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Jean-Benjamin de Labore's Abrégé D'Un Traité Dde Composition: The Merger of Musica Speculativa and Musica Pratica with an Emerging Musica Historica

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JEAN-BENJAMIN DE LABORE'S *ABRÉGÉ D'UN TRAITÉ DE COMPOSITION*: THE MERGER OF *MUSICA SPECULATIVA* AND *MUSICA PRATICA* WITH AN EMERGING *MUSICA HISTORICA*

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ABSTRACT

Jean-Benjamin de Laborde's *Abrégé d'un Traité de Composition*, *Livre* III of his encyclopedic *Essai sur la musique ancienne et moderne*, represents a new historical sensibility in the field of music theory at the end of the eighteenth century. Since antiquity, music theory has been divided into two main categories, *musica speculativa* and *musica pratica*. One, or both, of these approaches to music theory form the foundation of almost every music treatise for over 2,000 years, at least until the eighteenth century. A new historicist methodology appearing during the French Enlightenment treated history as a concept that demonstrated progress; this was accompanied by another emerging viewpoint that regarded historical phenomena as independent entities worthy of study in their original cultural context. Laborde's work incorporates both of these historicist positions, and, in so doing, furnishes a third means to engage in music theory, one that has been termed *musica historica* in this study.

Laborde's *Abrégé d'un Traité de Composition* (1780) incorporates these various aspects of music theory —*musica speculativa, musica pratica,* and *musica historica*— within it, with varying degrees of success. Laborde, a composer, writer, *fermier-général*, and student of Jean-Philippe Rameau, wrote the *Essai* to present all the information on musical subjects that he had discovered. He treats certain topics as speculative, others as practical, and still others as historical, but most of the material blends the three approaches in various ways, allowing Laborde the freedom of a flexible methodology. This dissertation sets Laborde's composition treatise in its historical context, investigating Laborde's life, the culture in which he wrote his treatise, his understanding of ancient music theory, his relationship to contemporary French theorists such as Rameau, Jean le Rond d'Alembert, and Jean-Jacques Rousseau, and how he interprets the history of his theoretical topics. By placing Laborde's *Abrégé d'un Traité de Composition* in its proper historical context, this study illuminates the work of a man who was one of a very few at the end of the eighteenth century to employ the nascent tools of modern historicism to investigate music. This dissertation concludes with a translation of Laborde's composition treatise.

INTRODUCTION

Music theory acts as a conduit for the propagation of musical ideas; it has done so from antiquity up through the modern era. The ideas of Greek scholars such as Pythagoras and Aristoxenus were transmitted through the centuries of antiquity, disseminated in Roman culture through the works of men such as Nicomachus and Aristides Quintilianus. Although these works preserved the Greek theories on music for future eras, due to the loss of any substantial extant musical repertoire, the musical practice of the ancients was lost. As the Catholic Church began to gain prominence throughout Europe, a new practical tradition of music emerged; chant came to be the foundation of musical life in Europe during the Middle Ages. The practical aspect of the chant tradition came into contact with the speculative tradition of the ancients. The reconciliation of these two traditions, *musica speculativa* and *musica pratica*, informs almost every work of music theory in some fashion until the eighteenth century, when a new area of consideration had to be incorporated into the fabric of the music theory scholarship—historicism.[1] This dissertation investigates the interaction between the nascent historicism and the extant speculative and practical traditions in music theory as presented in the *Abrégé d'un Traité de Composition* from the *Essai sur la musique ancienne et moderne* of Jean-Benjamin de Laborde.[2]

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[1] This statement does not address a third discipline—*musica poetica*—which emerged in the sixteenth century that addressed the rhetorical nature of musical expression. Thomas Christensen explains that *musica poetica* is concerned, in Aristotelian terms, with efficient causes, or that by which a thing is made, Thomas Christensen, "Introduction," in *The Cambridge History of Western Music Theory* (Cambridge: Cambridge University Press, 2002), 3, n. 7. Patrick McCreless adds that Nikolaus Listenius introduced the term *musica poetica* in his 1537 treatise *Musica* "as a compliment to *musica speculativa* and *musica pratica*, thus completing the Aristotelian triad of categories concerning the activities of the human mind (the theoretical, the practical, and the poetic or creative)," Patrick McCreless, "Music and Rhetoric," in *TheCambridge History of Western Music Theory* (Cambridge: Cambridge University Press, 2002), 853. *Musica poetica* was mainly a German phenomenon and does not figure prominently into Laborde's or many other French treatises of the eighteenth century. Therefore the dichotomy between the speculative and the practical traditions of music informs Laborde's writing, and it is from this methodological template for his work that the new historical perspective originated. *Musica poetica* and its relationship to the *Abrégé d'un Traité de Composition* will be addressed further in Chapter 5.

[2] Jean-Benjamin de Laborde, *Essai sur la musique ancienne et moderne*, 4 vols. (Paris, 1780).

History before the eighteenth century was quite often viewed simply as a series of dates and events that could be called upon as a didactic tool.[3] George H. Nadel describes that historical events before the eighteenth century were studied as "data for a moral or political science."[4] During the eighteenth century, history and the means to understand it underwent a revolutionary transformation; as fundamental, new ideas about the nature of history emerged that recast the methodologies of every disciple, including music. The awareness that history could offer illumination into the very nature of man came to be recognized; this resulted in a great discourse over the meanings and methodologies of history during the eighteenth century. Günther Pflug equates the debate over historical method to an issue of philosophy, by which he means "a debate over methods for determining the essential characteristics of man. Philosophers found that understanding man as an historical phenomenon held out the promise of understanding the essence of man."[5] At the end of the eighteenth century, as scholars addressed questions of how history should be approached and understood, the didactic aims of historical study began to transform, and new historical methodologies began to infiltrate various disciplines, including music.

The historiography of the Enlightenment, as defined by Vincent Duckles, is embodied in the work of musical scholar Johann Nikolaus Forkel (1749-1818).[6] Duckles explains Forkel's view as one "in which history resembled a pyramid-shaped structure of

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[3] Astrid Witschi-Bernz describes this position in relationship to the newer view of the historical event as a thing of value in its own right: "The gap between past experience viewed as a pedagogical lesson for the future and the historicist position which held a past event to be a unique experience possessed of a value and truth in itself, but relative to its own age, was not to be bridged. The former had to disappear," in Astrid Witschi-Bernz, "Main Trends in Historical-Method Literature: Sixteenth to Eighteenth Centuries," *History and Theory: Beiheft* 12 (1972), 89.

[4] George H. Nadel, "Philosophy of History Before Historicism," *History and Theory* 3, no. 3 (1964), 291. Nadel describes "moral' in this sense to mean "both civic and private morality, to politics and ethics," 312.

[5] Günther Pflug, "Die Entwicklung der historischen Methode im 18.Jahrhundert," *Deutsche Vierteljahrsschrift für Literaturwissenschaft und Geistesgeschichte* 28 (1954); translated as "The Development of Historical Method in the Eighteenth Century, *History and Theory: Beiheft* 11 (1971), 2. Arthur Marwick cautions the modern historian when he says that it is necessary to draw a distinction between the philosopher and the historian. The philosopher treats primary sources as "absolutely first-hand" and as being a source for reliable truth. Marwick adds that the historian's primary sources however are those that are created within the period studied. For this reason, he claims that a newspaper could never be a primary source for a philosopher, as they are secondary in character, but for a historian they are wonderful primary sources, Arthur Marwick, "Knowledge and Language: History, the Humanities, and the Sciences," *History* 87, no. 285 (2002), 8.

[6] Forkel was a German musician and scholar who published *Über die Theorie der Musik* [About Music Theory] (Göttingen, 1777). The organizational principle of this work will be discussed in more detail below.

which the culture of the historian's own day formed the apex."[7] Thus, history came to be understood as a natural progress that culminated in the present day. Not only could history now be interpreted as a logical, evolutionary progression, but the materials of the past could be studied for their own intrinsic value as historical phenomena. Regarding these two new approaches to history and the history of music, Glenn Stanley observes that the former "promoted the encyclopedic approach and universal history, and in the literature on music, strengthened the centuries-old tradition of locating music's origins and tracing earlier phases," while the latter allowance for the investigation of the music of the past for its own sake "spawned historicism, [and] arose virtually simultaneously with the idea of progress."[8] Paul Hamilton defines historicism as "the name given to this apparent revitalizing of the past by getting to know the different interpretations to which it is open and deciding between them on grounds of expressing our own contemporary preoccupations."[9] Carl Dahlhaus explains that historicism also evolved from a strong urge to subject the past to rigorous critique, thus encouraging the evaluation of historical phenomena in an objective manner, divorced from the historians "religious, moral and aesthetic assumptions." He adds that "historicism has its roots in the realization that a gap exists between the aspirations of the present and the imprint left upon the present by the past."[10] Historicism accepts the notion of history as progress, but is more concerned with the estimation of historical phenomena in and of themselves. This is apparent from Marwick's definition of historicism as a means to position history as a central discipline because "it postulates that everything is explained by its past development, while at the same time insisting that each age has unique characteristics, and a unique value of its own."[11]

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[7] Vincent Duckles, "Patterns in the Historiography of 19th-Century Music," *Acta Musicologica* 42, no. 1 (1970), 80.
[8] Glenn Stanley, "Historiography," in *The New Grove Dictionary of Music and Musicians*, 2nd ed.
[9] Paul Hamilton, *Historicism*, 2nd ed. (London: Routledge, 2003), 16.
[10] Carl Dahlhaus, *Grundlagen der Musikgeschichte* [Foundations of Music History] (Köln: Musikverlag Gerig, 1977), trans. by J. B. Robinson (Cambridge: Cambridge University Press, 1983), 53-55.
[11] Marwick, *The Nature of History*, 3rd ed. (London: Macmillan, 1989), 398. Michael Bentley ascertains that the first notion of history as progress is a direct result of the French Enlightenment, while the emergent historicism developed in the region that was to coalesce to become Germany as part of a "Counter-Enlightenment," in Michael Bentley, *Modern Historiography: An Introduction* (London: Routledge, 1999), 8-24. With this admission, Forkel's historicism is provided a sure cultural context, but Laborde's writing does not conform solely to the French Enlightenment model of history as progress. He too addresses historical topics from a historicist perspective.

Today, the historicism that developed in the second-half of the eighteenth century in relationship to music, informing the evaluation of the speculative and practical traditions, may be seen as a foundation of our modern music history. This new approach to history gained prominence over the idea of history as progress. Stanley describes the prevalence of this new historicism:

> Eighteenth-century historical thinking was challenged by a rise in skepticism about progress *per se* and an increasing reverence for an idealized past that was often stimulated by religious and nationalistic perspectives. These tendencies strengthened the appeal of historicism, an important part of which is a view of the past as equal or superior to the present. Historicism developed as an alternative to Enlightenment teleology as the basis for a philosophy of history. In the history of the arts, it promoted the abandonment of an absolute standard of beauty and a consciousness of the validity of sharply divergent artistic forms and styles over the course of history. Thus aesthetic relativism developed concurrently with historicism, and both tendencies supported the growing positivistic-empirical emphases of music historiography that coincided with the gradual establishment of music history as an academic discipline.[12]

As previously stated Forkel regarded history as progress, but his work also exhibited the position associated with historicism, that of history as an object of study in its own right, as well. He did not believe that the progress of history was necessarily continuous; he felt that music had reached its zenith with the music of Johann Sebastian Bach. Forkel also held that all cultural phenomena were related.[13] Thus Forkel embodies a historiographic stance that encompasses both the notion of history as progress and the aesthetic relativism embodied in the emergent historicism at the end of the eighteenth century. This bipartite notion of history as embodied in the works of Forkel, as Stanley says, coincided with the establishment of music as an academic discipline.

Toward the end of the eighteenth century, two concurrent ideas developed that permitted the establishment of music as a reputable academic field. The first, as has already been discussed, is the advent of historicism. Unlike the other arts, music had no classical reference point from which to claim a historical lineage. Once the understanding of history began to change during the eighteenth century however, allowing for a view of history as progress, but also embracing the valuation of a historical phenomenon on its

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[12] Stanley, "Historiography," 549.
[13] Vincent Duckles, "Johann Nikolaus Forkel: The Beginnings of Music Historiography," *Eighteenth-Century Studies* 1, no. 3 (1968), 283. See also Duckles, "Patterns in Historiography," 80.

own merits, music established a corpus of compositions that came to be regarded as the foundation of musical practice. Also, music theorists and scholars of the eighteenth century drew upon the writings of antiquity to confirm the natural principles upon which they believed music should be based. So the formation of a history for music, not only in regards to its theory, but also for its practice was a direct result of these new views about history. As this corpus of musical works became established, it provided the means for the evolution of the other approach that can be associated with the musical historicism of the late eighteenth and early nineteenth centuries, music analysis. The critical analysis of musical scores came to be one of the main forms of positivistic understanding that resulted from the new historicism of this era. As the application of analytic techniques to extant musical sources gained in importance, the contemporaneousness of musical life in Europe began to wane.[14] Critical analysis of music also provided a practical means to apply the concepts of speculative theory in a manner that made the speculative aspects of music accessible to both the dilettante and the practicing musician alike. It provided them with a common ground, wrought by the nascent historicism of the era. Analysis and historicism, two emergent concepts in the eighteenth century, flourished in a symbiotic relationship; the tools of analysis solidified the canon of musical works, while the canon of musical works, provided the raw materials for critical analysis. The analytic approach to music would not have developed in the manner that it did had it not been for the growing historiographic mindset that allowed for the creation of a class of compositions as *objets des arts*. Music moved away from being a contemporaneous art to being an art based on the idealized forms of the past.[15]

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[14] Weber explains that music performed in the eighteenth century was almost always by a living composer. This resulted in repertoires going through "cycles of casting out the old and bringing in the new, a process so regular that it was unusual for a work to continue to be performed long after a composer's death. Indeed an Italian opera rarely survived more than a decade after its première." Weber adds that "musical culture had no pantheon of great composers; rather than honor the past, it spurned it," William Weber, "The Contemporaneity of Eighteenth-Century Musical Taste," *Musical Quarterly* 70, no. 2 (1984), 175.

[15] Of course, today, many scholars are questioning the practice of analysis as it has become ensconced in the academic community and offering suggestions for the expansion of the ideas of analysis beyond the established historical parameters. See Joseph Kerman, "How We Got into Analysis, and How to Get Out," *Critical Inquiry* 7, no. 2 (1980), 311-331; Carl Dahlhaus, *Analyse und Werturteil* (Mainz: B. Schott's Söhne, 1970), trans. Siegmund Levarie, *Analysis and Value Judgment* (New York: Pendragon Press, 1983); and Lydia Goehr, *The Imaginary Museum of Historical Works: An Essay in the Philosophy of Music* (Oxford: Clarendon Press, 1992), especially 1-9 and 69-86.

In addition to the historicist approach to history that is found in works beginning in the late eighteenth century, many of these writings have a historiographic perspective as well. Marwick defines historiography as "the systematic study of historians' interpretations of (or writings about) the past."[16] From a musical perspective, Duckles defines historiography as not only the writing of music history, "but the historical examination of all the processes of musical scholarship."[17] Thus a true historiographic approach is reflexive and accounts for not only the cultural context of the work being studied, but also the cultural environment of the work being written. Thus, this dissertation is a historiographic investigation into a work by Laborde, the *Abrégé d'un Traité de Composition*—a work that has both historiographic and historicist elements. Although the relationship between the nascent historicism of the late eighteenth century and the writers who laid the groundwork for the modern historical study of music during this era warrants exploration, there is negligible modern historical or theoretical research in English on the important historicist writers on music from the late eighteenth century.[18]

Perhaps one aspect that accounts for the lack of any substantial historiographic research on the subject of the development of music historicism at the end of the eighteenth century is that this topic is situated outside of the modern divisions of the academic discipline of music—musicology and music theory. Musicologists could view these early attempts at historicism in music to be more closely related to the theoretical tradition from which it was emerging. Theorists may view the material as too historical to warrant a closer, theoretical analysis. Fortunately an overlap exists between the two disciplines in the sub-discipline of the history of music theory, an area that embraces a topic such as this. The historian of music theory need not be deterred by either the theoretical slant to some of the material, nor to the historical context to which it belongs. In fact, it is the responsibility of the historian of music theory to engage not only in the theoretical, but the historical as well. Ian Bent has suggested that the history of music theory binds music theory and music history together; it connects the Society for Music Theory and the American Musicological Society: "the discipline thus forms a veritable

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[16] Marwick, *The Nature of History*, 398.
[17] Duckles, "Patterns of Historiography," 76.
[18] Scan the bibliography for the article "Historiography" in *The New Grove Dictionary of Music and Musicians*, 2nd ed. The majority of the articles written since 1950 are in German.

'hinge' between the two organizations."[19] And although the history of music theory serves in part to connect the two aspects of musical scholarship, it is a relatively young discipline itself. Bent states that:

> One cannot help being struck by how very young a discipline the history of music theory is. So little of the vast territory that is all about us has yet to be explored. Such a paucity of work has [been] done, and between such narrow confines. Almost all of the investigation lies still ahead of us, and what is more, we have so little idea what it involves.[20]

As there is a monumental amount of work to do yet in the field of music theory, this present study adds to the canon of historical literature about music theory and addresses the methodological needs of the historian of music theory.

As the history of theory provides a cohesive bond that unites the modern fields of music theory and musicology, it is only appropriate that a revelatory look into the life and work of an essential late eighteenth-century writer and musician could reveal ideas inherent in the emergent historicism that eventually fostered the branching out of music theory and musicology into distinct, separate disciplines. Jean-Benjamin de Laborde's *Essai sur la musique ancienne et moderne* (1780) stands along side other works such as Forkel's, as well as those by John Hawkins and Charles Burney that were instrumental in fashioning the new historical contextualization of music at the end of the eighteenth century.[21] Stanley calls Laborde's *Essai* the "most important French music history of its time."[22] More specifically, the *Abrégé d'un Traité de Composition* offers a conception of music theory seen reflected from the mirror of historicism.[23]

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[19] Ian Bent, "History of Music Theory: Margin or Center?," *Theoria* 6 (1992), 3. Bent describes how both the theorist and the musicologist who show an interest in the history of theory must go through a thought process that addresses these issues. He says at the root of the concern for both theorist and historian is the fear of being marginalized. For this reason he concurs that "the history of theory is today something of an orphan" (Bent, 2).

[20] Bent, 4-5. These comments were made in 1992, but they still hold true over ten years later. While there is a greater interest in the field today, there is still a lot of work to be done, both in the investigation of the source material, but also, as Bent suggests, in formulating methodologies by which to achieve the most productive ends.

[21] John Hawkins, *A General History of the Science and Practice of Music* (London, 1776); Charles Burney, *A General History of Music from the Earliest Ages to the Present Period* (London, 1776-89).

[22] Stanley, "Historiography," 548.

[23] The choice of the term "mirror" in this instance is not arbitrary. As Christensen explains the traditional Latin translation for "theory" is *speculum*, which also means "mirror," Christensen, "Music Theory in Clio's Mirror," in *Music and the Mirror: Reflections on the History of Music Theory and Literature for the 21st Century*, eds. Andreas Giger and Thomas J. Mathiesen (Lincoln: University of Nebraska Press, 2002),

The historian of music theory must not shy away from the small inconsistencies and variations that music theory espouses throughout history. Rather, these variants must be embraced, as they allow the historian of music theory a means to access the cultural context of the theories in a manner that positions them more as an essential part of a cultural milieu than they would be if the theories were extracted and examined apart from the societies that formulated them. Regarding the discipline of the history of music theory, Thomas Christensen offers that "the shifting configurations of music theory over centuries, then, far from undermining any epistemic claims to transcendence or logical coherence, in fact endow the discipline with cultural vitality and relevance."[24] And Scott Burnham believes that the historian of music theory needs "to be more concerned with understanding the history of music theory as an intellectual and cultural history than with constructing the pre-history of today's theory."[25] He calls for a historicist approach to the study of the history of theory: "the shift in emphasis would involve treating all theories as systems of thought with their own integrity and as cultural/historical products of their own ways and means."[26]

The field of scholarship in music theory was dominated by two main types of musical knowledge until the end of the eighteenth century: the speculative and the practical—*musica speculativa* and *musica pratica*. Yet the practical and the speculative approaches did not have an effective way to assess historical phenomena, at least not as the concept of history was beginning to be understood toward the end of the eighteenth century. What is a historical phenomenon? Erwin Panofsky believes a historical phenomenon to be of a two-fold nature. He says that a historical phenomenon represents "on the one hand, an object of knowledge that transcend the scope of natural space and time but is on the other hand, fixed at a very particular moment in natural time and in a

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18. This casts music theory in the role of being a mirror on the historical development of music, a role for music theory that the research in this dissertation supports.

[24] Christensen, "Music Theory in Clio's Mirror," 19. Christensen describes Rameau's vicissitudes throughout his career on the origin of the minor mode as more than merely illuminating a weakness in Rameau's theories. Christensen believes the changes reflect the ever-changing intellectual influences that Rameau absorbed. Thomas Christensen, *Rameau and Musical Thought in the Enlightenment* (Cambridge: Cambridge University Press, 1993), 196-99.

[25] Scott Burnham, "Musical and Intellectual Values: Interpreting the History of Tonal Theory," *Current Musicology* 53 (1993), 79.

[26] Ibid.

very particular place in natural space."[27] This bipartite expression of a historical phenomenon aligns with Christensen's approach that a theory of music can transcend a cultural context, yet it is simultaneously, indelibly tied to a cultural milieu as well.

A historiographic reading of Laborde's *Abrégé d'un Traité de Composition*, as well as the entire *Essai sur la musique ancienne et moderne*, reveals the germinal stages of musical historicism. He clearly accepts music as being affected by an underlying historical progress, but he also exhibits, ever so slightly, a skepticism that permits him to conceive of the history of music and its theories not as a continual process, but one with peaks and valleys that is commensurate with the views of historicism. Throughout the *Essai*, there is a sure sense of what Laborde views favorably and that which he views with a more jaded eye, but his writing does not trace a historical path in which his opinions of the music improve over the course of time. In other words, the history of music and its theories is not one continual, uninterrupted, forward motion of progress and improvement in the art form. Rather, Laborde's support is often given to more nationalistic and musical considerations, regardless of the era from which they stem. He strongly advocates the musical work of the Greeks while acknowledging the slight progress of music in the Roman Empire. He is a strong proponent of French music and the natural derivation of harmony, and unsurprisingly, he does not hold Italian music to be as remarkable as French music, as it derives its power, not from natural sources, but solely from harmony.[28]

As the amount of scholarship on Laborde's life and work is scant, Chapter 1 offers a biographical sketch of Laborde. There is also a description of the *Essai sur la musique ancienne et moderne* that outlines its contents and the overall structure of this encyclopedic offering. Chapter 2 presents the cultural context in which Laborde was writing. The role music played in the lives of the French people is addressed there in more detail. In addition, the association between analysis and historicism is explored further in Chapter 2 by addressing the conflict that Laborde had over a system of music theory proposed by Alexandre-Théophile Vandermonde—a system that was based on the

[27] Erwin Panofsky, "Reflections on Historical Time," trans. Johanna Bauman, *Critical Inquiry* 30, no. 4 (2004), 698.
[28] The conflict between the French and the Italian schools of thought in composition will be addressed in Chapter 4. Laborde details both positions in the *Essai*, I, 50-60.

precepts of critical analysis. Laborde found Vandermonde's system wanting. Yet through the work in his composition treatise, which assisted in the historicization of music theory, Laborde made a system that utilized analytic techniques such as Vandermonde's not only possible, but probable.

The following three chapters approach Laborde's *Abrégé d'un Traité de Composition* from three different perspectives. Chapter 3 addresses Laborde's historiographic interpretation of the music theory of the ancients. In turn, this incorporates the manner in which he connects not only the speculative tradition of the moderns and the ancients, but the practical tradition as well. Although the Greek practical tradition has been lost, Laborde's historiographic approach permits the identification of some obvious and some other not-so-conspicuous links that bridge the speculative traditions of the ancients with his era, but he also searches for means to align the practices of the two eras. He bases his comprehension of the material upon the explanations of ancient authors, and still accounts for the obvious discrepancies between the two practical traditions. In addition to discussing the reason Laborde came to be interested in the music of the ancients in Chapter 3, the question of how Laborde defined the ancients is proffered as well. The theoretical concepts of the ancients are approached through the investigation of three specific theoretical topics as they are presented in the *Abrégé d'un Traité de Composition*: intervals, mode/key, and enharmonicism.

Moving from the vantage point of antiquity, Chapter 4 is concerned with Laborde's modern perspective of music theory. First, the three greatest contemporary influences in the development of Laborde's comprehension of modern music theory contextualize the speculative and the practical traditions from both an approving, as concerns Rameau and d'Alembert, and a somewhat more antagonistic perspective *vis-à-vis* Rousseau. In this chapter, Laborde's own descriptions of harmony, melody, and the fundamental bass further disclose his amalgamation of both *musica speculativa* and *musica pratica* and the historicization of the presented topics as well. The materials in both Chapters 3 and 4 reflect subject matter that is common to French musical treatises of

the eighteenth century, whether practical guides to accompaniment or speculative ruminations on the origins of music.[29]

There is a measure of theoretical material in Laborde's *Abrégé d'un Traité de Composition* that is difficult to categorize solely as either speculative or practical; this same distinctive material, for the most part, may not be classified as belonging exclusively to the eras of the moderns and the ancients. Chapter 5 engages in this material by addressing the particular topics of scales and solfège, *chant sur le livre* and plainchant, and tablature from Laborde's composition treatise. Of the subjects Laborde contemplates that fall into this category, many of them, such as the developments of solfège and plainchant, originate in the period of time between the ancient and the modern eras. Laborde's inclusion of materials such as these, which date from the Middle Ages, stands in contrast to a number of the historical sources of the French Enlightenment that often only utilized the belief in history as progress. Regarding this phenomena, Michael Bentley remarks that the majority of the writers in "the Enlightenment omitted from [their] purview periods of history that [they] found distasteful and, since the whole of the Middle Ages was found coarse and untutored, this meant the medieval history had little presence in Paris."[30] Laborde, as will become evident, did not shy away from addressing the music from the period between antiquity and modernity. This distinction from the theoretical works of his countrymen speaks to the historicist underpinning that coexists with the notion of history as progress in Laborde's *Essai*. Although the title of Laborde's *Essai sur la musique ancienne et moderne* could connote that he only deals with the music of antiquity and that of modernity in his work, Laborde actually explores a wealth

[29] Of course, as it would be expected, the contemporary materials in Chapter 4 are far more prevalent in the contemporary sources than the materials on the ancients found in Chapter 3, but as that chapter demonstrates the musical theories of the ancients were far from unfamiliar to the writers in the eighteenth century.

[30] Bentley, *Modern Historiography*, 9. Marwick observes that some of the great minds of the Enlightenment had a disparaging view of the Middle Ages because the past could not measure up to the standard set forth by the present era; "both Gibbon and Voltaire exercised their magnificent wit on the obvious fact that human beings in past ages had not always disported themselves in a fashion considered suitable in the eighteenth-century 'Age of Reason,'" in Arthur Marwick, *The New Nature of History: Knowledge, Evidence, Language* (Houndmills: Palgrave, 2001), 60. This fact, taken with questionable scholastic rigor, and the need for established historical study at the university level combined to provide history that is very uneven at the end of the eighteenth century, but, according to Marwick, "in bringing prestige to historical study they did, in that sense, help to prepare a readership for the more scholarly works of the nineteenth century" (Ibid., 58). Marwick references Edward Gibbon, *Decline and Fall of the Roman Empire* (1776-88); Arouet de Voltaire, *Essai sur les mœurs et l'esprit des nations et sur les principaux faits de l'histoire* (1756).

of historical musical material between antiquity and modernity as well. The material Laborde presents from the period between the ancient and modern eras is neither wholly speculative nor completely practical in nature. This theoretical data that he has incorporated into his composition treatise can be described most accurately perhaps by the term "historical"—or perhaps a more congruent moniker might be suggested: *musica historica*. Chapter 5 undertakes to characterize this temporally displaced theoretic material as *musica historica* as a direct result of the historicism evolving at the end of the eighteenth century, and, in so doing, entwines it with the established theoretical traditions of *musica pratica* and *musica speculativa*. This creates a troika of methodological approaches available to Laborde, and to modern scholars, to assess music theory.

The proposal of this tripartite methodology for the music theory in Laborde's *Abrégé d'un Traité de Composition* does have a historical precedent in the eighteenth century.[31] Forkel's *Über die Theorie der Musik* proposes a five-part division to music theory. The first two parts, physics and mathematics, may be associated with the traditional domain of music theory: *musica speculativa*—albeit, Christensen adds, "updated with new scientific knowledge and languages."[32] The next two parts cover grammar and rhetoric. This is the realm of *musica pratica*. Christensen explains that in music theory these categories entail "systems of scales, keys, harmony, and meter, as well as their application by composers in terms of phrasing, genre, and rhetoric."[33] The final category addresses the new domain of critical analysis. Christensen characterizes critical analysis as the part of music in which the "theorist is concerned with such elusive qualities as the 'inner character' of the musical work."[34] In a later work which expands upon this proposal for music theory, *Allgemeine Geschichte der Musik* [Abstract on the History of Music],[35] Forkel expands his view of critical analysis to include the tools of musical rhetoric. In so doing, according to Duckles, Forkel offers nothing less than "a

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[31] This three-part methodology is also proposed in the twentieth century by Carl Dahlhaus. He acknowledges three distinct traditions in music theory, which he labels paradigms: the speculative, the practical, and the analytic, Carl Dahlhaus, *Die Musiktheorie im 18. und 19. Jahrhundert: Grundzüge einer Systematik*, *Geschichte der Musiktheorie*, ed. Frieder Zaminer, vol. 10 (Darmstadt: Wissenschaftliche Buchgesellschaft, 1984), 6-9.
[32] Christensen, "Music Theory in Clio's Mirror," 12.
[33] Ibid.
[34] Ibid.
[35] Johann Nikolaus Forkel, *Allgemeine Geschichte der Musik* (Göttingen: Schwickert, 1788).

complete apparatus for the analysis of eighteenth-century musical style as an eighteenth-century musician would see it."[36] As previously discussed, the advent of critical analysis as a theoretic tool coincides with that of historicism, so that a reasonable connection may be drawn between the analytic aspect offered by Forkel and that of *musica historica* proposed for Laborde.

The hermeneutic of Laborde's work as encompassing this musical dialectic may be only a product of a modern reading, but even if Laborde had not been cognizant of this methodology in his own writing, a strong case may be made for its presence.[37] The history of music theory abounds with comparisons and compliments of speculative and practical theory. At the end of the eighteenth century, Laborde has written a theoretical work, the *Abrégé d'un Traité de Composition*, that entwines *musica speculativa* and *musica pratica* with historicism, thus producing a third approach to the discipline of music theory, *musica historica*.

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[36] Duckles, "Forkel," 286.

[37] As previously stated, Marwick believes that all philosophical primary sources are thought of as being true. He cautions, however, that all primary sources for the historian are "fallible, and many have second-hand elements within them. One must first identify the primary source, but one must then avoid taking it as any kind of fountain of truth," in Marwick, "Knowledge and Language," 8. This is certainly the case with Laborde's *Essai*. The source is primary, but it should not be assumed to be without error, and it certainly contains information from second-hand source material. Rather, it must be viewed as a product of a specific cultural framework, and for better and for worse, it only contains the "truth" as it was perceived by Laborde at that moment in history and from his perspective. At times Laborde's writing is rife with passages that show his contempt for specific aspects of musical life. This is writing that some may consider subjective, and they would be correct, but as this dissertation will attest, sometimes more can be gleaned from how something is said than by the actual words themselves. Bentley explains that in the French Enlightenment, wit and satire were an integral property of the writings (Bentley, *Modern Historiography*, 10). Laborde is certainly no exception.

CHAPTER 1

LABORDE: A BIOGRAPHIC SKETCH

The last moments of Jean-Benjamin (-François) de Laborde's life were spent on a scaffold in Paris awaiting his execution at the blade of the guillotine. Laborde led so rich and varied a life that it seems fitting, however unfortunate, that it should have such a dramatic finish. His indictment listed Laborde as an "ex-deputy *fermier-général* fattened by the substance of the people."[1] Obviously, it is difficult to convey the totality of someone's life in a single line, and it is as arduous as it is dangerous to accept a death warrant such as this at its face value. Laborde obtained many titles during his lifetime: composer, writer, tax collector, antiquarian, a member of the Court of Versailles in the service of King Louis XV, and even governor of the Louvre. Laborde, while he is not often a subject for modern scholarly research, truly is "one of the most eclectic men of his era,"[2] and deserves a closer and more thorough inspection.

While comprehensive sources for information regarding Laborde are scant, I have gleaned his basic biographical information from several sources: Alexandre Etienne Choron and François Joseph Fayolle's *Dictionnaire historique de musiciens*, François-Joseph Fétis's *Biographie universelle des musiciens*, and Michael Fend's article, "Laborde, Jean-Benjamin(-François) de."[3] Michael Fend's account of Laborde's life is very straight forward, objectively presenting the main points of his life with very little in the way of criticism. The two French sources, while containing the same basic factual

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[1] Emil Haraszti, "Jean-Benjamin de Laborde," *La revue musicale*, no. 158-9 (1935), 109.
[2] Ibid.
[3] Alexandre Etienne Choron and François Joseph Fayolle, *Dictionnaire historique des Musiciens*, 1810 ed.; reprint, Hildesheim, Germany: Georg Olms Verlag, 1971; Michael Fend, "Laborde, Jean-Benjamin (-François) de," in *New Grove Dictionary of Music and Musicians*, 2nd ed.; François-Joseph Fétis, *Biographie universelle des musiciens* 2nd edition (Paris, 1875). There is an extant copy of Laborde's autobiography available in the collection at the *Bibliothèque Royale Albert 1st* in Belgium; this will afford a wonderful resource for future research into Laborde's life. The autobiography is contained in a letter to Champein and is bound in a copy of the *Essai*. There is also a dissertation in French by Jean Warmoes about Laborde that remains to be investigated as it has not been available for research; Jean Warmoes, "L'exemplaire de l'*Essai sur la musique ancienne et moderne* de Jean-Benjamin de Laborde annoté par Grétry" (Ph. D. diss., University of Leuven, 1956).

information, present a far more critical, slightly biased, and somewhat negative overview of Laborde's life and works.

Laborde was born on 5 September 1734 in Paris, France into a very rich, aristocratic family. His parents had a total of fifteen children, only five of which surived. Laborde had three sisters and one brother.[4] He received a thorough education that included musical training on the violin with Antoine Dauvergne and composition lessons with Jean Philippe Rameau, while he prepared for a career in finance. Although finance was the vocation his family had intended for Laborde, his personal desires led him towards a career in music instead. This was probably due in part to his presentation of an opera in 1748, at the age of 14, entitled *La chercheuse d'oiseaux* [The Bird Watcher]. Ten years later he supplied an *opéra-comique* entitled *Gilles*, *garçon peintre, z'amoureux-t-et-rival* [Gilles, Boy Painter, Lover and Rival] that enjoyed moderate success and was followed by many others.

We are unfamiliar with Laborde's work as a composer today, though there are numerous scores to his stage works.[5] The neglect of Laborde's musical works, far from being an isolated case of our own era, began during his own lifetime. When his patron, Louis XV, died and Laborde left the Court at Versailles, his works ceased to be an integral part of the schedule at the Opéra. Spire Pitou explains that although Laborde's operas often received lavish productions, they were "received with little or no enthusiasm because they were staged at the Opéra merely as a result of Laborde's influence with the king and his position as *valet de chambre* of Louis XV."[6] The influence of the king is unmistakable in Laborde's successes, such as they were, as a composer. This fact is made abundantly clear, as Laborde had nothing more staged after the king's death in 1774.[7]

His decision to forgo a financial vocation was also encouraged by his interest in the life at Court.[8] He entered into the service of Louis XV in 1762 and soon became a

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[4] René Pichard du Page, "Un finacier dilettante au XVIIIe siècle: Jean-Benjamin de Laborde," *Revue de l'histoire de Versailles et de Seine-et-Oise*, 28 (1926), 108.
[5] Laborde's extant scores are held in manuscript form in either the Bibliothèque of the Paris Opéra or the Paris Conservatoire in the Bibliothèque Nationale de France (Fend, 87).
[6] Spire Pitou, *The Paris Opéra: An Encyclopedia of Operas, Ballets, Composers, and Performer, Volume 2: Rococo ad Romantic, 1715-1815* (Westport, CT: Greenwood Press, 1985), 313. [Every sunsequent reference to Pitou may be understood to be from this second volume of his work.]
[7] Ibid.
[8] Ibid.

close, extremely loyal confidant of the dauphin; he was bestowed the title of *premier valet du chambre*. Through Louis XV's favor, Laborde entered into the ranks of the *fermiers-généraux* [farmers-general]. Fétis explains that the appointment did not provide Laborde the financial security it could have:

> Because of his extravagances, his frequent trips, and his aptitude to throw himself into the most risky enterprises, he was on more than one occasion on the verge of being ruined. Nevertheless, the favor of the King and his resourcefulness always managed to sustain him.[9]

These royal assignments allowed Laborde a certain freedom to indulge in his passion for composition with little else to distract him other than his responsibilities to the King and Court life itself.

As Louis XV's premier chamber valet, he was intimately involved in the King's personal affairs. He was also an active ally to the King's mistress, Mademoiselle du Barry, and often a liaison between the two. Hugh Noel Williams describes an event that transpired in the autumn of 1773 in which Laborde was of gracious service to Mme. du Barry that indicates Laborde's fealty to the King. Laborde had business to transact in Geneva; du Barry commissioned him to pay a visit to the writer Voltaire and bestow a kiss upon each of his cheeks on her behalf. Williams reports that "the commission was duly executed and appears to have greatly delighted the recipient of the kisses, ever susceptible to flattery, no matter from what source it came."[10] Laborde's actions resulted in Voltaire sending du Barry a letter in which he praises her beauty and also acclaims Laborde's work as a composer, thanking her for the favor she has bestowed on the young composer.[11]

Laborde demonstrated his loyalty to the King the following year, when his advice in an extremely difficult situation saved the King, his mistress, and the country of France from a great, public embarrassment. A writer from Burgundy by the name of Théveneau de Morande was set to publish a revealing look at the life of the Mme du Barry entitled

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[9] Fétis, *Biographie universelle des* musiciens, II, 25, "mais, par suite de ses prodigalités, de ses fréquents voyages et de sa facilité à se jeter dans les entreprises les plus hasardeuses, il fut plus d'une fois sur le point d'être ruiné; cependant la faveur de le roi et son génie fécond en ressources parvinrent toujours à le soutenir." [This and all subsequent translations in the dissertation are the present author's unless otherwise indicated.]

[10] Hugh Noel Williams, *Madame du Barry* (New York: Charles Scribner's Sons, 1904), 236.

[11] Ibid., Laborde had composed the music to Voltaire's opera *Pandore*.

Mémoires secrets. Morande alerted du Barry of his intentions and offered to have her buy the manuscript to keep it from publication. Du Barry and the King could not procure an extradition for the writer from the English, but they were granted permission to come to England and arrest Morande themselves, if they could accomplish the task clandestinely. Morande received word of his impending, and apparently not so secret, capture and was able to engage the English people, causing them to rally around him as a victim of the state of France. As a result, the King and du Barry had no choice but to work with Morande to achieve a more diplomatic resolution. The first attempts to reach a settlement failed before they even began, as the two ambassadors that the King sent were not even allowed an audience with Morande. Three thousand copies of Morande's book had been printed and were ready to be distributed when Laborde, as the King's *valet du chambre,* suggested that the King dispatch Pierre Augustin Caron de Beaumarchais, the dramatist, in his service to mediate this sensitive matter. Acting upon Laborde's advice, the King did send Beaumarchais as his liaison to connect with Morande. Beaumarchais and Morande worked out an agreement, and the manuscript and all the copies were destroyed. Beaumarchais returned to France to enjoy a deserved revitalized status at Court as compensation for his success, but, as the King had fallen ill in Beaumarchais's absence, his reward was not to come to fruition.[12]

Laborde surfaced as an integral part of the workings of the Court once again at the time the King takes ill. As the King had caught smallpox and was confined to his chambers, those opposing du Barry began to prepare to oust her from Versailles. However, Laborde, as the King's valet, was loyal to du Barry, as well as on her payroll, and had the power to clear out the King's bedroom. Once the King became cognizant of his own dire condition, realizing it was most likely a state from which he would not recover, he sent for du Barry one last time, on 4 May, 1774. This allowed Laborde the opportunity to search out Mme. du Barry, so that the dying King and his mistress could sequester themselves in private for a brief time.[13] The King explained to her that his duty was now to his country and that she must leave in the morning. She fainted at the news, and when she recovered, she headed straight to her carriage and left Versailles. Shortly

[12] Williams, 245-8.
[13] Edmond and Jules de Goncourt, *Madame Du Barry* (London: John Long, Limited, 1914), 193.

thereafter, the King told Laborde to proceed to retrieve Mme. du Barry for him once again. When Laborde informed the King that she had already departed the Palace for Rueil, two large tears fell down the cheek of the King.[14] The King died from smallpox six days later.[15]

Although these brief anecdotes regarding Laborde in his capacity at the Court of Louis XV are not extremely relevant in regards to Laborde's music, they do provide some insight into Laborde's life and character as he was relied upon, trusted by, and loyal to the King and his mistress as typified by his behavior in these highly personal and potentially troublesome situations.

