- . *Hippolyte et Aricie*. Paris: Montule, la veuve Boivin, and Le Clerc, n.d. [1733].
- . *Orchestral Dances from the Opera, Abaris ou Les Boréades (1764)*. Edited by Mary Térey-Smith. Victoria, B.C.: Jeu Music, 1986.
- . *Pièces de Clavecin: Complete Keyboard Works I*. Edited by Siegbert Rampe. Kassel: Bärenreiter, 2004.
- . *Treatise on Harmony*. Translated by Philip Gossett. New York: Dover Publications, 1971.
- . *Zoroastre*. Paris: La veuve Boivin, Castagniere et Chez l'Auteur, n.d. [1749].
- . *Zoroastre*. Manuscript parts. Copied by Durand. 1758-1776. Bibliothèque nationale de France. gallica.bnf.fr.
- Rosow, Lois. "From Destouches to Berton: Editorial Responsibility at the Paris Opéra." *Journal of the American Musicological Society* 40, no. 2 (Summer 1987): 285-309.
- Rousseau, Jean. *Traité de la viole*. Paris: Christophe Ballard, 1687.
- Sadler, Graham. "Patrons and Pasquinades: Rameau in the 1730s." *Journal of the Royal Musical Association* 113, no. 2 (1988): 314-37.
- . "Rameau and the Orchestra." *Proceedings of the Royal Musical Association* 108 (1981-1982): 47-68.
- . "Rameau's Singers and Players at the Paris Opéra: A Little-Known Inventory of 1738." *Early Music* 11, no. 4 (October 1983): 453-67.
- Sadler, Graham and Albert Cohen. "Jean-Philippe Rameau." In *The New Grove French Baroque Masters*, 207-308. Edited by Stanley Sadie. New York: W. W. Norton and Company, 1986.
- Saint-Lambert, Michel de. *Principles of the Harpsichord*. Translated and edited by Rebecca Harris-Warrick. Cambridge: Cambridge University Press, 1984.
- Showalter, Jr., English. "Voltaire et ses amis d'après la correspondance de Mme de Graffigny, I: 1738-1739." *Studies on Voltaire and the Eighteenth Century*, 139. Oxford: Voltaire Foundation, 1975.

- Spitzer, John. "Orchestra and Voice in Eighteenth-Century Opera." In *The Cambridge Companion to Eighteenth-Century Opera*, 112-39. Edited by Anthony R. DelDonna and Pierpaolo Polzonetti. Cambridge: Cambridge University Press, 2009.
- Spitzer, John and Neal Zaslaw. *The Birth of the Orchestra: History of an Institution, 1650-1815*. Oxford: Oxford University Press, 2004.
- Stowell, Robin. *The Early Violin and Viola: A Practical Guide*. Cambridge: Cambridge University Press, 2001.
- Térey-Smith, Mary. "Orchestral Practice in the Paris Opéra (1690-1764), and the Spread of French Influence in Europe." *Studia Musicologica Academiae Scientiarum Hungaricae* 31, no. 1/4 (1989): 81-159.
- Verba, Cynthia. *Dramatic Expression in Rameau's Tragédie en Musique: Between Tradition and Enlightenment*. Cambridge: Cambridge University Press, 2013.
- Weber, William. "La musique ancienne in the Waning of the Ancien Régime." *The Journal of Modern History* 56, no. 1 (March 1984): 58-88.
- Wood, Caroline, and Graham Sadler. *French Baroque Opera: A Reader*. Aldershot, UK: Ashgate Publishing, 2000.