When Louis XV died, Laborde's life of indulgence and servitude at Versailles came to an abrupt end. Laborde lost his position at Court with the King's passing, so he left Versailles; he married Adèlaide de Vismes, the sister of the director of the Opéra, later that same year.[16] Having again suffered heavy financial losses, and without the King's patronage, he decided to regain his fortune and, thus, returned to being one of the *fermiers-généraux*.[17] The *fermiers-généraux* were a class of glorified tax-collectors responsible for gathering all indirect taxes such as the salt tax [*la gabelle*].[18] In Louis Ducros's discussion of the *fermier-généraux*, he explains that the indirect taxes may be contrasted with the more familiar direct taxes, such as the land tax [*la taille*], which were collected by tax-collectors; these taxes then proceeded to pass through a series of officials' hands until they were sent to the Controller General who had authority over all of France's treasuries.[19] The *fermier-généraux*, however, were collectively responsible to supply the crown with sixty million in order to "guarantee the royal revenue. They received a fixed sum in return, on condition that they made themselves responsible for

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[14] Olivier Bernier, *Louis the Beloved: The Life of Louis XV* (Garden City, NY: Doubleday & Compan, Inc., 1984), 248.
[15] For another account of Laborde's role at the time of the king's death, see Pichard du Page, 118-120.
[16] Laborde's wife was one of Marie Antoinette's ladies-in-waiting, so Laborde's break from the courtly life was not purely complete. Although he was aware of the goings on of courtly life through his wife, he no longer carried any influence with the King and his close associates.
[17] Pitou, 313.
[18] Louis Ducros, *French Society in the Eighteenth Century*, trans. W. de Geijer (New York: Lenox Hill Pub., 1927), 153.
[19] Ibid.

collecting all indirect taxes, and thus became the middlemen…between the taxpayers and the Crown."[20]

During this period, away from the direct, daily influence of the opulence and intrigues of the Court at Versailles, life for Laborde became more tranquil and studious. Now when he devoted time to music it was not primarily as a composer, but rather as a scholar. When he left the confines of the palace, Laborde aligned himself with the Abbé Pierre-Joseph Roussier. Joscelyn Godwin describes him thus, "in his youth, Laborde had been pupil in composition of Rameau. After the death of his royal patron, he preferred to follow Roussier, and set himself industriously to write erudite works of surprising variety."[21]

And indeed he wrote; during the last 18 years of his life Laborde had a part in writing, translating, editing or collaborating on some 20 books on various subjects, musical and otherwise.[22] While critics of Laborde's works have found inaccuracies in the texts and have claimed them to be structurally unsound, the writings still contain a wealth of musical knowledge regarding music of the eighteenth century, antiquity, and even other, non-European cultures.[23] His most famous written work is undoubtedly his *Essai sur la musique ancienne et moderne*. Fend suggests that the "*Essai* was apparently a side product of LaBorde's extensive travels through France, Switzerland, and Italy collecting materials for his other books,"[24] a claim Laborde himself makes in the very first paragraph of the "Foreword" in the *Essai*. Laborde states that "our original materials had been collected only to develop an article on music for our *Voyage de la Suisse & de l'Italie*, having found these materials far too voluminous for this goal, we are determined to develop an exceptional treatise from them ourselves."[25]

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[20] Ibid.
[21] Joscelyn Godwin, *Music and the Occult: French Musical Philosophies 1750-1950* (Rochester, NY: University of Rochester Press, 1995), 36.
[22] Several of Laborde's non-musical works are described by Pichard du Page, 200-204.
[23] Fend, 86.
[24] Fend, 86-87.
[25] Laborde, *Essai*, I, v, [Every subsequent Laborde citation will indicate the volume number in Roman numerals and the page number. Every passage translated into English from Laborde in this dissertation has been translated by the author.] "Nos premiers matériaux n'avaient été rassemblés que pour former un article sur la Musique, dans notre *Voyage de la Suisse & de l'Italie*: les ayant trouvés trop volumineux pour cet objet, nous nous sommes déterminés à en former un Ouvrage particulier."

As it was for so many other Frenchmen of every social class, Laborde's life became very difficult with the onset of the French Revolution; as a member of the aristocracy, and as a *fermier-général*, he was seen as an enemy to the new republic. Pitou describes Laborde's personal financial situation as a result of the Revolution as "appreciably diminished."[26] His execution may have been delayed, however, by an apparent confusion created by Laborde's name and title. Choron and Foyelle submit that Laborde was living forgotten in the department of *Seine-Inférieure*, due in part to the resemblance his name had to that of the banker of the Court, and to another *fermier-général*, both of whom were also named Laborde.[27] Haraszti supplies further information on this subject, knowledge he acquired as a result of the difficulties he encountered when he began to assemble facts about Laborde's life; he states that one of the reasons that Laborde was eventually brought before the Revolutionary Tribunal is because of the similarity of Laborde's name with that of the Marquis Jean-Joseph de Laborde, Lord of Méréville.[28] The Marquis Laborde had been executed some months before as the result of his son's thoughtless actions. The Marquis's son had spent a grandiose sum of the Marquis's money to buy paintings that he then sent to England. When this was discovered, the Marquis was arrested, tried, and executed for trafficking in paintings.[29] The Marquis's son's behavior was quite likely interpreted by the Tribunal as the treacherous, maybe even treasonous, act of a noble family "smuggling" national treasures out of the country. Haraszti suggests that Laborde the musician was eventually arrested because Antoine-Quentin Fouquier-Tinville, the public prosecutor of the Revolutionary Tribunal, remembered the name Laborde from this previous incident, and although the two men were in no way related, he demanded the musicians head.[30]

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[26] Pitou, II, 313.
[27] Choron and Fayolle, 389.
[28] Haraszti, 110. Pichard du Page explains the confusion that may occur for the historian because of the two M. Laborde's; he says "as for the historians who have only had cursory dealings with one of tehse two people, they have quite often confused on efor the other," (Ibid., 105). He adds that care in identifying one or the other must be taken, as they shared more traits than just a name. He says "the precaution is not useless, for Jean-Benjamin de Laborde had a homonyme that lived at the same time who was also worked in finance, lived sumptuously, loved the arts, and is not easy to distinguish them in contemporary memoirs," (Ibid., 105).
[29] Ibid.
[30] Ibid., Haraszti's research discovered that indeed the relative documents in the Bibliothèque Arsenal, specifically in installment manuscript No. 6497, of the two separate families are indeed mixed together.

Thus when Laborde was marked for execution, he fled Paris. Laborde's flight is a result of the political and financial pressures he faced under the new government. Pitou surmises Laborde's situation; "he decided to leave Paris for Normandy and a more economical way of life while simultaneously eluding prosecution by the new government."[31] After his exodus from the city, his palace in Paris on the rue Richelieu, with its library containing volumes numbering 25,000, was burnt to the ground. Eventually he was discovered in his country hideout. He was captured and returned to Paris, and in spite of the entreaties of friends made on his behalf, he was sentenced to be executed. Pitou suggests that Laborde himself may have had a hand in his own execution as a result of his own indignation: "he pressed for a settlement of his case and was rewarded for his insistence upon speedy justice."[32] Laborde's indemnity in his case was a trip to the guillotine. His sentence was carried out on 22 July 1794 (or on 4 Thermidor, Year 2, according to the calendar of the new Republic instituted by Maximillien Robespierre), only five days preceding the downfall of Robespierre and his tyrannical Reign of Terror.

Laborde's adult life may be separated into two distinct periods. The first consists of his time at the Court of Versailles during the reign of Louis XV, terminating at the death of the King in 1774; the second begins with Laborde's departure from the Court and continues until the time of his death in 1794. The clear distinction between the two periods is made even more obvious when it is observed that the majority of Laborde's musical compositions were written during his time at Court. Once he left the cloistered, yet decadent atmosphere of the Court, he turned his attention from composition to writing. Laborde's published materials all date from this latter period of his life. According to Choron and Fayolle, the division between Laborde's two periods is so complete that it even led Ernst Ludwig Gerber to assume that Laborde the opera composer and Laborde the author were two completely different individuals.[33]

Laborde's identity has proven to be a nebulous topic both during his life and following his death. Aside from the aforementioned confusions occurring regarding

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[31] Pitou, II, 313.
[32] Ibid.
[33] Choron and Fayolle, 389, Here is yet another instance of confusion over Laborde, this time between not Laborde and another man with the same name, but this time, even more interestingly between Laborde's own oeuvre as a composer and as a writer, which has caused erroneous scholarship on Laborde.

Laborde's execution and Gerber's assumption that Laborde was in fact two different people, there are numerous other cases where a slight shift in perspective regarding Laborde creates potential confusion. For example, in Williams's account of the Mme. du Barry he has a reference in the index listing Laborde as *premier valet du chambre*, but in the text for this reference, the Laborde that is mentioned is actually the Court banker.[34] Haraszti has uncovered several instances of Laborde being mistaken for someone else, chief among them is the 1922 edition of the Riemann-Einstein *Musiklexikon* mistaking Laborde for a Jesuit priest named Jean-Baptiste de Laborde who had invented an electric piano in 1759 and published a work[35] in 1761 describing it.[36] Adding to the apparent confusion, Godwin has realized that when searching for information on Laborde, some dictionaries will list him as "Borde, de La."[37]

Although all of these name variations and misconstrued accolades have seemingly assisted in creating in some minds at least two separate and finite Messieurs Jean-Benjamin de Laborde, the composer and the scholar, this distinction should only be made in relation to the chronology of his output. Both of these Messieurs Laborde are indeed the same person. Laborde's activity as a composer coincides with his time at Court, because as Louis XV's *premier valet de chambre*, he was allowed to engage his creative instincts as a composer; being so close to the King provided Laborde with a great amount of royal favor which he could parlay into opera performances. Laborde's work as a scholar occurs after he had left Court, because, no longer being required in the daily service of the King, he now had ample time to pursue his scholarly interests.[38] The things he learned while working as a composer, however, did not cease to be important in his written work just because he was no longer actively composing; on the contrary, the practical experience he garnered as Rameau's pupil and as a working composer appears

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[34] Williams, 7, As far as I have been able to determine through my personal research on the subject, although Laborde the musician was involved in finance in the later years of his life, he is not the same man as the banker for the Court of Versailles.

[35] Jean-Baptiste de Laborde, *Le clavecin électrique avec un nouvelle théorie de mechanisme et des phénomènes de l'électricité* (Paris, 1761).

[36] Haraszti, 111.

[37] Godwin, 45. This research assistance is offered by Godwin in the notes to his Chapter 2, "Pythagoras in Egypt in China," n. 18, but he does not provide any specific instances in which this occurs. In the instances where I have encountered this, most notably in Fétis, *Biograpie universelle des musiciens*, there has been a cross-reference to the "Borde, de La" entry under "Laborde."

[38] This is, of course, in addition to the fact that, after the death of Louis XV, Laborde no longer had the favor of the King to provide him with the means to have operas performed, as previously mentioned.

to have had a lasting influence on Laborde beyond the scope of his lessons and compositions. Laborde's enthusiasm for Rameau and his theories is evident throughout the *Essai sur la musique ancienne et moderne*, but the *Essai* is far more than a treatise devoted to extolling and disseminating Rameau's theories.[39] Laborde strongly advocates Rameau's theoretical arguments in his musical writings, yet he did not consider music theory to be the sole musical subject worthy of considering in his writings. Unlike Rameau who aspired, sometimes with great enthusiasm, in his written works to relate everything in music, and eventually outside of the discipline of music, to his own musical theories which he claimed were based on natural principles; Laborde, in contrast, goes about the perhaps simpler, yet no less daunting task of attempting to relate everything he has discovered about music, theory and otherwise, in his *Essai*.

The *Essai sur la musique ancienne et moderne*

The *Essai* is an encyclopedic undertaking that is comprised of six distinct *livres* bound in four hefty *tomes*. *Tome premier* contains the first two *livres*. *Livre premier* presents Laborde's views on the subject of music, as well as chapters devoted to the music of various countries and peoples. *Livre deuxième*, *des instrumens*, considers various types of instruments, both modern and from antiquity. *Tome deuxième* also contains two *livres*, the third and the fourth. *Livre troisième*, *Abrégé d'un Traité de Composition*, presents Laborde's views on music from a theoretical perspective. *Livre quatrième* is devoted to the art of song. *Tome troisième*, the whole of which is allotted to *livre cinquième*, concerns itself with bibliographic entries regarding musicians and poets from modern and ancient times. Finally, *tome quatrième* consists of *livre sixième*, which deals exclusively with French lyric poets, and includes a few supplemental materials and an index.

In the *livre premier*, Laborde has not restricted himself to research on the music of the modern, western European countries, although he does include chapters on France (chapter 26) and Italy (chapter 22); he investigates the music of ancient Greece (chapter 10), ancient Rome (chapter 11), Egypt (chapter 11), the Jews (chapter 6), and Hungary

[39] D'Alembert's *Élémens de musique théorique et pratique, suivant les principes de M. Rameau* (Paris: 1752, 2nd edition, Lyons, 1762) would be an example of this type of a treatise.

(chapter 19). Nor is Laborde circumscribed by discussing music only in terms of geographical or religious boundaries; he has written chapters on the music of the fourteenth through sixteenth centuries in Europe (chapter 18), on the use of music during public games (chapter 14), and public ceremonies of acclamation in ancient society (chapter 15). Laborde even explores the music beyond Europe's borders, including chapters on the music of the Chinese (chapter 17), the Persians and the Turks (chapter 20), and the Arabs (chapter 21).

The organological guide in *livre deuxième* is as richly varied as the material in *livre premier*. There are chapters devoted to instruments that are categorized employing the instrument division that are still in use today: stringed instruments, both ancient and modern (chapters 13 and 16, respectively); percussion, ancient and modern (chapters 12 and 15); and wind instruments, ancient and modern (chapters 11 and 14). Laborde also furnishes chapters in which he describes the instruments used for various occasions in ancient society such as sacrifices and celebrations (chapter 2), games (chapter 4), navigation (chapter 5) and funerals (chapter 7), and he describes the instruments needed for some of the popular music entertainments of his own day in Paris such as the *Opéra*, the *Opéra Comique*, and the *Concert Spirituel* (chapter 20). Laborde expands upon the previously discussed chapters concerning non-European countries of which he writes in *livre premier* by including chapters on the instruments of China (chapter 17) and the Arabs (chapter 18); he then expands his range of inquiry to discuss the instruments of Africa, specifically those from the coast of Guinea, the Gold Coast, and Congo (chapter10).

Livre troisième contains an abridged composition treatise which is translated in full as a part of this dissertation. The focus of this dissertation will be on this *livre* and Laborde's contribution to the canon of eighteenth-century French theoretical writings. For the moment, it will suffice to say that this *livre* is firmly grounded in western compositional practice utilizing theoretical concepts prevalent in France at the end of the eighteenth century.

Chanson is the sole subject of *livre quatre*. Laborde discusses song in ancient Greece and Rome (chapters 2 and 3), as well as devoting a chapter to the songs of Scandinavia (chapter 9), but the majority of this *livre* documents the French chanson.

Laborde examines the development of the chanson in France from the twelfth through the fifteenth centuries (chapters 4, 5, and 8), providing a comprehensive table (chapter 7) of the locations housing the manuscripts of the chansons of the twelfth and thirteenth centuries that he has researched.

Tome troisième and *tome quatrième,* which are comprised of *livre cinquième* and *livre sixième,* respectively, both contain bibliographic entries of varying lengths. *Livre cinquième* has been organized into ten chapters, each espousing a different category of people. He deals with poet-musicians, musicians, and authors who wrote about music in Ancient Greece and Rome (Chapters 1, 2, and 3, respectively). Chapters 4 through 7 deal with Italians: the composers (chapter 4), lyric poets (chapter 5), famous singers (chapter 6), and authors who have written about music in the last century (chapter 7). The final chapters deal with Laborde's fellow countrymen: French composers (chapter 8), French musicians (chapter 9), and French authors (chapter 10). *Livre sixième* deals exclusively with French lyric poets.

As previously stated, in addition to the biographical information regarding French lyric poets, there are a few supplements in *tome quatrième*. Among them are additional information on chapter 4, *tome troisième* providing further information on Italian composers and a notice regarding a manuscript from the library of the Duke of Valliere containing the poems of Guillaume de Machaut.

While this overview cannot capture the textured nuances or the unique character of the entirety of Laborde's *Essai*; it does create, however, through this survey of the *Essai*'s totality, an impression of Laborde's far-reaching vision. In his *Essai* Laborde was, at various turns and using modern terminology, a theorist, a musicologist, a lexicographer, an ethnomusicologist, an organologist, and a critic, but above all, I believe he was a man genuinely excited by music and the things it could accomplish, and he wished to share this with anyone who cared to take the time to listen. When the *Essai* was published however, not everyone was as enthusiastic for Laborde's all-encompassing fascination with music as he was.

One of the sharpest criticisms of the *Essai* came from the pen of François-Joseph Fétis. In his biographical reference entitled *Biographie universelle des musiciens*, Fétis

refers to Laborde's *Essai* as a "work of ignorance, disorder, and negligence."[40] These strong words have a strain of truth to them, but these methodological failings of which Laborde was accused that arise throughout the *Essai* are, I believe, in part, due to the fact that Laborde was working without a clear and specific template. Musicology was not an established scholastic field at the end of the eighteenth century; at that time, those who chose to write on subjects that today we would refer to as musicological were fostering the foundations of a new discipline—though they were probably unaware of this actuality at the time—through no small amount of trial and error. Laborde was aware of several works about music which are also written from a fledgling historicist position that may have influenced his own work, among them Jacques Bonnet's *Histoire de la musique & de ses effets, depuis son origine jusqu'à présent*, and M. Blainville's *Histoire général, critique & philologique de la Musique*.[41] Laborde was also familiar with such seminal seventeenth-century works as Marin Mersenne's *Harmonie universelle* and Athanasius Kircher's *Musurgia universalis* with which Laborde shares several topical areas, such as musical instruments and the music of the ancient Greeks and Hebrews, although each author's map of the musical terrain is his own.[42]

Does Laborde's utilize various methods and approaches toward organizing its material? Certainly he does. The early chapters are arranged geographically and somewhat chronologically, the composition treatise is presented by topics, and the later chapters are catalogued alphabetically. Does the layout of his material seem haphazard? The specific arrangement of chapters does appear, at times, random. This does not detract, however, from the richness and variety of material in the work; it adds to it. Emil Haraszti provides an interpretation of Laborde's accomplishment in this regard:

> In the period when Laborde appeared, musicology was still in its beginnings. Through the wealth of his material in the *Essai*, Laborde places himself well above the works which appeared before his. Prinz von Waldthurn, Bontempi, Bonnet-Bourdelot, Martini, Hawkins, Burney (1776-1789) cannot compete with Laborde. There is no more method in his work than among the work of the others.

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[40] Fétis, II, 26.
[41] Blaineville, *Histoire général, critique & philosophique de la Musique*, (1765); Jacques Bonnet, *Histoire de la Musique & de effets, depuis son origine jusqu'à présent*, (1715).
[42] Athanasius Kircher, *Musurgia universalis*, (Rome, 1650); Marin Mersenne, *Harmonie universelle* (Paris, 1636-37).

> Nevertheless, it remains Laborde who has the great merit of providing a general view of the entire domain of musicology.[43]

Laborde himself states in the Forward to the *Essai* that "this work, written without pretense, is only the outcome of thirty years of readings and of the extracts which were their fruit."[44] Fétis speaks of disorder in the *Essai*. The disorder may be more a result of a rushed production schedule than of any intentional negligence. Laborde has clarified his position from the start that this is only a collection of materials. He further defines the reasoning behind the creation of the *Essai*; he claims that his "only plan has been to collect, in a single work, nearly all of the good writings on music from several thousands of volumes which have appeared to us. This is the sole merit of this enterprise."[45]

Haraszti conjectures that Fétis may have had a more personal reason for denouncing Laborde with prejudice in his writings; Fétis's wife, Louise Adélaide Catherine, was the daughter of the editor of the *Mercure National*, P. F. I. Robert, who was an intimate friend of revolutionary leader Georges Jacques Danton and Mlle. de Kéralion, a close friend of Robespierre. Haraszti hypothesizes that Fétis's wife was sure to have a substandard opinion of Laborde; as he was a prisoner of the Republic and sentenced to death by its Tribunal, she certainly was able to influence her husband in Laborde's regard.[46] This bias toward Laborde could have easily colored Fétis's estimation of the *Essai*, and subsequently influenced numerous others who turned to Fétis's work, but as Haraszti suggests, echoing Laborde's own words, "this work does not have the pretension to be anything other than the result of Laborde's readings over the course of thirty years."[47]

Laborde directly addresses the deficiencies he has discovered in his own method of assembling the information in the *Essai*, revealing that he was aware of the drawbacks in his hasty approach. In a statement that may be read as prescient in light of the criticisms which were to be lobbed at the *Essai*, he says that "some of our readers will

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[43] Haraszti, 113.
[44] Laborde, I, v, "Nous déclarons de bonne foi que cet Ouvrage, composé sans prétention, n'est que le résultat de trente ans de lectures & des extraits qui en étaient le fruit."
[45] Ibid., "Nous n'avons eu d'autre projet que celui de rassembler dans seul ouvrage, Presque tout ce qui nous a paru écrit de bon sur la Musique, dans plusieurs milliers de volumes. Voilà l'unique mérite de cette entreprise."
[46] Haraszti, 111.
[47] Ibid., 113.

perhaps desire to find more method in this edition of the work, but we must mention that we have not been successful in acquiring the necessary knowledge for the development of our ideas on music in a timely manner."[48] Laborde's cognizance of the shortcomings of his own work implies a certain amount of humility in the author;[49] he acknowledges and accepts that there are limitations in his ability to complete his endeavor in an efficient manner. These limitations would surely result in extensive criticism. Haraszti concurs when he states that Laborde "attracts the attention to himself of a certain faultiness of method in the *Essai*'s groupings that are apparent when one finds the facts concerning the same subject in different places."[50] Laborde explains that the printing schedule created this overlap of ideas. On occasion, "some of this knowledge has only reached us after we had already delivered the related articles to the printers."[51] Laborde admits that the articles appeared incomplete; so when the new materials arrived, the only thing to do was to add the necessary information into the sections of the *Essai* not yet delivered to the printers.[52]

Laborde addresses his potential critics once again by reminding them of the *Essai*'s main purpose and inviting them to submit materials to correct any oversights:

> In spite of the care that we have taken in order to respect opinions and to hurt no one, we are not unaware that we will meet a crowd of critics, of whom perhaps several will be of good faith. We are content with inviting them to observe that this work is only an essay, only an assembly of materials destined for the construction of a very large structure, and we hardly believe it [to be] without faults. We will entertain with the greatest gratitude the information that others are willing to give us, as well as all the pieces of information that escaped us in our research.[53]

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[48] Laborde, I, v, "Quelques-uns de nos Lecteurs desireront peut-être trouver plus de méthode dans la rédaction de l'Ouvrage; mais nous observons que n'ayant pu acquérir que successivement les connaissances nécessaires au développement de nos idées sur la Musique."

[49] There is a certain strain of humility that runs throughout most French writings of the era that at times seems more like affect than genuine humility. In this case, however, Laborde truly seems to be daunted by the enormity of the task he has attempted and he does realize that he has only made a humble beginning.

[50] Haraszti, 113.

[51] Laborde, I, v, "il est arrive que quelques-unes de ces connaissances ne nous sont parvenues qu'après que nous avions déja livré à l'impression les articles qui y étaient relatifs."

[52] Ibid., "ensorte que la demonstration de ces memes idées nous paraissant alors incomplete, nous avons dû rejetter dans des notes cette partie de notre discussion."

[53] Laborde, I, vi, "Malgré les soins que nous nous sommes donnés pour respecter les opinions, & ne blesser personne, nous n'ignorons pas que nous rencontrerons une foule de Critiques, dont peut-être plusieurs seront de bonne foi. Nous nous contenterons de les prier d'observer que cet ouvrage n'est qu'un essai, qu'un assemblage de matériaux destines à la construction d'un très-grand édifice, & que nous sommes

This statement is laced with charming rhetoric to be certain, but the underlying message elucidated within the jargon should not be misinterpreted. Laborde believes his *Essai* to be a collection of materials only and is the first to acquiesce that there are errors to be found within it.

From our modern vantage point, another striking aspect of the *Essai* that deserves investigation is the lack of information regarding German composers and authors. I speculate that several different factors could have coincided to deliver Laborde's *Essai* to the public *sans Allemagne*. The first is that Laborde may not have been literate in the German language; although he was fluent in Italian.[54] It may also be assumed that he could read a fair amount of Latin due to his extensive education; still there seems to be no indication that he could read German. Second, Laborde's predominant interests were in the realm of French and Italian music, as is amply expressed throughout the *Essai*. Aside from the obvious fact that he himself is French, Haraszti suggests that Laborde is attracted to French and Italian art due to "his temperament, his sentiments, [and] his character. He knows these two countries well."[55] Finally, the aristocratic culture in France, as based in Versailles and Paris, was driven by that which was fashionable, especially in music. The French thought very highly of themselves and their culture, but they were not so insular as to completely prevent foreign notions from infiltrating the fashionable music of the time, although these foreign ideas caused their own share of controversy—and controversy was always fashionable to the French in the eighteenth century. It so happened, however, that the country that came to influence the musical tastes of the time was not Germany, but rather, Italy; in fact, the French versus the Italian style of making music, particularly in opera, dominated the landscape of musical discourse in France throughout the eighteenth century.

The *querelle des bouffons* during the 1750s exemplifies the struggle between the French and Italian styles of composition that fashionable society reveled in.[56] In this case

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éloignés de la croire sans défauts. Nous recevrons avec le plus grande reconnaissance les instructions que l'on voudra bien nous donner, ainsi que tous les renseignemens qui ont échapé à nos recherches."

[54] Haraszti, 115.

[55] Ibid.

[56] Robert M. Isherwood, in his article regarding the continuation of the *querelle des bouffons* in the 1770s and 1780s in Paris between the Gluckists and the Piccinnists, provides a succinct but insightful summary of this conflict (Robert M. Isherwood, "The Third War of the Musical Enlightenment," in *Studies in*

the conflict regarded the merits of French versus Italian opera on the surface, but actually represented a greater conflict between the relative strengths of French and Italian music as typified by Jean-Philippe Rameau's belief in the natural supremacy of harmony as typified in French music and Jean-Jacques Rousseau's insistence that melody is more natural, therefore Italian music should be the aesthetic model.[57] The Opéra often hosted scenes during the years of the *Querelle*, 1752-1754, not only the scenes from the operas being presented on the stage, but also scenes from the controversy playing out in the opera house itself. In all actuality, it often appeared as if the *Querelle* had more to do with what occurred in the Opéra house itself than the actual operas that were occurring on stage. James H. Johnson observes that on the floor of the Opéra, or the *parterre*, which contained the "fringes of the Parisian elites, whom the more polished elements of society viewed with disdain," including the intellectuals of the day such as Jean Rond d'Alembert and Denis Diderot, the combatants would gather beneath the boxes of the King and Queen, which faced one another across the parterre, and bait one another into verbal combat, while showing support for their own position in the controversy.[58] It is fitting that they would choose to position themselves beneath the Royal boxes, for the ultimate barometer as to whether or not something was fashionable fell to the King himself and those close to him.

The Opéra and the works performed there could always be employed as a barometer of what the King and those at the top of the social strata embraced as fashionable. After all, as has previously been mentioned, Laborde earned the King's trust and was rewarded with numerous productions of his work at the Opéra during his tenure with Louis XV. As soon as Louis XV passed away, the new barometers of taste were the young royal couple Louis XVI and Marie Antoinette, who had no reason to support Laborde's compositions, as he was no longer in their direct service at Versailles. Johnson describes the Opéra during Louis XV's tenure:

Eighteenth-Century Culture, vol. 4, ed. Harold E. Pagliaro (Madison: University of Wisconsin Press, 1975), 223-29).

[57] Thomas Christensen, *Rameau and Musical Thought and the Enlightenment* (Cambridge: Cambridge University Press, 1993), 236-38.

[58] James H. Johnson, *Listening in Paris: A Cultural History* (Berkeley: University of California Press, 1995), 18.

> At mid-century the Opéra-known officially as the Académie Royale de Musique-was a royal spectacle, tailored to fit the tastes of the king's most distinguished subjects: his closest relatives held the boxes in the most visible rows, royal administrators and palace functionaries seldom missed performances, and Louis XV himself came with some regularity.[59]

The importance the French assigned to the "boxes in the most visible rows" cannot be overstated, because the Opéra, during the time in which Laborde was composing, was less a place to observe presentations of the musical works quietly, and more of a venue for a sort of social exhibitionism, to see and be seen. In his discussion on the boxes at the Opéra, Johnson states that a clear view of the opera was not "of paramount importance anyway; to be seen was a higher priority. Subscriptions lists from the middle of the eighteenth century reveal a general correspondence between visibility to others and relative position in the social hierarchy."[60] Elsewhere Johnson describes the importance of the Opéra as a place of social networking, "on the whole, the Opéra in 1750 was a public setting for private salons, for which the music, dancers and machines provided an excellent backdrop."[61]

This is the environment, more or less, in which Laborde presented his stage works; a world dictated by the whims of a select few. William Weber describes the dictates of musical fashion in this manner, "because music was a general social pleasure for the upper orders, authority over tastes was ruled by the precept of privilege which was essential to the *ancien régime*. The *beau monde* was beholden to none in its musical tastes; no authority stood higher."[62] When Laborde left his life as a composer behind, it stands to reason that the same awareness of this world and its attention to the tastes of the aristocrats unsurprisingly would echo through his written works; so as Germany never seems to be a fashionable subject, I imagine that Laborde found it unnecessary to investigate the Germanic composers and writers.

One of the reasons for Germany's lack of stature, especially when compared with Italy, is that it had a strong association with the tradition of polyphonic music. Weber explains that this tradition "remained apart from general taste…and was generally

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[59] Ibid., 10.
[60] Ibid., 16.
[61] Ibid., 26.
[62] William Weber, "Learned and General Musical Taste in Eighteenth-Century France," *Past and Present* 89 (1980), 62.

thought accessible—some even said attractive—only to those with advanced musical training."[63] This goes against the maxim that Weber presents as summarizing the "mentality of the age regarding musical learning: one did not have to know anything special to understand music, but it was nice if one did."[64] The French and Italian operatic traditions, although polarizing in their influence on French society, were both seen as accessible to the public—even to the members of society that had minimal musical knowledge—and could be enjoyed, or not, as one saw fit, based on the taste of the listener and the sway of popular opinion. The polyphonic tradition, however, was viewed by society as something for the musical elite; Weber adds that "while fugal writing continued as the hallmark of the learned composer (that of J. S. Bach being regarded as the most skillful of its kind), it did not have many amateur practitioners and related little if at all to classical study of musical theory and aesthetics."[65] Without amateur interest, the polyphonic tradition, as represented by J. S. Bach, did not have the influence over public opinion that opera did at the end of the eighteenth century. Thus seen as a musical tradition outside the realm of the general musical understanding of the public, Germany and its music had little influence in France during the second half of the eighteenth century.[66] Couple this with Laborde's own penchant for French and Italian music and his possible illiteracy in German, Germany's lack of representation in the *Essai* does not seem quite as shocking.

Over the past two centuries, the criticisms leveled against Laborde's *Essai*, such as its flimsy methodological structure, the overabundance of Italian and French subject matter at the expense of German, and his strong personal prejudices, do not outweigh Laborde's achievement. For a reader to surmount the alleged ignorance, disorder, and negligence claimed by Fétis only requires Laborde's readers to undertake a more active role in assessing the context in which Laborde was writing. Christensen discusses the importance of placing a music theory text within its proper cultural milieu in order to

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[63] Ibid., 63.
[64] Ibid., 63-4.
[65] Ibid., 63.
[66] This is not the same as saying that there was no music with a German lineage being performed in Paris at this time. Both Haydn and Mozart were performed, but the pieces that found success were those that catered to French tastes for programmatic music. Johnson describes numerous examples of the French taking to this music, especially that of Haydn, towards the end of the eighteenth century into the nineteenth century (Johnson, *Listening in Paris*, 75-76, 208-212).

ascertain a thorough understanding of the work.[67] His ideas seem to capture a critical, analytic element that has been absent from much of the scholarship, as limited as it is, on Laborde in both the nineteenth and twentieth centuries, as exemplified by Fétis's harsh judgment of the *Essai*. Christensen says:

> Every music theory must first be understood as a creative intellectualization of music that is informed by a unique complex of culturally specific parameters. And this is precisely what a presentist approach fails to do by seeing some past theory only on the basis of *our* concerns, *our* models, or, in other words, *our* theories. It is myopic of us, if not a bit narcissistic, to imagine that past theorists were necessarily talking about (or worse, adumbrating) the same topics with which we are concerned today.[68]

Christensen's suggestion that using a "presentist" approach to characterize a music theory—an approach that bases ideas and opinions on a contemporary set of theoretical conceptions, rather than considering those of the period being studied—creates an extremely limited understanding of the theory under investigation.

Another point Christensen makes is that "greater insight will be gained when we look at theories (like artworks) for what is unique and defining about them, not for what is common and invariant."[69] Laborde's *Essai* abounds with individuality; Christensen's model provides a useful tool to excavate a more accurate understanding of Laborde's place in the music theory canon. The remainder of this project will explore Laborde's contribution to the arena of music theory in France at the end of the eighteenth century through the text of the *Abrégé d'un Traité de Composition* taken from *Livre troisième* of the *Essai sur la musique ancienne et moderne*, utilizing a historically and culturally based hermeneutic model, as suggested by Christensen. The following chapter will explore the cultural context in which Laborde wrote, offering observations on the developing historical consciousness that informs Laborde's theoretical work.

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[67] Thomas Christensen, "Music Theory and Its Histories," in *Music Theory and the Exploration of the Past*, eds. Christopher Hatch and David W. Bernstein (Chicago: University of Chicago Press, 1993), 18.
[68] Ibid., Christensen goes on to warn of the dangers of a unique historicist approach to theory as well, and concludes by suggesting that the reconciliation between the present and the past occurs hermeneutically by assuming the dichotomy is more of a dialogue, two parts of a single subject.
[69] Ibid., 18-19.

CHAPTER 2

LABORDE AND THE STATE OF MUSIC THEORY IN FRANCE AT THE END OF THE EIGHTEENTH CENTURY

Laborde's *Abrégé d'un Traité de Composition*, published as *livre troisième* of his *Essai sur la musique ancienne et moderne* was issued at an important juncture in the history of music. Laborde's compositional treatise encapsulates and summarizes the thoughts of several of the most prolific French musical thinkers of the eighteenth century. When Laborde's *Essai* appeared at the end of the eighteenth century, a momentous shift in music's role in society and its place in French academia was occurring. The musical environment of the culture in France at this time was extremely volatile, mirroring the turbulent state of the country.[1] The close connection between France's music and her people at this moment in time should not be surprising, as musical life in France during the eighteenth century was a vibrant, integral part of their society. In the eighteenth century, music served a crucial role in the French people's everyday existence and therefore was distinguished from the other fields in the humanities, such as art and literature.

Weber presents a comprehensive overview of music's role in French society at this time and its relationship to the other liberal arts.[2] He asserts that music had a stronger role in society as a whole because of its state as the "least of the liberal arts."[3] Music was viewed as the "most vulgar of the arts" in academic circles; it "remained marginal to higher learning. By tradition, neither composition nor performance had any part in formal academic study, since the well-born could not contemplate doing them as trade."[4] Another reason Weber offers for music's inferior standing as a discipline in the French educational system is its lack of a clear classical tradition, especially in comparison, with

[1] When I refer to the music in the country of France, I am referring more specifically to the state of music in the capital city, Paris, and its environs, such as Versailles, as Paris was the center of all cultural life in the country at this time.
[2] Weber, "Learned and General Musical Taste," *Past and Present* 89 (1980), 58-85.
[3] Ibid., 61.
[4] Ibid., 60-1.

other arts forms: "music, lacking a textural corpus from antiquity, only had a second-hand classical tradition. For that reason music could enter higher learning only upon the sufferance of other fields,"[5] or stated in another manner, "since only fragments of Greek and Roman music had survived, there were no models for humanistic emulation or scholarly study."[6] As a result there was no true, state supported, academic branch devoted to the study of music; Weber expands upon this idea:

> Since music had no true classical heritage, its hierarchy of knowledge was weakly defined, and its learned men had no institutional authority, no academy. If the Académie Française devoted itself to codifying the French language and writing a dictionary—thus governing all modes of discourse—the Académie Royale de Musique was only an opera company with a fancy name, a royal show-place with a classic veneer. It in no way resembled the academies in science, literature and the plastic arts, and not until 1791 did it acquire an educational arm.[7]

Music's importance in antiquity is without question, but the speculation regarding that tradition had been largely relegated to aesthetics and the mathematical theories of acoustics, due in great part to the lack of a substantive corpus of extant musical literature from antiquity. On the subject of eighteenth-century treatments of the music of antiquity, Weber says that "their history of music concerned the philosophical and scientific traditions, but rarely any discussion of composers, styles, or music itself."[8] The void created by the lack of a sufficient, extant musical body from antiquity facilitated in the creation of a climate in France in which music was the product of a "culture of the 'now.'"[9] Weber further advances this proposal: "works were composed, enjoyed, and quickly forgotten. There were no masters as we know them now."[10] The concert works being performed during the eighteenth century were, for the most part, by living composers. When a work survived a composer's death, such as in the case of Lully, Weber informs that "it was extensively re-written and acted as a fixture of an institution rather than as a model elevated above criticism and studied in the schools."[11]

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[5] Ibid., 61.
[6] William Weber, "Mass Culture and the Reshaping of European Musical Taste, 1770-1870," *International Review of the Aesthetics and Sociology of Music* 8, no. 1(1977), 16.
[7] Weber, "Learned Culture and Musical Taste," 71-72.
[8] Ibid., 61
[9] Ibid.
[10] Weber, "Mass Culture," 16
[11] Weber, "Learned and General Musical Taste," 61-62.

In France, the world of musical taste permeated so many facets of society that it was often seen as too accessible to too many people to be a truly learned art:

> Music loomed large in the rites and pleasures of the court, the tavern and the home; people danced, drank and courted to it, and in the late seventeenth century operas and concerts simply put these functions on a grander scale….Even if plays also had a bawdy tradition, they offered much less spectacle--especially less dance—than opera and did not play as large a role in the home as instrumental music.[12]

Weber's belief is that the musical saturation found in eighteenth-century French society only added to music's lack of prestige in the vestiges of higher learning, but its diminished power in the domain of academia only bestowed more power upon the public sphere when it came to shaping music's role in France.[13] So, as a result of the combination of its lack of a true classical tradition, its reliance on contemporary works, its lessened stature in learned circles, and its being deeply embedded in the daily lives of the French citizens, music held a unique position in eighteenth-century France among all the arts. Music was more closely dictated by the views and opinions of the people, granted a few and select group of people, but the people nonetheless. Without a standard based on classical norms to measure music against, as existed in the other artistic fields, the bounty of what was acceptable to the musical public was dictated by taste, and, according to Weber, "musical taste accordingly remained fixed upon the present."[14] William Ray further defines taste, not as "a spontaneous expression of one's particular character, but rather a reflex of social solidarity."[15] Thus, while there were people who were considered musical experts, Weber asserts that "their role was to inform the public, not dictate its preferences;"[16] the public provided the final arbitration and verdict on what is determined tasteful. Besides, Weber adds, "connoisseurs in music could only claim a contemporary authority, which was by definition intellectually weak, and had to make do

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[12] Ibid., 62.
[13] Ibid., 62.
[14] Ibid., 61.
[15] William Ray, "Talking About Art: The French Royal Academy Salons and the Formation of the Discursive Citizen," *Eighteenth-Century Studies* 37, no. 4 (2004), 539.
[16] Weber, 71.

with a trumped-up classical tradition. Bound to the present, they had to respect the judgment of general taste."[17]

While these connoisseurs, perhaps the most famous coterie being the *philosophes*, had little influence over the general taste in music, they did play a crucial role in establishing a musical lineage from antiquity. The work of these aestheticians also provided the French with the ability to assess their music and the tools to value their own history. Weber suggests that the *philosophes*' vaulted position in French cultural society "may help to explain why the Académie Royale de Musique continued to perform many operas by Lully and his successors after their deaths."[18] Due, in part, to the cultural standing and influence of the *philosophes*, Lully was procured a position in the French musical pantheon, a construct fashioned by the *philosophes* and their brethren, even as the public grew tired of the *tragédies lyriques*.[19] The role that these connoisseurs played as arbiters of taste—not the aforementioned taste of the moment dictated by the public, but rather of the taste of the French musical tradition—established the foundation for the inception of a true classical music tradition into the nineteenth century.[20]

Music's role in the public life extended beyond the performances at the Opéra and the private salons; many heated debates over music and its theories that captured the public's attention continually surfaced in the publications of the era. The theorist and musician at the center of this squall of intellectual dissemination concerning music theory was undoubtedly Rameau. Although his works were often labyrinthine works of prose, Rameau's true triumph, according to Christensen, lay in his derivation of a single natural principle to explain the complex practice of music. [21] The "single natural principle" which Rameau produced, the *basse fondamentale*, provided an explanation for music

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[17] Ibid., 63. Weber continues with this historical thread when he adds that "all of this was to change after the eighteenth century. With the rise of a "classical" repertoire from around 1810 on, chiefly the music of Haydn, Mozart, and Beethoven, came an epochal change in the history of musical life, a fundamental transformation in the assumptions of taste….By the middle of the nineteenth century the symphonic repertoire was seen as the most serious of artistic forms, poets looked to music for aesthetic models, and connoisseurs had emerged as lay priests of the new musical deities." Weber, 64. The contrast between the two are cultural extremes that confirm that the end of the eighteenth century was indeed a tumultuous time.
[18] Ibid., 80.
[19] Ibid.
[20] Ibid.
[21] Thomas Christensen, *Rameau and Musical Thought*, 5.

established upon a natural phenomenon.[22] Rameau's findings engaged readers beyond the trained musicians of his day, the educated public of the time, especially the small group of cultural writers, the *philosophes*, who discovered noteworthy features to endorse in Rameau's writings. Christensen states:

> What impressed the *philosophes* about Rameau's theory had less to do with any putative musical value of the fundamental bass than the confirmation it gave to their collective epistemologies; Rameau's model appeared to them to be a model of judicious philosophy, validating their conviction that nature was governed by a small number of quantifiable principles that could be discovered through careful analysis and calculation.[23]

Music theory in France in the eighteenth century, greatly enriched as a result of the active interest in the subject throughout the learned community, provided a strong tie to the classical era; music theory bridged the chasm between the eighteenth century and antiquity in lieu of the non-extant body of musical literature, thus providing the conjunction that Weber submits was wanting. The theorists of the day were prodigiously involved in the aspiration to associate contemporary musical practice to that of antiquity through both eras' use of a theory founded upon universal scientific principles. The *philosophes* collaborated with the theorists in this endeavor through their participation. Weber explains that the most important role performed by the *philosophes* in this enterprise:

> …was to bestow the blessings of the classical tradition upon musical activity. In so doing they tried to provide an intellectual legitimacy to what was an essentially worldly form of entertainment. Even if their speculations about Greek music contributed little to the music of their time, it related musical life to the mainstream of French learning. They did, of course, conceive of music in terms now often thought external to the art, terms derived from the doctrine that art must imitate nature; their frame of reference was essentially that of literature, not music in and of itself.[24]

The *philosophes*, however, did not have an aesthetical template for music, as Weber states, so they utilized ideas from the fields of art and literature. The music theorists of

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[22] That phenomenon was based upon the *aliquot* division of the string of a monochord in Rameau's first and most famous work *Traité de l'harmonie réduite à ses principes naturels* (Paris: Ballard, 1722); in later works, however, the natural phenomenon he employed was the *corps sonore*; or rather the acoustical phenomenon that produces the harmonic partials of a vibrating string, the twelfth and the nineteenth, which are equivalent to the fifth and the major third respectively.
[23] Christensen, *Rameau and Musical Thought*, 6.
[24] Weber, "Learned and General Musical Taste," 79-80.

the eighteenth century had a more direct association with the musical life of antiquity than the *philosophes* had. Rather than establishing aesthetical conventions from another discipline about another era, the theorists could turn directly to the writings of the ancient Greeks to attempt the formation of causality between them and their current practice. In short, if Rameau and his brethren could prove that contemporary music was constructed from the same physical principles as the music of antiquity, it would constitute and institute a genuine lineage for modern musical practice.

Yet, towards the end of the eighteenth century, newer theoretical models emerged that eschewed the prescriptive, scientific foundations of composition for a descriptive, analytic approach to music. These newer analytic models seemed to be contrary to the more established prescriptive, historically grounded, scientifically supported theoretical models based upon Rameau's principles, such as those advocated by Laborde in his *Essai*. While he was personally involved in the exchanges fueled by the two approaches to music theory, expressing his stance in support of Rameau's ideas, Laborde actually assisted in the propagation of the newer, analytic models with the publication of his *Essai*. Laborde's *Essai* taken as a whole encouraged the progress towards music's institutionalization in France; it helped to codify and define music in terms of its history in Europe and its uses in various non-European cultures. Furthermore, Laborde attempted, as did other musical scholars such as Rameau and Pierre-Joseph Roussier, to link the modern theoretical tradition with that of antiquity, showing that as a subject, music needed a form of scholarly representation in the realm of higher learning, As Laborde stimulated the generation of a historical context for the study of music, this process also assisted in a shift of the public's perception of music at concerts. Whereas music during the eighteenth century was an artistic expression of the now, as previously discussed, the connoisseurs and others who were learned about music began to hold up specific works of the past to be models of what music could and should be as the century entered into its last quarter—first with Lully, then with Rameau. As the eighteenth century became the nineteenth, this process accelerated, leading to the generation of a canon of masterworks, mainly those of three composers: Haydn, Mozart, and Beethoven. Their compositions became the foundation of the esteemed classical repertory of the nineteenth century.

How does this pertain to music theory? The creation and high estimation of this canon of music established a body of musical literature to which the newer analytic models of music theory could be applied. The contention between the conventional views of music theory as a science, *musica speculativa*, or as a didactic tool used for instruction, *musica pratica*, and the newer perspective of music theory as an analytic tool that could be used to investigate and validate the burgeoning repertory of confirmed masterworks at the end of the eighteenth century in France is exemplified in the conflict between Laborde and Alexandre-Théophile Vandermode (1735-1796).[25]

Vandermonde was a member of the French Royal Academy of Sciences, who had a distinguished career in mathematics and engineering; he was appointed to the Academy in 1771 as a geometer.[26] He also became involved in the field of music when he presented a new system of music theory to the Academy in the form of two papers, *Système d'harmonie applicable à l'état actuel de la musique* [Harmonic System Applicable to the Actual State of Music], in November of 1778, and a clarification of this system two years later, *Second Mémoire sur un nouveau système d'harmonie applicable à l'état actuel de la musique* [Second Essay on a New Harmonic System Applicable to the Actual State of Music], in November of 1780.[27] His hope in presenting his theory to the Academy was the creation of a didactic method which would, according to Cynthia Gessele, afford "a better musical education to both amateurs and connoisseurs"[28]—a method which would provide a clear alternative to the current state of theoretical arguments regarding music. Albert Cohen observes that Vandermonde "notes that great liberties are taken by musicians in following the natural principles of harmony derived from physics and mathematics."[29]

Vandermonde's disdain in this regard is assuredly directed towards Rameau, his theories, and his adherents, for by the mid-point of the eighteenth century, Rameau's

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[25] This conflict, presented briefly here, is covered in much greater detail in Chapter 4 of Cynthia Gessele, "The Institutionalization of Music Theory in France" (Ph.D. diss., Princeton University, 1989), 173-234.
[26] Albert Cohen, *Music in the French Royal Academy of Sciences: A Study in the Evolution of Musical Thought* (Princeton: Princeton University Press, 1981), 97.
[27] Gessele, 173. It should be remember that Vandermonde is a member of the Academy of Sciences, just as d'Alembert was. It should also be remembered that neither Rameau nor Laborde was ever extended an invitation to join the society. This fact surely underlies some of the antagonism between Laborde and Vandermonde.
[28] Ibid., 229.
[29] Cohen, 97-8.

theory of the fundamental bass had become the foundation of theoretical thought throughout France. Many of the *philosophes* rejected the scientific validations that Rameau had provided as proof of his system's validity, but they accepted and incorporated much of Rameau's practical information, such as the idea that the fundamental bass was a representation of the lowest note of each chord, or its root, and that chord inversions were related to their fundamental chords.[30] In other words, Rameau's conceptions about harmony, the tertian structure of chords, and inversional relationships between chords had become accepted as representative of common musical practice, in spite of the rejections maintained by later writers of Rameau's scientific conjectures regarding music's generation.

Vandermonde offered his system as one such alternative to Rameau's theory of fundamental bass which by the 1780s was being promulgated by Laborde.[31] Gessele surmises that Laborde, adhering to Rameau's main premise of the *corps sonore,* "believed that the proportional relationships of intervals was the expression of a demonstrable reality found in "nature" as the overtone series, and that this reality provided the only valid foundation for a music theory."[32] Vandermonde, on the other hand, held the belief that nature does not provide the *systematic* basis for harmony; he established his musical system on the *a priori* existence of equal tempered tuning, thus refuting nature's role in the construction of a theoretical system for music.[33]

Gessele elucidates that Vandermonde, mirroring the musical culture of the time, "took contemporary practice as his initial premise and used a reductive method to arrive at a single law that purportedly would describe all chord progressions and licenses of the existing harmonic vocabulary."[34] With a hypothesis that emulates the fashion of the day regarding the ear as the ultimate barometer of taste, Vandermonde's system relied upon the judgment of the ear as its foundation; in other words, Gessele explains,

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[30] Cynthia Gessele, "The Conservatoire de Musique and national music education in France, 1795-1801," *Music and the French Revolution*, ed. Malcolm Boyd (Cambridge: Cambridge University Press, 1992), 192.
[31] Gessele, "The Institutionalization of Music Theory in France," 175.
[32] Ibid., 189.
[33] Ibid., 189-90.
[34] Ibid., 191.

"Vandermonde dispensed with the notion that one's aural judgment confirms theory and instead allowed it to define theory."[35]

With the ear as Vandermonde's standard, he was able to begin with the supposition that the diatonic scale in an equal tempered system could be the basis of his theory. Gessele further elaborates on this concept:

> Instead of constructing scales from manipulation of proportions of the overtone series, Vandermonde took the diatonic scale as the foundation of contemporary musical practice. Thereupon, he straightforwardly established that a seven-note scale could exist on any of the twelve chromatic half steps of the octave.[36]

Without a reliance on the *corps sonore*[37] as the source of his system, Vandermonde avoided the problems Rameau and his adherents faced when trying to explain the origins of the minor scale; Vandermonde simply accepted its existence, as he did with the major scale, as *a priori* information.[38]

Vandermonde could then generate the triads and seventh chords found in common practice directly from the various scale types. By recognizing the triad as the standard construction used by composers to build sonorities, then building a triad on each of the seven notes of each of his scales, Vandermonde accounted for not only the major and minor triad, but also the diminished and augmented triads as well. He referred to the chords that he derived in this manner as the elementary chords.[39]

Using these basic concepts as his foundation, Vandermonde expanded his theory by reducing every regular chord progression to one fundamental law which he called the *Loi general de l'harmonie*. The means he described to achieve this is the *base*

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[35] Ibid., 192.
[36] Ibid., 193.
[37] The *corps sonore*, a fundamental concept of Rameau's theory, will be discussed in greater detail in Chapter 4. Cynthia Verba describes it in the following manner: "a resonating body will generate not only its fundamental or lowest sound, but also a series of harmonically related overtones through the successive divisions of the resonating body, producing the octave, the perfect twelfth, and the major seventeenth" (Cynthia Verba, *Music and the French Enlightenment: Reconstruction of a Dialogue*, *1750-1764* (Oxford: Claredon Press, 1993), 58). Thus through the application of the overtones, which reduced to simple intervals through the use of octave equivalence produce the major triad, Rameau had a scientific, natural foundation for the basis of his harmonic theories.
[38] Gessele, "The Instituionalization of Music Theory," 193-4. Gessele explains that Vandermonde recognized four distinct forms of the minor scale in common practice. He describes 1) the *mode mineur en descendant*, which today we would call the natural minor scale; 2) the proper, or *mode mineur proprement dit*, our harmonic minor scale; 3) the *mode mineur en montant*,, our melodic minor scale; and 4) the *mode mineur avec quatre superflue*, or the harmonic minor with an augmented fourth. All four versions of the scale were accepted as facts in Vandermonde's system.
[39] Ibid., 197-8

d'harmonie; today, we would refer to the *base d'harmonie* as the root of the chord.[40] The chord on which a phrase concluded would be the perfect chord, and its root would be the tonic. Gessele concludes, therefore that "the *base d'harmonie* was the principal note of the tonic and the principal note of dissonant chords that moved to a consonant tonic in cadences."[41]

When Vandermonde applied the *base d'harmonie* to musical examples in his *Mémoire*, it supplied elucidation of the analytic role of the *base d'harmonie*. Gessele interprets this to show that the "*base d'harmonie* would only describe the reigning tonic scale of a phrase of a piece of music by reducing a passage to its elementary chords and then relating those chords to the tonic or dominant area."[42] In other words, Vandermonde's system provided a way to determine the large-scale motion of a particular musical phrase. He emphasized that his reductionist theory was meant to analyze a piece of music; Gessele explains that to Vandermonde, "analysis is the simplification of a harmonic progression using the *base d'harmonie* as the descriptive indicator of tonal area."[43] In this system, Vandermonde rejected the notation of continuo figures which provide complete sonorities for every bass note, because they do not, in his opinion, always indicate the chords' functions; he "merely indicates the tonic or fifth to which a passage is subject."[44] In so doing, he dismantled the strict harmonic hierarchy present in other systems.[45]

Yet in employing his system, Vandermonde did not expect his audience to jettison their existing musical knowledge, but rather to use their training as a foundation upon which to organize his system. Gessele emphasizes this idea when she says that "Vandermonde assumed that his readers had sufficient training to understand continuo

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[40] Ibid., 198.
[41] Ibid., 198-200, it should be mentioned that Gessele does address the fact that Vandermonde's use of the general term *base*, as opposed to the more musical term *bass* which infers the lowest note of a chord, "connotes a conceptual formula for signifying the general harmonic foundation of a phrase."
[42] Ibid., 199. Gessele's use of the term "dominant" here, as relating to music that is related to the fifth degree of the scale, is hers and not something she has taken from Vandermonde's text for she details the fact that Vandermonde's system distinguished itself from the fundamental bass and continuo theories of the period by his use of the term "fifth" in his text rather than the term "dominant." She states that "his terminology implies that the scale's internal hierarchy, not the inalienable attraction of the dominant and the tonic, determines harmonic progression" (Gessele, 204).
[43] Ibid., 200.
[44] Ibid., 204.
[45] Ibid., 206.

practice and even to recognize and accept concepts, such as chord inversion, which had been proposed by Rameau and were subsumed into the works of other theorists."[46] Vandermonde intended his system to be used by musicians who had a certain level of musical knowledge; Gessele elaborates, "Vandermonde's system was not for beginners, nor was *base d'harmonie* a practical method."[47] Gessele's comments demonstrate that Vandermonde's theory is not pedagogical, in so far as it is not a method intended for those with no musical education, nor is meant to be used as a means of musical composition; rather the *base d'harmonie* is designed for analyzing existing music.

Vandermonde's theoretical system imparts analytic tools for the investigation and eventual understanding of a piece of music. At its basest level, it is a descriptive system. It has its fundamental theoretical basis in the *a priori* acceptance of the major and minor scales; therefore it does not provide any speculation as to the derivation of the scales as the systems of Rameau and Laborde attempt to do. Gessele states that "Vandermonde posed a new set of assumptions as to how one could achieve a relatively advanced musical proficiency without physical or mathematical premises. He concentrated instead on comprehension of an existing work through an analytic method."[48] Gessele summarizes Vandermonde's theoretical output:

> Vandermonde's system was intended to "analyze a piece of music." The process of analysis involved a reduction of a passage to a simple description of its reigning scale. He dismissed concepts tendered by continuo practice such as completeness of chords and individual chord denominations and by fundamental bass such as a hierarchical system of chord classifications and *double emploi*.[49]

The descriptive methodology of Vandermonde's analytic system stood in sharp contrast to the prescriptive nature of the existing fundamental bass theory. Laborde's position as a champion of Rameau's theory of fundamental bass caused a fervent reaction from him regarding Vandermonde's disavowal of a scientific basis for music theory. The paradox of Vandermonde's analytic system is that while he avoided the problems created by utilizing a scientific foundation for his theory, he did not provide a satisfying generative principle such as that which arises from the use of the overtone series as the

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[46] Cynthia Gessele, "*Base d'harmonie:* A Scene from Eighteenth-Century French Music Theory," *Journal of the Royal Music Association* 119 (1994), 71.
[47] Ibid.
[48] Ibid., 87.
[49] Gessele, "The Institutionalization of Music Theory," 222-3.

template for the major chord in Rameau's theories. Because it is fundamental to common practice, Vandermonde claims the major chord as his starting point, *a priori*; but in so doing, he does not address the question of how the scale came to exist in the first place—at least the system of fundamental bass attempts to uncover the underlying principles of common musical practice.

In his *Essai*, particularly in the *Abrégé d'un Traité de Composition*, Laborde promotes the system of the fundamental bass. He states that "any harmony cannot be good, unless it is subjugated to the fundamental bass."[50] While the fundamental bass, if learned thoroughly, will aide the composer in his craft, it "is not a part of the music which is able to be played. It is only the proof of the composition, as, in arithmetic, addition is the proof of subtraction."[51] Laborde suggests that the time a composer spends learning the rules of the fundamental bass is well spent; "we would not recommend enough to study the system of the fundamental bass with the greatest care, and to get used to it to the best of your ability with its rules and their exceptions."[52] Gessele furthers our understanding of Laborde's objectives in the employment of the fundamental bass when she claims that "Laborde applied the fundamental bass to harmonic progressions as a test of compositional rectitude; those passages that did not conform to the rules of fundamental bass, consequently, were incorrect or stylistically inadmissible."[53]

If the fundamental bass is applied to harmonic progressions as Laborde has suggested, it certainly entails an aspect of analysis. Therefore I am in no way proposing that the fundamental bass has no analytic component, that it is purely prescriptive. Rather, when employing the fundamental bass, analysis provides a tool for the composer to check his work, as it were, to ascertain if he had indeed created a passage that had been composed within the confines of acceptable harmonic motion. For a continuo player, this skill was crucial. Gessele states that "the practical importance of the fundamental bass was that it provided an understanding of accompaniment, the eighteenth-century term for basso continuo realization. Accompaniment, in turn, provided a foundation for

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[50] Laborde, *Essai*, II, 46, "Toute harmonie ne peut être bonne, quand elle n'est pas soumise à la basse fondamentale."
[51] Ibid., "La basse fondamentale n'est pas une partie de Musique qui puisse être exécutée, elle est seulement la preuve de la composition; comme, en Arithmétique, l'addition est the preuve de la soustraction."
[52] Ibid., "Nous ne saurions trop conseiller de l'étudier avec le plus grande soin, & de se familiariser le plus que l'on poura avec ses regles & leurs exceptions."
[53] Gessele, 224.

compositional practice."[54] Thus when Laborde suggests that you must "subjugate" your harmony to the rules of the fundamental bass, it is for no other purpose than for the composer to determine the legitimacy of his harmonic structures. Laborde's intent in using the fundamental bass is not to describe the reigning tonal area as would be accomplished with Vandermonde's system.

The dichotomy between the theories of Laborde and Vandermonde illuminates a dramatic shift in the underlying arguments for the existence of music theory. Laborde maintains the older perspective that a theory of music should be prescriptive in nature; music theory should provide specific answers to why our musical practice is the way it is, seeking solutions within a scientific framework. Vandermonde presents an approach reflective of an emerging canon of musical literature which provided a corpus for analysis; his theory provides a means to characterize what occurs at levels beneath the surface within a piece of music. Gessele submits that the attention provided to Vandermonde's system demonstrates how "music theory was changing in eighteenth-century France:"

> Music theory was moving away from the closed systems that limited or defined compositional practice towards systems that were able to describe compositional practice and thereby would provide a consistent framework for discussion of existing compositions and of methods of composition.[55]

She extends her conclusions concerning Vandermonde, enunciating the shift from music theory as a science towards music theory as an art, or, as I have designated it, from music theory as a prescriptive discipline to a descriptive discipline:

> Although Vandermonde's system was never taken up directly by later theorists, his work provides a clear example of the transition from musical theories in which science and system dominate to those in which analysis of existing works is the primary intention. Thus, Vandermonde's system reflects not only a movement from music theory as science towards music theory as art, but also a movement from accompaniment as the basic skill of the composer to analysis as the primary method of compositional pedagogy.[56]

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[54] Gessele, "The Conservatoire de musique," 192.
[55] Gessele, "The Institutionalization of Music Theory," 231.
[56] Ibid., 234. Gessele uses this shift as the launching point to discuss the choice of pedagogical methods at the beginning of the nineteenth century for the newly established French National Conservatory.

Thus, as music theory emerged as an analytic discipline, reflective of the new pedagogical paradigm of music as an art used to teach composition, the need for the older system based in the practical art of accompaniment began to wane.

Vandermonde's system did not receive much attention beyond its initial presentation at the Academy, and it is noteworthy in this study more for its intended, overall purpose and design as an analytic system than its particular musical contents, which were better represented in various other analogous music theory treatises that emanate from this period.[57] Gessele and Cohen both indicate this aspect of Vandermonde's work. In the above quotation, Gessele simply confirms that Vandermonde's theoretical system, while not adopted by later musicians, exhibits the clear movement from music as science to music as art. Cohen however advocates a couple of reasons for Vandermonde's stark deficit relative to any sort of significant legacy regarding his musical methodology. First of all, Cohen states that musicians, with good reason, tended to view Vandermonde as a mathematician not as a musician. Cohen explains that Vandermonde's contribution to mathematics, while small, has proven to be significant and valuable; Vandermonde's contribution to music, however, while also succinct, has none of the stature of his mathematical output.[58] This idea leads directly to his second point, Cohen hypothesizes that the reason Vandermonde's system did not resonate among his contemporaries is that he intended to reduce his system to fundamental laws "that, while based on natural principles, adapt these principles to the requirements of *l'oreille et le gout*."[59] Vandermonde's reasoning led to the statement of two fundamental laws of music, the first which governs chord succession and the second, part-writing; Cohen believes that his laws are not fundamental "in any sense, rather they both describe elementary, restrictive procedures for succession and part-writing of neighboring chords."[60] This is just Cohen's way of stating that the "fundamental"

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[57] Gessele describes several other treatises that were written at this time which eschew the basic scientific tenets underlying the fundamental bass system and there influence in the development of a national musical education system in France, chief among them are Anton Bemetzrieder, *Leçons de clavecin, et principes d'harmonie* (Paris, 1771) and the work which would come to be adopted by the newly formed Conservatoire de Musique as a pedagogical text, Charles-Simon Catel, *Traité d'harmonie par Catel, member du Conservatoire de Musique, adopté par le Conservatoire pour server à l'étude dans cet établissement* (Paris: Imprimerie du Conservatoire, an X [1801]).
[58] Cohen, 97.
[59] Ibid., 98.
[60] Ibid.

procedures that Vandermonde provided are nothing more than descriptive tools used to explain the common practice.

Cohen has the benefit of history to inform his opinions and decisions regarding Vandermonde, but criticism of Vandermonde's system appeared almost as soon as his presentation had been completed. Chief among these critics was Laborde who uses his *Essai* to present a critique of Vandermonde's theories. Laborde's comments are limited to Vandermonde's first presentation, *Système d'harmonie applicable à l'état actuel de la musique*, in 1778; Vandermonde's second address, the *Seconde Mémoire*, did not occur until after the *Essai* had been published. With that fact in mind, I think Vandermonde's more thorough second presentation would have done little to sway Laborde's opinions regarding Vandermonde's theories. In reviewing the first, smaller document, Laborde says "it would be difficult to give an idea of M. Vandermonde's system from the brief portion of it that he has provided in his *Mémoire*, to perceive of it, where he seems rather to want to shroud it than to explain it."[61] Laborde suggests this clandestine approach is taken "without a doubt, so that no one can benefit from its discovery, in order to anticipate the work that he intends to give on this material."[62]

Laborde discloses Vandermonde's desired results, in a considerably dismissive manner, as being "that his system will have for its goal the reduction of all that is put into practice by today's composers into principles."[63] These are principles that composers apparently are required to know according to Laborde's reading of Vandermonde's text. Laborde determines that Vandermonde believed more composers than not truly compose without the guidance of any principles when he asserts that "the number of those who have principles is extremely small, when compared to those who have no sort of rule in their art, no principles, whether general or particular, which can direct them, because this is the *actual state of music*."[64] Laborde's titular reference to Vandermonde's *Système*

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[61] Laborde, III, 690, "il serait difficile de donner une idée du systême de M. Vandermonde, sur le peu qu'il en laisse appercevoir dans son Mémoire, où il semble plutôt vouloir l'envelopper que l'expose."
[62] Ibid., "sans doute, afin que personne ne profite de sa découverte, pour prévenir l'ouvrage qu'il se propose de donner sur cette matiere." Laborde is apparently making reference to the expected, forthcoming elaboration of Vandermonde's system.
[63] Ibid., "tout ce qu'on peut entrevoir dans ce Mémoire, c'est que son systême aura pour but de réduire en principes tout ce que pratiquent aujourd'hui les Compositeurs."
[64] Ibid., "tant ceux qui ont des principes, dont le nombre est extrêmement petit, que ceux qui n'ont sur leur art aucune sorte de regle, aucuns principes, soit généraux, soit particuliers, qui puissant les diriger; car c'est-là *l'état actuel de la Musique*."

d'harmonie applicable à l'état actuel de la musique provides a means for Laborde to present his own theoretical position; in the following excerpt, Laborde submits a title he feels to be more appropriate for Vandermonde's work that clarifies his own position while insinuating that Vandermonde, as a man of science, should know better than to abandon it so readily:

> It seems to us that M. Vandermonde's system would have been far more profitable if he had established it on *the actual state of the science of harmony*. For without a doubt, this scientist cannot ignore that the science of harmony is not something to be created, and since the time Rameau distinguished its first principles, there now exists, through the practice of this science, works in which everything that remained to be done, fortunately has been carried out.[65]

Laborde's acute criticism of Vandermonde's apparent dismissal of science's role in music solidified his own stance as an advocate of science's importance to music theory. Yet while Laborde's position at this historic conjuncture bolstered the earlier viewpoint of music theory as a science, his work in the *Essai* promoted the construction of a musico-historical context for the French musical tradition, which, in turn, aided in the formation of the French Conservatoire National de Musique. Historically, this places Laborde in an incomparable position. Laborde supported music theory as a science, but his publications propelled music theory towards a new role as a descriptive, analytic catalyst towards understanding extant musical works, thus laying the groundwork for his culture to be able to constitute and recognize what would become the classical canon of music. This contributed, in turn, to music being established as a subject worthy of its own educational institution in France—an institution that would ultimately reject the idea of the fundamental bass that Laborde supported so fervently.

The emergence of this canon of musical literature prepared the field of music theory for newer analytic systems. Thus Laborde's historical research promoted the formation of theories that did not adopt the fundamental scientific truths upon which Laborde claimed musical practice was established, rather, they employed the ear as the final arbiter of taste and based their rules upon musical practice with no regard to the scientific underpinnings. By searching the past for validation and confirmation of his

[65] Ibid., "Il nous parait que le systême de M. Vandermonde aurait été bien plus fructueux, s'il était établi sur *l'état actuel de la science de l'harmonie*; car sans doute, ce savant n'ignore pas que science de l'harmonie n'est pas à créer, & que depuis que Rameau en a tracé les premiers principes, il existe, sur la pratique de cette science, des ouvrages où tout ce qui restait à faire, se trouve heureusement exécuté."

theoretical concepts, Laborde participated in the solidification of music as an academic discipline, thus allowing music to transfer its position from among the sciences to its current environment among the arts. The following chapter shall investigate Laborde's reliance upon the authors of antiquity to support his theories in his *Abrégé d'un Traité de Composition*.

CHAPTER 3
LABORDE AND THE TRADITION OF THE ANCIENTS

French society in the eighteenth century resonates with the presence of ancient Greek and Roman culture. Although music from antiquity, as discussed previously, consisted almost exclusively of musical fragments, in eighteenth-century France, the musical scene pulsated with an underlying fascination with the societies of the ancients. Weber suggests that in the eighteenth century "classical nomenclature pervaded musical life."[1] This occurred even without a "historical chain of works done *in imitatio*: lacking a Virgil, music could have no Petrarch, and no composers revered down through the ages as were Dante and Michelangelo."[2] Weber observes that in eighteenth-century France "most opera librettos [were] derived from the general knowledge of Greek or Roman history or mythology; many halls, societies or occasions had ancient titles; and aspects of musical composition were sometimes seen in terms of Ciceronian rhetoric."[3] In the absence of any substantial musical repertory from antiquity, the scholarship in music theory in eighteenth-century France provides a fertile link to the culture of the ancients. This sentiment regarding musical writings from ancient Greece is echoed by Thomas J. Mathiesen who describes the state of musical scholarship in the eighteenth century as follows: "a certain body of texts began to be codified as representing a tradition of 'ancient Greek music theory,' even though the content and method of the texts varied widely and relatively little was known about many of the authors."[4]

As discussed in the overview of Laborde's *Essai* in Chapter 1, Laborde collected as much information as possible about the authors of antiquity. The majority of this information is catalogued in the first three chapters of *livre cinquième* of the *Essai*. Laborde organized each of these chapters as alphabetical lexicons, with each chapter

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[1] Weber, "Musical Taste," 61.
[2] Ibid., 60
[3] Ibid., 61.
[4] Thomas J. Mathiesen, "Greek Music Theory," in *The Cambridge History of Music Theory*, ed. Thomas Christensen (Cambridge: Cambridge University Press, 2002), 111.

further divided into two sections, the first dealing with the Greeks, and the second with the Romans. The subject matter of the first chapter is Greek and Roman poets, the second presents Greek and Roman musicians, and the third offers Greek and Roman writers who explored music. The biographical entries provide invaluable insight to the musical world of the ancients, but Laborde's work also illuminates the methodological template for music history that was developing at the end of the eighteenth century in Europe.

Vincent Duckles suggests that music historians of the eighteenth century began to regard their history not only as an exploration of the past, but that they were also "engaged in fashioning a structure of ideas to support [their] understanding of that past."[5] Helen P. Liebel investigates the rise of historicism in Germany during the Enlightenment, conveying that it was the German's "sophisticated study of Greek and Roman culture which took place in the eighteenth century that resulted in the revolutionary changes in the Western view of history."[6] She defines historicism for the Germans of the late eighteenth and early nineteenth centuries as "the basic assumption that individual events have to be seen in the context of a wider, universal historical development, and the facts of history [are to] be explained in terms of fundamental concepts."[7] Duckles, who employs the term historiography rather than historicism,[8] defines it as "history conceived within the framework of a theory of culture and a theory of knowledge."[9] By searching for the roots of modern musical practice in the societies of antiquity, Laborde attempted to frame music not only in the context of the wider historical development of which Liebel speaks, but as Duckles would describe it, he was also carving out a theory of knowledge and culture for music as well. Duckles goes on to state: "music historians first

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[5] Vincent Duckles, "Johann Nikolaus Forkel: The Beginnings of Music Historiography," *Eighteenth-Century Studies* 1, no. 3 (1968), 277.
[6] Helen P. Liebel, "The Enlightenment and the Rise of Historicism in German Thought," *Eighteenth-Century Studies* 4, no. 4 (1971), 359.
[7] Ibid.
[8] Historicism is defined by *Webster's Dictionary* as "a theory that all cultural phenomena are historically determined and that historians must study each period without imposing any personal or absolute value system." Historiography is defined as "the body of techniques, theories, and principles of historical research and presentations; methods of historical scholarship." *Webster's Encyclopedic Unabridged Dictionary of the English Language*.
[9] Duckles, "Johann Nikolaus Forkel," 277. Duckles' definition of "historiography" could be misconstrued for a definition of "historicism," but he defines historiography as being informed by historicism. He explains that "historiography is a term that strikes one as a cumbersome equivalent for the writing of history….It is history writing that has become conscious of its own ends and purposes. Historiography carries the implication that the historian is not merely delving into the past; he is, at the same time, engaged in fashioning a structure of ideas to support his understanding of the past," (Duckles, "Forkel," 277).

began to regard their discipline in this light in the late eighteenth century."[10] This is the intellectual climate in which Laborde began to write his *Essai*. In this chapter, Laborde's understanding of the ancients' contributions regarding music and the effect they had on music in Laborde's day will be addressed.

Definitions of Antiquity: Who were the Ancients?

Before going further with the discussion of Laborde's ideas regarding the ancients, I believe it would be beneficial to delineate what exactly is meant by the moniker "ancient author," both to Laborde and from our vantage point at the beginning of the twenty-first century. Mathiesen suggests that the tradition of writing technical works about music or on harmonics in Greek was "extraordinarily resilient, extending easily over eight centuries. But by the collapse of Rome in the fifth century CE, the tradition had become moribund, though certainly not entirely forgotten."[11] Therefore, the period for the written works Mathiesen refers to extends roughly from the fourth century BCE to the fifth century CE.[12] Obviously the fall of Rome did not immediately terminate all interest in Greek musical traditions. In the seventh century, Mathiesen informs us that Isidore of Seville held Greek music in the highest regard, but he had comparably little exposure to the original Greek sources.[13] At this point in Western music, Mathiesen claims that:

> Until the West experienced a rebirth of interest in ancient Greek science in the fourteenth and fifteenth centuries, the traditions of Greek music theory were known only in a highly refracted form through a complex stream of adaptations and paraphrases in the new tradition of medieval Latin musicography.[14]

Of course, the parameters Mathiesen establishes to define the "ancient" exclude musical texts written in Latin. This is unsurprising, as his definition comes from an article discussing ancient Greek music theory. He clearly considers the Latin texts secondary to the original Greek sources.

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[10] Ibid.
[11] Mathiesen, "Greek Music Theory," 109.
[12] Ibid., 113, This hypothesis is supported by a list of the primary Greek treatises on music that Mathiesen has provided beginning with the work of Aristoxenus in the fourth century BCE and ending with Alypius in the fourth to fifth century CE.
[13] Ibid., 109-110.
[14] Ibid., 110.

Laborde's conception of what constitutes the ancients is quite similar to the modern idea set forth by Mathiesen. Laborde provides biographical entries for all of the authors who wrote the primary treatises on music in Greek that are listed by Mathiesen.[15] Laborde, however, ventures beyond Mathiesen's criterion that the ancients were authors who only wrote about music in Greek to include those who wrote in Latin as well. Although the title of Laborde's third chapter[16] in *Livre cinquième* certifies that Laborde is comfortable dividing the writers of antiquity into two categories, the Greeks and the Romans, he considered them both to be part of the overall heading, "The Ancients." The section in Chapter 3 dealing with Latin writings is smaller than the comparable section on Greek authors in the same chapter. Laborde's inclusion of Boethius and Cassiodorus among the writers in this section suggests that Laborde perceived a longer time span for the period of the ancients than the one proposed by Mathiesen. Boethius and Cassiodorus both wrote during the sixth century CE, thus adding at least a century to the era suggested by Mathiesen.[17]

While there appears to be a discrepancy between the terminus of antiquity from Laborde's eighteenth-century perspective and Mathiesen's twentieth-century point of view, antiquity's commencement, at least as far as extant writings are concerned, finds the two men in accord. The earliest known writings on music date from the fourth century BCE.

Laborde and Mathiesen's timelines are based upon extant Greek musical writings. For this reason, neither one takes into account one of the most important figures of ancient Greek music theory, Pythagoras, as he lived before the time of the earliest surviving texts. Pythagoras, who lived in the sixth century BCE, predates the extant written source material for Greek music theory by two centuries; yet, Laborde, his contemporaries, and modern scholars would more than likely all agree that Pythagoras holds an important place in the pantheon of Western music theory, an idea the writings of both eras appear to support. Pythagoras's teachings and ideas were to become the basis of

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[15] Mathiesen, "Greek Music Theory," 113.
[16] Laborde, "Greek and Roman Authors who have Written about Music," III, 133-160.
[17] Although these two authors fall outside of Mathiesen's time frame for the ancients, they both wrote before Isiodore, whom Mathiesen indicates is a writer who does not have a solid connection to the original Greek source material. They are also writing in Latin rather than in the Greek of the original sources, thus they are outside the parameters of Mathiesen's consideration.

one of the two main traditions of ancient Greek music theory, Pythagoreanism. Pythagoreanism concerned itself with the ratios of intervals and with music's relationship to the cosmos. It did not trouble itself with actual music; it dealt fundamentally in abstract concepts and mathematics. For this reason, Pythagoras's ideas formed the foundation of what was to develop into *musica speculativa*.

The other main tradition of ancient Greek music theory was founded upon the writings of Aristoxenus, [18] a musican and scholar who lived in the fourth century BC, and later works based on his ideas.[19] The principal ideas of Aristoxenus involve the explanation of phenomenological experiences of music that lead to the formation of rules based on the understanding of these experiences.[20] Barker explains that this phenomenological information came from "the analysis and synthesis of what is heard as melodic, simply in its character as an object of perception."[21] Basically, as Aristoxenus's method is based upon the phenomena of musical practice, he helped to establish the branch of musical inquiry known as *musica pratica*. Andrew Barker says that Aristoxenus is "concerned with the analysis and synthesis of what is heard as melodic, simply in its character as an object of perception."[22] Barker adds that the process of analysis of the musical material that the Aristoxenians advocated necessitated the formation of a "system of concepts and a corresponding terminology that belongs wholly to the domain of harmonics.[23] The elements of melodic sequences and the various ways

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[18] There was a third group that is mentioned in the writings of antiquity, the Harmonicists. Aristoxenus believed the Harmonicists were not thorough in their systematization of music. Regarding the Harmonicists, Aristoxenus says that "as we explain in detail how many parts there are in the science [of music] and what the function of each of them is, we shall find that they [the Harmonicists] did not even touch on some of them, and dealt inadequately with others" (Aristoxenus, *Elementa Harmonica*, I, 30, 2-4, in *Greek Musical Writings, Volume II: Harmonic and Acoustic Theory*, ed. Andrew Barker (Cambridge: Cambridge University Press, 1989), 127). While Aristoxenus held a mainly negative opinion of the Harmonicists, Mathiesen explains that as they were familiar with Pythagorean mathematics, the Harmonicists "attempted to apply mathematical principles to the description of at least some parts of musical practice. In so doing, they might seem to represent a link between the Pythagorean and Aristoxenian traditions, but the precise historical relationship among the three traditions remains elusive" (Mathiesen, "Greek Music Theory," 114).
[19] Mathiesen, "Greek Music Theory," 114.
[20] Barker, *Greek Musical Writings,* II, 123-24.
[21] Ibid., 124.
[22] Ibid.
[23] The use of the term 'harmonics' in relationship to Aristoxenus's writings does not refer to the modern connotation of harmony, nor to the more speculative association that can be made with the musicians of the harmonist school, rather, for Aristoxenus, harmonics is concerned with the practical theories of *systema* and *tonoi*. Both *systema* and *tonoi* are discussed in more detail later in the chapter; a basic, though not entirely

in which they can be organized and combined must be classified, named and related to one another."[24] Barker states that "a good deal of the Aristoxenian repertoire was drawn from the language of practicing musicians."[25] This is in stark contrast to the Pythagoreans who, in dealing with conceptual ideas based on number, had little need for such a terminology.

While Pythagoras left no writings in his own hand, his musical legacy, especially his scientific inquiry into music, was propagated in Euclid of Alexandria's *Division of the Canon*[26] as well as the writings of Plato, Aristotle, and Claudius Ptolemy among others.[27] Pythagorean music theory is not based upon musical practice, but rather upon a more accurate reliance upon the truths that may be found through the use of numbers. Mathiesen describes the Pythagorean view:

> In general, Pythagoreans were not concerned with deducing musical science from musical phenomena because the imperfection of temporal things precluded them from conveying anything beyond a reflection of higher reality. The important truths about music were to be found instead in its harmonious reflection of number, which was ultimate reality. As a mere temporal manifestation, the employment of this harmonious structure in actual pieces of music was of decidedly secondary interest.[28]

In a discussion of temperament, Laborde provides a similar assessment of the Pythagorean reliance upon number. In so doing, he also elucidates the dichotomy between *musica speculativa* and *musica pratica*:

> Pythagoras, who discovered the intervals, wanted the calculations to be followed in all exactness. Aristoxenus, who realized how much this precision postponed progress in the art, wished, with reason, that one only consulted his ear. This was the origin of the sects of Pythagoras and of Aristoxenus. The first taught only

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accurate, translation would be "scale" and "key," respectively. Regarding harmonics, Aristoxenus says, "the science concerned with melody has many parts and is divided into several species, of which the study called Harmonics, must be considered one: in order it is first, and its character is like that of an element. For it is the study of first principles, which include whatever is relevant to an understanding of *systemata* and *tonoi*," Aristoxenus, *Elementa Harmonica*, 1, 1, 17-21, in *Greek MusicalWritings*, II, 126.

[24] Ibid.

[25] Ibid.

[26] Euclid, trans. Thomas J. Mathiesen as "An Annotated Translation of Euclid's Division of the Monochord," *Journal of Music Theory* 19, no. 2 (1975), 236-58.

[27] Mathiesen, 114. See also Plato, *Republic*, 530c-531c; Aristotle, *Metaphysics*, 985b23-986b12; Ptolemy, *Harmonics*, I, 11.1-15.2.

[28] Ibid.

> theory and the second, practice. Antiquity has been divided into these two factions for a long time.[29]

In fact, the two-fold division of music theory into *musica speculativa* and *musica pratica* as originally conceived by the ancient Greeks served as the dominant paradigm for the majority of musical scholarship until Laborde's era. Almost every work written on music in the West for over 2,000 years can be classified as either practical, speculative, or some combination of the two.

Although the foundations of modern musical scholarship are a product of ancient Greece, the Greeks are not the only society that must be considered to be a part of the ancient musical world. The other great society of antiquity is the Roman Empire. As indicated by his bipartite grouping of the materials in Chapters 1 through 3, in *Livre cinquième* in the *Essai*, into the Greeks and the Romans, Laborde also considered the Romans to be a part of the culture of the ancients. How do the Romans then factor into the two main musical traditions developed by the Greeks?

Mathiesen describes the decline of ancient Greek music theory in Roman society at the end of the fourth century CE as "the residue of an ancient civilization."[30] He characterizes the process that occurred as the Greek authors were translated into Latin:

> Later Greek writers such as Nicomachus, Ptolemy, Gaudentius, and Aristides Quintilianus represent both the final stages of Greek music theory in antiquity and, as filtered through their Latin interpreters, the first stages of ancient Greek music theory as it came to be known in the Middle Ages.[31]

Mathiesen's comments describe the Roman authors of antiquity, then, as transitional figures in the transmission of the original Greek ideas on music during the Middle Ages. Mathiesen's comment leaves the distinct impression that the stature of music in Roman society was somewhat less than in Greece. Indeed, according to Calvin M. Bower, the purpose of music in Roman education was to act as a fundamental tool in the education of

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[29] Laborde, II, 43, "*Pythagore*, qui, le premier, trouva les intervalles, voulait qu'on suivît le calcul à toute rigueur. *Aristoxène*, qui trouvait avec raison l'on ne consultât que son oreille. Telle fut l'origine de la secte des *Pythagoriciens* & de celle des *Aristoxéniens.* Les premiers n'enseignaient que la théorie, & les seconds la pratique. L'Antiquité a été long-tems divisée par ces deux sects."
[30] Mathiesen, "Greek Music Theory," 130.
[31] Ibid.

an orator.[32] Bower suggests that while musical learning in the Latin West derived from the technical materials in Greek,[33] the "principal goal for learning *musica* seemed to have been mastering a repertoire of facts and references that might be dropped in a speech at an appropriate moment, thereby making a favorable impression and giving the orator more credibility."[34] Music came to be something more than a practical art or a speculative endeavor. For the Romans, music acted as a cultural phenomenon that provided a well-spring of stories, facts, and anecdotes to the orator.

Laborde, if not expressly aware of this view of Roman education, certainly seems to have had at least an implicit understanding of it, as his longest entry in the section in Chapter 3, *Livre troisième* dealing with Roman writers is devoted to Cicero, the famous orator from the first century BCE. He warranted such a lengthy entry in Laborde's work most likely because of Cicero's reliance upon musical subjects. To that end, Laborde says that "although the life of this illustrious man may belong to history, he has so often spoken of music in his works that we could not refuse to outline the main events of his life."[35] He also mentions that "Plutarch has called him the best orator."[36]

Did Laborde share in this modern day assessment offered by Mathiesen of Roman authors as mere conduits of the Greek systems of music theory? Mathiesen views the Roman writers as transitional figures, merely conveying the true insight of the Greek authors. The Roman writers that Laborde included in this chapter on ancient writers also seem to be those whose material, written in Latin, simply channeled the musical information about music from the Greek sources to a wider, Latin readership during the Roman Empire. Laborde states that the "Romans only had the Greek authors translated and added nothing new to music; all of their science was confined to declamation and dance."[37] For example, Cassiodorus, Laborde says, "has composed several treatises about

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[32] Calvin M. Bower, "The Transmission of Ancient Music Theory into the Middle Ages," in *The Cambridge History of Western Music Theory*, ed. Thomas Christensen (Cambridge: Cambridge University Press, 2002), 137.
[33] Ibid., 136.
[34] Ibid., 137.
[35] Laborde, III, 155, n. a, "Quoique la vie de cet homme illustre apartiene à l'histoire, il a tant parlé de la Musique dans ses ouvrages, que nous n'avons pu nous refuser de tracer les principaux événemens de sa vie."
[36] Ibid., 156, "Plutarque l'appele le premier des Orateurs."
[37] Laborde, I, 43, "Les Romains ne firent que traduire les Auteurs Grecs, & n'ajouterent rien à la Musique; toute leur science se borna à la déclamation & à la danse."

music....What he had written on this art is only a review of the works of his predecessors."[38] This belief is congruent with Mathiesen's modern perspective.

Laborde, whose interest was piqued by the Roman's lack of musical innovation, looked beyond the stagnation of musical progress in Rome to find a reason for it. To this end, Laborde proposes that the Romans were more concerned with declamation and dance than with music: "the nation of the Romans was first too savage and too warlike to cultivate the arts, especially music, which requires sensible souls."[39] He reiterates this idea when he says that "Romans were, of all people, those for whom knowledge was most belated on all the arts, except for the art of war."[40] These statements, when coupled with the knowledge that Romans viewed music as a tool which could fashion a more persuasive orator, led Laborde to the conclusion that it was not only that the Romans borrowed their ideas about music from the Greeks, but that they did not contribute to the expansion of knowledge about music in any substantial manner, seeing it as subordinate to dance, declamation, and, above all, the art of war. This conjecture certainly colors the following statement Laborde makes about Vitruvus, a famous Roman architect:

> The first Roman who wrote about music was the famous Vitruvus, who inserted a chapter into his Treatise on Architecture in which he obscurely explains the system of Aristoxenus, and, at that time, music was not so important; thus he was obliged to use nearly all of the Greek terms for music. The Romans kept music such as they had found it and never regarded it as a pleasant art. One cannot ignore that they did have famous composers, but their names and their works have not come down to us.[41]

Laborde understood that music served as an integral part of Roman life, but, in his opinion, the Romans appeared to have no interest in pursuing music as a serious art form.

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[38] Laborde, III, 155, "Il a fait plusieurs Traités sur la Musique….Ce qu'il a écrit sur cet art, n'est qu'un résumé des ouvrages de ses prédécesseurs."

[39] Laborde, I, 41, "La nation des Romains fut d'abord trop sauvage & trop geurriere pour cultivar les Arts, & sur-tout la Musique qui exige des âmes sensibles."

[40] Ibid., 42, "Les Romains furent, de tous les Peuples, ceux dont les connaissances furent les plus tardives sur tout les Arts, excepté sur celui de la guerre."

[41] Ibid., 42-3, "Le premier Romain qui écrivit sur la Musique, fut le fameux Vitruve, qui inséra dans son Traité d'Architecture un Chapitre, dans lequel il explique obscurément le systême d'Aristoxène; & la Musique était alors si peu de choses, qu'il fut oblige d'adopter Presque tous les termes de la Langue Grecs. Les Romains conserverent la Musique telle qu'ils l'avaient trouvée, & ne la regarderent jamais que comme un Art agréable. On ignore s'ils eurent des compositeurs fameux, mais leur noms ni leur ouvrages ne sont jamais venus jusqu'à nous."

Laborde's assertion that the Latin authors are transitional figures coincides with our modern concepts of antiquity and of Rome's contributions to music. The Latin texts passed on the learning of the ancient Greeks to the Middle Ages, and therefore mainly reconsidered existing material, rather than proposing new conjectures as to music's function and purpose. But if all of the Latin authors in Laborde's text were assigned this status, a compartmental explanation results that does not account for all of the authors Laborde discussed in *Livre cinquième*. Laborde's delineation of the ancients seems to have other determinant factors involved in its definition.

If Laborde did not view all of the Latin authors from antiquity as transitional, how did he differentiate among them? Clues to his methodology may be found in the manner in which he categorizes them. For instance, Laborde wrote about authors from the period he delineates for the ancients (fourth century BCE – fifth century CE), such as Saint Augustine (355-430 CE) and Saint Jerome (340-420 CE), but they do not appear in the chapter on ancient Roman authors. Rather they were placed in a later chapter in *Livre cinquième*, Chapter 7: "Authors who Have Written about Music in Latin and in Italian."[42] Why would Laborde include authors such as Saint Augustine, who predates both Boethius and Cassiodorus, in a chapter which for the most part contains more modern authors from the sixteenth, seventeenth, and eighteenth centuries, and not in the chapter dealing with Roman authors, which contains writers who, chronologically at least, should be considered as belonging to antiquity? Did he view them differently? Or are the proposed dates for antiquity somehow insufficient?

Addressing the issue of the suggested dates, the fifth century CE as the terminus for Laborde's definition of antiquity appears to be sufficient, although he implies that ancient Rome maintained some influence on music until the fifteenth century. He says that "music followed the moral decadence and buried itself away with the Roman name throughout the barbarous centuries which covered Italy and all of Europe. It began to be

[42] Laborde, III, 331-374, "Auteurs qui ont écrit sur la Musique en Latin & en Italien." The majority of authors discussed in this chapter deal with writers from Laborde's more recent past. They are mainly scholars from the sixteenth, seventeenth, and eighteenth centuries, but there are exceptions. In addition to the fifth century writers Saint Augustine and Saint Jerome, Laborde has also included Saint Gregory, Saint Isiodore, Bede, and Guido d'Arezzo. He has even provided a second entry on Boethius.

revealed a bit in the fifteenth century."[43] Laborde's explanation of Rome's continuing, yet somewhat stagnate, influence on music in Europe is indicative of a common viewpoint in the Enlightenment that perceives the Middle Ages to be a relatively fallow period in history in which not much musical growth was occurring, especially when compared to the musical achievements of antiquity or the eighteenth century. This Enlightenment attitude should obviously not be taken as an affirmation that the Middle Ages was a period of no musical growth, nor as a license to group Laborde into the category of Enlightenment writers who viewed the Middle Ages with disinterest. As we shall see, Laborde investigates the "fallow period" of the Middle Ages throughout his *Essai*. As the proposed dates for antiquity are sufficient for Laborde, the distinction between the writers he categorized as Roman and those that he did not comes solely from the content of their writing.

By classifying writers such as Augustine separate from the writers of antiquity, Laborde acknowledged two concurrent strands of music history. The Roman Empire had declined by the fifth century CE—regardless of Laborde's suggestion that residual influence from the Romans may have been experienced throughout Europe for centuries—as did the speculative tradition of the Greeks. During the period encompassing the last few centuries of the Roman Empire, 250-550 CE, however, a different tradition began to arise, a tradition to which these seemingly displaced writers in Laborde's *Essai*, such as Augustine, belong. The advent of a tradition that was distinct from that of the Greeks and their Roman propagators accounts for the authors such as Saint Augustine and Saint Jerome (c.342-420 CE) in Laborde's work. These writers were no longer merely propagating the Greek theories about music as the Roman authors—as they are grouped in Laborde's *Essai*—were; they were infusing the Greek's ideas on music with a new perspective. In his musical treatise, *De musica*, Augustine addressed the concept of number in its important relationship with music, not as the means to produce consonant

[43] Laborde, I, 49, "La musique suivit la décadence des mœurs, & s'ensevelir, avec le nom Romain, sous les siecles de barbarie qui couvrirent l'Italie & l'Europe entiere. Elle commença à se relever un peu, dans le quinzieme siecle."

intervals as in the teachings of Pythagoras, but rather in its relation to rhetoric and mensuration and their ability to lead the soul to knowledge of God.[44]

These concurrent strands of historical development reflect a familiar bifurcation—*musica speculativa* and *musica pratica*. Ancient civilization ended with the Roman Empire, as did the practice of music as the ancients knew it. The materials on music that were left by the Greeks provided the basis of the speculative tradition in music. This speculative material reemerged in the fifth century in treatises that espoused the formal causes of music for the Greeks and encouraged the inclusion of music as a vital part of the liberal arts.[45] While Boethius is perhaps the most familiar writer of this period to twenty-first century musicians, Bower suggests that two others, Cassiodorus and Isiodore, as leaders of Christian groups, "introduce two new dimensions into reflections concerning music: 1) the presence of music in Biblical literature and 2) the centrality of singing in Christian worship."[46] In so doing, Bower continues:

> they began to break down the boundaries that isolated the ancient discipline of *musica*—that collection of facts known by the orator and that Platonic sphere of learning leading to abstract knowledge—from the practice of music that was rapidly becoming an ever more significant part of the liturgy.[47]

Bower's statement explains that Isiodore and Cassiodorus recognized the importance of a rapidly growing facet of musical life that had developed independently from the speculative concerns of their treatises, one closely related to the Catholic Church— the emerging practice of plainchant.

The practical chant tradition may be traced back to the forefathers of the church such as Augustine. While their works often contained speculative elements, as Augustine's *De Musica* contains a section that describes number as the pathway to the eternal harmony of God,[48] they mainly endorsed music as a practical tool to be used by

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[44] For a survey of Augustine's work on the subject of music, see Herbert M. Schueller, *The Idea of Music: An Introduction to Musical Aesthetics in Antiquity and the Middle Ages* (Kalamazoo: Medieval Institute University, 1988), 239-256.

[45] Writers in this category are Anicius Tortuatus Severinus Boethius (c.480-524), *De institutione musicæ*, Martianus Capella (5th century CE), *Di nuptis Philologiæ et Mercurii*, Favius Magnus Aurelian Cassiodorus (6th century CE), *Institutiones*, and Isodore of Seville (d. 636), *Etymologiæ*.

[46] Bower, "The Transmission of Ancient Music Theory," 148.

[47] Ibid., 148-49.

[48] Schuller describes the intent toward the end of *De musica* where Augustine describes the manner in which the physical number of harmony leads to the eternal harmony of God: "it purifies as it stimulates the soul of the hearer, awakens in that soul a like harmony, and leads it to the love of God" (Schueller, 248).

the church for worship and contemplation. Schueller describes the early leaders of the Church, such as St. Ambrose (c.340-397 CE) and St. Jerome,[49] and the practical nature of their work:

> These men were thinkers and theologians, if not philosophers. Indeed philosophy itself was not yet considered to be legitimately theological. They were no more professional musicians than were their predecessors who wrote about music. They were compelled to recognize music—while they virtually ignored the other arts—because it was useful and necessary in the Church. Nevertheless, these were men of imagination, of vision, and, above all, of conviction and passion. None of them forsook the requirements of the worship services, including the Mass, and of Christian education in the narrow sense. As a rule, they were not speculative thinkers: they were men of action, even administrators.[50]

Schueller adds that the main function of music during this time was for "arousing devotion in the clergy and congregation, who would be inspired with a worship of and appropriate admiration for God as the Creator and sustainer of all."[51] This religious understanding of music created the foundation for the modern practical music tradition in the West—*musica pratica*.

During the rule of Charlemagne in the late-eighth and early-ninth centuries, music underwent a scholastic revitalization. Charlemagne encouraged musical activity, and his court and the monasteries flourished with musical life. Charlemagne was interested in reforming church music and, thus, he rejected the music of the Gallican, Ambrosian, Mozarabic, and Byzantine rites, in favor of the Roman rite. As a result, Schueller explains, "Gregorian chant and its practice were to be followed strictly."[52] By focusing the musical practice solely on Gregorian chant, the music could remain simple, which was, according to Schueller, "the approved ideal towards which church music was to strive."[53]

As a result of Charlemagne's reforms, a repertoire of chant was coalescing that could be aligned with the existing Greek theories that had survived into the Middle Ages as the Carolingian era came to an end in the ninth century; in other words the extant speculative theories could now be apllied to a vibrant musical practice. The majority of

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[49] Laborde discusses St. Ambrose, III, 363-4; he discusses St. Jerome, III, 364.
[50] Schueller, 236-7.
[51] Ibid., 237.
[52] Ibid., 285.
[53] Ibid., 286.

writers who are listed in Chapter 7 of *Livre cinquième* who lived prior to the fifteenth century, such as Augustine, Ambrose, and Jerome, are related to a scholastic tradition associated with the Church. Perhaps Laborde chose to list them among the more contemporary authors in Chapter 7 for this reason: they are more accurately viewed by Laborde as forerunners of modern musical practice, not the custodians of ancient speculative knowledge such as Boethius and Cassiodorus. While they did not write about musical practice in the pedagogical sense that later writers such as Guido would, they did discuss the importance of music in the Bible and in Christian doctrine in such a way that it became established as an indespensable means to enhance Christian dogma and the experience of worship. As there was not any extensive, extant body of musical literature from the ancients to balance the bounty of their writings on speculative concerns, the speculative tradition came to represent the ancient musical tradition. By the Middle Ages however, the scholars of Europe who wrote about music now had a blossoming chant repertory to address as well. This new this performance tradition provided a balance to complement the ancients' speculative theories about music. In a sense, *musica speculativa* had been placed in a form of stasis during the Middle Ages as *musica pratica* flowered in the church. Now common ground between this new musical practice and the speculative foundations of the ancients begged to be discovered, allowing both traditions to grow anew.

Bower addresses this concern in discussing the destabilization of Europe after Charlemagne's death in the ninth century. As a result of the political unrest during this period, Bower states that "the vital culture that had originally been associated with the court moved into the monasteries. The manuscript traditions originally associated with scholars not necessarily attached to a given location became established in monastic centers."[54] Bower explains that these monastic scholars were drawn to the theories of musical transcendence inherent in the speculative tradition of the ancients, but "the singing of the liturgy played such a central role in their daily lives that they were unable or unwilling to divorce musical speculation from liturgical practice."[55] This led to a reformulated discipline of music theory in the medieval era. Bower says that while music

[54] Bower, 152.
[55] Ibid.

theory "maintains its roots deep in the matter of Pythagorean arithmetic and unfolds its pitches and intervals with the absolute security of mathematical ratios, its principal subject has become actual contemporaneous music."[56] The practical aspects of music theory manifested in many of the music treatises of the time through a pedagogical methodology.[57] Schueller explains that the ideas that had appeared in the Carolingian era "fully emerged in this new and more technically oriented kind of writing, which was designed to serve an educational function, in this case for the edification of future singing masters or singing men who would be employed in the Church."[58] This pedagogical approach is demonstrated by the work of Guido d'Arezzo, who wrote the *Micrologus*[59] in the eleventh century, as it dealt with his teaching method for the musical practice of his era. Guido was concerned with the practice of music as it was developing in the church.[60] Thus, the discipline of speculative music, which had been dependent on the theories of the ancients for centuries, had found a new counterpart in the practical tradition of chant.

The reconciliation of *musica speculativa* and *musica pratica* during the medieval period provided a marked contrast to the ancient tradition in which, according to Bower, "theorizing takes place with little or no reference to repertoire, and that the purpose of studying *musica* is to take the first steps of knowing abstract truths."[61] In his categorization of ancient authors in the *Essai*, Laborde appears to be acknowledging this distinction, however fortuitously, between the ancient authors who espoused the speculative, quantitative tradition divorced from any sort of repertoire and the authors

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[56] Ibid., 164. Schueller describes the shift from emphasizing the speculative to dealing with the practical in the music treatises following Charlemagne's death. He says "but now the Pythagorean explanation of music as number, no matter how frequently it apostrophized, can legitimately be replaced by the Augustinian notion that music is the art of singing well through the correct regulating of modulation and mensuration," Schueller, 304.

[57] Aside form Guido d'Arezzo who is discussed below, several other writers of the time published pedagogical works. There is the unknown author of the groupd of manuscripts known as the *Musica enchiriadis* and the *Scolia enchiriadis*, both from the late ninth or early tenth century. Aurelian of Réôme, *Musica disciplina* (9th century). Regino of Prüm, *Epistola de harmonica institutione* (c.900). Also, the *Dialogus de musica* (c.1000), written in the form of a catechism, was attributed to Odo of Cluny (d.942) until the eighteenth century. For more on these works, see Schueller, 296-9, and Bower, 151-64.

[58] Schueller, 297.

[59] Guido d'Arezzo, *Micrologus*, (c.1030). Some of the other treatises from this period (9th – 12th centuries)

[60] Guido's presence in the *Essai* indicates that while many of Laborde's contemporaries may have perceived the Middle Ages as an era of sparse musical growth, Laborde had begun to investigate the period to discover that it not only encouraged an understanding of music as progress, but it also provided opportunites to study the documents and ideas of the Middle Ages as unique historical phenomena as well.

[61] Bower, 158.

who laid the groundwork for a practical tradition by forming strong doctrines for the inclusion of music in the Church that made the performance of chant possible. The repertoire of chant that evolved in the Church provided the impetus for the union of musical theory with musical practice during the medieval period. By the exclusion of writers such as Augustine and Jerome from the section on ancient writers on music, Laborde acknowledges these two separate, yet related strands of the historical lineage of music: 1) the speculative tradition that reaches back to Pythagoras, and 2) the practical tradition that had emerged in the chant repertory of the Catholic Church in the Middle Ages.

Having explored Laborde's treatment of various authors the question may well be repeated—"Who are the ancients?" Collectively, the ancients are an assortment of writers, poets, and musicians. From our present-day perspective, the timeline of ancient writings on music from the fourth century BCE, at which time the first extant Greek writings appear, to the fifth century CE, at the fall of the Roman Empire, provides an adequate delimitation for the time period that entails antiquity in musical thought. And although Laborde identifies a couple of authors from the sixth century CE in his chapter devoted to the ancients, these dates for antiquity suffice for him as well. As antiquity ended, Latin authors preserved the legacy of Greek musical thought. Yet, as these writers adopted Greek speculative ideas about music to establish music as an integral discipline of the liberal arts, a practical tradition was growing in prominence—the chant tradition of the Catholic Church. Much of the musical scholarship from the Carolingian and post-Carolingian eras reflects the attempted reconciliation between the speculative theories of the ancients and the practical tradition associated with the growing chant repertory as writers searched for the speculative, theoretical underpinnings to this practice.[62]

[62] Bower has constructed a chart that lists the major treatises from this period (9th-12th centuries CE) (Bower, 150). Regarding the reconciliation between the speculative and the practical that is found in many of these treatises, Bower suggests that "in short, monastic scholars began to connect concrete musical practice with abstract musical thought, and the synthesis that was to become medieval music theory had begun (Bower, 151)." The synthesis of these ideas occurring in the Carolingian era supports the belief that Laborde has crafted two categories of the ancients to reflect both the Greek speculative tradition and the early Catholic writers who established music's importance in the church, thus providing the doctrinal groundwork for the evolution of the chant practice of the early Middle Ages.

Laborde and the Abbé Roussier

Now that the parameters of antiquity in Laborde's *Essai* have been provided, 4th century BC – 5th century CE, the question of how Laborde came to be so thoroughly interested in the music of antiquity should be asked. The depth of the material in the *Essai* leads to the conclusion that Laborde more than likely had access to many of the ancient texts in his own library, which was destroyed when his house was burned during the Revolution. Unfortunately, the exact content of Laborde's library cannot be known, but the assumption that it contained a good number of the texts that he references throughout the *Essai* is probably sound. For those he did not own personally, Laborde could turn to the libraries of his friends, colleagues, and patrons. One of these colleagues in particular appears to have played a considerable role in arousing Laborde's extensive interest in the music of antiquity—the Abbé Pierre-Joseph Roussier.

Roussier was not a student of music in his childhood, but that changed at the age of 25, when he encountered the works of Rameau. Although he did not become a student of Rameau as Laborde had done, Roussier was so taken by the principles of Rameau's theoretical system, especially with the idea of the fundamental bass, that he immersed himself in the study of music. This led Roussier to publish two theoretical treatises of his own, *Traité des accords et de leur succession* [Treatise on Chords and Their Succession] in 1764,[63] and *Observations sur diffèrens points d'harmonie* [Observations on Different Points of Harmony] in 1765. [64] By Laborde's own account, "at 25 years, the Abbé Roussier did not know a note of music, but thirty years later, he ranked among the premier musicians of his century."[65] Laborde has the highest praise for Roussier when he says that "his *Traité des accords* has become a classic work; the harmonists and musicians who desire to make use of its principles, create the strongest case for it."[66] He goes on to say that "it would be hoped that the author may provide a new edition of this

[63] Abbé Pierre-Jospeh Roussier, *Traité des accords et de leur succession* (Paris: Bailleux, 1764).
[64] Abbé Pierre-Joseph Roussier, *Observations sur différens points d'harmonie* (Geneva, 1765). For more on Roussier's theoretical ideas, see Richard Dale Osborne, "The Theoretical Writings of Abbé Pierre-Joseph Roussier" (Ph. D. diss., Ohio State University, 1966).
[65] Laborde, III, 678, "A vingt-cinq ans l'Abbé Roussier ne connaissait pas une note de musique, à 30 il était au rang des premiers de son siecle."
[66] Ibid., "Son Traité des accords est devenu un ouvrage classique; les Harmonistes & les Musiciens qui veulent l'être par principes, en font le plus grand cas."

solid work, in order to expose the errors and absurdities as far as the harmonic material is concerned, thanks to the charlatanism of the foreigners who come to pervade France."[67]

As mentioned in Chapter 1 of this dissertation, Laborde worked closely with Roussier upon leaving Versailles at the time of Louis XVI's ascension to the throne. Laborde and Roussier were both adamant supporters of Rameau's system of fundamental bass, thus sharing an important tract of common ground. This fact not only allowed Laborde to broaden the strong theoretical basis he had accrued under Rameau's tutelage, but also to explore aspects of the world and its music that he may not have had the opportunity to, had he remained sequestered at Versailles for the remainder of his life. Laborde's respect for Roussier is evident when he describes him as "the most surprising theorist who had never existed, and the only man of our time who had known the true principles of music."[68] According to Laborde, this surprising and least likely of music theorists "only owes his profound knowledge to his own genius, guided, and sometimes led astray, by the works of Rameau."[69]

While Rameau and his system of the fundamental bass molded Laborde's own understanding of music theory, it was a third work of Roussier's that inspired the direction of Laborde's writing with regard to the culture of the ancients, *Mémoire sur la musique des anciens* [Essay on the Music of the Ancients].[70] Roussier supplied a seed for Laborde that would begin to grow in his own work. Laborde praises Roussier's *Mémoire*; he says that "certainly the *Mémoire* of Monsieur l'Abbé Roussier is the most scholarly work of its kind that has been crafted on the music of the ancients. It is filled with

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[67] Ibid., "Il serait à souhaiter que l'Auteur donnât de cet ouvrage solide une nouvelle édition, pour l'opposer aux erreurs & aux absurdités en matiere d'harmonie, qu'à la faveur de charlatanisme des étrangers viennent répandre en France." According to Godwin, Roussier did indeed contemplate offering a second edition of his *Traité des accords*. In a hand-written note that is presumed to be his, located at the end of his *Traité des accords et de leur succession* in a copy of the *Journal des sçavans*, February 1765, located in the Bibliothèque National, cote V, 2457, Roussier laments the small distribution for the first printing of his work. He claims he is willing to give copies away. He continues that "he would be happy if half of those to whom they were given took the trouble to read the book. There is no hope at all that my treatise, or any other work, will be read in the future, because nowadays they want to proclaim that Genius has no need of rules," (Godwin, 36).

[68] Ibid., "Roussier…est le Théoricien le plus étonnant qui ait jamais existé, & le seul qui ait connu de nos jours les véritable principes de la musique."

[69] Ibid., "Il ne doit ses profondes connaissances qu'à son génie, guide & quelquefois égaré par les ouvrages de Rameau." The distraught that Laborde speaks of towards Rameau was not an uncommon occurrence, even among his supporters, as Rameau's theories became more esoteric towards the end of his life. Laborde's recognition of this fact is dealt with in the next chapter.

[70] Abbé Pierre-Joseph Roussier, *Mémoire sur la musique des anciens* (Paris, 1770).

learning and thoroughly considered, adeptly planned research."[71] Godwin describes the idea contained in Roussier's *Mémoire* as "the superiority of ancient nations, especially Egypt, and the degree to which the Greeks were indebted to them."[72] This concept is apparent in Laborde's statement that the *Mémoire*:

> proves indisputably that the systems of Greek, Egyptian, Chinese and our own music is based on the triple progression, which had never been known by us, and had been lost by the Greeks (at least as far as we know), for it is not possible that their ancestors might not have known about it and that a connection itself so exact might be found by accident.[73]

Two distinct impressions may be drawn from this particular passage. The first deals with Laborde's methodology and his blossoming sense of historicism. He acknowledges that the hypothesis he is making is based on the information available to him at that particular moment in history; he further admits that there may be additional historical data yet to be discovered which could either refute or support his claim. This is the type of historical writing that was beginning to appear at the end of the eighteenth century, a writing style that Duckles says has "become conscious of its own ends and purposes.…[It] carries the implication that the historian is not merely delving into the past; he is, at the same time, engaged in fashioning a structure of ideas to support his understanding of that past."[74]

The second impression concerns a theoretical issue that Laborde raises—the triple progression. It is apparent from the excerpt that he finds the triple progression to be vital to the musical systems of numerous countries, yet he does not mention it by name in the *Abrégé d'un Traité de Composition*. A brief explanation of the triple progression will be provided here, as it will contribute to a more enriched reading of Laborde's theoretical writings. The triple progression consists of the series of the powers of three: 1, 3, 9, 27, 81, 243…(Figure 3.1).[75]

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[71] Laborde, III, 679, " Certainement le *Mémoire* de M. l'Abbé Roussier est l'ouvrage le plus savant qui ait été fait sur la Musique des Anciens. Il est rempli d'érudition, & de recherches bien vues & bien méditées."
[72] Godwin, 32.
[73] Laborde, III, 679, "Il prouve incontestablement que les systêmes de musique des Grecs, des Egyptiens, des Chinois, & le nôtre, sont fondés sur la progression triple; ce qui n'avait jamais été su par nous, & avait été oublié par les Grecs, (du moins par ce que nous connaissons); car il n'est pas possible que leurs ancêtres ne l'eussent pas su, & qu'un rapport si exact se fût trouvé par hazard."
[74] Duckles, 277.
[75] Roussier, *Mémoire*, 13.

PROGRESSION TRIPLE.

Ier Terme	IIe	IIIe	IVe	Ve	VIe	VIIe	VIIIe
1	3	9	27	81	243	729	2187
si	*mi*	*la*	*re*	*sol*	*ut*	*fa*	*si♭.*

Figure 3.1

Roussier's chart for the triple progression

Godwin describes the triple progression as it applies to music:

> In musical terms, these numbers correspond to a series of descending fifths, because the multiplication of a string-length by 3 [produces] a tone [that is] an octave and a fifth lower, one obtains from the above numbers the series: B, E, A, D, G, C, F…These are none other than the seven tones of the diatonic scale.[76]

In practical terms, the triple geometric progression creates the interval of the fifth, as can be seen in Figure 3.1.

Rameau likewise made use of the triple progression, but it was not the source for his principles of music; those were to be found in the acoustical phenomenon of harmony. Rameau simply uses the triple progression as a means to support and validate his theory of the fundamental bass. Christensen explains that Rameau's interest in the triple progression comes from the association he could draw between the numerical series of the triple geometric progression and the perfect twelfth, one of the three fundamental partials that is generated by the *corps sonore*.[77] The ratios derived from any two adjacent figures in the progression model the motion of a perfect fifth, thus forming this most important movement of the fundamental bass.[78] Rather than considering the triple progression as a validation for the harmonic partials produced by the *corps sonore*, Roussier saw the triple progression as fundamental in its own right. Godwin insists that

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[76] Godwin, 32.

[77] Christensen, *Rameau and Musical Thought*, 178. Christensen also describes the correlation between the other two fundamental partials and their own geometric progressions, which Rameau also utilized. For the derivation of the octave, Rameau used the double geometric progression (2, 4, 8, 16…) to provide the ratios 2:4, 4: 8, etc., and for the major seventeenth, he employed the quintuple geometric progression (5, 25, 125, 625), which provides the interval of the major third, 4:5.

[78] Ibid., Rameau also uses the triple geometric progression to define the parameters of a mode as the harmonic relationship between the fundamental sound and the fifth above (*dominante*) and the fifth below (*sous-dominante*). Rameau describes this process in his *Génération harmonique* (Paris: Prault fils, 1737), see in particular pp. 62-69. For an explanation of this material, see Christensen, 178-185.

for Roussier "the triple progression became the foundation of everything and he devoted his most important book [the *Mémoire sur la musique des anciens*] to expounding its consequences."[79] Laborde's support for Roussier's claims regarding the triple progression is evident when he says:

> M. l'Abbé Roussier has demonstrated through his evidence that all those who have written on music before him have only established false principles, because they have not known the true one; sublime in its simplicity and satisfying in every respect.[80]

Roussier's influence and fascination with the cultures of the ancients thoroughly affected Laborde; this interest in the music of the ancients permeates Laborde's *Essai*. Aside from the discussion of the triple geometric progression and the biographical entries in the *cinquième livre* of Laborde's *Essai* that have been discussed, the ancients' ideas regarding music are disseminated throughout the *Essai*. A complete investigation of this subject is outside the scope of this dissertation, but the writers of antiquity are well-represented in his *Abrégé d'un Traité de Composition*, and this warrants further exploration.

The Ancients in Laborde's *Abrégé d'un Traité de Composition*

Reflective of his title, *Essai sur la musique ancienne et moderne*, Laborde continually references authors from ancient Greece and Rome throughout the body of the *Abrégé d'un Traité de Composition*, attempting to bridge the theoretical ideas on music of the past with those of his era. Throughout his text, the music and theories of Laborde's era emerge as a result of the work done by the ancient authors. The musical material flows between Laborde's present, his recent past, and the ancient past. Laborde has undertaken to provide an analysis, albeit it an abridged one, of the modern compositional tools available in the eighteenth century, often directing his critical eye towards the Greeks, investigating the components of music theory which incorporate the speculative knowledge proffered by the ancients.

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[79] Godwin, 32.

[80] Laborde, III, 679, "M. l'Abbé Roussier a prouvé jusqu'à l'évidence, que tous ceux qui ont écrit sur la musique avant lui, n'ont établi que de faux principes, parcequ'ils n'ont pas connu le seul véritable, sublime par sa simplicité, & satisfaisant à tous les égards."

In his *Abrégé d'un Traité de Composition*, Laborde refers to the ideas and the works of Pythagoras, Athenaeus, Aristoxenus, and Aristide Quintilianus among others, but rather than approach the influence of the ancients in his composition treatise by discussing each author individually, their impact as it relates to a number of specific musical subjects will be addressed instead. The reason for this course of action is two-fold. First, it is suggested by the organization of the *Abrégé d'un Traité de Composition* itself, which is organized by subject, in a mostly logical progression of topics in a manner similar to many of the French compositional treatises of the day. Besides, as previously discussed in this dissertation, Laborde addresses the contributions of the individual writers elsewhere in the *Essai*. Second, this approach will keep the focus upon the material in the *Abrégé d'un Traité de Composition*. The *Essai* contains such a wealth of relevant information that it could support the research for numerous dissertations and still not be exhausted as a source. By narrowing the scope of the analysis in this dissertation to Laborde's *Abrégé d'un Traité de Composition*, an essential abstract of Laborde's theoretical position regarding the ancients and his contemporaries may be ascertained.

While Laborde's *Abrégé d'un Traité de Composition* is truncated in certain respects, most notably, in my opinion, in its presentation of the didactic compositional tools of *musica pratica*, it holds an abundance of material that supports, enhances, and flavors the text which more than counters the brevity of the work. Laborde's handling of three specific subjects will be addressed as the means to infiltrate the material in his composition treatise addressing the music of the ancients: intervals, modes and keys, and enharmonics. This will furnish a *systematic* representation of Laborde's approach to and understanding of the ancient authors and their conceptions of music.

Intervals

The Ancient Greek approach to intervals may be traced back to the teachings of Pythagoras. As previously discussed, the Pythagorean conception of music was a speculative concern based upon a quantitative conception that believed musical truth could be gleaned from number. One of the most esteemed conceptions of number in Pythagorean theory is the tetractys of the decad. Catherine Nolan explains that the tetractys "is an arrangement of points in the shape of a triangle, and represents the first

four natural numbers, whose sum is 10 (1+2+3+4)."[81] In his *Advanced Mathematics*, Sextus Empiricus (2nd-3rd centuries AD) says that the tetractys is:

> described as the "fount of ever-flowing nature" in as much as the whole universe is organized on the basis of these numbers according to *harmonia*, and *harmonia* is a *systēma* if three concords, the fourth, the fifth and the octave; and the proportions of these three concords are found in the four numbers previously mentioned, in one, two, three, and four.[82]

As Sextus Empiricus describes, the intervals created by the ratios of the numbers of the tetractys are the consonant, or harmonious, intervals: the octave (1:2), the fifth (2:3), and the fourth (3:4). Nolan points out that the importance of these numbers extends beyond their basis for the consonant intervals; for the ancient Greeks, these numbers are imbued with symbolic and mystical meaning which provide glimpses into the cosmological order.[83] Barker adds that "in the Pythagorean world-view, the 'harmony' of the universe (and sometimes those of the microcosms of state and soul) was rooted in the mathematical relations of the sort that this musical structure displays."[84]

There is a story that has come down to us about Pythagoras's discovery of the mathematical principles which underlie the consonant intervals. The story has become legendary, almost mythic in stature and, despite any doubts as to the veracity of its origins, has caused modern scholars to give Pythagoras the benefit of the doubt when attributing the dissemination of these ideas among the Greeks.[85] The story is recounted in Nicomachus's *Enchiridion*, or Handbook of Harmonics, from the early second century CE.[86] Barker explains that Nicomachus's *Enchiridion* has the distinction "of being the only work on the subject to have survived complete from the period between Euclid and Ptolemy."[87] According to Nicomachus, Pythagoras discovered the connection between

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[81] Catherine Nolan, "Music Theory and Mathematics," in *The Cambridge History of Western Music* Theory, ed. Thomas Christensen (Cambridge: Cambridge University Press, 2002), 273.
[82] Sextus Empericus, *Adv. Math.,* vii. 94-95, in Barker, *Greek Musical Writings,* II, 30. *Harmonia* may be defined here in two ways, first in a more general sense, as "a structure of elements with fixed relationships between them," and more specifically "the set of notes to which a stringed instrument would be tuned in order to play music of a certain character" (John G. Landels, *Music in Ancient Greece and Rome* (London: Routledge, 1999), 100).
[83] Nolan, 273.
[84] Barker, 28.
[85] Ibid., 256, n. 43.
[86] Nicomachus, *Enchiridion*, 237-265, in Barker, *Greek Musical Writings,* II, 247-269.
[87] Barker, 245. The period between Euclid and Ptolemy is approximately from the third century BCE to the second century CE.

consonant intervals and their numerical ratios while passing by a blacksmith's one day. In Nicomachus's account, Pythagoras is:

> Happening by some heaven-sent chance to walk by a blacksmith's workshop, he heard the hammers beating iron on the anvil and giving out sounds fully concordant in combination with one another, with the exception of one pairing: and he recognized among them the consonance of the octave and those of the fifth and the fourth. He noticed that what lay in between the fourth and the fifth was in itself discordant, but was essential in filling out the greater of these intervals. Overjoyed at the way his project had come, with god's help, to fulfillment, he ran [to] the smithy, and through a great variety of experiments he discovered that what stood in direct relation to the difference in the sound was the weight of the hammers, not the force of the strikers or the shapes of the hammer-heads or the alteration of the iron which was being beaten. He weighed them accurately, and took away for his own use, pieces of metal exactly equal in weight to the hammers.[88]

Nicomachus then relates how Pythagoras conducted experiments upon the metal pieces that were of varying weights by suspending them from strings which consisted of the same material, the same number of strands, and the same thickness. Through his testing, Pythagoras comes to realize the numeric relationships between the pitches created by the different weights. The octave, he determines, is in a duple ratio, as the weights of six and twelve units sounded an octave apart. The weight of eight units sounded a fifth in relation to the heaviest weight of twelve units, and the weight of nine units sounded a fourth in relation to the heaviest weight. He also concluded that by measuring the intervals from the lightest weight, the opposite results occurred; the eight unit weight sounded a fourth in relation to the six unit weight, and the nine unit weight sounded a fifth in relation to the six unit weight.[89]

Pythagoras looked at his material and his data and came to a few conclusions. He realized that the two combinations of weights that produced the interval of the fifth, eight to twelve, and six to nine, were in the same ratio to one another, 2:3.[90] He also realized

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[88] Nicomachus, 246, in Barker, *Greek Musical Writings,* II, 256-7.
[89] Ibid., 257.
[90] I have chosen to indicate all ratios in this manner, with the smaller of the two intervals being placed first. This indicates a ratio in terms of string lengths. This decision has been made in deference to Laborde who presents most of the ratios in the *Abrégé d'un Traité de Composition* in this manner. It is also historically appropriate for the music of the ancients to indicate their ratios as divisions of string lengths, for example the octave as a measure of string length would be indicated as 1:2. This manner of notation is the opposite of ratios in which the larger integer is placed first. This represents the vibrational frequency of the sounding

that the two weight combinations which created the interval of the fourth shared the same numeric relationship; both the six to eight and the nine to twelve combinations generated the ratio of 3:4. According to Nicomachus, Pythagoras then tested this hypothesis out on varying types of instruments and "found the conception arrived at through number to be concordant and immutable in all of them."[91]

Laborde conveys an abridged version of Pythagoras's discoveries in the *Essai*.[92] Regarding this legend, Laborde says, that "this account could only have been manufactured in order to please, for it is untrue that the weights must have been in these proportions in order to yield the sounds in question."[93] Laborde is not alone in this opinion; the precision of Pythagoras's alleged experiment is called into question as early as the second century CE by Claudius Ptolemy, a Pythagorean. According to Barker, Ptolemy "holds the principles of harmonic order are mathematical: their nature and credentials are to be discerned by reason."[94] Barker adds that Ptolemy's work "is deeply indebted to his predecessors, but he seldom mentions earlier [writers on music] explicitly except to criticize them."[95] As a Pythagorean, Ptolemy does not reserve criticism solely for the Aristoxenians, whose fundamental understanding of music ran counter to that of Pythagoras, but also for the Pythagoreans themselves, who Ptolemy, as Barker explains it, calls to account for small details or for "their failure to apply essentially sound principles in the right way."[96] The report of Pythagoras's derivation of the intervals is one such example of Ptolemy's criticism of the speculative tradition. Regarding Pythagoras's experiment, Ptolemy firmly states that, even if everything about the strings is constant,

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strings that comprise the interval, for example a string an octave higher will vibrate twice as many times as the original string; thus the ratio 2:1 describes this relationship. While Laborde does list the majority of his intervals in terms of string lengths, he understands intervals in terms of vibrational frequency as well (See Laborde, II, 4). This is due, in part, to the constructionist nature of his approach to intervals in his composition treatise. Laborde uses the geometric progressions to construct the intervals with the simplest ratios first, then progressing to those with more complex ratios. Laborde avoids confusion by maintaining the labels as representations of string length, as using the geometric progressions lends itself to having ratios that place the smaller number first (the double progression is indicated by the following sequence of rising numbers: 1, 2, 4, 8, etc.; the ratios for the octave 1:2 can be gleaned from this construct quite easily).

[91] Ibid., 258.

[92] Laborde, III, 150-1.

[93] Ibid., "Cette histoire ne peut qu'être inventée à plaisir; car in n'est point vrai qu'il faille des poids dans cette proportion pour rendre les sons dont il s'agit."

[94] Barker, 270.

[95] Ibid.

[96] Ibid.

the ratios of the weights will not coincide to the sounds that arise from them.[97] Barker confirms this. He even elaborates upon this statement by specifying that "the desired results will again fail to be produced. The pitch-ratios are not directly related to the ratios of the weights, but to those of their square roots."[98] In the eighteenth century, Laborde understood this mathematical discrepancy as well. He illustrates that to create a pitch an octave higher, a weight twice as large would not produce the desired results; rather "it would be necessary to use a quadruple sized weight in order to form a higher octave. In order to produce a fifth, it must be 9/4, and for the fourth, 16/9."[99] Here Laborde has provided the ratios of the intervals of a fifth (2:3) and a fourth (3:4) squared.

Regardless of the authenticity or accuracy of this legend, Pythagoras's influence is immediately apparent in Laborde's *Abrégé d'un Traité de Composition*. In Chapter 4, which deals with consonance and dissonance, Laborde begins with the derivation of the intervals from the Pythagorean myth. They are the most consonant of the intervals and the mathematical ratios that produce them are the simplest: the octave (1:2), the fifth (2:3), and the fourth (3:4). Laborde's discussion commences with the derivation of the octave. He says that "a string, which in one second, creates six vibrations, is plucked at the same time as a string which creates twelve; two sounds result which form a consonance, because, [during the time that the strings vibrate], a connection exists between these two sounds."[100] He contrasts this with two strings without an apparent mathematical relationship; he suggests a string with twelve vibrations and one with nineteen. He claims that if a connection exists between these two disproportionate strings, it would be impossible for the ear to discern it. He then returns to the previous, consonant example and says that, "therefore, the simplest consonance is the one where the high-

[97] Claudius Ptolemy, *Harmonics*, in Barker, *Greek Musical Writings,* II, 291.
[98] Barker, 257, n. 49.
[99] Laborde, III, 151. Here is an instance in which Laborde does use ratios which reflect vibrational frequency rather than string length. This is rather curious as the material he is discussing relates to string lengths. His reason for this is unclear, especially as he seems to understand the difference between the two forms of notating an intervallic ratio.
[100] Laborde, II, 4, "une corde qui dans une seconde forme six vibrations, étant pincée en même tems qu'une corde qui forme douze, il en résulte deux sons, qui forment une *Consonance*, parcequ'alors il existe un raport entre deux sons."

pitched sound completes precisely two times as many vibrations as the low-pitched sound. This consonance is called an octave."[101]

The two notes that comprise the interval of the octave are always in the proportional relationship of 2 to 1, since, according to Laborde, the high-pitched tone "creates two times as many vibrations as the low-pitched sound."[102] Laborde explains that every octave will be a doubling of the previous octave's value. Thus a double octave will be in the ratio of 4 to 1; the triple octave will be in the proportion of 8 to 1. He concludes by stating that "only by allowing the number two in music, do we achieve the knowledge of the consonances named octaves."[103]

Laborde considers music to consist of more than the octave, of course, so he expands his exploration by wondering "let us see what will result from introducing the number three."[104] When placed between the two notes of the octave indicated by the ratio 2:4, the number three creates two new proportions: the fifth, 2:3, and the fourth, 3:4. Laborde first considers the interval of the fifth. He makes the numbers of his ratios more musically germane by equating the numerals with specific pitches, which he designates with solfège.[105] He calls the sound produced by the number one, *ut* or C. Therefore the sound an octave higher is *ut-8ve*, represented by the number two. When the tone is raised another octave, to the number four, Laborde labels it as *ut-2nd8ve*. In this manner, Laborde places the tone which makes three vibrations to the one vibration of the *ut* between the *ut-8ve* (C) and the *ut-2nd8ve* (C), creating the *sol-8ve* (G).[106] Laborde then applies his understanding of the ratios of an octave, by doubling three to obtain six,

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[101] Ibid., "Donc la plus simple Consonance est celle où le son aigu acheve précisément deux fois de vibrations que le son grave. Cette Consonance est appelée *octave*."
[102] Ibid., "elle forme deux fois plus de vibrations que lui."
[103] Ibid., 5, "en n'admétant que le nombre 2 dans la musique, on ne parvient qu'à la connaissance des Consonances appelées *octaves*." This is an explanation of the double geometric progression which produces the octave.
[104] Ibid., "En y introduisant le nombre 3; voyons ce qu'il en résultera."
[105] French composition treatises of the eighteenth century often employ this methodology. Roussier, Rameau, d'Alembert, and Rousseau each use it in their respective works. The solfège labels are equated with the specific pitches of the C major scale (*ut*=C, *re*=D, *mi*=e, etc.). So while Laborde is dealing with material from the speculative tradition, this methodology allows for associations to be made with musical practice.
[106] Ibid. Laborde explains that practice dictates the use of the label *sol* for this tone. The interval is labeled a fifth because it is the fifth note of the scale employed by musicians in the common practice. "Or le son exprimé par 3 est celui que les Musiciens marquent par la note *sol*; & ils nomment l'intervalle d'*ut* à *sol*, une *quinte*, parce que dans le succession des notes de la Gamme, *ut, re, mi, fa, sol, la, si, ut*, *etc.*, la note *sol* est la cinquième depuis *ut.*"

which he labels as *sol-2nd8ve* (G). He continues executing this function, establishing a chart which displays the ratios of the notes derived from the numbers two and three (Figure 3.2). [107]

	8e	8e	1e 8e	2e 8e	3e 8e	3e 8e	4e 8e	4e 8e	5e octave.
ut,	ut,	ſol,	ut,	ſol,	ut,	ſol,	ut,	ſol,	ut,
1.	2.	3.	4.	6.	8.	12.	16.	24.	32.

Figure 3.2

Laborde's chart of the ratios for octaves and fifths

In the tradition of *musica speculativa*, this series can be extended indefinitely, but Laborde's ideas, however, are based upon existing musical practice. This is reflected in his assignment of actual pitches to each numerical value. His reliance upon musical practice is emphasized further when he describes the interval created by the proportion from one to three. Laborde says that "the proportion from 1 to 3 expresses the interval of an octave and a fifth, which, due to the simplicity of the numbers involved, must form the most noticeable consonance after the octave. It is the interval after the octave that is the easiest for an instrument to tune."[108] Laborde's inclusion of the interval of the twelfth is a reference to the overtone series, which provides a solid, scientific explanation for musical practice. Yet Laborde's point of reference for the application of these speculative materials regarding consonant intervals is the tuning of an instrument. The association between the mathematical derivation of intervals and the use of these same ratios to tune an instrument underscores the important role of musical practice in relationship to *musica speculativa* in Laborde's writings.

Before explaining the derivation of the interval of the fourth, Laborde makes a slight change in the solfège labels on the model presented above. He alters the label of the unison, his reference to the value 1, from *ut* to *fa*, or from C to G. In so doing he substitutes the label of the fifth, represented by the number 3, from *sol* to *ut*, or G to C (Figure 3.3). [109] This transposition of solfège labels maintains the proper ratios, but

[107] Ibid., 6.
[108] Ibid., "Il résulte delà, que la proportion de 1 à 3 exprime un intervalle composé d'une octave & d'une quinte; & qui, à cause de la simplicité de ses nombres, doit former, après l'octave, la Consonance la plus sensible à l'oreille. C'est est aussi celle qui, sur un instrument, s'acorde le plus facilement après l'octave."
[109] Ibid.

indicates that the fifth being considered is now the one from the fourth member of the scale rising to the first. Laborde now recognizes the presence of another interval in the proportional relationship from 3 to 4; it is the interval of the fourth.

	8e	8e	2e 8e	2e 8e	3e 8e	3e 8e.
fa,	fa,	ut,	fa,	ut,	fa,	ut.
1.	2.	3.	4.	6.	8.	12.

Figure 3.3

Laborde's chart of the ratios for octaves, fifths, and fourths

Laborde calls the fourth, or the interval from *ut* (C) to *fa* (F), a consonance, but "it is not as pleasant as the fifth because its proportion, 3 to 4, begins to be more complex than that of the fifth, which is from 2 to 3."[110] Thus, Laborde concludes, the number three generates the proportions which create the intervals of the fifth and the fourth.

Laborde refers his readers back to the chart, by asking that we now take the number three and multiply it by itself. When we attempt to insert the number 9 into the chart, he says that it should be apparent that it will be a slightly higher sound than the *fa-3rd8ve* (F). He labels this sound as *sol-3rd8ve* (G).[111] Thus, the tones *ut-2nd8ve, fa-3rd-8ve, sol-3rd8ve*, and *ut-3rd8ve*, or C, F, G, and C, align with the numerical values 6, 8, 9, and 12 respectively. Laborde then employs the concept of octave equivalence[112] to transpose the sounds down two octaves. Christensen offers that the process of octave identity provides Rameau with an explanation for why musicians tend to reduce compound intervals to their simplest forms and for why, in thorough bass practice, chords are

[110] Ibid., "Consonance qui n'est pas aussi agréable que le quinte, parceque sa proportion étant 3 à 4, commence à être plus compliquée que celle de la quinte, qui est 2 à 3."

[111] Ibid. "Prenons maintenant trois fois le nombre 3, pour avoir le nombre 9, il nous donnera un son plus haut que la son *fa-3nd8ve*; donc le nombre 9 donne le son *sol-3rd8ve*."

[112] Rameau referred to this concept as "octave identity." He dealt with it specifically in response to Leonhard Euler in an open letter published in the *Mercure de France* in 1753 that was later published as a pamphlet (Rameau, *Extrait d'une réponse de M. Rameau à M. Euler sur l'identité des octaves* (Paris: Durand, 1753), in *The Complete Theoretical Writings of Jean-Philippe Rameau*, ed. Erwin R. Jacobi, vol. 5 (Dallas: American Institute of Musicology, 1967-72), 175). Christensen explains that "Euler could not accept that any two intervals related by octave or compounding could be considered identical" (Christensen, *Rameau and Musical Thought*, 245). Rameau however saw octave identity as a means to make the naturally produced series of pitches practical to use (Christensen, *Rameau*, 246). In other words, the idea of octave identity made the twelfth produced by the overtone series the same as the fifth that could be used in common practice. Octave identity is an example of the manner in which Rameau could intertwine the ideas of speculative theory with the practice of music.

inverted freely with the resultant harmonies being accepted as related to the theoretical harmony provided by the figure.[113] Regarding the identity of octaves, Rameau says that it does not create any fundamental differences in the melody or the harmony; the changes brought about in the musical surface by octave identity "do not alter the fundamental at all, either in nature or in art, it only consists in the various modifications of one harmony combined differently, where the sounds cannot change order without the assistance of their octaves."[114] Thus any use of inversion or simplification of compound intervals hinges on the properties of the octave. Laborde has done just this, creating an equivalence between two different pitches described as C, *ut* and *ut-2nd8ve*, by lowering the pitch of the C associated with 6 from *ut-2nd8ve* to *ut*, 6, 8, 9, and 12 now correspond to the tones *ut*, *fa, sol*, and *ut-8ve*, or C, F, G, and C (Figure 3.4).[115]

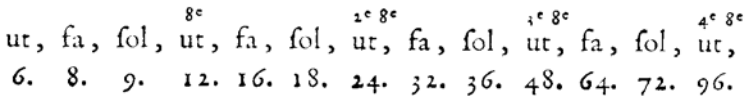

Figure 3.4

Laborde's chart of Pythagorean ratios

Laborde has now generated the same ratios that Pythagoras is credited with discovering in the story told by Nicomachus. Laborde even indicates the ratio formed from 8 to 9, the second, or whole-tone, and classifies it as a dissonance, just as Pythagoras had done.[116] At this point Laborde begins to expand upon the consonant intervals generated in the Pythagorean myth. He continues with the same methodology to create the rest of the intervals in common practice, both consonant and dissonant.

Laborde explains that the next interval, the seventh, results from the ratio from *sol* (G) to *fa-8ve* (F), 9 to 16. As with the interval of the second, this interval is a dissonance. Laborde indicates that the second and the seventh are dissonant intervals because "these

[113] Christensen, *Rameau and Musical Thought*, 246.
[114] Rameau, *Extrait d'une réponse de M. Rameau à M. Euler*, 14, "c'est, dit-il, une différence qui n'altère nullement le fond, ni dans sa nature, ni dans son genre: elle consiste seulement dans les différentes modifications d'un même tout différemment combine, où les sons ne peuvent changer d'ordre sans le secours de leurs *Octaves*."
[115] Laborde, II, 6.
[116] Ibid.

proportions are no longer expressed by the small numbers 1, 2, 3, 4, 6."[117] At this point, Laborde continues to derive dissonant intervals by taking the number nine and multiplying it by three. 27 falls between *ut-2nd8ve* (C), 24, and *fa-2nd8ve* (F), 32. Laborde points out that 27 is also a fifth above *sol-8ve* (G), 18, as the resulting ratio from 18 to 27 is merely 2 to 3. Laborde thus labels 27 as *re-2nd 8ve* (D).[118] Using octave equivalence again, Laborde moves the bottom note *ut* (C) up two octaves, from 6 to 24. From this reassignment of values and the addition of *re* (D) into the chart, Laborde creates a new model (Figure 3.5).[119]

ut, re, fa, ſol, ut[8e], re, fa, ſol, ut[2e 8e], re, fa, ſol, ut[3e 8e], re, fa, ſol, ut[4e 8e],
24. 27. 32. 36. 48. 54. 64. 72. 96. 108. 128. 144. 192. 216. 256. 288. 384.

Figure 3.5

Laborde's chart for the derivation of the major sixth and minor third

Laborde gleans the intervals of the minor third and the major sixth from this chart. The minor third, the ratio from 27 to 32, or *re* (D) to *fa* (F), and the major sixth, the ratio from 32 to 54, or *fa* (F) to *re* (D), are both considered dissonant by Laborde's standards as the ratios are not created with the simple integers up to the number six.

The next step would be to multiply 27 by three to get 81 to produce the next set of intervals, but, Laborde says, "the modern theorists whom we follow here, use the number five and its multiples in order to generate the other tones."[120] In other words, five is doubled to give us the tone an octave higher, represented by 10, then doubled again to produce 20, then 40, and then 80. Laborde is claiming that modern theorists employ the number 80 rather than 81 in their ratios. The ratio formed by these two notes, 80:81, is called a syntonic comma.[121]

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[117] Ibid., "Ces proportions de 8 à 9, & de 9 à 16, n'étant plus exprimées par les petits nombres 1, 2, 3, 4, 6, ne sont plus dans la classe des *Consonances*, mais commencement celle des *Dissonances*."
[118] Ibid.
[119] Ibid.
[120] Ibid.,7, "les Théoriciens modernes, que nous suivons ici, prenent le nombre 5 & ses multiples pour avoir les autres tons."
[121] Ibid., n., "en triplant 27 on aurait 81. Les octaves supérieures de 5, sont 10, 20, 40, & 80; les Théoriciens modernes emploient 80, au lieu de 81, & ils appelent *comma* la différence entre ces deux nombres."

The reason for this slight, but important, shift becomes more apparent when Laborde explains the derivation of the next interval. Refer to Figure 3.3. He places five within this model. Thus, the tone associated with five vibrations would sound between the tones *fa-2nd8ve* (F) and *ut-2nd8ve* (C). Laborde assigns the number five the label *la*, or A; in this specific example it will be *la-2nd8ve.* Thus, the interval from *fa-2nd8ve* to *la-2nd8ve*, or F to A, is represented by the ratio of 4:5. Mathematically, this is very close to the ratio 64:81, which would have been the ratio used for deriving the major third, if Laborde had not introduced the numerical term five into his methodology of intervallic construction. One reason for this minute alteration is that musical practice has accepted the major third as an important consonance in musical composition. When the ratio of the major third is 4 to 5, rather than the numerically cumbersome 64 to 81, it falls within the accepted parameters for consonant intervals—those being constructed of two terms, each of which is represented by the number six or any integer less than six.

Laborde identifies the other interval created by the introduction of the number five as a minor third. He has already provided the criteria for the creation of a minor third as being the ratio of 27 to 32, but now he describes the interval from *la-2nd8ve* to *ut-2nd8ve* (A to C), defined in this case as the ratio from 5 to 6, as a minor third. He favors this numerically simpler ratio because it now designates the minor third as a consonance rather than a dissonance as well. Laborde acknowledges that these differences may seem insignificant as the "difference is almost imperceptible to the ear,"[122] but the modest adaptations of the ratios of both the major and the minor thirds reflect the musical practice of the time. Rather than staying true to the mathematical rigors of number alone using the tools of the speculative tradition, Laborde accommodates the accepted belief that the third is a chief component of musical composition, a valued consonance in musical practice.

Laborde then applies the number five to the remaining established tones, *sol, ut,* and *re* (G, C, and D) to produce the tones a major third above them, *si*, *mi,* and *fa#* (B, E, F#), respectively. If the F# is disregarded momentarily, Laborde has provided all seven pitches of the diatonic scale. When the tones A, E, B, F# are raised a major third,

[122] Ibid., 8, "la différence est Presque imperceptible à l'oreille."

employing the ratio of 4 to 5, the tones C#, G#, D#, and A# are generated, respectively, thus supplying all twelve pitches of the modern chromatic scale.[123]

Having accounted for all of the notes being used in the practical art of music in his day, Laborde surmises the mathematical values for all the pitches and the ratios which form the intervals. He says that "the true origin of the tones that are used today is drawn from the numbers 2, 3, and 5."[124] Laborde explains why he need not proceed further in the creation of intervals by suggesting the introduction of the geometric series created by the number seven, the next prime number after 5. If the number seven was introduced, "the number of the tones of the octave would become larger and we would generate the quarter-tone. The Ancients knew of the quarter-tone and they used it in the development of what they called the enharmonic."[125] The quarter-tone is not employed in the music of Laborde's time, or, in his own words, "these quarter-tones are banished from our music, so we will not push our research in this genre any further."[126]

Laborde's last statement here is revealing. Although quarter-tones exist, they have little bearing on the musical practice of his era. So much of the information he supplies regarding the generation of tones and of intervals is firmly grounded in the speculative traditions of the ancient Greeks, but he draws a clear distinction between the speculative nature of their material and his own by filtering the Greek ideas and figures through the musical practice of his time. This occurs in three distinct ways. First, Laborde employs the use of octave equivalence. The Greeks treated each of the fifteen notes in their system as individual pitches; they each had distinct labels. Laborde employs the idea, common to many French treatises at the end of the eighteenth century, that intervals may be condensed from a compound form to an equivalent interval within the range of an octave to facilitate ease in comprehension and performance. Second, Laborde bases his understanding of consonances and dissonances not on the tetractys of Pythagoras which uses the numbers one through four to account for consonance, but on a modified understanding of Gioseffo Zarlino's *scenario* which delineates consonance with the

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[123] Ibid.
[124] Ibid., 10, "Le véritable origine des tones qui sont aujourd'hui en usage, est donc tirée des nombres 2, 3, & 5."
[125] Ibid., 11, "le nombre des tons de l'octave deviendrait plus grand, & nous donnerait les *quarts de ton*, les Anciens connaissaient, & dont ils formaient ce qu'ils appelaient *l'enharmonique*."
[126] Ibid., "ces quarts de tons étant banis de notre Musique, nous ne pousserons pas plus loin nos recherches en ce genre."

numbers one through six. [127] In so doing, Laborde allows for the inclusion of the major third (4:5), the major sixth (3:5), and the minor third (5:6) within the category of acceptable consonances. Finally, throughout his explanation of the generation of the tones and the ratios which form the intervals, Laborde aligns numerical values with pitch names, creating an association between abstract mathematical concepts and actual musical practice, in other words between *musica speculativa* and *musica pratica*. The derivation of the intervals is not an exercise in scientific acumen for Laborde; it is a practical matter that just happens to have a very strong scientific underpinning. Laborde offers a clear connection to the tradition of *musica speculativa* derived from the ancient Greeks and the *musica pratica* of the eighteenth century that forges a historical link between the music of contemporary society and antiquity.

Modes and Keys

While the connection in Laborde's discussion between the ancient and modern traditions on intervals and their derivation is apparent, the relationship between the conception that the ancients had of mode and the modern conceptions of mode and key are more illusory. In Chapter 9 of his *Abrégé d'un Traité de Composition*, "Des Modes ou Tons," or "On Modes and Keys," Laborde makes a clear distinction between past and present when he says "the name of mode, for us, does not have the same meaning that it had among the ancients."[128] Despite the disparity in the definitions, the idea that Laborde has not discovered any connections between the two eras regarding the manner in which they defined and understood the concept of "mode" should be deferred. There are connections, but, the relationships that exist are not as conspicuous as the associations discovered in the speculative tradition of using numerical ratios to derive the intervals to bridge the ancient and modern cultures. Although the similarities are not as apparent as in the creation of intervals, a close reading of Laborde's text will offer similar associations between the two, variant understandings of "mode."

Undertaking the topic of mode from the modern perspective first, Laborde acknowledges that musicians of his day only recognize two particular modes, the major

[127] Gioseffo Zarlino, *Le istitutioni harmoniche* (Venice, 1558), Part I, 23-26.
[128] Laborde, II, 27, "Le nom de *Mode*, parmi nous, n'a pas la même signification qu'il avait chez les Anciens."

and the minor. He clarifies this statement by saying that "all music in a major key is in the major mode and all music in a minor key is in the minor mode."[129] Laborde emphasizes the interval of a third and its importance in the determination of the mode; he says that the third "is the essences of the mode, since it is the third which forms the major or the minor key."[130] In other words, the major mode will be indicated by the presence of a major third in the scale. The minor key will have a minor third. In discussing their respective origins, Laborde draws a distinction between the major and the minor modes. The major mode results from natural causes; Laborde affirms that it is a result of the overtones "generated by the resonance of the *corps sonore*, which produces the major seventeenth, the double octave of the major third, as well as the twelfth, which is an octave above the fifth of the fundamental sound."[131] Thus Laborde accounts for the notes that comprise the major triad and proves that they are produced naturally by the overtone series. Laborde elaborates on the derivation of the harmonics of the principal sound which constitute a major triad:

> We claim that an ordinary sound is composed of two others, which are the octave from its fifth (or the twelfth) and the double octave from its major third (or the nineteenth). Some quite discriminating and well-practiced ears hear even the high pitched octaves of these intervals. We call these sounds the harmonics of the principal sound.[132]

Unlike the major mode, the minor mode appears to have no explanation based on natural phenomena. Fundamentally, the minor mode is a product of the current musical practice of the time. Laborde mentions that Rameau presents a derivation for the minor mode,[133] but a better illustration of the concept is provided by Jean Rond d'Alembert in

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[129] Ibid., "que toute Musique en Ton majeur est dans le *mode majeur,* & que toute Musique en Ton mineur est dans le *mode mineur*."

[130] Ibid., "C'est le tierce qui constitue le mode, puisque c'est la tierce qui constitue le Ton majeur ou le Ton mineur."

[131] Ibid., "Le mode majeur est dans la nature, puisqu'il est engendré par la résonance du corps sonore, qui rend la dix-septième majeure, double octave de la tierce majeure, ainsi que la douzième, octave de la quinte du son fondamental.

[132] Ibid., 14, "on fait qu'un son quelconque est compose de deux autres, qui sont l'octave de sa quinte (ou la *douzième*), & la double octave de sa tierce majeure (ou la *dix-septième*). Des oreilles bien fines & bien exercées entendent même quelquefois les octaves aiguës de ces intervalles. On appele ce sons les harmoniques de le son principal."

[133] Rameau's position on the derivation of the minor continually mutated throughout his career. Although the procedure for generating the minor triad based on the arithmetic series of the major triad applied below the fundamental sound found in the *Génération harmonique* may be his most famous attempt at deriving the minor from the *corps sonore*, it is his description of *De mode mineur* in the *Démonstration* which most

his revised *Élémens du musique théorique et pratique* (1762).[134] Although d'Alembert approaches the validation of the minor mode as a scientific product of the *corps sonore*, he can only provide a solution that is less satisfying than the generation of the major mode. The intervals above the fundamental tone, the twelfth (the fifth when utilizing octave equivalence) and the seventeenth (the major third) are the result of the overtones. He uses these scientific measurements for the derivation of the intervals which constitute the major triad as they are produced by the *corps sonore*; then d'Alembert manipulates the material to produce a rational, yet not scientifically complete, demonstration. Taking the major mode, which he calls "the immediate work of nature,"[135] as a starting point, d'Alembert suggests creating a slight derivation from the melody C, E, G, in which the pitches E and G are caused to resonate by the fundamental pitch C, "but the second pitch, E, does not make G, which is only its minor third, resonate."[136] So, unlike the major third, the minor third is not manufactured naturally by the *corps sonore*, but d'Alembert's process, based upon the scientific precepts of the *corps sonore*, offers an explanation for why the minor mode has become so accepted in musical practice.

D'Alembert suggests that, instead of using the E between the notes C and E, another pitch be chosen, a pitch that "might have (as does the pitch C) the property of making G resonate and which might yet be different from C."[137] Knowing the intervals produced by the *corps sonore*, d'Alembert offers that the pitch in question should have G as its major seventeenth, or a major third, "in other words," d'Alembert says, "at the

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closely resembles d'Alembert's process described here below (Jean-Philippe Rameau *Démonstration du principe de l'harmonie servant de base à tout l'art musique théorique et pratique* (Paris: Durand, 1750), 62-84). Having taken C for the fundamental of the major mode, Rameau takes A as his new fundamental sound for the minor mode, which he describes as subordinate to the major. He then says that the principal C gives its major third, E, to the minor mode as A's fifth. He adds, "For there attends a great closeness between the fundamental harmonies of these two modes [what we know as the relative major and minor], for as soon as the generator of the major and its third, form the third and the fifth of the generator of the minor, it must be the same between their *adjoints*, as it is easy to verify" (Rameau, *Démonstration*, 72, "De-là suit une grande communauté de *sons* fondamentaux de ceux deux *Modes*; car, dès que le générateur de *majeur*, & sa *Tierce*, forment la *tierce* & la *Quinte* du générateur du *mineur*, il en doit être de même entre les *adjoints*, comme il est aisé de le vérifier.").

[134] Jean Rond d'Alembert, *Élémens de musique, théorique et pratique, suivant les principes de M. Rameau, éclaircis, devélopés et simplifies par M. d'Alembert: Nouvelle édition, revue, corrigée & considérablement augmentée* (Lyon: Jean-Marie Bruyset, 1762; reprint ed., 1772), 20-24.

[135] Ibid., 22, "l'ouvrage immédiate de la nature" (trans. Elsberry).

[136] Ibid., "mais le second son mi ne fait point résonner sol qui n'est que sa tierce mineur" (trans. Elsberry).

[137] Ibid., "qui ait (ainsi que le son *ut*) la propriété de faire résonner sol, & qui soit pourtant différent d'*ut*" (trans. Elsberry).

major third below the same pitch G."[138] As the pitch E is merely a minor third below G, the note in question should be a semi-tone lower, or E-flat. When E-flat is inserted between C and G, or C, E-flat, G, both the C and the E-flat cause the G to resonate naturally. It is true that the C does not produce the E-flat causing the minor sonority to not be "as perfect as the first arrangement,"[139] but the C, E-flat, G is also "dictated by nature, although less immediately than the first, and in fact, experience proves that the ear adjusts to it nearly as well."[140] This is the manner in which d'Alembert derives the minor mode.

Having provided the derivation of the major and minor modes, Laborde delineates the differences between their specific pitches in eighteenth century practice. He says that in the major mode, the third, the sixth, and the seventh should always be major, while in the minor mode "the same intervals should always be minor; however, we almost always make the seventh major. It is what we call the leading tone."[141] Laborde furthers his definition of a modern mode by commenting that the term "mode" is often used in a manner that defines the actual key of a piece rather than just the modality in the sense of major or minor. For example, Laborde says that "we say that an air is in the mode of D, when it is in the key of D, major or minor; then mode becomes synonymous with key."[142]

In this regard, Laborde continues, we can count 34 keys, but due to enharmonic respellings, there are actually only 24 keys, 12 major and 12 minor, as indicated in Figure 3.6.[143]

Having established the modern context of the concept of *mode*, or *key*, Laborde compares it with his understanding of the ancients' definitions of "mode." Laborde says that the "idea that the ancients attached to this term *mode*, or *key*, was quite different from the definition that we have of it."[144] Laborde remarks that "among the ancients, mode was

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[138] Ibid., "ce qui revient au même, à la tierce majeur au dessous de ce même son *sol*" (trans. Elsberry).
[139] Ibid., 23, "n'est pas à la vérité aussi parfait que le premier arrangement" (trans. Elsberry).
[140] Ibid., "dicté par la nature, quoique moins immédiatement que le premier; & en effet l'expérience prouve que l'oreille s'en accommode à peu près aussi-bien" (trans. Elsberry).
[141] Ibid., "les mêmes intervalles doivent toujours être mineurs; cependant on rend presque toujours majeure la septième: c'est ce qu'on appele la *note sensible*."
[142] Ibid., "nous disons qu'un air est dans le mode de *re*, quand il est dans le Ton de *re* majeur ou mineur, & alors il devient synonyme de Ton."
[143] Ibid., 8. The text in the margins of Figure 3.6 reads "each of these can be major or minor."
[144] Ibid., 28 n., "L'idée que les Anciens atachaient à ce terme *mode* ou *ton*, était bien différente de celle que nous en avons."

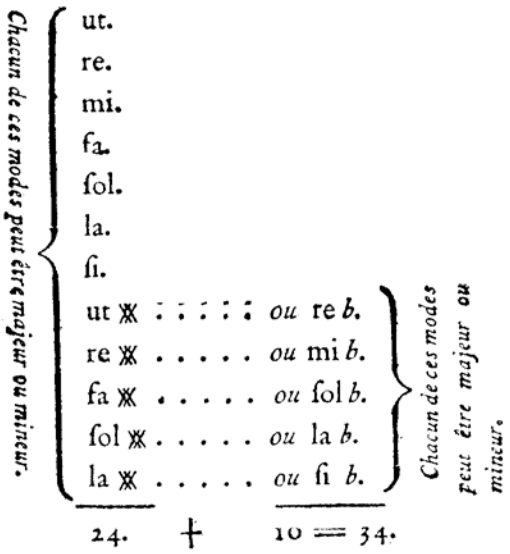

Figure 3.6

Laborde's list of modern modes, or keys

only the range from one sound to another."[145] It should be observed that Laborde's use of the term mode does not reflect the terminology of the ancients, although it appears to be a somewhat standard application of the term for the era.[146] The deceptive use of the term "mode" is two-fold in this context. First the term that the ancients would use for what Laborde is referring to as mode is "*tonoi*." John G. Landels explains the ancients had several definitions of "*tonoi*:"

> The basic literal meaning of the word *tonos* is 'tension,' as is found in a string on a stringed instrument; hence, by a simple shift, it can mean pitch—either pitch in the abstract, or a specific pitch. It was also used, as we use it, to mean the interval of a tone—hence the Greek has such expressions as 'a tone higher,' or 'two notes a tone apart.' Finally, there was a particular use of the word in connection with scales, which correspond roughly to our word 'key.'[147]

Aristides Quintilianus echoes the multiple definitions of *tonoi*: "We can use the term "tonus," in music, in three ways. It can mean the same as "pitch;" it can indicate a certain

[145] Ibid., "Chez les Anciens, le mode n'était que l'étendue d'un tel son à tel autre son."
[146] See Jean-Jacques Rousseau, *Dictionnaire de musique* (Paris: Veuve Deschene, 1768; reprint, Hildesheim: Georg Olm, 1969), 292-94; Rameau, *Traité*, 143-48, Gossett, 157-162.
[147] Landels, 97.

magnitude of sound;…or it can mean the *tropos* of a *systema*, such as Lydian or Phyrigian."[148] The second problem arises from the association that can be made between the modern idea of mode and the church modes of the Middle Ages. The clutter of the etymology is compounded when it is considered that the church modes adopted the names of the ancient Greek *tonoi*, although, in this context, they represent a significantly different practice. Couple this with the fact that both the ancient system and the modes of the church often had affectations assigned to them, and there should be no wonder in the fact that the terminology is misappropriated and confounded. John Neubauer draws this connection: "the assignment of affects to keys was complicated by a longstanding confusion of the Greek *harmoniai* with the church modes."[149] In reading Laborde's text, the following ideas must be understood: 1) his applicattion of the term "mode" to the ancients in this matter is incorrect, a more proper term would be "*tonoi*,"[150] and 2) the use of "*tonoi*" will avoid confusion with the term "mode" associated with the chant practice of the Middle Ages, thus allowing a more unencumbered reading of the text.

Laborde explains the ancients had a very limited range to their music, therefore, they initially only had three *tonoi*: the Dorian, the Phrygian, and the Lydian, used for the low, medium, and high ranges, respectively.[151] Each of the starting notes of these *tonoi* was a tone apart. Then to increase the number of *tonoi* by two, they divided the interval between the Dorian and the Phrygian, to create the starting note of the Ionian *tonos*, and

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[148] Aristides Quintilianus*, De Musica*, 20.1-5, in Barker, *Greek Musical Writings*, II, 421. The rough translation of "*systema*" here would be scale and "tropos" is a synonym for "*tonos*" found in the later works of antiquity, Barker, *Greek Musical Writings*, II, 18. Barker provides a thoughtful overview of the concept of *tonoi*, 17-27.

[149] John Neubauer, *The Emancipation of Music from Language: Departure from Mimesis in Eighteenth-Century Aesthetics* (New Haven: Yale University Press, 1986), 55. The use of *harmoniai* signifies a grouping of non-determinant pitches which produce a certain affect that reflect "distinct emotional, aesthetic, and moral effects" (Barker, *Greek Musical Writings*, II, 14). Barker provides an overview of this concept as it was understood in ancient times (*Greek Musical Writings*, II, 14-17), and comes to the conclusion that in this case *harmoniai* is closer in meaning to our term "mode" (Barker, 17). To associate a modern label with an ancient term in this manner is precarious as it will not always capture the exact meaning of the original term in every instance, whether it be for "*tonoi*," "*harmoniai*," or "*systema*." This creates problems for the translator. As Laborde has addressed this topic and its relationship to modern keys, the translation of "mode" in relationship to the music of the ancients in Laborde's text will consistently be treated as "t*onoi*." Occasionally, especially in his discussion of the affects and keys, a more accurate translation may indeed by "*harmoniai*," but as it is Laborde's notion to associate certain affects with specific keys, the translation of "*tonoi*" will still be applied

[150] The term "*tonoi*" will be employed henceforth in this section to differentiate between the ancient Greek conception and that of the church modes of the Middle Ages. This applies even when Laborde uses the term "mode" in his text; as stated above, it will be translated as "*tonoi*."

[151] Laborde, II, 29.

they placed the first note of the Aeolian *tonos* between that of the Phrygian and Lydian *tonoi*. According to the chart that Laborde has included, the five *tonoi* would have the following starting notes by eighteenth-century practice: Dorian-*ut*, or C; Ionian-C# or D-flat; Phrygian-D; Aeolian-D# or E-flat; and Lydian-E.[152]

To have a full understanding of the ancient concept of *tonoi*, the Greek's reliance upon the tetrachord must be explored. The tetrachord, literally meaning four strings, is a group of four pitches that is the basic building block of ancient Greek music. In Greek practice, the tetrachord was a melodic entity, as the notes were not sounded simultaneously. A term the Greeks would assign to the tetrachord is "*systema*." Not all *systema* would be classified as tetrachords, but all tetrachords could be classified as *systema*. Aristides Quintilianus defines a *systema* as "that which is constituted out of more than two intervals."[153] A common modern interpretation of *systema* would be to define it as a scale; but, Landels cautions: "that could be misleading, because a *systema* could have a range greater or less than an octave, and was probably regarded by Greek musicians as a spectrum of notes from which a segment was chosen to form the scale for any particular composition."[154] The tetrachord could be divided internally in three distinct ways. The variations in the tuning of tetrachords always occurred in the middle two strings, as the pitches of the two outer strings would always remain constant, tuned to the interval of the fourth. Referring to this property of the tetrachords, Laborde calls the first and last tones fixed, or stationary, while "the second and third tones, which sometimes take one intonation, sometimes another, were called the changeable, or moveable tones."[155] Laborde explains that the three types of tetrachords used in ancient Greece were the diatonic, the chromatic, and the enharmonic. When starting on the lowest pitched tone and moving higher, the diatonic consisted of a half-step, a step, and a step. Laborde provides the examples B, C, D, E, or E, F, G, A.[156] The chromatic tetrachord is composed of a half-step, a half-step, and a step and one-half, or a minor third, which Laborde illustrates with the following examples: B, C, C#, E, or E, F, F#, A.[157] Finally,

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[152] Ibid.
[153] Aristides Quintilianus, *De Musica*, I, 13.4-5, in Barker, *Greek Musical Writings*, II, 413.
[154] Landels, 88.
[155] Laborde, II, 18.
[156] Ibid., "Dans le diatonique, un demi-ton, un ton, un ton."
[157] Ibid., "Dans le chromatique, un demi-ton, un demi-ton, un ton ½, ou tierce mineur."

the enharmonic tetrachord is comprised of a quarter-step, a quarter-step and the interval of two steps, or a major third, such as B, B##, C, E, or E, E##, F, A.[158]

The oldest of the Greek tetrachords, *hypaton*, was also the lowest pitched tetrachord, based on the notes of a lyre which had three or four strings, in which the outer two strings were tuned to the interval of a fourth. Laborde bases this claim on the idea that music at this time was very simple and used for declamation. The low tetrachord was used solely for religious ceremonies and equated with the majesty of the gods, according to Laborde.[159] As the use of music in ancient Greece spread to the theaters, being used as accompaniment to the tragedies, Laborde says that the people "found that the first tetrachord was too low and too dull for this use."[160] Thus, they created the second tetrachord, *meson*, "which was composed of the last string of the first tetrachord and three new, higher strings."[161] The two tetrachords share a common note at the point in which they overlap; this is an example of conjunct tetrachords. Laborde credits Terpander (7th century BCE) as being the man who added the strings to create the seven string lyre.[162] Mathiesen supports Laborde's claim by stating that "although the lyre may have had, in earliest times, only three or four strings, from at least as early as the time of Terpander, it had seven or more strings."[163]

After a time, Laborde continues, music was needed for simple amusement and cheerfulness; the first two tetrachords were not suited for this, so the third tetrachord was created, *synemmenon* (or "conjunct") and *diezeugmenon* (or "disjunct"). There are two distinct forms of the third tetrachord. As its name implies, the first, *synemmenon*, is conjunct with the second tetrachord *meson*. The second, *diezeugmenon*, is disjunct in relation to meson. Eventually the notes of the third tetrachord became too constrictive for the types of overindulgent celebrating that Laborde cites for the invention of the fourth

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[158] Ibid., "Dans l'enharmonique, un quart de ton, un quart de ton, deux tons, ou tierce majeur."
[159] Ibid., 18-19.
[160] Ibid., 19, "ils trouverent que le premier tétracorde était trop bas & trop sourd pour cet usage."
[161] Ibid., "qui fut composé de la derniere corde du premier tétracorde, & de trios nouvelles cordes plus aiguës."
[162] Ibid.
[163] Thomas J. Mathiesen, *Apollo's Lyre: Greek Music and Music Theory in Antiquity and the Middle Ages* (Lincoln: University of Nebraska Press, 1999), 243.

tetrachord, *hyperboleon* (or "of notes or strings thrown beyond the others," i.e. "additional" or "extreme"):[164]

> The abuse of cheerfulness, like the bacchanals, the orgies, the mysteries of the good goddess, etc., would have caused the fourth tetrachord, hyperboleon, to be invented because the more piercing the sounds became, the more animated the spirits, which were already overheated by wine and debauchery.[165]

Thus the four tetrachords came together, two sets of two conjunct tetrachords separated by a whole step; the two tetrachords separated in this manner are referred to as disjunct tetrachords. To this span of an octave and a seventh a final note was added, the *proslambanomenos*, underneath the lowest note of the bottom tetrachord, *hypaton*, so that

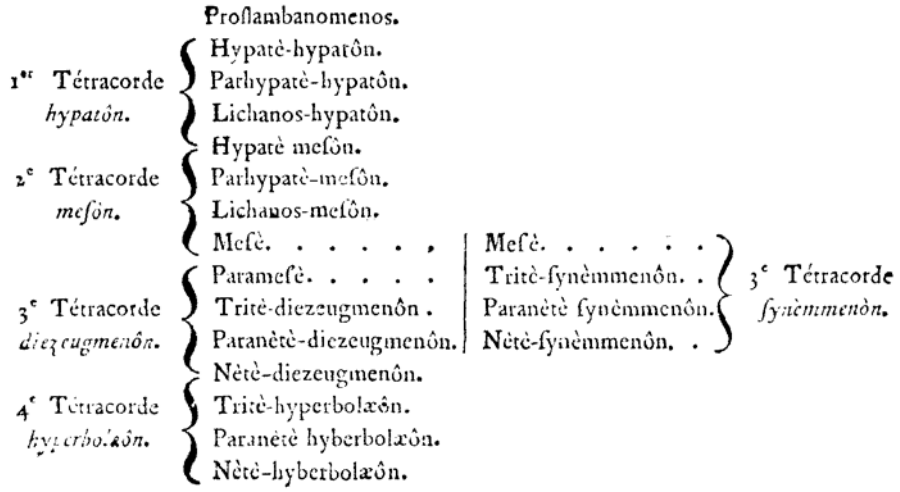

Figure 3.7

Names of the strings in the Ancient's system—in French[166]

the entire construct then had a range of two complete octaves.[167] The individual tetrachords could be tuned according to the needs of the performers without disrupting the basic structure of the two octave system as the outer strings of each tetrachord were

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[164] The definition of hyperboleon is taken from Barker, 408, n. 54.

[165] Laborde, II, 19, "l'abus de la gaité, comme les bacchanals, les orgies, les mysteres de le bonne Déesse, &c. auront fait inventer le quatrieme tétracorde, *hyper-boleon*, parceque plus les sons devenaient perçans, plus ils animaient des esprits déja échaufés par le vin & par la débauche."

[166] Ibid, 16. This systemization may be found in various sources from late antiquity. Nicomachus, *Enchiridion*, 258-265, in Barker, *Greek Musical Writings*, II, 264-69; Ptolemy, *Harmonics*, II, 51.19-57.9, in Barker, *Greek Musical Writings*, II, 325-331; Aristides Quintilanus, *De Musica*, I, 7.16-10.16, in Barker, *Greek Musical Writings*, II, 406-410.

[167] Ibid., 19-20.

always tuned to the interval of the fourth. The various string names and the tetrachords to which they belong are listed in Figure 3.7; the lowest note, the proslambanomenos, is located on the top of the list. Today the two octave system described by Laborde has come to be known as the Greater Perfect System.

Laborde's explanation of the Greek system of tetrachords and *tonoi* creates the perception that, while related to our modern system in some fundamental ways, the tenor of the differences separating the two demonstrates that it is far removed from the practice of Laborde's time. The main distinction to be drawn between the two systems from Laborde's perspective appears to be that the modern system uses two modes, the major and the minor, while the Greek system used far more *tonoi*. Also, the Greeks used *tonoi* in a practical manner as a melodic construct through the creation of *systema* employing tetrachords, whereas "mode" in the eighteenth century may represent a melodic or a harmonic component of the music, or both.[168] Whatever the practical differences between the use of *tonoi* and mode, Laborde claims a relationship between the ancient system and the modern one by suggesting that the function of the *tonoi* for the ancients was similar to that of key in his day. In an assertion that reflects the definition provided above for *tonoi*, he states that "we are persuaded that what the ancients used to call "mode," is only today what we call key."[169] Laborde does recognize however that the musical practices of the two eras are different, in spite of the comparison he is declaring. This is evident when he specifies that in the ancient use of *tonoi* "they covered the range of no more than an octave, whereas today, in our keys, we cover a much larger range."[170] As previously mentioned, Laborde also suggests that "the idea that the ancients attached to the term "mode," or "key," was quite different than the one we have of it."[171] He explains that the ancients heard the modes as a "particular degree of elevation of their harmonic system in

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[168] This dual designation for "mode" is apparent at the beginning of Rousseau's dictionary article on the topic when he associates mode with melody and accompaniment (chordal structures); he says that mode is "the regular arrangement of melody and of accompaniment relative to certain principal sounds upon which a piece of music is constituted," Rousseau, *Dictionnaire*, 284-85.
[169] Ibid., 29, "Nous sommes persuades que ce que les Anciens appelaient *mode*, n'est que ce que nous appelons aujourd'hui *ton*."
[170] Ibid., "dans chaque Mode, on ne parcourait que l'octave; au lieu qu'aujourd'hui, dans nos Tons, nous parcourons une bien plus grande étendue."
[171] Ibid., 28, n., "L'idée que les Anciens atachaient à ce terme *mode* ou *ton*, était bien différente de celle que nous en avons."

which the sounds always followed one another in the same order."[172] For Laborde, the modern conception of mode entails the notion of major and minor, as discussed above, but "in addition to that, the various modifications that affect these sounds for the sake of accuracy [are] inseparable from the manner of tuning the instruments."[173] These adjustments to the various major and minor keys defer to the judgment of the ear, although, Laborde says of modern practice that "all of the majors are essentially the same, as are the minors."[174]

Laborde does not intend for his consideration of the relationship between ancient *tonoi* and modern keys to be a reflection on the actual structural composition of the *tonoi* or the keys, rather it is meant to reflect the desired affect that results from using a specific *tonoi* or key to obtain a certain reaction from the listener. To this end he has provided correlations between the modern keys and the ancient *tonoi* in a table contained in the *Essai*.[175] In the chart, Laborde provides a character/affect for each of the *tonoi*, which he then conjectures as corresponding to one of our keys. For example, Laborde equates the *tonos* Dorian with the key of C, both of which have the character of being serious, solemn, and majestic.[176] The parallel he draws between the Greek *tonoi* and modern keys provides confirmation of his theory that "what the ancients used to call *tonoi* is today in effect what we call key."[177] Laborde provides a caveat, however, when he recognizes that "the *tonoi* [of the ancients] could have more particular characteristics than our keys, due to the types of poetry that was set to the types of music on these *tonoi*, by the kinds of

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[172] Ibid., 29-9, n., "Ils n'entendaient par-là, qu'un certain degré d'élévation, dans le systême total de leur harmonie, dont les sons se suivaient toujours selon le même ordre."
[173] Ibid., 29, n., "à cause du défaut de justesse, inséparable de la maniere d'acorder les instrumens de Musique."
[174] Ibid., "modifications qui diversifient, au jugement de l'oreille, les modulations tant majeures que mineures, quoique toutes les majeures soient essentielement les mêmes, aussi bien que toutes les mineures."
[175] The Chart has been reproduced in Appendix B. For an overview of the French use of *caractère* as an aesthetic tool in music, and as a means to investigate the cultural history of the era, see Jane R. Stevens, "The Meanings and Uses of *Caractère* in Eighteenth-Century France," in *French Musical Thought: 1600-1800*, ed. Georgia Cowart, 23-52 (Ann Arbor: UMI Research Press, 1989). Stevens also notes a correlation to the terms Laborde uses and those that Rousseau employs in his *Dictionnaire* (Stevens, 36). This is hardly surprising given the familiarity Laborde had with Rousseau's *Dictionnaire* as discussed in the next chapter.
[176] Laborde, II, 28-29.
[177] Ibid., 29, "ce que les Anciens appelaient *mode*, n'est que ce que nous appelons aujourd'hui *ton*."

instruments used to accompany the voices in these modes, and by the ranges that were employed."[178]

Laborde's last statement appears to acknowledge the fact that there is a lot about the *tonoi* in Greek musical practice that he cannot know for certain, yet a correlation between the Greek system and that of his own day can be conjectured. The connection is not as solid as the one previously discussed regarding the derivation of intervals, in which the ratios that create the fundamental intervals, the octave (1:2), the fifth (2:3), and the fourth (3:4) used by the Greeks are the same ratios used to create the same intervals in modern practice. Modern practice dictates the inclusion of more consonant intervals than these, but the octave, fifth, and fourth have been constant throughout the history of Western music.

The pedigree of our modern keys and the major and minor scales is not as clear as the presence of the intervals of an octave, a fifth, and a fourth when pursued through past centuries. One of the biggest obstacles to that end is the fluctuations of the *tonoi* and modes throughout ancient and more modern music history. Laborde discusses the *tonoi* as if they were specific entities that remained fixed for hundreds of years; the simple fact is that they were constantly evolving. The fifteen *tonoi* system that Laborde provides had not been codified until late antiquity.[179] Laborde addresses the vicissitudes of the ancient system, but does not provide specific instances of such changes. He says that "the ancients differ a lot among themselves on the definitions, the divisions, and the names of their *tonoi*."[180] He adds that "the ancients have admitted or rejected a large number of them at different times."[181]

Although the development of the Greek system of *tonoi* through the centuries of antiquity provides a foundation for comparison that is not as solid as the one offered by

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[178] Ibid., 30, "les Modes pouvaient être caractérisés plus particulierement que nos Tons, par le genre de poésies qu'on mettait en musique sur ces Modes, par l'espesce d'instrumens qui acompagnaient les voix dans ces Modes, & par la mesure qu'on y employait."

[179] Landels provides a chart which traces the evolution towards the fifteen mode system of late antiquity (Landels, 98-99). He states that it was firmly established by the time of Aristides Quintilanus's *De Musica* (est. 3rd century CE). In *De Musica*, Book I, Chapter 10, Quintilianus credits Aristoxenus with naming thirteen separate modes in the fourth century BCE. Therefore the system developed very slowly over an approximate 700 year period from thirteen to fifteen modes.

[180] Ibid, 28, n., "Les Anciens diffèrent beaucoup entr'eux sur les définitions, les divisions & les noms de leurs modes."

[181] Ibid., "les Anciens en ont admis ou rejeté un grand nombre en différens tems."

the derivation of intervals, there are nevertheless, a few constants in the *tonoi* systems of the ancients. First, the three original *tonoi*, Dorian, Phrygian, and Lydian, appear consistently throughout the treatises of antiquity. The eventual fifteen *tonoi* system emerges from this core group of three slowly over time—a historical process which Laborde does allude to, however truncated and ahistorical his account may be. Regarding these three *tonoi*, Aristides Quintilianus says that "*tonoi* fall into three generic kinds, the Dorian, the Phyrigian, and the Lydian. Of these the Dorian is useful for the lower-pitched activities of the voice, the Lydian for the higher, and the Phyrigian for the intermediate."[182] Also, much as the ratios of the intervals provide a constant touchstone, the three different genera of tetrachords—the diatonic, the chromatic, and the enharmonic—contribute an invariable element throughout the development of the modal system in antiquity. In fact, the diatonic tetrachord can be seen as the basic building block of the modern diatonic scale. If two disjunct, diatonic tetrachords are observed, i.e. B, C, D, E and F, G, A, B, they create a scale which, depending on the note taken as the tonic, could be classified as either a major or a minor scale in modern terms. Laborde does not mention this fact specifically, but he appears to have had it in mind when he says that "the two classes of modes have retained similarities for more than two thousand years."[183] Finally, even if this claim can be accepted, it is difficult to recognize Laborde's alignment of the ancient *tonoi* with the modern keys as anything more than one man's particular interpretation. The idea of the various ancient modes and modern keys sharing characteristics related to affectations is fathomable; it is the assured assignment of specific keys to each ancient mode that is suspect. How did Laborde come to the conclusion that Dorian and the key of C were so closely related, and that they both have the characteristic of sober, majestic music? Contemporary speculative treatises often equated certain modes with specific pitches or particular affects, but when they did, they were often wildly divergent.[184] Regarding the assignment of particular keys to specific

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[182] Aristides Quintilianus, *De Musica*, 1.23.1-4, in Barker, *Greek Musical Writings*, II, 424-25.
[183] Laborde, II, 30, "puisque les genres des uns & des autres se sont conserve semblables depuis plus de deux mille ans."
[184] Regarding theorists who attempted to provided musical associations to the various affects in the eighteenth century, John Neubauer says that "theorists of the affects attempted to assign emotional value to the basic musical materials and forms, including intervals, keys, styles, meters, and rhythms, but they disagreed on the most fundamental definitions and categorizations, and their efforts were usually half-hearted" (Neubauer, 52). Anderson explains that the idea of music expressing various passions originates

affects in the eighteenth century, Neubauer says that the "attributions of affects to the keys was hardly systematic."[185] Laborde's associations for each particular key are questionable, but the idea of using music to create an effect in a listener provides a correlation to unite the ancient and modern practices. Laborde understands that the ancient *tonoi* and modern keys are functionally not the same thing, yet he attempts to bridge this chasm of theoretical observation with a hypothesis about the similarity of the effects that the affects aroused through the use of ancient *tonoi* and modern keys.

Enharmonics

Whatever similarities may exist regarding the functions of the two distinctive systems of ancient *tonoi* and modern keys, Laborde finds little affinity at all when discussing both the ancient and the modern understanding of the term enharmonic.

For the ancients, the enharmonic referred to one of the three genera of tetrachords as discussed in the previous section. The enharmonic tetrachord, starting from the lowest note and moving upwards, is composed of two adjacent quarter-tones and a major third. The presence of these quarter-tones makes the enharmonic tetrachord difficult for Laborde's modern audience to process, let alone enjoy. On this subject, Laborde says that the enharmonic tetrachords of the ancients "are almost unplayable, and when we could make use of them, there are not any ears sensitive enough today to be aware of their merit."[186] He elaborates by adding that "these enharmonic sounds were created from a diluted sound in several parts."[187] This is a reference to the quarter tones which comprise the enharmonic tetrachord. The basic sound to which he refers to as being "diluted" can be interpreted as being the half-tone, which is the smallest interval in use in the musical practice of Laborde's time. The half-tone is weakened by being split further into distinct, theoretically *aliquot*, parts; these are the quarter-tones.

Laborde provides the views of two ancient authors who had two very distinctive conceptions of the enharmonic tetrachord. He claims that Aristides Quintilianus

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with the Greeks, and medieval scholars believed each mode had particular expressive properties, but the idea really blossoms in French baroque theory (Anderson, 153-54). See Neubauer 51-59.

[185] Neubauer, 55.

[186] Laborde, II, 15, "mais ils sont Presque impracticables, & quand il serait possible de s'en server, il n'y a point aujourd'hui d'oreilles assez délicates pour en sentir le mérite."

[187] Ibid., "Ces sons enharmoniques étaient formés d'un son coupe en plusieurs parties."

proclaims that the enharmonic type of music was the sweetest of the three types in use among the ancient Greeks.[188] Laborde supplements this idea by countering that the "ancients did not maintain the enharmonic for a long time because they devalued the appraisal of the pleasure they provided, and these fractional divisions were producing pleasure in their minds and never in their hearts."[189] Laborde then turns to Plutarch, whom he credits with reproaching "the musicians of his time for having lost the most beautiful of the three types of music, and for daring to say that the intervals are not perceptible enough in and of themselves."[190] These brief comments about the enharmonic tetrachord and the quarter-tones used to form them by the ancients provide the impression that, while they may have been challenging to listen to, they certainly were, at least, just as rewarding.

The use of quarter-tones, a foreign concept in Laborde's day, to create an enharmonic tetrachord stands in stark contrast to the primary understanding of the term enharmonic in the eighteenth century. To Laborde's contemporaries, enharmonicism is a useful and accessible tool that facilitates seamless respellings of musical notes that allow for modulations between keys. Laborde furnishes this hypothesis when he says that "today what we call enharmonic is absolutely different from the meaning that the ancients used to give this word."[191] To the modern musician of his day, enharmonic

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[188] Laborde uses the term *doux* to describe Aristides Quintilianus's description of the enharmonic genere, yet the word "sweet," or any of the other common English translations for *doux*, such as gentle, mild, or even gentle, seem accurate for Quintilianus's description of the enharmonic genre. Aristides Quintilianus says that "the enharmonic demands stricter precision, being accepted only by the most outstanding musicians, while for most people it is impossible" (Aristides Quintilianus, *De Musica*, 1, 16, 13-16, in Barker, *Greek Musical Writings*, II, 418). This description does not relate to the word "sweet." In fact the idea of a sweet sounding music for the Greeks is more often than not associated with the chromatic genre, as demonstrated by this passage from Aristoxenus in which he claims that the desire to sweeten music through the use of the chromatic genre causes musicians to distort the enharmonic genre beyond recognition. Aristoxenus says that the endless pursuit of sweetness "is their objective is shown by the fact that they spend most of their time and effort on the chromatic, whereas when they do occasionally come to the enharmonic, they force it close to thechromatic, and the melody is correspondingly pulled out of shape" (Aristoxenus, *Elementa Harmonica*, 1, 23, 13-22, in Barker, *Greek Musical Writings*, II, 141-2).

[189] Ibid., 39, "les Anciens ne le conserverent pas long-tems, parcequ'on commença à ne plus calculer le plaisir, & que ces divisions de fractions n'en produisaient qu'à l'esprit, & jamais au cœur."

[190] Ibid., "d'avoir perdu le plus beau des trios genres, & d'oser dire que les intervalles n'en sont pas assez sensibles."

[191] Ibid., 15, "Ce que nous appelons aujourd'hui *enharmonique*, est absolument différent de la signification que les Anciens donnaient à ce mot."

"consists of having the name of a chord changed when we are able to assign two names to one of the notes that constitute it."[192]

Laborde suggests the following example as a means of explanation. He starts with the spelling of a diminished-seventh chord, B, D, F, A-flat, in the key of C. This chord resolves to the perfect chord on C: C, E, G. If the A-flat is respelled enharmonically as G#, a new chord is created, B, D, F, G#, which Laborde calls a major sixth chord with a diminished fifth. This chord resolves to either "the sixth chord C, E, A, or the perfect chord A, C, E, which both constitute the key of a minor."[193] Laborde summarizes this process by saying that "instead of having been in the key of C, as it seems to the ear that the music was supposed to lead to, through this change of name from A-flat to G#, we are in the key of a minor. This is what we call enharmonic."[194]

As this example demonstrates, the understanding of enharmonic in Laborde's day is tied to the use of tertian harmony, as opposed to the ancient use of the term for one of the genre of tetrachords, which was strictly melodic. An enharmonic respelling of a note or a chord, which may also be referred to as enharmonic equivalence, creates a pivot which allows the composer to defy the listener's expectations and change the key of a passage with harmonically sound voice-leading. Laborde explains that "sometimes we use enharmonics to pass from a key into another by changing the name of a chord."[195] In modern-day parlance we would say that the change from the key of C to the key of a minor occurs with the use of a pivot chord. Today, this would be described as a modulation, but that term had just begun to be associated with this sort of harmonic movement between keys in the eighteenth century in France.

There is a dual understanding of modulation in Laborde's time. The first meaning of modulation concerns the proper procedures for establishing and maintaining a given mode; the second describes the means to move away from and successfully return to a mode, or key. In his *Dictionnaire de musique*, Jean-Jacques Rousseau defines modulation

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[192] Ibid., "ne consiste qu'à faire changer de nom à un accord, lorsqu'on peut donner deux noms à une des notes qui le composent."
[193] Ibid., 16, "l'acord de sixte *ut*, *mi*, *la*, ou de l'accord parfait *la*, *ut*, *mi*, qui tous deux constituent le Ton de *la*."
[194] Ibid., "Ainsi, au lieu d'avoir été en *ut*, comme Il semble que l'oreille devait y conduire: par ce changement de nom de *la*b en *sol*#, on se trouve en *la*; & c'est ce que nous appelons *enharmonique*."
[195] Ibid, 40, "Nous l'employons quelquefois pour passer d'un Ton dans un autre, en faisant changer de nom à un accord."

in the first sense, as "the means to establish and handle the mode."[196] He continues, however, by introducing the second function of the term by saying "but today this word more commonly finds itself being used for the art of conducting harmony and melody successively through several keys in a manner pleasant to the ear and conforming to the rules."[197] Cynthia Verba explains that the first definition is older, taken from Renaissance modal theory, while the second definition is newer, from the turn of the eighteenth century, as music moved towards a system based upon two modes, major and minor, with numerous, different keys.[198] William J. Mitchell describes the duality of the meaning of modulation "in the eighteenth century [as] it meant 'change of key' and other things, among which was 'affirming or sustaining the key.'"[199] Verba assures us that the two nuances of the term modulation coexisted throughout the eighteenth century, and did not come to mean solely change of key until the nineteenth century, once the system of major and minor keys had been firmly established.[200] Rameau provides an explanation of modulation in the *Traité de l'harmonie* which encompasses both interpretations of the word:

> It is better to move to a new key and thus from one to another with discretion, returning imperceptibly to those which are closest to the beginning key, in order to be able to finish there, in such a manner that it seems that one has never left it; also when one has moved through several other keys, it is necessary to "modulate" in this principal key a little longer towards the end, than at the beginning.[201]

Having clarified the context of the term "modulation" in the eighteenth century, Laborde's demonstration of the enharmonic respelling of a diminished-seventh chord

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[196] Rousseau, *Dictionnaire*, 295, "c'est proprement la manière d'établir & traiter le Mode." These "means" include returning frequently to the tonic and dominant, but through varied means, the use of cadences, and the avoidance of accidentals.
[197] Ibid., "mais ce mot se prend plus communément aujourd'hui pout l'art de conduire l'Harmonie & le Chant successivement dans plusieurs Modes d'une manière agréable à l'oreille & conforme aux regles."
[198] Cynthia Verba, "Rameau's Views on Modulation and Their Background in French Theory," *Journal of the American Musicological Society* 31, no. 3 (1978), 467-68.
[199] William J. Mitchell, "Modulation in C. P. E. Bach's *Versuch*," in *Studies in Eighteenth-Century Music: A Tribute to Karl Geiringer on His Seventieth Birthday,"* ed. H. C. Robbins Landon in collaboration with Roger E. Chapman (New York: Oxford University Press, 1970), 335.
[200] Ibid., 478.
[201] Rameau, *Traité de l'harmonie*, 249, "il vaut donc mieux passer dans un nouveau Ton, & ainsi de l'un à l'autre avec discretion, en rentrant insensiblement dans ceux qui approchent le plus de celuy par lequel on a commence, pour pouvoir y finir, de maniere qu'il ne semble pas qu'on l'ait quitté; aussi faut-il *moduler* dans ce *Ton principal* un peu plus long-temps vers la fin, qu'au commencement, lorsqu'on a passé par plusieurs autre *Tons*."

may be reexamined. Laborde supplies another example of an enharmonic respelling of a chord being used to change keys. He presents the pitches F#, A, C, E-flat, which "form a chord that we call a diminished seventh, and this chord ordinarily should lead to the perfect minor chord on G: G, B-flat, D."[202] Laborde proposes that the music move into the key of E, rather than the key of G. In order to accomplish this we need only to change the name of E-flat to D#. Thus, the chord, now spelled F#, A, C, D# becomes "a major sixth with a diminished fifth, which leads to the perfect chord on E: E, G, B; or to the chord of the sixth on G: G, B, E; and one or the other of these chords demonstrates that we have entered the key of E."[203] The beauty of this type of harmonic motion is that it allows for a smooth, almost indiscernible transition between keys. Laborde offers an explanation for this when he says that "in the performance, this change will either not be noticed or noticed very little. Although there may be a difference of an enharmonic quarter-tone between these sounds, it is a difference which is almost imperceptible to the ear."[204]

That is not to say that the transition accomplished by this type of modulation creates music that is as soothing to the ear as the ease with which the enharmonic respelling alleviates compositional exigencies when moving between keys. The tonal centers that can be accessed through the enharmonic respelling of a diminished-seventh chord will have tonics either a minor third or a tritone away from the original key. Today, these would not necessarily be considered closely related keys.[205] Laborde expounds

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[202] Laborde, II, 40, "les sons, *fa*#, *la*, *ut*, *mi*b, forment un accord que l'on appele *septieme diminuée*, & cet acord doit conduire ordinairement à l'acord parfait mineur de *sol*: *sol, si*b, *re*."

[203] Ibid., "une *sixte majeure avec fausse quinte*, qui conduit à l'acord parfait sur *mi*: *mi, sol, si*; ou à celui de *sixte* sur *sol*: *sol*, *si*, *mi*; & l'un ou l'autre de ces accords constate que l'on vient d'entrer dans le Ton de *mi*."

[204] Ibid., "Dans l'exécution on ne s'aperçoit point, en fort peu, de ce changement, quoiqu'il y ait entre ces sons une différence d'un quart de ton enharmonique, différence presque inappréciable à l'oreille." Paula Jean Telesco, in her thorough survey of enharmonicism in the eighteenth century, decribes a similar type of enharmonicism in which every note in the chord is respelled, thus the listener is completely unaware of the modulation until the return of the original key. She calls it the "Pythagorean horn" phenomenon, Paula Jean Telesco, "Enharmonicism in Theory and Practice in Eighteenth-Century Music" (Ph. D. diss., Ohio State University, 1993), 127.

[205] In this example, Laborde uses an enharmonic respelling to modulate from g minor to e minor. These two keys are not considered to be closely related. Closely related keys are the relative major or minor to the original key and those keys a perfect fifth above and below the original key and their relative major or minor keys. Theoretically, an enharmonic respelling could be used to modulate from a key to its relative major or minor, as they are closely related keys that are a minor third apart, but the use of an enharmonically respelled diminished seventh chord in this case would be a more exceptional modulation. A modulation which employs a pivot chord would produce a smoother transition between the keys.

upon this idea when he says that "although the ear may hardly appreciate this enharmonic quarter-tone, when it is isolated, the abruptness that is causes in the different passages is quite unmistakable."[206]

Laborde's allegation of the asperous nature of the enharmonic of the eighteenth century is further strengthened when he discusses Rameau's use of the enharmonic. He says that "Rameau has divided the enharmonic into two types, the diatonic enharmonic and the chromatic enharmonic."[207] The division is predicated on the motion of the fundamental bass in the music. In the diatonic enharmonic, the bass alternately descends by a fourth and rises by a minor third; in the chromatic genre, the fundamental bass alternates a descent by a minor third with an ascent by a major third.[208] Laborde says that in both instances, when the music is played, "the effect from them would be harsh and evil sounding."[209] For young composers, Laborde warns "to use the enharmonic rarely and with the greatest moderation, and never use it other than in parts where you must surprise the ear of the listener."[210] He refers to Rousseau, who observes that the enharmonic is most effectively used in the *récitatif obligé*.[211] Rousseau says that the

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[206] Laborde, II, 40, "Quoique l'oreille ne puisse guere sentir ce quart de ton enharmonique, lorsqu'il est isolé, elle s'aperçoit fort bien de la brusquerie qu'il cause dans ces différens passages."
[207] Ibid., 41, "Rameau a divisé l'enharmonique en deux genres, l'*enharmonique diatonique* & l'*enharmonique chromatique*."
[208] Rameau, *Démonstration*, 93-95. The bass movement of the diatonic enharmonic is found on p. 93; the bass motion of the chromatic enharmonic is explained on pp. 94-55.
[209] Ibid., "Quand ils le seraient, nous osons assurer que l'effet en ferait dur & mal sonant."
[210] Ibid., "user de l'enharmonique rarement & avec la plus grande modération, & de ne jamais s'en server que dans les endroits où il faut qu'ils surprenent l'oreille des Auditeurs."
[211] Ibid., 42. Charles Dill suggests that labels such as *récitatif obligé* may have been applied to French opera, even though they may have been inappropriate: "As the *querelle des bouffons* subsided, descriptions of French musical forms and their functions continued to be framed in language derived from Italian opera, and without a vernacular French alternative there was little reason to root out this new language once it had appeared" (Charles Dill, "Eighteenth-Century Models of French Recitative," *Journal of the Royal Music Association* 120 (1995), 239-40). Rousseau provided categories of recitative based upon Italian opera in his *Dictionnaire*—*récitatif obligé*, *récitatif mesuré*, and *récitatif accompagné* (*Dictionnaire*, 403-05)—that aided in the establishment of a system of classification which did not necessarily reflect the state of French opera accurately. This is reflected in Rousseau's statement that French opera did not even have *récitatif obligé* until his own opera *Le Devin du Village* in 1752 (Rousseau, *Dictionnaire*, 405). There was a vibrant operatic tradition in France before the performance of Rousseau's one-act interlude. Rousseau's statement speaks to the idea that his category *récitatif obligé* is not appropriate for French opera more than it addresses the notion that French opera had been lacking this form of expression until Rousseau. Rousseau's strong support of Italian opera and the primacy of melody as a means of musical expression—as opposed to the tradition in French opera that draws on a more harmonic vocabulary—supports this notion. Dill explains that "even if Italian opera had been effectively repudiated by this time, and some French writers believed that it had been, its critical language still made its presence felt as a model of discourse (Dill, 240)."

recitative is the "true place" for the enharmonic; as it is best utilized "in a sublime and touching scene where the voice must multiply and diversify the musical inflections to the imitation of the oratorical, and often invaluable, grammatical accent."[212] Laborde cites the reason for this as being that the recitative is an expressive, musical passage, in which numerous, sometimes opposite, emotions are encountered, in quick succession. He adds that, "the impact of the passions and the ideas are best depicted with this kind of music, which is incoherent and shatters the sense of musical phrase, as one idea comes to ruin another."[213] As a compositional standard, the enharmonic needs be used sparingly due to its harmonically volatile nature, and for this reason, Laborde concludes that "only very rarely would the enharmonic not damage the melody, which should be the basis of the composition."[214]

Returning to the musical example, Laborde has already discussed the use of enharmonic equivalence that is required to use a diminished-seventh chord on F# to move from the key of g minor to the key of e minor. He goes on to discuss two other possible enharmonic respellings and consequent resolutions of the diminished-seventh chord on F#. The key of b-flat minor may be reached by respelling the F# as G-flat, creating the chord G-flat, A, C, E-flat. Laborde describes this chord as an augmented second, and it resolves to a six-four chord, F, B-flat, D-flat that indicates the key of b-flat minor.[215]

Similarly, the same F# diminished-seventh chord may be used to lead the music to the key of c# minor. This occurs when the C in the diminished-seventh chord is respelled enharmonically as B#, and the E-flat as D# producing the chord F#, A, B#, D#. Laborde describes this new chord as a "tritone chord (or augmented fourth) with minor third."[216] He says this chord "must be followed by the sixth chord on E: E, G#, C#, which demonstrates that we have entered into the key of c#."[217]

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[212] Rousseau, *Dictionnaire*, 197, "C'est dans une scéne sublime & pathétique où la Voix doit multiplier & varier les infléxions Musicales à l'imitation de l'accent grammatical oratoire & souvent inappréciable."
[213] Laborde, II, 42, "on ne peut mieux peindre le choc des passions & des idées que par ce genre de Musique, qui est incohérent, & qui brise le sens de la phrase musicale, ainsi qu'une idée en vient briser une autre."
[214] Ibid., 41, "ce genre ne pourait que très rarement ne pas nuire à la mélodie, qui doit être la base de la composition."
[215] Ibid, 40.
[216] Ibid., "accord de *triton* (ou *quatre-superflue*) *avec tierce mineur*."
[217] Ibid., "doit être suivi de l'acord de *sixte* sur le *mi*: *mi*, *sol#*, *ut#*, qui constate que l'on est entré dans le Ton d'*ut#*."

While the names that Laborde assigns these different enharmonic chords may be different than the modern labels we assign to them,[218] the function of enharmonic respelling and resolution of a diminished-seventh chord that he describes is a process with which any modern student of music theory should be familiar. Laborde summarizes this process when he says that "there are four different enharmonic paths which proceed from the diminished-seventh chord, in which each of the four notes of the chord becomes in turn the leading tone of the key into which we pass."[219] He believes that this example should suffice to provide the reader adequate recognition of the eighteenth-century concept of the enharmonic, both in theory and in practice. For this reason he does not find it necessary to repeat this process with the other diminished-seventh chords or the major keys.[220] Using the enharmonic to change the key of a musical passage in this manner can create an abrupt change in the music, as Laborde has already said, but he adds that "one is soon forced to admire the way that the music is obviously transported into a key from which it was obviously quite distant."[221]

In the preceding discussion of the use of the diminished-seventh chord and its enharmonic respelling used to bring about key change, Laborde addresses the more modern conception of enharmonicism that deals with the respelling of pitches in terms that relate it to the enharmonic quarter-tone. In so doing, Laborde successfully draws an analogy between the two definitions of enharmonic, the ancient and the eighteenth century. He notes that "although we may allow ourselves [according to the perceptions] of our taste to call A-flat and G# the same pitch, there is in fact a difference between these two tones."[222] Laborde refers to a minute difference in the tuning of the enharmonically respelled notes, a difference he claims "is easy to certify by arithmetic."[223] Thus, Laborde offers a correlation between the small variation in pitch of

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[218] For example, Laborde uses the term sixth chord on E in the previous paragraph for the chord E, G#, C#. Today we would most likely label this chord as a first inversion C# minor chord.
[219] Laborde, II, 40, "Voilà donc quatre marches enharmoniques différentes, qui precedent de la septieme diminuée, & dans lesquelles chacune des quatre notes de cet accord devient note sensible du Tons dans lequel on passe."
[220] Ibid.
[221] Ibid., 40-1, "elle est forcée d'admirer la maniere dont elle se voit transportée dans un Ton, dont elle se croyait bien éloignée."
[222] Ibid., 16, "quoique nous nous permétions d'appeler à notre gré le meme ton *la*b & *sol*#, il y a effectivement entre ces deux tons une différence."
[223] Ibid., "c'est ce qu'il est aisé de constater par le calcul."

the two enharmonic sounds in modern practice and the quarter-tone employed by the ancients in the enharmonic tetrachord. This relationship is tenuous, especially when compared to the identical use of the ratio of the octave (1:2) in ancient Greece and eighteenth-century France, but it is close enough to support a closer inspection.

Remembering that the ratio of the interval of a justly tuned major second has been established as being 8:9, Laborde describes the interval of the quarter-tone, or the difference from B# to C, as 3/128 or 1/43.[224] Laborde then defers to Jean Rond d'Alembert when he describes four different types of quarter-tones which are known in his day. They are labeled the major quarter-tone, which according to M. d'Alembert has a difference of 1/32 from the unison; the minor quarter-tone, a difference of 1/36; the half of the major half-tone, a difference of 1/30; and the half of the minor half-tone, a difference of 1/48 from the unison.[225] Laborde says that "this is why the interval between B# and C is called a quarter-tone. Since its difference with the unison is about 1/43, it differs less than the largest of the quarter tones [given by d'Alembert] and more than the smallest."[226]

Laborde says it is these small variations in pitch that "prevent our fifths and thirds from being perfectly exact."[227] Just intonation is the tuning of an interval according to its exact mathematical ratios; it is a practiced based firmly upon fundamental concepts of *musica speculativa*. When Laborde refers to two enharmonically equivalent notes as being two distinct aural entities, he is speaking of them as justly tuned pitches. Yet, in the eighteenth century, Laborde recognizes that the mathematical distinction between the two enharmonic pitches need not be made in a musical composition; in *musica pratica*, they can be treated as true enharmonic equivalents. The main reason which Laborde imparts for this is immanently practical; he says that "the proof that the enharmonic, as given by

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[224] Ibid., 39. Due to Laborde's reliance upon d'Alembert for his information on quarter-tones, I feel confident in the assumption that Laborde also has taken this ratio from d'Alembert's writings. D'Alembert describes a process to determine the interval between B# and C as being 3/128, or 1/43 (d'Alembert, *Élémens de musique* (1762), 107, n. ll).

[225] D'Alembert, *Élémens* (1762), 107-08, n. ll. D'Alembert labels the interval of 1/43 as an "enharmonic quarter-tone." Elsberry explains that he also calls this interval a "major apotome," which he gives the value of about 1/42. The major apotome is produced by fundamental bass movement in major thirds (Elsberry, 209).

[226] Ibid., "C'est pour cela que l'intervalle entre le *si#* & l'*ut*, est appelé quart de ton; sa différence avec l'unité étant de 1/43, il en diffère moins que le plus grand des quarts des ton, & plus que le plus petit."

[227] Ibid., 16, "c'est cette différence qui empêche que nos quintes & nos tierces ne soient parfaitement justes."

calculations, cannot be used in our type of composition is that several of our string and wind instruments cannot play the difference between E# and F, and F# and G-flat, etc."[228]

The harpsichord provides the most apparent example of this class of instrument because there is only one key to be played for each of the enharmonically equivalent notes. Laborde mentions that there are some harpsichords which have "the keys of the sharps and the flats cut in two."[229] This allows for the performer to distinguish between the F# and the G-flat, but, Laborde continues, "apart from the fact that this division of the keys greatly increases the difficulty of playing this instrument, there are very few ears capable of distinguishing the difference and delicate enough to know taste in the person playing."[230] Laborde claims that it would hardly be worth the trouble.[231] So the standard keyboard without the split keys must be modified in its tuning to allow for the playing of either note. The means to achieve the tuning of an instrument, in which the notes are not tuned to the exact mathematical equivalents of the ratios is called tempered tuning or temperament.

Laborde describes temperament in simple terms. He begins with the division of the octave into thirds, both major and minor. If the octave is divided into *aliquot* major thirds, the octave will be divided into three equal intervals. For example, the octave C to C, would then be divided into C to E, E to G#, and G# to C. If the octave is divided equally into minor thirds, four distinct intervals will be created. Consider the octave from A to A, the division into minor thirds would result in the following intervals: A to C, C to E-flat, E-flat to G-flat, and F# (an enharmonic respelling of G-flat) to A. Regarding this example should make it easy to see that if these intervals are tuned justly or are tuned, as Laborde says, "as they must be, three major thirds or four minor thirds ought to make the range of the octave."[232] The speculative proof that the thirds in this example, both major

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[228] Ibid., 42, "Une preuve que l'enharmonique, tel que le calcul le donne, ne peut être employé dans notre genre de composition, c'est que plusieurs de nos instrumens à cordes, & tous ceux à vent, ne peuvent faire la différence de *mi#* au *fa*, du *fa#* au *sol*b, &c."
[229] Ibid., "Il y a cependant des clavecins où les touches des dieses & des bémols sont coupées en deux." See Laborde, I, 343-5, Laborde has provided a drawing of one such split-key keyboard and an explanation of it.
[230] Ibid., "mais outré que cette division augmente de beaucoup la difficulté de jouer cet instrument, il y a bien peu d'oreilles capables de la discerner, & assez délicates pour savoir gré à celui que joue."
[231] Ibid.
[232] Ibid., 43, "Car, si on acordait les tierces comme elles doivent l'être, trios tierces majeurs or quatre tierces mineures devant faire l'étendue d'une octave."

and minor, will equal an octave on paper does not guarantee that it will be true in practice as well.

Laborde suggests that if the thirds were indeed tuned justly "it would happen that the four minor thirds would pass the octave near 1/73, and that the three major thirds would fall short of the complete octave by about 1/43."[233] Laborde explains that the distance that the minor thirds overshoot the octave is equivalent to the ratio of the Pythagorean comma.[234] The interval that the major thirds fall deficient of the octave, 1/43, is equal to the interval of the quarter-tone, according to Laborde. So, in order to have the intervals complete the space of an entire octave, the size of the component intervals must be altered, some stretched, some diminished, so that the final interval of an octave has the ratio of 1:2. Laborde then concludes that "it is this method, in which we are admitted to force an interval to increase and another to diminish, that is called temperament."[235]

Temperament was created in the sixteenth century as a solution to the problems incurred, such as the one Laborde describes above, when just intonation was used to tune a keyboard. Temperament, according to Rudolf Rasch, provided an answer to these slight discrepancies by altering, or tempering, certain intervals; therefore, "all tempered intervals deviate somewhat from just values."[236] Therefore temperament and just intonation may be categorized as reflecting the polarity between *musica pratica* and *musica speculativa* respectively. Rasch also suggests that "a characteristic of tempering in general is that, when the intervals to which it applies are ordered into circles, the total amount of tempering in a circle is constant and equal to a given value."[237] What Rasch means by this is that as one interval is tempered to be larger, somewhere within the given span, another interval will decrease by the same distance as the first interval is increased. To elaborate, Rasch maintains the same example as Laborde by suggesting the division of

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[233] Ibid., "il arriverait que les quatre tierces mineures étant justes, passeraient l'octave de près de 1/73, & que les trios tierces majeurs n'arriveraient à l'octave juste que moins 1/43 à peu près."
[234] Ibid., The Pythagorean comma is a small interval of the ratio 531,441:534,288, equal to a little less than one half of a quarter-tone. See Laborde, II, 10, n. a.
[235] Ibid., "C'est cette méthode, dont on est convenu de forcer un intervalle & d'en diminuer un autre, que le nomme *tempérament*."
[236] Rudolf Rasch, "Tuning and Temperament," in *The Cambridge History of Western Music Theory*, ed. Thomas Christensen (Cambridge: Cambridge University Press, 2002), 201.
[237] Ibid.

the octave into three major thirds. The circle of justly tuned major thirds, as he calls it, will fall short of an octave by a minor diesis (39:40). In order to reach the full size of the octave the minor dieses must be portioned out among the three intervals. Rasch provides several means to accomplish this; "one could enlarge the three major thirds by the same amount (then we may speak of equal temperament), or one could enlarge one or two major thirds more than the remaining one(s), as long as the sum total of the tempering equal the minor dieses."[238]

When Laborde describes the process of tempering the justly tuned thirds above, he does not specify the type of temperament he is referring to. There are numerous ways to tune a keyboard instrument, they can be tuned using equal temperament or some other form such as meantone temperament or well temperament. While equal temperament is perhaps the most familiar tuning to our twenty-first century ears, Laborde's text furnishes indications that the tuning systems he discusses do not utilize equal temperament. Although the tuning systems Laborde proposes do not describe equal temperament, or the division of the octave into twelve equal parts, the system was certainly known in France at the end of the eighteenth century. The rise to prominence of equal temperament in the eighteenth century, according to Rasch, was closely bound to the necessity of a keyboard which was tuned to accommodate numerous tonal centers, and this need "cannot, of course, be separated from the free use of all twenty-four major and minor keys that was becoming the standard in musical composition."[239] As Laborde does not advocate equal temperament in the *Abrégé d'un Traité de Composition*, the two distinct methods in which to tune a harpsichord he specifies both employ tempered tuning.

The first tuning he presents is Jean-Jacques Rousseau's.[240] Laborde furnishes the three proofs which are to guide the keyboard tuner in this tempered system. The first proof requires the tuner to begin on the middle C key on the keyboard. From C, go up four fifths[241] and weaken each of them so that the fourth fifth, E, will play the major third justly tuned with the original C. The second proof says to continue to go up by fifths until the sharps are reached, then "enlarge the fifths a little, although the thirds suffer from

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[238] Ibid.
[239] Ibid., 207.
[240] Laborde, II, 43. Laborde has taken this tuning system from the article on "Temperament" from Rousseau, *Dictionnaire de musique*, 502.
[241] The four fifths would be 1) C to G, 2) G to D, 3) D to A, and 4) A to E.

doing this, and when you arrive on G#, stop. This G# should play, with the E, a justly tuned major third, or at least a less sufferable one."[242] The third proof of this system begins by tuning fifths below middle C.[243] The first fifth, C to F, should be weakened, or smaller than a just fifth, and then, as each successive fifth is tuned, enlarge it by degrees until D-flat is reached. When the D-flat is renamed with its enharmonic equivalent, C#, it should form a fifth with the G# from the second proof.

Rousseau does not provide specific numerical figures for the tuning of this system, but it is not equal temperament, as the alterations that Rousseau suggests would not create equal spacing between the notes. A problem exists and it is that Rousseau and any other musician who attempts to temper a scale must face; it is impossible to have justly tuned fifths and justly tuned major thirds in the same system. According to Rasch, this is because the sum of four fifths, described in Rousseau's tuning system as C to G to D to A to E, minus two octaves "provides a major third that has to be diminished by the amount of a syntonic comma (80:81) in order to be equal to a just-intonation major third."[244] This means that the justly tuned major third (4:5) is smaller than the major third derived from the justly tuned perfect fifths (64:81) by the ratio of a syntonic comma. So to account for this discrepancy, Rasch suggests that "either the fifths have to be narrowed or the major third has to be left wider than just, or both."[245] While not providing a definitive answer to this situation, Rasch offers some guidance towards making the best decision regarding the tempering of the fifths and the major thirds by commenting that

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[242] Laborde, II, 43, "On renforce un peu les quintes, quoique les tierces en souffrent, & quand on est arrive au *sol#*, on s'arête. Ce *sol#* doit faire, avec le *mi*, une tierce majeure juste, ou du moins souffrable."
[243] The intervals here are descending 1) C to F, 2) F to B-flat, 3) B-flat to E-flat, 4) E-flat to A-flat.
[244] Rasch, 201, the process of comparing the just intonation of a major third, 4:5, to the just tuning of major fifths is also used by Rousseau. Rousseau uses the triple progression to rise by fifths, ut 1, sol 3, re 9, la 27, & mi 81. Then using the just tuning of the major third, 4:5, as a point of departure, he assigns the solfège labels *ut* and *mi*, to the numbers 4 and 5 respectively. If 1 is *ut*, then 4 is *ut-2nd8ve* using the double geometric progression (see n. 77, this chapter). Through the use of octave equivalence 4 may then be assigned the label *ut*, Now Rousseau again applies the rule of the double geometric progression, this time to *mi* 5, thus obtaining the following set of intervals, *mi* 5, *mi* 10, *mi* 20, *mi* 40, *mi* 80. Rousseau concludes that "the fifth of *la* being *mi* 81, and the major third of *ut* being *mi* 80; these two *mi* are not the same, and their relationship is precisely 80:81, which is precisely the major [syntonic] comma" (Rousseau, *Dictionnaire de musique*, 501, "Ainsi la quinte de *la* étant *mi* 81, & la Tierce majeure d'*ut* étant *mi* 80; ces deux *mi* ne sont pas le même, & leur rapport est 80/81, qui est précisément le Comma majeur.").
[245] Ibid., 201-02.

"the decision is basically a musical one: which interval needs to be kept just or as just as possible: the fifth or the major third?"[246]

In the proposal of his second tuning system, Laborde supplies a clear answer to Rasch's question: keep the fifths justly tuned. This system is offered as an alternative to Rousseau's, one that Laborde believes to be simpler.[247] The tuning process is indeed less complex than in Rousseau's system, as it only requires the tuner to begin on E-flat and ascend by justly tuned fifths, providing all twelve pitches of the enharmonic scale, until the tuner arrives at G#. Once the enharmonic respelling of G# is employed, producing A-flat, Laborde claims that "it will not make a justly tuned fifth with the E-flat, but it will be left such that it will be heard as a just fifth because it is impossible for it to be otherwise."[248] Thus, this system will create a keyboard with only one out of tune fifth, the aforementioned A-flat to E-flat. For this reason, Laborde says, "it will be necessary to avoid playing pieces in the key of A-flat because its fifth, not being in tune to all the octaves, only results in an unpleasant effect, if by chance you have some delicacy in the instruments."[249] Laborde concludes his recommendation of this method of tuning by allowing that "it might possibly occur that this way may not appear to be the best to several musicians."[250] To these people, Laborde says that they will only be able to prove that their preference in tuning may be better, allowing them, as himself, to favor their own. Finally, Laborde adds that the detractors "will not be able to deny that this method may seem the simplest."[251]

Laborde's tuning system based on justly tuned fifths indeed seems to be far simpler than Rousseau's, yet his support for this particular system that he presents to be a clear case of a break with current practice in his *Abrégé d'un Traité de Composition*. Placing the just tuning of the fifths above that of the thirds relies on the speculative foundations of Pythagorean tuning in which the most important intervals were the octave

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[246] Ibid., 202.
[247] Laborde, II, 44.
[248] Ibid., "ce *sol#*, devenu *la*b, ne fera pas une quinte juste avec le *mi*b; mais on laissera telle qu'on la trouvera, parcequ'il n'est pas possible qu'elle soit autrefois."
[249] Ibid., "Alors il faudra seulement éviter de jouer des morceaux de Musique dans le Ton de *la*b; parceque sa quinte n'étant pas justes à toutes les octaves, il ne peut en résulter qu'un effet désagréable, pour qu'on ait de la délicatesse dans les organes."
[250] Ibid., "Il poura très bien arriver que cette maniere ne paraisse pas bonne à plusieurs Musiciens."
[251] Ibid., "au moins ne pouront-ils nier que celle-ci ne paraisse la plus simple."

and the fifth. This is the tuning that was predominant throughout the Middle Ages. According to Rasch, "Pythagorean tuning is thought to represent the tuning of instruments in medieval times, when the fifths were still the predominant consonant intervals and the thirds only of secondary importance, so that their poor tuning could be accepted."[252] In supporting the system that is easier to produce and is associated with medieval practice as opposed to one that had been dominant in music for over one hundred years, Laborde appears to be at cross purposes. Laborde, a fully trained practicing musician, has chosen the speculative solution over the practical one.

Why does Laborde support this tempered tuning system of just fifths, especially with the ascendancy of the third as fundamental in determining the mode in a piece of music? He provides no real explanation, so only conjectures can be made. His choice is made even more perplexing when you consider his own training as a composer. He understands the necessity for the major third to sound major in order to create a strong major key. Laborde says, in explaining the rules for composing a trio, "the first rule is that it is necessary that the third is heard at all times in the measure, because it is like the soul of harmony."[253] So why would he suggest a system in which the tuned third is not of the utmost importance? Especially when tuning the thirds produces decent fifths; Rasch explains this idea: "just major thirds lead to moderately tempered, if still acceptable, fifths, whereas just fifths lead to overly wide and quite unusable major thirds."[254] Also, the importance of the tuning of the third in determining mode, whether major or minor, cannot be underestimated at this point in the eighteenth century, as the twenty-four key system that we are familiar with today had begun to crystallize.

The importance, then, of the tuning of the third should be apparent to Laborde. The practice of meantone temperament, which from the eighteenth century onward, according to Rasch, is the name given to the system "in which the just fifths were diminished by one quarter of a syntonic comma (in order to produce major thirds),"[255] had been in use since the sixteenth century. Zarlino introduces a system that does not adhere to the exact formulations of meantone temperament as discussed above, but he

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[252] Rasch, 198.
[253] Laborde, II, 48, "La première règle du *Trio*, ou de la Musique à trois parties, est qu'il faut qu'on entendue la tierce dans tous les tems de la mesure, parcequ'elle est comme l'âme de l'harmonie. "
[254] Rasch, 202.
[255] Ibid., 202.

does follow the same basic procedure of creating a major third that is more in tune by diminishing the size of the fifths.[256] Rasch concludes that "after Zarlino, meantone temperament is probably the most commonly described single tuning system until well into the eighteenth century. Its ubiquity in the literature suggests a rather general application on keyboard instruments throughout this period."[257] Couple this widespread knowledge of meantone temperament in the eighteenth century with the importance of a justly tuned major third in establishing the modality, major or minor, of the music in Laborde's day, and it becomes all the more bewildering as to why Laborde does not also embrace this particular system.

One answer to this uncertainty is that meantone temperament, as espoused by Rousseau and described above, was not the only prominent tuning system in France during the eighteenth century. Owen H. Jorgensen explains that although a temperament based on unaltered octaves, with the fifth receiving more tempering than the third, what has been labeled meantone temperament, was a solid foundation of Baroque tuning practices; by 1737, Rameau, in the *Génération harmonique*,[258] rejects these foundations.[259] In their stead, Jorgensen elaborates, Rameau's new ideas on temperament were based upon the "natural order of intervals in the harmonic series;"[260] in other words, Rameau's system was steeped in the speculative, mathematical tradition. This meant that the intervals were ranked in importance by the simplicity of their ratios.[261] In this manner the octave (1:2) was most important and could tolerate no alterations, and the fifth (2:3) having the second most simple ratio needed to be kept as pure as possible. Jorgensen continues that "the major third, being the fourth interval in the series and also containing

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[256] This system of meantone temperament is described in Mark Lindley, "Zarlino's 2/7-Comma Meantone Temperament," in *Music in Performance and Society: Essays in Honor of Roland Jackson*, eds. Malcolm Cole and John Koegel, 179-194.
[257] Rasch, 202.
[258] Jean-Philippe Rameau, *Génération harmonique ou traité de musique théorique et pratique*, (Paris: Prault fils, 1737).
[259] Owen H. Jorgensen, *Tuning: Containing the Perfection of Eighteenth-Century Temperament, The Lost Art of Nineteenth-Century temperament, and the Science of Equal Temperament* (East Lansing: Michigan State University Press, 1991), 189.
[260] Ibid.
[261] Christensen discusses this aspect of theory in relationship to Zarlino's *senario* and the problems it creates between theory and practice (*Rameau and Musical Thought*, 74-77). These are problems that are present in Rameau's temperament proposal as well. For, as Christensen says, "most musicians by 1600 did not accept the perfect fourth (4:3) [the numerically simpler ratio] as more consonant than the major third (4:5) or minor third (5:6)" (Christensen, *Rameau and Musical Thought*, 74).

a much less simple ratio, could tolerate much alteration or tempering."[262] In so doing, Rameau advocates a practical application of a more speculative system of temperament that is contrary to the meantone temperament found in widespread practice in the eighteenth century described above. Jorgensen believes that Rameau's temperament has basic philosophical underpinnings that adumbrate the advent of equal temperament; after all, he says, "what temperament better satisfies the qualification for the least amount of tempering on all fifths than equal temperament?"[263] Rameau's idea that the fifths needed to be maintained at the expense of the thirds had filtered into Laborde's presentation on temperament.

Although Laborde supports a system of temperament with more accurately tuned fifths, he is in no way an advocate of equal temperament. Laborde still holds to the idea that the slight variations in tuning which occur naturally are to be valued, for they create the subtle, almost imperceptible differences between keys, which give an individual key its distinctive character. When just intonation is employed, rather than equal temperament, which lends itself to enharmonic equivalence, Laborde says that "A# is not the same thing as B-flat, [nor] the B as the C-flat,…but as these differences are not considerable, we ignore them on keyboard instruments."[264] Laborde describes the octave as being divided into twelve half-tones on the keyboard "of more or less equal distance between them. As a result no fifths, nor thirds, etc., are perfectly correct, but this difference is so small that the ear cannot perceive it."[265] Laborde concludes:

> It is this difference which makes what we experience in one key, a feeling that we do not experience in another; and like the fifths and thirds, the experiences are different in each key. This difference gives each key a character which is appropriate to it, and it is this variance that makes the key which invites us to cheerfulness, whereas another carries us to sadness. Such is, in our opinion, the origin of these great modes of the ancients, of which each one had a different character, and which served the same purpose for the ancients as the keys do for us.[266]

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[262] Jorgensen, 189.
[263] Ibid., 190.
[264] Laborde, II, 10, "que le *la*# n'est pas la même chose que le *mi*b, le *si* que l'*ut*b,…mais comme ces différences ne sont pas considérables, on les néglige sur les instrumens à touches."
[265] Ibid., "sur ces instrumens l'octave étant partagée en douze demi-tons à-peu-près égaux entr'eux, il en résulte qu'aucunes quintes ni tierces, &c. ne sont parfaitement justes; mais cette différence est si petite, que l'oreille ne peut l'apercevoir."
[266] Ibid., "C'est encore cette différence qui fait qu'on éprouve dans un Ton une sensation que l'on n'éprouve pas dans un autre; & comme les quintes & les tierces sont différentes dans chaque Ton, cette

Here Laborde offers a few connections between the enharmonic of the ancients and that of his own day. First, the enharmonic in the *musica pratica* of both periods is used sparingly and functions as a means to afford a composer with the ability to write music that is more emotionally charged. For the ancients, they held the enharmonic tetrachord to be the sweetest. Laborde's contemporaries use the enharmonic to represent volatile and dynamic emotions in their compositions. From the speculative perspective, Laborde also points out that the quarter-tone that the ancients used in the tuning of their enharmonic tetrachord, while not exact, is similar to the interval created between the just intonation of two enharmonically equivalent notes, such as G# and A-flat, in the eighteenth century. While such an association produces a succinct correlation that reads well on paper, the musical practice of Laborde's time nullifies any real affiliation between the two concepts of enharmonic. The use of instruments which must use one key or fingering for both of the enharmonically spelled pitches warranted the creation of a tempered scale that permits the dual use of keys on a harpsichord and creates a unification of the enharmonic pitches.

The investigation of Laborde's interest in the ancient musical cultures of Greece and Rome and his subsequent appropriation of this material in his *Essai*, particularly the *Abrégé d'un Traité de Composition*, provides interesting insights, not only into our musical heritage but also into Laborde and his burgeoning historical and theoretical methodologies. By utilizing the theories of ancient Greek writers and considering their association with the musical theories and practice of his own time, Laborde is involved in the process of creating a working template for the analysis of music—not only the analysis of music in terms of the underlying technical structures in a specific work, but also of the work's place within a larger theoretical, cultural, and even historical context. Laborde engages the ancient historical pedigree of specific musical topics—as discussed in this chapter—such as intervals, mode, key, and enharmonics by addressing both their speculative and practical aspects in an attempt to discover commonalities between modern and ancient music. Sometimes clear connections between the two may be found

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différence procure à chaque Ton un caractere qui lui est propre, & qui fait que l'un nous invite à la gaité, tandis que l'autre nous porte à la tristesse: telle est, à notre avis, l'origine de ces fameux *Modes* des Anciens, dont chacun avait un caractere différent, & qui étaient chez eux ce que sont parmi nous les *Tons*."

as in the speculative derivation of the intervals that are used in modern and ancient practice. In other instances, remnants of the ancient traditions, such as the diatonic tetrachord, have survived, being transformed into a fundamental part of modern practice—two disjunct, diatonic tetrachords may be used to create the major diatonic scale. Finally, at other times, the correlation between the modern and ancient—the practical and the speculative—may be reduced to a few numerical similarities and in the music's desired affects, such as is the case with enharmonicism. Laborde's historical contextualization of these and other musical topics in his *Abrégé d'un Traité de Composition* constitutes an enriched reading experience, but the knowledge espoused by the ancients on music does not provide the only source of Laborde's curiosity. In the following chapter, Laborde's relationship to a few of the major musical writers of his era will be addressed, as well as the effect they produced on his writing in the *Abrégé d'un Traité de Composition.*

CHAPTER 4

LABORDE AND HIS CONTEMPORARIES IN FRENCH MUSIC THEORY

Laborde's interest in the music of the ancients strengthened his knowledge regarding contemporary musical thought. As a testament to the emerging historical sensibility at the end of the eighteenth century, the content of Laborde's *Essai* signifies his awareness of and indebtedness to the rich musical theoretical tradition in which he writes. In the previous chapter, numerous topics regarding the music theory of Ancient Greece in Laborde's *Abrégé d'un Traité de Composition* were explored. Just as Laborde makes myriad references to ancient authors such as Aristoxenus and Athenaeus, he is also well-versed in the music theories of the writers of his own era. Laborde's continual citations of three of his contemporaries, especially Jean-Philippe Rameau, Jean Rond d'Alembert, and Jean-Jacques Rousseau, warrant a more thorough investigation at this point. First we will consider the influence of Rameau, who absorbed and incorporated ideas from numerous schools of thought including Cartesian metaphysics, Newtonian experimentalism, and Lockean sensationalism, to create what he believed to be a unified theory of music based upon harmonic principles. D'Alembert, representing here the Encyclopedists and the *philosophes*, fully supported Rameau's theories at first, but began to distance himself from Rameau and the more esoteric theories propounded later in his career. Finally, Rousseau chose to associate himself with an Italian school of thought that placed melody in a position of supremacy as the source of music's expressive power. Of course, the Abbé Roussier was perhaps as great an influence on Laborde as any of his other contemporaries. However, his impact on Laborde's conceptions of modern theories is negligible when compared to that of Rameau, d'Alembert, and Rousseau; besides, as

the previous chapter demonstrated, Roussier mainly aroused Laborde's fascination with the culture of the ancients.[1]

This chapter will present the ways in which each of these three men, Rameau, d'Alembert, and Rousseau, came to influence Laborde, and then will consider his own contribution to the music theory of the era. To this end, Laborde's understanding of the theoretical concepts of harmony, melody, and the fundamental bass will be explored from the perspective provided by his own *Abrégé d'un Traité de Composition*. By addressing the basic tenets of these three theorists, a more accurate overview of Laborde's own views may be gained. By further investigating his relationships with and his opinions of these three men, as reflected in the writings of the *Essai* as a whole, a sure sense of Laborde's perception of the music theory of eighteenth-century France will be provided.

Rameau: The Generator of Modern Harmonic Theory

Rameau obtained a great stature during his lifetime from his activities as a composer and as a writer. Yet it is primarily through his theories on music that he is known to us today. After brief comments on Rameau's musical legacy and his being the musical heir of Jean-Baptiste Lully, Rameau's theories as they were interpreted by Laborde, his student, will be explored.

To Laborde, Rameau was a man of great genius, who received a continuous bounty of praise entwined with constant voices of dissent and criticism throughout his professional lifetime, both for his music and his theoretical works. Laborde's praise for Rameau's music is unbridled: "the first performance of this opera [*Castor et Pollux*] was an epoch for our nation and excited the spirits in a similar clamor to the one that we saw arise a few years ago."[2] Pitou explains that in the early years of the 1750s, Rameau was at

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[1] It should also be remembered that Roussier's knowledge of modern theory was based on Rameau's writings, so by addressing Rameau's influence on Laborde calls attention to Roussier's influence to a certain degree as well.

[2] Laborde, *Essai*, III, 465. "La premiere représentation de cet opéra fut une époque pour notre nation, & excita dans les esprits une fermentation semblable à celle que nous avons vu s'élever il y a quelques années." Laborde is referring to the performance of Pergolesi's *La Serva Padrona* between the acts of a performance of Lully's *Acis et Galatée* in 1752. The success of *La Serva Padrona* instigated a strong support for the Italian style of opera, especially among the *philosophes*. This is evident in Rousseau's publication of his *Lettre sur la musique française* in 1753 which declared that French music is nonexistent. See Verba, *Music and the French Enlightenment*, 9-16.

the apex of his career as a composer.[3] The successes and accolades that Rameau received from this revival, however, were far different than the criticisms he had received earlier in his career. Laborde describes the situation in Paris before the premiere of the revival of Rameau's *Castor et Pollux* in 1754:

> Jealousy ignited the hatred, which gave recourse to the dissention that overwhelmed Rameau; but the man of genius scorned the envious, whom he answered with his new masterpiece, finally forcing them into silence. The revival of *Castor et Pollux* brought about everyone's approval, therefore, it could never be compared very successfully to that one [*Hyppolyte et Aricie*], since he experienced no refute. Especially since more continual performances could not diminish the pleasure that all of Paris experienced in hearing this beautiful opera that spoke simultaneously to the soul, the heart, the spirit, the eyes, the ears and the imagination.[4]

Charles Burney describes the successful revival of *Castor et Pollux* "as the most glorious event of [Rameau's] life."[5] This was due in no small part to the timing of this success as it came two years after the success of Giovanni Battista Pergolesi's *La Serva Padrona* which sparked the beginning of the *Querelle des bouffons*. The *Querelle* engaged the city of Paris in a heated debate over the relative merits of French versus Italian opera. Burney explains that it was, in part, the success of Rameau's *Castor et Pollux* which "*tranquilised les esprits*" of the nationalistic fervor.[6] Burney acknowledges that Laborde and other "partisans for the national style could never have heard it enough."[7]

Although the Lullists came to support Rameau during the *Querelle*, much of the original criticism lobbed at Rameau early in his career came from the supporters and

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[3] Pitou, II, 457.

[4] Laborde, III, 465, "La jalousie enflamma la haine, qui eut recours à la discorde pour accabler Rameau: mais l'homme de génie méprisa les envieux, & ne leur répondit que par de nouveaux chefs-d'œuvre, qui enfin les forcerent à se taire. La reprise de *Castor & Pollux* entraîna tous les suffrages; jamais succès n'a pu être compare à celui-là, puisqu'il n'éprouva aucune contradiction, & que plus de cent représentations de suite ne purent diminuer le plaisir que tout Paris éprouvait à entendre ce bel opéra, qui parlait à la fois à l'ame, au cœur, à l'esprit, aux yeux, aux oreilles & à l'imagination." Rameau was not always the standard for French opera. When his first opera, *Hippolyte et Aricie*, was staged at the Palais-Royal in 1733, supporters of Lully found Rameau's style to be too contemporary when compared to that of the French master, Lully. The Lullists had come around to the Ramist side however by the eruption of the *Qeurelle des bouffons*, when they both opposed the Italians and their style of Opera. So by the time of the revival of *Castor et Pollux*, Rameau received broad acclaim as the master of French opera. Laborde does not refer to *Hippolyte et Aricie* in his text, but this interpretation supports the cultural context that the quote references when he says "it could never be compared very successfully to that one since he experienced no refute."

[5] Charles Burney, *A General History of Music: From the Earliest Ages to the Present Period*, II, 969.

[6] Burney, II, 971.

[7] Ibid, 969-70.

admirers of Jean-Baptiste de Lully, the master of French opera from the previous generation of composers. Laborde draws a comparison between the two men; he believes that making that associating the two masters of French music is inevitable, as they would seem to be on an equal plane, but this is an analysis that would not stand up under close scrutiny.[8] Both musicians must be recognized for their individual merits and contributions and do not need to rely on or compete with one another for reputation; they both deserve it. Rameau surpasses Lully, however, in Laborde's estimation, due to his investigation into the theory of his art form:

> The immense advantage that Rameau had on the latter [Lully] is to have also written on his art, by having discovered its true principles and by never having deserved the esteem of posterity. The music of those who preceded him and of those who follow him probably will not exist several centuries from now. It will be as the Greeks are to us, in that hardly any of their music remains for us, so ours will not remain for future generations in its entirety; but Rameau's *Traité de l'harmonie,* his *Génération harmonique*, etc., will be known in 2000 years and will bestow the legacy of Rameau that he deserves.[9]

Laborde's opinion that Rameau's theories would be his true gift to posterity is one that has come to fruition. He would not be surprised that Rameau's theories are better known than his operas at the beginning of the twenty-first century. Laborde observes that, before Rameau, composers engaged in a "trial and error" approach to music making; there was no single theory which provided rules for a "good and sure practice," thus leaving a catalog of music which "does not deserve the honor of being ranked among the *Beaux-arts*."[10] When Rameau proposed his system of music based upon the concept of

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[8] Laborde, III, 465, "On nous a donné des paralleles entre Lully & Rameau; mais ces deux grands hommes ne pouvaient guères se comparer."

[9] Ibid., 465-6, "L'avantage immense que Rameau a sur ce dernier, c'est d'avoir écrit sur son art, d'en avoir découvert les vrais principes, & par-là d'avoir mérité à jamais l'estime de la postérité. Sa Musique, celle qui l'a précédé, & celle qui la suivra, n'existeront probablement plus dans quelques siecles; il en sera de la nôtre comme de celle des Grecs, dont à peine il nous reste quelques vestiges; mais son traité de l'harmonie, sa génération harmonique, &c. seront connus dans dues, & laisseront de lui souvenir qu'il mérite." Laborde's comments are bound within a historical context here that illuminates the nascent historicism in his work.

[10] Ibid., 466, "Depuis la renaissance des arts jusqu'à lui, la Musique livrée au tâtonnement de la routine & au caprice des Compositeurs, ne méritait pas l'honneur d'être mise au rang des Beaux-arts; elle était également dépourvue & d'une bonne théorie & des regles d'une bonne & sure pratique."

the fundamental bass,[11] he provided composers with a rational means to validate their compositional practice. Laborde further delineates this position:

> It is true that the ear and experience had given rise to a great number of rules, but these rules were uncertain, insufficient, and false, and were more responsible for an infinite number of exceptions, as if it was some fundamental rule of the arts, inspired by nature, as well as laws established by man, that exceptions are inevitable, because the human spirit could not expect to anticipate all the possible cases. The music had beauty, but no one knew its secret. There were almost as many laws as there were examples, and the responses of the teachers, as well as those of the ancient oracles, only added to the confusion and uncertainty of those who consulted them.[12]

According to Laborde, Rameau appeared in the midst of this musical "chaos" and "unraveled" it, bringing forth the "mysteries of his art" through the "light and order" which he carried with him. He was able to reduce music to some general principles in which all the parts strengthened and clarified one another and, in turn, the whole.[13] Yet, Laborde recognizes that not everyone has been so willing to provide Rameau with such generous praise. In an attempt to further strengthen Rameau's important position in music theory, Laborde compares Rameau and Sir Isaac Newton (1643-1727), saying that Rameau is to music what Newton is to physics. As Newton's theories have not led people to abandon his principles of physics in order to return to the metaphysics of René Descartes (1596-1650) or the "occult qualities" of Aristotle, why would Rameau's theories be jettisoned for those of Zarlino? Laborde suggests that Rameau's detractors belong in three categories: they have given preference to systems that evidently employ Rameau's theories freely; they are ingrates who have taken to contesting the usefulness

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[11] The fundamental bass as suggested by Rameau and as understood by Laborde, d'Alembert, and Rousseau will be discussed in detail below.

[12] Laborde, III, 466, "L'oreille & l'expérience avaient donné lieu, il est vrai, à grand nombre de regles; mais ces regles incertaines, insuffisantes, fausses, se trouvaient de plus chargées d'une infinité d'exceptions, comme s'il en était des regles fondamentales des arts, inspirées par la nature, ainsi que des loix établies par les homes, où les exceptions sont inévitables, parceque l'esprit humain ne saurait prévoir tous les cas. La Musique avait des beautés, mais personne n'en connaissait le secret; il y avait presqu'autant de loix que d'exemples, & les réponses des maîtres, comme celles des anciens oracles, ne faisaient qu'ajouter à l'embarras & l'incertitude de ceux qui les consultaient."

[13] Ibid, "Rameau parut & débrouilla ce chaos; il y porta tout à la fois la lumiere & l'ordre; il révéla les mysteres de l'art; il réduit la Musique à des principes généraux; enfin il offrit un systême fécond, dont toutes les parties s'éclairaient & fortifiaient réciproquement."

of Rameau's theories; and they are the ignorant who fight his concepts without truly understanding them.[14]

Laborde acknowledges that Rameau has disparagers, but implies that their critical views are not grounded in complete understanding and comprehension of Rameau's theories. He steps beyond comparing only Newton with Rameau by pairing Descartes with Newton on one side of this analogy. "One can be assured that Rameau had been both Descartes and Newton, since he has done for music what these two great men have done for philosophy."[15] As previously stated, this praise for the composer is primarily deserved due to Rameau's ability to unravel music's underlying theoretical mysteries, but how does Laborde justify the comparison with not one, but two of the preeminent thinkers of his era? He explains:

> As with Newton, Rameau had started from what existed in practice in order to find its principle. And Descartes, Rameau had started from nature itself, that is to say, from this phenomenon known as the *corps sonore*, in order to deduce so many consequences, principles, and particular rules from it, which, through his work have elevated the most plausible mechanical operations of the simple practice in science.[16]

Laborde provides a caveat, however, which furnishes some leeway in the application and development of his ideas about Rameau's theories, perhaps directed towards the critics who find his theories to be not always suitable when applied to an actual musical composition. Rameau, empowered by his wealth of experience as a composer, believes he could bend the rules of his system, which is grounded in the speculative tradition, to reflect the actualities of musical practice. Since he was not formally educated in the sciences, as Descartes and Newton were, he appears not to be troubled by the act of borrowing aspects of various methodological systems in a

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[14] Ibid, "La Physique ne doit pas plus à Newton que la Musique ne doit à Rameau; mais depuis Newton personne ne s'est avisé d'abandonner les principes de ce grand home pour retourner aux tourbillons de Descartes, ou aux qualités occultes d'Aristote; tandis qu'au contraire, le systême de Rameau n'a Presque rencontré que des envieux qui affectaient de donner la préférence à des systêmes évidemment empruntés du sien, ou des ingrates qui profitaient de sa doctrine& en attaquaient l'utilité, ou des ignorans qui combattaient & ne l'entendaient pas."

[15] Ibid., 467, "On peut donc assurer qu'à lui seul Rameau a été Descartes & Newton, puisqu'il a fait pour la Musique ce que ces deux grands hommes ensemble ont fait pour la Philosophie."

[16] Ibid, "Ainsi que *Newton*, il était d'abord parti de ce que existait dans la pratique pour en trouver le principe; & comme *Descartes*, il était parti de la nature même, (c'est-à-dire, de ce phénomène connu du corps sonore) pour en déduire comme autant de conséquences, les principes & les regles particulieres, qui, par son travail, ont élevé en science les opérations machinales les plus plausible de la simple pratique."

fragmentary manner, such as Cartesian *a priori* explanations of a mechanistic universe and Newtonian experimentalism, to create a personal hybrid system that suited his particular needs as a musician. He relies on his musical experiences coupled with his knowledge of various scientific systems to arrive at his theories. According to Laborde, if this approach creates rules that are not always in line with "the most natural consequences of his principle, that, in and of itself, does not invalidate their stability."[17] Rameau often seems to contradict his own rules by allowing for exceptions, but time and again this results from his experience as a musician. Christensen suggests that "Rameau's theory was ultimately an empirical one in that it was rooted in his rich experience as a composer and performer. The Cartesian deductive structuring was imposed only afterwards."[18] By relying on his *goût* and his ear as the ultimate barometers of the soundness of a musical passage, rules could be circumvented without destabilizing the body of Rameau's theoretical constructs. Laborde acknowledges this organizational feature of Rameau's work:

> The only art that one learns from him demonstrates, in the manner which we see it dealt with in all the authors who have preceded him, the soundness of mind that nature was supposed to have endowed this artist with, since the rules which derivate from the principles that he has set out are in such small number.[19]

Verba hypothesizes that even in a system such as Rameau's that is governed by a set of rationalist principles based on Cartesian epistemology, he can allow for exceptions to these principles by accepting sensibility as another route to the same conclusions that may have been reached through reason.[20] Christensen observes that this latitude was surely a great benefit to Rameau throughout his career due to "his continued difficulties over some fifty years in connecting all his ideas within a single, comprehensive, and logically-connected system."[21] Verba explains, in a manner that accounts for Rameau's ability to amalgamate the realms of *musica speculativa* and *musica pratica*, that Rameau often recognizes the gap between music as science and music as art when musical

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[17] Ibid. "…des conséquences bien naturelles de ses principes, elles n'infirment pas pour cela leur solidité."
[18] Thomas Christensen, *Rameau and Musical Thought*, 269.
[19] Laborde, III, 467, "Le seul art qu'on lui apprit prouve, par la maniere dont nous le voyons traité dans tous les auteurs qui l'ont précédé, de quelle justesse d'esprit la nature devait avoir doué cet Artiste, puisque les regles qui s'écartent des principes qu'il a poses, sont en si petit nombre."
[20] Verba, *Music and the French Enlightenment*, 38.
[21] Christensen, *Rameau and Musical Thought*, 269.

practice cannot be easily explained by the rules generated by the empirical principles of his system, such as for the derivation of subdominant and the minor mode.[22] In these instances, "Rameau invokes the notion of genius, taste, instinct, or music as art, thus signifying that there is a part of music which transcends rules or principles,"[23] a sentiment with which Laborde would have most likely agreed. Christensen offers this interpretation:

> Much in Rameau's theory, as we know, was validated by musical experience and had little to do with any Cartesian reasoning. Examples are his explanations for the minor triad, octave identity, the function of the subdominant, and the need for temperament. There is nothing inherent in the string divisions of the monochord or resonance of the *corps sonore* that should lead to these formulations. Indeed, Rameau's main theoretical challenge…was to relate these musical ideas in a non-forced way to his principle of harmony."[24]

Throughout his career Rameau's search for a "non-forced" relationship between concepts such as these, which are so integral to both musical practice and his speculative principle of harmony, causes him to discover means other than reason and rational principles in music such as sensibility and *goût* to explain certain phenomena that musical experience permits. At the start of his career he presents another of these means in his discussion of practical musical experience; in the *Traité* he discusses the importance of the ear's experience in its relation to reason in analyzing a piece of music:

> We may judge music only through our hearing, and reason has no authority unless it is in agreement with the ear; yet nothing should be more convincing to us than the union of both in our judgments. We are naturally satisfied by our ear, while the mind is satisfied by reason. Let us judge nothing then except by their mutual agreement.
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> Experience offers us a large number of chords susceptible of an infinite diversity, in which we shall always lose our way unless we search for the source elsewhere. Experience sows doubt everywhere, and everyone, imagining that his own ear will not mislead him, trusts in himself alone. Reason, on the contrary, presents us with only a single chord whose properties are easy to determine with a little aid from experience. Thus, as long as experience does not contradict what reason authorizes, the latter should prevail. Nothing is more convincing than a decision based on reason, especially when it is drawn from a source as simple as that

[22] Verba, *Music and the French Enlightenment*, 52.
[23] Ibid.
[24] Christensen, 33.

> which reason offers. Let us be ruled then by reason whenever possible, and let us call experience to its aid only when we desire further confirmation of its proofs.[25]

This passage depicts Rameau's Cartesian influence, but it also reflects his experience with music as a living art which sometimes requires decisions to be made beyond the structure of reason. He gives the utmost importance to reason in his theory of music, but he provides a caveat in the quote given above, "as long as experience does not contradict what reason authorizes, the latter should prevail,"[26] which thus allows experience and musical practice to be the actual, final determinant of a musical passage.

Over thirty years after the publication of the *Traité*, Rameau addresses the same issue in his *Observations sur notre instinct pour la musique, et sur son principe*.[27] "If we are truly sensitive and we only judge a work based on our feelings, we will always judge it well."[28] He describes the importance of allowing oneself to get lost in the moment of the music to really judge a piece properly, but he still reminds us that reason underlies much of what we listen to. When reason and feeling are in agreement, then there is no need to call upon either:

> Often when someone believes he grasps music, it is actually only the words or the expression that one wants to attribute to it. One tries to submit oneself to it through forced inflections, but this is not then the means to be able to judge it. On the contrary, it is necessary to allow oneself to be influenced by the feelings that this music inspires without thinking about it—without thinking about a word of it, then, this feeling will become the measure of our judgment. With regard to reason, it is available to everyone, and we come to draw it from the bosom of nature. We have even shown that instinct reminds us of it in every moment, in our

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[25] Rameau, *Traité*, 125-26, Gossett, 139-140, "L'on ne peut juger musique par le rapport de l'ouïe; & la raison n'y a d'autorité, qu'autant qu'elle s'accorde avec l'oreille; mais aussi rien ne doit plus nous convaincre que leur union dans nos jugemens: Nous sommes naturellement satisfaits par l'oreille, & l'esprit l'est par la raison; ne jugeons donc de rien que par leur concours mutuel.

L'experience nous offre un grand nombre d'accords susceptibles d'une diversité à l'infini, où nous nous égarerons toûjours, si nous n'en cherchons le principe dans une autre cause; elle seme par tout des doutes; & chacun s'imaginant que son Oreille ne peut le tromper, ne veut s'en rapporter qu'à luy-même. La raison au contraire ne nous met sous les yeux qu'un seul accord, dont il luy est facile de déterminer toutes les proprietez, pour peu qu'elle soit aide de l'experience: ainsi dés que cette experience ne dément point ce que la raison autorise, celle-cy doit prendre le dessus; car rien n'est plus convaincant que ses décisions, sur tout lorsqu'elles sont tirées d'un principe aussi simple que celuy qu'elle nous offre: ne nous reglons donc que sur elle, si cela se peut, & n'appellons l'experience à son secours, que pour affermir d'avantage ses preuves" (trans. Gossett).

[26] *Ibid.*

[27] Rameau, *Observations sur notre instinct pour la musique et sur son principe* (Paris, 1754).

[28] Rameau, *Observations*, 78, 305, "si nous sommes véritables sensibles, & si nous ne jugeons que d'après le sentiment, nous jugerons bien."

actions, and in our discourse. For as soon as feeling and reason come into agreement, there is no longer the ability to appeal to them.[29]

Throughout his career, Rameau engaged in creating a functional reconciliation between the realms of *musica speculativa* and *musica pratica*. Rameau's scant formal training in the sciences, being far less than that of men such as d'Alembert, and his extensive musical experience, being far greater than that of men such as Rousseau, can be seen as the main obstacles that many of his critics have in accepting his theories, even if they are not aware of this bias themselves.

D'Alembert: Interpreter of Rameau

Jean Rond d'Alembert's lack of musical training and strict adherence to a Cartesian philosophy caused him to distill Rameau's theories into a cleaner, simpler system in the second edition of his *Élémens du musique théorique et pratique suivant les principes de M. Rameau*.[30] Christensen observes that for d'Alembert, "if any part of Rameau's theory could not be rigorously deduced from the initial axioms, it was jettisoned or relegated to the status of an anomalous 'license' granted on behalf of '*bon goût*.'"[31] D'Alembert would then try to correct the perceived flaws, and in so doing, Christiansen continues, "d'Alembert attempted to draw new deductions and find new explanations that he believed to be more logically consistent than those of Rameau. But what d'Alembert viewed as specious or inconsistent in Rameau's system often turned out to be a musically perspicacious insight."[32]

D'Alembert, as a Cartesian whose scientific ideal was always to reduce and simplify, says with authority that Rameau could not reconcile his ideas into a single

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[29] Rameau, *Observations*, 61-3, 297-8, "Souvent on croit tenir de la musique, ce qui n'est dû qu'aux paroles, ou à l'expression qu'on veut leur prêter, on tâche de s'y soumettre par des inflexions forcées, & ce n'est pas-là le moyen d'en pouvoir juger: il faut, au contraire, se laisser entraîner par le sentiment qu'elle inspire, cette musique, sans y penser, sans penser en un mot, & pour lors ce sentiment deviendra l'organe de notre jugement. Quant à la raison, elle est à présent entre les mains de tout le monde, nous venons de la tirer du propre sein de la nature; nous avons prouvé, même, que l'instinct nous la rappelle à tout moment, & dans nos actions, & dans nos discours. Or, dès que la raison & le sentiment seront d'accord, il n'y aura plus moyens d'en appeller."

[30] Jean Rond d'Alembert, *Élémens de musique théorique et pratique suivant les principes de M. Rameau* (Paris, 1752, 2nd edition, Lyons, 1762).

[31] Christensen, *Rameau and Musical Thought*, 269.

[32] Ibid.

functioning, logical system.[33] Christensen explains this statement and in so doing, illuminates the gap between the two men:

> In this respect, d'Alembert's criticisms were absolutely justified. Rameau was simply too inept a logician ever to reconcile harmonic practice within the confines of his narrowly conceived rationalist system, try as he might. D'Alembert, however, was not in a position to appreciate the real empirical underpinnings of Rameau's theory. Indeed, given his philosophical prejudices as well as his lack of experience with music, it would have been virtually impossible for him to do so. It was inevitable, then, that his interpretation of Rameau's theory would prove wanting.[34]

A scholar that desires to understand Rameau and his ideas fully must immerse himself in the culture and society of the Enlightenment in eighteenth-century France; the greater cultural context a scholar or critic can have for Rameau's life and works, the greater his understanding of the subject will be. Christensen observes that while "Rameau's writing style is prolix and discursive, [and] his arguments seem to constitute an eclectic and not always coherent mix of scientific, scholastic, and mystical reasoning that changed over the course of his lifetime," it is this eclecticism that provides a richness and depth that is lost in reinterpretations of Rameau's theories.[35] Or stated another way, Christensen offers, "Rameau's varying heuristic strategies are not simply annoying overgrowth that one must cut through in order to get to the heart of his thought. They are in fact essential constituents of it."[36] Christensen further suggests that "these varying heuristic and rhetorical strategies can be understood only within the specific (and changing) musical, intellectual and social environments that impinged on their formulation."[37] Unfortunately, d'Alembert and other theorists have been content to focus on the "theory" as an excisable entity that can be judged apart from its specific contextual framework; they often settle solely upon the results created by the speculative aspects of theories, regardless of the somewhat messy necessities brought about through musical practice. Christensen labels this particular brand of scholarship "distilled historicization"

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[33] Ibid.
[34] Ibid.
[35] Christensen, "Music Theory and Its Histories," 17.
[36] Ibid.
[37] Ibid.

and claims it is an appropriate term for Rameau's contemporaries such as d'Alembert and Rousseau as well as modern writers such as Joan Ferris.[38]

As previously stated, Laborde was aware of Rameau's numerous detractors. He was even cognizant of the dissension that erupted between Rameau and his former ally, d'Alembert. Unlike many of Rameau's opponents however, Laborde did not conceive of Rameau's theoretical flexibility as detrimental when it came to the application of his ideas to actual music practice. Laborde granted Rameau a certain amount of practical license in working with his speculative theories that is surely a product of his having a great deal of musical experience himself—license that those with less musical experience were perhaps not as willing to extend to him. Rameau's contemporaries, those Laborde calls the "so-called theorists," found various ways to discredit him and his theories that, from Laborde's perspective, were based on faulty reasoning. They could not comprehend Rameau's work as a careful consideration of both the practical and speculative aspects of music. They were content to focus on one to the detriment of the other. This led some of the theorists to describe Rameau's ideas as insufficient, substituting, in Laborde's words, "sterile observations" for his theories that "at the very most, are applicable to [only] some particular rules."[39] This comment may have been directed toward Rousseau who clearly felt Rameau's theories to be lacking in several fundamental areas, which will be

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[38] Ibid., 35, n. 21; the article to which Christensen refers is Joan Ferris, "The Evolution of Rameau's Harmonic Theories," *Journal of Music Theory* 3, no. 1 (1959): 23 -56. Christensen offers the example of Rameau's conception of the fundamental bass, which can only truly be understood within its "rich historical and biographical contexts." Christensen says that "one cannot hope to capture the full meaning of Rameau's theory [of fundamental bass] simply through an analysis of the text as an autonomous artifact. We need instead to view his *œuvre* synoptically and contextually." For Christensen this entails reconstructing "the musical conditions of his time that impelled his discoveries," such as the pedagogical traditions of the monochordist, French throrough-bass practice, contrapuntal theory, etc., and also investigating the various intellectual schools of thought with which he came into contact such as Cartesian mechanistic philosophy, Newtonian empiricism, and Lockean sensationalism. The vicissitudes in his arguments, his changing rhetoric, and the variances in his pedagogical strategy only make sense, Christensen offers, "when viewed against the many *mise en scènes* of his life." Rameau must be seen as the successful composer, but also as the thwarted aspirant to the Royal Academy of Sciences, and the rival of the Encyclopedists. In other words, Christensen says, "Rameau's music theory cannot be fully understood unless placed and analyzed within its total historical context" (Christensen, "Music Theory and Its Histories," 16-7). Many other aspects of Rameau's theories take on more accurate meaning when approached in this way. The various approaches that Rameau took to the derivation of the minor mode being foremost among them—see the discussion in the previous chapter, pp. 84-87. See also Christensen, *Rameau and Musical Thought*, 193-99, and 276-79.

[39] Laborde, III, 466-7, "Parmi les soidisans Théoriciens de nos jours, les uns ne cessent de presenter le systême de Rameau comme insuffisant, & ne lui substituent que des observations sterile, ou tout au plus applicables à quelques regles particulieres."

discussed below.[40] Laborde also describes another group of Rameau's dissidents as theorists who believe they have made new discoveries, although, in reality, they have merely changed the "names of the chords and the diverse objects of harmony and have established all their so-called rules on some destructive basis of harmony."[41] Laborde says:

> The drive of these practitioners is even more deplorable, not differentiating the successful discrepancies as sometimes being able to allow genius some ignorance toward the rules. They regard the rules as useless and compose boldly without suspecting what composition truly is at all. One who takes it into one's head to paint without knowing anything of design or one who writes in a language that one did not understand would be easier to excuse and less ridiculous than this.[42]

Laborde is prescient in his claim that other theorists have merely taken what Rameau has offered and incorporated it into their own work, even if they are not adherents to his theories.[43] For Rameau's work did weave its way into the fabric of music theory throughout Europe and became a cornerstone of the discipline. Donald H. Foster surmises Rameau's importance over the past two hundred years when he says that "the underlying

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[40] Laborde's suggestion of "sterile observations" may be indicative of his feelings over Rousseau's treatment of the fundamental bass in his *Dictionnaire*. Rousseau's entry on the fundamental bass sticks to the basic facts and shows no real enthusiasm for the subject, so that Rousseau's off the cuff dismissal of it for another system is not too surprising. This matter is discussed further in the section "Fundamental bass" below.

[41] Ibid., 467, "Les autres croient avoir fait des découvertes, parcequ'ils ont changé les dénominations des accords & de divers objets d'harmonie; & tous établissent leurs prétendues regles sur des bases destructives de l'harmonie." This reference could be lobbed at Tartini and his system of fundamental bass—a system championed by Rousseau. A system that Laborde claims is, at its root, a reconfiguration of Rameau's system of fundamental bass.

[42] Ibid., "La conduite de nos Praticiens est encore plus déplorable; ne distinguant point les écarts heureux que se permet quelquefois la génie d'avec l'ignorance des regles, ils regardent celles-ci comme inutiles, & composent intrépidement sans se douter seulement de ce que c'est que la composition. Celui qui s'aviserait de peindre sans avoir les élémens du dessin, ou d'écrire dans une langue qu'il n'entendrait pas, serait plus excusable & moins ridicule."

[43] For one such example of a manner in which Rameau's theory of the fundamental bass was transformed in Germnay in the eighteenth century, see Cecil Powell Grant, "The Real Relationship Between Kirnberger's and Rameau's Concept of Fundamental Bass," *Journal of Music Theory* 21, no. 2 (1977), 324-38. Grant explores Kirnberger and Marpurg's interpretations of the fundamental bass in Germany. Marpurg criticized Kirnberger for allowing for the loose application of the fundamental bass to allow interpolated chords. Marpurg believed the fundamental bass should be used for the "literal tertiary reduction of individual chords" (Grant, 333). Grant explains that Kirberger believed his approach to be against what Rameau intended, as did Marpurg, a view that has been carried into the work of modern scholar such as David Beach and Joyce Meekel. According to Grant, this erroneous viewpoint is unfortunate because "it prevents our realizing that inferential harmonic analyses are a common link between the systems of Kirnberger and Rameau, and it limits our awareness of and objective inquiry into the aspects of Rameau's fundamental bass speculations, the profoundly provocative qualities of which have not yet been fully appreciated" (Grant, 336).

influence of Rameau's theories…was profound, and continued to affect subsequent theorists, whether they accepted or rejected him, or even if they were altogether unaware of him."[44]

By the time of Laborde's *Essai,* Rameau's theories had been in publication for over fifty years. Even after this relatively short time span, Rameau's ideas had already begun to permeate musical nomenclature. As a result of the international success of his *Élémens de musique*, d'Alembert propagated Rameau's theories throughout Europe. Thus, Rameau's success as a theorist outside of France was due in no small part to a writer with whom he had formerly been allied but with whom he became engaged in published combat. D'Alembert, who Rameau came to view as disapproving of his theories, is the same writer that Laborde saw as pro-Ramist barely a generation later. Laborde supports d'Alembert for the same work in music theory that Rameau came to dismiss. Whatever animosity Rameau developed for d'Alembert over the course of their relationship, the enmity does not appear in the work of his student. Laborde gives high praise to d'Alembert for the publication of his *Élémens du musique*.[45] Laborde speculates that d'Alembert made Rameau's dense and labyrinthine prose accessible to a wider audience that would not have had the patience or the skill to approach Rameau's works directly. He states with conviction that were it not for M. d'Alembert, Rameau would be read by only a few people. He goes on to recommend d'Alembert's interpretation of Rameau's theories to be of the greatest value to the student musician.[46] As Laborde clearly praises d'Alembert in his work, it is somewhat curious to speculate why Laborde, a sure champion of Rameau and his theories, would not have been influenced by the growing displeasure and eventual falling-out Rameau had with d'Alembert late in the composer's life, a situation of which Laborde was surely very aware.

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[44] Donald H. Foster, *Jean-Philippe Rameau: A Guide to Research* (New York: Garland Publishing, 1989), 15.

[45] In the *Abrégé d'un Traité de Composition*, Laborde references the second edition of this work which came about in part due to the escalating feud between d'Alembert and Rameau.

[46] Laborde, II, 33–34, "Sans le courage de M. d'Alembert, les Ouvrages de notre grand Rameau, remplis de choses utiles, ingénieuses & neuves, ne seraient lus que par peu de personnes, étant presque inintelligibles & dénués de cette méthode si nécessaire pour instruire par gradation. M. d'Alembert, fâché de voir tant de travaux inutiles, a voulu les mettre en valeur: il nous a donné ses *Élémens théoriques et pratiques*, qui sont, pour ainsi dire, l'élixir de tout ce qu'a écrit Rameau. La clarté, la justesse, la précision, voilà ce qui caractérise cet Ouvrage précieux, le seul, peut-être, utile aux jeunes Musiciens, & dont nous ne saurions trop leur conseiller la lecture répétée & la plus réfléchie."

Laborde clearly holds both men in high regard. Rameau's genius in composition and theory are the product of a fertile mind which continued to create works of distinction until the last years of his lengthy career.[47] D'Alembert is a mathematician, not a musician, who invested himself in the scientific ramifications of Rameau's theories.[48] When Rameau published an open letter to d'Alembert in 1760, which is bound together with the *Code de musique*, he addressed the criticisms leveled against his theories by d'Alembert in two articles, *fondamental* and *gamme* [scale], from the seventh volume of the *Encyclopédie* issued in 1757.[49] Laborde takes a very objective view of the incident and of his former teacher:

> We would never want to hide the fact that the good, honest, excellent Rameau had a moment of blindness by summoning M. d'Alembert to the court of public opinion ten years later, in order to accuse him of making the criticisms about his works in the articles *Fondamental* and *Gamme* in the *Encyclopédie*. Even if what he claimed had been true, what would M. d'Alembert have done wrong? Was Rameau able to flatter himself to the point of believing that he never had irrefutable ideas, which often discredited what had been stated in one of his previous works? Did M. d'Alembert ever create more harm for Rameau through his criticisms, than he had been useful to Rameau by putting his principles within everyone's reach? It is necessary to forgive this moment of mood in an old man, always filled with his offered ideas and who perhaps tomorrow hardly remembered what he had thought the day before. We must speak the truth that M. d'Alembert respected even the faults of this great man.[50]

Laborde respects d'Alembert and his work in the same manner that he claims d'Alembert respects Rameau:

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[47] Before his death in 1764, Rameau published a final treatise, *Code de musique pratique ou méthodes pour apprendre la musique…avec les nouvelles réflexions sur le principe sonore* (Paris: Imprimerie royale, 1760), and wrote a final stage work, *Les Paladins* (1760).

[48] Christensen suggests that d'Alembert saw Rameau's system as a means to further his own position in a package that the public would have found very accessible and appealing in "Music Theory as Scientific Propaganda: The Case of d'Alembert's *Élémens de musique," Journal of the History of Ideas* 50 (1989): 409-27, and later in Chapter 9, "D'Alembert," in *Rameau and Musical Thought in the Enlightenment*, 252-90.

[49] Jean-Philippe Rameau, *Lettre à M. d'Alembert sur ses opinions en musique insérées dans les articles "Fondamental" et "Gamme" de l'Encyclopédie* (Paris, 1760).

[50] Laborde, *Essai*, III, 543, "Nous voudrions pouvoir à jamais cacher que le bon, l'honnête, l'excellent Rameau eut un moment d'aveuglement, en citant dix ans après M. d'Alembert au tribunal du public, pour l'accuser d'avoir fait la critique de ses ouvrages dans les articles *Fondamentale* & *Gamme* de l'Encyclopédie. Quand cela eût été vrai, quel tort aurait eu M. d'Alembert? Rameau pouvait-il se flatter de n'avoir jamais eu que des idées inattaquables, lui qui souvent détruit dans un de ses ouvrages ce qu'il a dit dans les précédens? & m. d'Alembert pouvait-il jamais autant nuire à Rameau par ses critiques, qu'il avait servi en mettant ses principes à la portée de tout le monde? Il faut pardonner ce moment d'humeur à un vieillard toujours rempli de ses idées présentes, & qui, peut-être, le lendemain à la vérité de dire que M. d'Alembert respecta jusqu'aux torts de ce grand home."

> The most flattering tribute for Rameau is without any doubt the one which has been given to him by our most famous geometer [d'Alembert], who has not scorned the task of clarifying the principles of this great man, and who has always had reverence for his genius, in spite of their differences, which sometimes caused Rameau to lose his sight, and even in spite of the wrongs Rameau has done to him several times.[51]

Laborde's ability to embrace d'Alembert's *Élémens* as an agent of the dissemination of Rameau's theories rather than a popular deconstruction of them, in my opinion, results from several factors. First, Laborde's station in life provided him with better opportunities growing up and, one would assume, with an exceptional basic education, which may have offered Laborde the ability of seeing beyond the immediate conflict to a broader scope of lasting influence. A second factor also allowed Laborde to view d'Alembert's work in a larger context; that factor is time. Laborde could see the long term benefits from the multiple editions and translations of d'Alembert's *Élémens* that spread Rameau's theories throughout Europe over the second half of the eighteenth century.[52] Laborde values the presentation and propagation of Rameau's core ideas in the *Élémens* more than the loss of the system's nuances—nuances which were a product of Rameau's vast musical experience. Finally, there is the simple fact that the works being scrutinized were Rameau's and not Laborde's, so no matter how faithful a disciple of Rameau's he was, Laborde could never have been as personally involved in the conflict as the men who actually wrote the original works, Rameau and d'Alembert. Laborde's *Essai* clearly proves that he is aware of the subtleties found in Rameau's musical system, but, whatever the respective drawbacks of Rameau's and d'Alembert's approaches, d'Alembert succeeded, at least from Laborde's perspective, in transmitting the basic tenets of the system, and that appeared to have been more important for Laborde.

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[51] Ibid., III, 468, "L'hommage le plus flatteur pour lui est sans contredit celui que lui a rendu un de nos plus célebre Géomètres, qui n'a pas dédaigné d'éclaircir les principes de ce grand home, & qui a toujours eu de la vénération pour son génie, malgré ses écarts, qui, quelquefois, le font perdre de vue, & même malgré les torts que Rameau a eu plusieurs fois avec lui."

[52] Christensen reports that d'Alembert's *Élémens*was translated into English, German, and Italian in the eighteenth century, and that it went through six separate editions in d'Alembert's lifetime (*Rameau and Musical Thought*, 267). Regarding the French editions, Elsberry delineates that the first edition (1752) was reprinted in 1759. The second edition (1762) was reprinted in 1766, 1772, and 1779. Elsberry adds that d'Alembert had intended to write another, more complete, theoretical workd based upon Rameau's *Traité*. The *Élémens* would have served as this work's foundation, but there is no eveidence that he ever began work on it (Elsberry, 303).

Laborde's *Essai* details the work of M. d'Alembert in a manner that allows for conclusions of this nature to be drawn, but Laborde's pen was not always so gracious to those who altered or attacked Rameau's work. Although Rameau had transferred the focus of his animosity during his later years toward d'Alembert, he had previously been engaged in a feud over theories of music with Jean-Jacques Rousseau, a verbal scrimmage that Laborde willingly adopted in his former teacher's stead.[53]

Rousseau: A Nemesis of Mimesis

The praise that Laborde commands for d'Alembert—in spite of his controversy with Rameau—is not to be found in his writings which deal with Rousseau. Although, Laborde offers occasional praise to the author of the *Dictionnaire de musique*, it is often backhanded. Rousseau's ideas regarding music are continually called to question throughout Laborde's *Abrégé d'un Traité de la Composition*. In his composition treatise, Laborde references several specific articles from Rousseau's *Dictionnaire de musique*, then proceeds to question their content; Laborde scrutinizes the articles *melodie*,[54] *tetrachord*,[55] *harmonie*,[56] *enharmonique*,[57] *règle de l'octave*,[58] and *accompagnement*.[59] His analysis of these topics provides the reader with an impression that Laborde viewed Rousseau as a great hindrance to the dissemination and acceptance of Rameau's musical theories. D'Alembert may have distilled the original theories into simpler forms to make them comprehensible to a larger audience, thus losing some of the subtleties that make Rameau's ideas so rich, but Rousseau obviously has ideas about music which are fundamentally different from those of Rameau, d'Alembert, and Laborde. The principal distinction between their two approaches emerges from the identification of the primary means of musical expression—melody or harmony. Rousseau believes melody to be the foundation of all musical expression. For Rousseau, the music of Italy epitomizes this position. Rameau, Laborde, and d'Alembert, on the other hand, consider music to have its

[53] Rousseau was not the only contemporary of Laborde's whom he indulged with printed confrontation. See the discussion of Laborde and Vandermonde in Chapter 2.
[54] Laborde, II, 13.
[55] Ibid., II, 18.
[56] Ibid., II, 34-37.
[57] Ibid., II, 42.
[58] Ibid., II, 61.
[59] Ibid., II, 62.

expressive basis in harmony. This ideological chasm underlies a substantial amount of the animosity between Rousseau and Laborde. In his writing, Laborde emphasizes the separateness caused by this schism that is found in Rousseau's works, the specifics of which are discussed below.

However clear Laborde's disapproval of Rousseau's fundamental ideas regarding music are, Laborde's perspectives in the *Abrégé d'un Traité de Composition* on Rousseau's material from his *Dictionnaire* appear conflicting at times. Potentially, this could create confusion for the reader of his composition treatise. Although he criticizes Rousseau's ideas in certain places, in others, Laborde encourages his readers to seek out Rousseau's material on the subjects of *mode*,[60] *temperament*,[61] *chords,* and *figures*.[62] Do Laborde's apparent vicissitudes regarding the worth of Rousseau's theories create discord within the account of his own ideas? While no clear underlying factor may emerge to unite Laborde's fluctuations regarding Rousseau's value in the *Abrégé d'un Traité de Composition* upon a cursory reading, there can be no mistaking when Laborde takes umbrage with Rousseau's position when reading the text, whatever the subject may be. A surer sense of Laborde's standing in this regard will be gained by expanding our purview to his material outside of the *Abrégé d'un Traité de Composition*.

Moving beyond the confines of the *Abrégé d'un Traité de Composition*, an examination of the materials regarding Rousseau in the *Essai* as a whole reveals a more thorough assessment of Laborde's opinions of him, making the inconsistencies regarding the integrity and value of Rousseau's work in the *Abrégé d'un Traité de Composition* more cohesive than they may at first appear. Laborde undercuts even the positive aspects of Rousseau's *Dictionnaire*, "where several excellent articles may be found, but is nevertheless filled with a large number of errors."[63] Laborde conjectures that Rousseau has siphoned the majority of his inspiration for his *Dictionnaire* from Brossard's *Dictionnaire de musique*[64] "which had served as a guide to Rousseau in his career."[65]

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[60] Ibid., II, 31.
[61] Ibid., II, 43.
[62] Ibid., II, 63.
[63] Ibid., III, 668, "Le second est son *Dictionnaire de musique*, où l'on trouve plusieurs articles excellens, mais un plus grand nombre remplis d'erreurs."
[64] Abbé Sébastian de Brossard, *Dictionnaire de musique* (Paris, 1703).
[65] Laborde, III, 599, "Brossard a fait on *Dictionnaire de Musique*, & a le mérite d'avoir servi de guide à Rousseau dans cette carriere."

Clearly, Laborde leads the reader to believe the redeemable portions of Rousseau's *Dictionnaire* are taken from Brossard:

> In spite of the reputation of Rousseau's work, it is necessary to provide Brossard the credit which he is due and to admit that he had been a great help at first by supplying Rousseau with the greatest part of the materials which all had been reassembled and expanded respectfully enough. We are even able to add to the praise of this knowledgeable teacher, for in the articles where he acted as the guide, there is little to be corrected, but this is not even the case with the articles which are entirely by the citizen of Geneva.[66]

Laborde's *Essai* does not provide a "reasoned critique" of Rousseau's *Dictionnaire*, but that hardly prevents him from extracting what he believes are some of Rousseau's more obvious and troublesome errata and providing corrections to them. Laborde expresses his main concern in addressing the examples that he has chosen:

> We adequately desire to spare some of the pain to those who may want to study Rousseau's *Dictionnaire*, and to prevent them from adopting errors which are all the more difficult to avoid, due to Rousseau's attractive style, which is artful enough to influence his readers, when they are not sheltered from its seductive power by unshakable principles.[67]

As a pedagogical means to aide the student, Laborde has identified and corrected several errors from Rousseau's *Dictionnaire* —sixteen in total—in *Livre cinquième*, Chapter Nine of his *Essai*.[68] It is Laborde's intention that his rectifications would prevent the student musician who uses Rousseau as a reference from learning music fundamentals incorrectly, thus avoiding a musical foundation based on fallacy. The corrections range from the simple to the quite extensive and involved. Laborde's seventh example is an instance of the former in which he corrects Rousseau's definition of a plectrum as a type

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[66] Ibid., III, 668, "Malgré la réputation de cet ouvrage de Rousseau, il faut rendre à *Brossart* la justice qui lui est due, & convenir qu'il a été d'un grand secours au premier, en lui fournissant la plus grande partie des matieres toutes rassemblées, & assez bien développées. L'on peut encore ajouter à la louange de ce savant maître, que dans les articles où il a servi de guide, il en est peu où il y ait quelque chose à reprendre; mais il n'en est pas de même dans ceux qui sont tout entiers du Citoyen de Genêve."

[67] Ibid., III, 668, "Notre projet n'est pas de faire une critique raisonnée de son Dictionnaire; c'est un objet qui exigerait trop de détails pour entrer dans notre plan. Nous nous contenterons de faire voir, par quelques exemples, que cet ouvrage aurait besoin d'être refondu, pour épargner bien des peines à ceux qui voudront l'étudier, & les empêcher d'adopter des erreurs d'autant plus difficiles à éviter, que le style séduisant de Rousseau a l'art d'entraîner ses lecteurs, quand ils ne sont pas à l'abri de la séduction par des principes inébranlables."

[68] Ibid., III, 669-677.

of bow.[69] An example of one of the more extensive reparations is found in Laborde's example number sixteen. It contains Laborde's correction of Rousseau's mistaking our major third for being the same as that of the Ancient Greek's third, the ditone; Laborde provides the calculations and proportions to support his correction.[70]

Thomas Webb Hunt offers a thorough overview of this portion of Laborde's *Essai*.[71] He states that "most of Laborde's complaints are legitimate."[72] He describes the aforementioned examples as well as several others from among those which Laborde supplies. In addition to the obvious corrections of certain errors, Hunt suggests that some of Laborde's criticisms are more hypercritical and denigrating;[73] and indeed they are. In one instance, Hunt points out that Laborde may have "unwittingly credited Rousseau with an important addition to the vocabulary of theory."[74] He refers to Rousseau's assignment of the creation of the label *sous-médiante* to Rameau, in the same manner that the term *sous-dominante* is correctly attributed to Rameau. Laborde says of the error that "this word is from Rousseau's vocabulary and not Rameau's, as this word has never pervaded his thoughts."[75] Hunt adds that "Laborde's criticisms, on the whole, provided a

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[69] Ibid., III, 672, "page 256, il dit que *le Plectrum était une espece d'archet*. Le Plectrum était de plume ou d'ivoire, ou de corne, emmanché ou sans manche; on s'en servait pour pincer la corde; & l'archet a une toute autre destination."

[70] Ibid., III, 675-6, "page 513, à l'article *Tierce*, Rousseau dit: "*La tierce majeure* que les Grecs appellaient *Diton*, composée de deux tons comme d'*ut à mi*. Son rapport est de 4 à 5." Rien n'est plus faux; le Diton des Grecs était composé de deux tons majeurs, & par conséquent son rapport est de 4 à 5 1/16. Ce Diton est la somme de quatre quintes prises dans la progression triple; au lieu que notre tierce de 4 à 5 est la produit de deux quintes de la même progression triple, & d'un ton mineur qu'on y ajoute. En un mot, notre tierce est produite directement par la résonance du corps sonore, & celle des Grecs naissait de la progression triple." The difference between these two intervals is familiar. The major third, 4:5, and the ditone, 64:81, are only separated by the interval of a syntonic comma, 80:81, so the difference between them is largely a speculative matter.

[71] Thomas Webb Hunt, "The *Dictionnaire de musique* of Jean-Jacques Rousseau" (Ph.D. diss., North Texas State University, 1967), 360-68.

[72] Ibid., 364.

[73] Ibid., 365, for example, one of the instances Hunt assigns to this category of Laborde's corrections is in Rousseau's article *Hypate*. Rousseau states Nicomachus claims that the lowest string of the diapason is an allusion to the farthest planet in the heavens, Saturn. Laborde uses "rather inane and capricious irony" when he counters that Nicomachus was not the only one in Ancient Greece who was aware of this. Hunt points out that Rousseau did not imply that it was only Nicomachus who knew this fact; rather, he was using him as an example of one of the many people who knew it (Hunt, 365-66).

[74] Hunt, 367.

[75] Laborde, III, 675, "Ce nom est donc du vocabulaire de Rousseau & non de celui de Rameau, & qui ce mot n'est jamais venu dans l'esprit."

healthy corrective to Rousseau's errors in fact and judgment, but were sometimes puerile, captious, or inconsequential."[76]

Another aspect of Rousseau's writing that Laborde takes umbrage with is the writing style itself. Laborde acknowledges Rousseau's influential, rhetorical skills as a writer; he views Rousseau's "seductive" prose, however, as a serious detriment to the truly engaged student of music. Laborde confronts Rousseau's attractive prose by accusing him of dodging potential reproaches to his work; he claims that Rousseau attempts to deflect personal culpability for potential errors in his *Dictionnaire* by placing the blame on what amounts to the manuscript being at the printers is "evident proof of bad faith." Laborde believes this fact can be discovered by the simple act of reading and comparing.[77] The following instance supports Laborde's assertion. Rousseau says the manuscript left his hands in 1750, but in the *Dictionnaire* he references the Essays of M. Jean-Adam Serre of Geneva, which were published in 1753,[78] the system of Giuseppe Tartini (1692-1770) which appeared in 1754,[79] and even the second edition of the *Élémens de musique* of M. d'Alembert which came about in 1762.[80] Laborde does not allow any latitude for the possibility that Rousseau may have had access to these works before they were published or some other equally reasonable explanation—that would be apart from Laborde's point. In order to create a public portrait of Rousseau as a man who comes across as charming and pleasant, all the while hiding from the public his ignorance regarding music, Laborde's conjecture regarding the publishing inconsistencies is proof enough of Rousseau's duplicity.

For Laborde, the only acceptable solution to the errors found throughout Rousseau's *Dictionnaire* is to have somebody provide a complete overhaul of the material:

> In this article we have only wanted it known that Rousseau had wandered in the absence of his knowledge, especially regarding the systems of the Greeks and of Rameau. It is not that we do not recognize in good faith that there may be excellence in the rest of the work, but we would desire, for the advantage of the

[76] Hunt, 368.
[77] Laborde, III, 669, "Il n'est pas inutile de reveler d'abord la preuve évidente d'une mauvaise foi dont on n'aurait pas dû le soupçonner….Pourquoi se server de pareils moyens pour esquiver des reproches, lorsque la vérité peut se découvrir si facilement? Quand il ne faut que lire & comparer?"
[78] Jean-Adam Serre, *Essais sur les principes de l'harmonie* (Paris, 1753).
[79] Giuseppe Tartini, *Trattato di musica, secondo la vera scienzia dell'armonia* (Padua, 1754).
[80] Rousseau, *Dictionnaire*, Preface, ix (Cited in Laborde, III, 669).

> musicians, that it might be entirely recast and sufficiently clarified by an impartial author. It would be so that everything that has been dictated by mood against French music, the Royal Academy of Music, the orchestra of the Opera, and by jealousy against Rameau, Guido, etc. might be removed from it. Finally, it would be necessary that one might add to this work what Rousseau has not been able to say, for lack of enough knowledge, either of the system of Rameau which forms the heart of our harmony; or the system of the Greeks, of which until him the principle and the course had been ignored. [If these things were accomplished], then there would be nothing left of this dictionary that we would desire to change, and it would become as useful as it is now dangerous, as it spreads and perpetuates a multitude of errors.[81]

He continues by providing the name of the "impartial" person best situated to do the job in his estimation. "We believe that we can designate the Abbé Roussier as the only theorist capable of undertaking a task so difficult to fill."[82]

Laborde's description of Rousseau as "this morose man, bizarre and eloquent, attractive to read, dangerous to believe, that one admires more than one likes, has demonstrated that in music and in poetry one's spirit used to be able to compensate for one's knowledge" acknowledges the power Rousseau wielded with his pen while categorizing this very strength as a severe weakness when applied to Rousseau's work in music and poetry.[83] Laborde lists Rousseau's accomplishments in music, such as they are, as being two-fold.[84] First, as has been stated, he published his *Dictionnaire* which is

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[81] Laborde, III, 676-7, "dans cet article nous n'avons voulu que faire connaître qu'il avait erré par défaut de connaissances, sur-tout dans ce qui concerne le systême des Grecs & celui de Rameau. Ce n'est pas que nous ne reconnaissions de bonne foi qu'il n'y ait d'excellentes choses dans le reste de cet ouvrage; mais nous desirerions pour l'avantage de Musiciens, qu'il fût entiérement refondu par un auteur sans partialité & suffisamment éclairé ; il faudrait qu'il en retranchât tout ce qui a été dicté par l'humeur contre la *Musique Française*, *l'Académie Royale de Musique*, *l'Orchestre de l'Opéra*, &c. &, par la jalousie, contre Rameau, Gui d'Arezzo, &c. Enfin il faudrait qu'on rectifiât toutes les erreurs, & qu'on ajoutât à cet ouvrage ce que Rousseau n'a pu dire, faute de connaître assez, soit le systême de Rameau qui fait le fond de notre harmonie, soit le systême des Grecs, dont jusqu'à lui on avait ignoré & le principe & la marche. Alors ce Dictionnaire ne laisserait rien à desirer, & deviendrait aussi utile qu'il est maintenant dangereux, en répandant & perpétuant une multitude d'erreurs."

[82] Ibid., 677, "Nous croyons pouvoir désigner *l'Abbé Roussier* comme le seul Théoricien capable de se charger d'une tâche aussi difficile à remplir."

[83] Ibid., IV, 367, "Cet home chagrin, bizarre & éloquent, séduisant à lire, dangereux à croire, qu'on admire plus qu'on ne l'aime, a prouvé en musique & en poésie, que l'esprit pouvait suppléer aux connaissances."

[84] Rousseau's musical accomplishments are far from being two-fold, of course. Most importantly, Rousseau's contribution to d'Alembert and Diderot's *Encyclopédie* consisted of writing all of the music articles for the project. Perhaps Laborde chooses not to enter into discussion of those writings, due to d'Alembert's close editorship, and due to the fact that the writing in the *Dictionnaire* came later in Rousseau's career and reflects more of his original thoughts on music than did his writings in the *Encyclopedie*. Laborde also mentions a dissertation that Rousseau wrote in 1743 which he quickly dismisses with a line that could just as easily reflect Laborde's attitude toward Rousseau's writings in

"excellent in some articles, but full of gall, and contains absolute falsities in other articles."[85] Second, Rousseau composed the opera *le Devin du village* [The Village Soothsayer-1752] of which Laborde claims the ensemble is "charming," yet the composite pieces of which, "examined separately, substantiate that he is neither a composer, nor a poet."[86] Rameau's reception of this work was somewhat cool, and this provided Rousseau with a just cause to lash out at Rameau and his ideas whenever the opportunity presented itself. Rameau claimed that the work on *le Devin du village* could not have been completely of Rousseau's pen. His reasoning is that only half of the small opera's music is composed according to good harmonic principles, the other half is just bad. He states that "if Rousseau had written the good, he has not written the bad."[87] While Rameau does not say that the bad half is Rousseau's, he certainly implies it in the subtext of the accusation. For this quite personal reason, Laborde says, Rousseau began his barrage on Rameau and his theories:

> What has Rousseau not written against Rameau in his *Dictionnaire de musique*? How does he not make an effort to critique his works and even to pronounce them ridiculous? He has never allowed an occasion to pass in which to issue satiric tracts against them that are filled with gall, solely to extract his revenge on Rameau for not believing him to be the sole author of *le Devin de village*.[88]

Rameau's attitude toward Rousseau and the music in his opera must surely have been colored by the view of French music that Rousseau developed as his career progressed—Laborde's certainly was—finding it far inferior to that of the Italians, so far inferior, in fact, that in 1753 in his *Letter on French Music* he claimed that French music

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general. He says that the dissertation is "nearly unknown and does not deserve a better fortune" (Laborde, *Essai*, III, 668), "Le premier donné en 1743, est un *Dissertation sur la Musique moderne*, presqu'inconnue, & qui ne méritait pas une meilleure fortune."

[85] Laborde, IV, 367, "1º, à nous donner un Dictionnaire excellent dans quelques articles, mais plein de fiel, & de choses absolument fausses dans d'autres."

[86] Ibid, "2º, à composer son intermede du *Devin de village*, dont l'ensemble est charmant, mais dont les paroles & les musique, examinées séparément, prouvent qu'il n'était ni Poëte ni Compositeur."

[87] Ibid., III, 468, "Ce petit opéra est tout composé d'une moitié de choses bien faites suivant les principes, & d'une moitié de mauvais faites contre les regles. Il n'est donc pas de la même main; donc si Rousseau a fait les bonnes, il n'a pas fait les mauvaises."

[88] Ibid., III, 468, "Que n'a-t-il pas écrit contre Rameau dans son Dictionnaire de Musique? Combien ne s'est-il pas efforcé de critiquer ses ouvrages, & même de les rendre ridicules? Il n'a laissé échapper aucune occasion de lancer contr'eux des traits satyriques & remplis de fiel, uniquement pour se venger de ce que Rameau ne le croyait pas l'auteur de tout *le Devin de village*. "

did not even exist.[89] Rousseau labels melody as the source of all expression in music; for this reason, he elevates the music of the Italians, not the French, to a cardinal position. Laborde, Rameau, and d'Alembert, however, consider harmony to be the basis of all the expressive power in music, a stance that the harmonically rich musical practice of France bolstered.

The Primacy of Melody vs. Harmony: The Case of the *Basse fondamentale*

The contention between those, such as Rousseau, who believed melody provided music's expressive power, and those, such as Rameau, d'Alembert, and Laborde, who understood harmony to be the source of musical expression reveals a fundamental dichotomy of musical aesthetics in eighteenth-century France. This section will address Rousseau's understanding of melody's fundamental role in music in conjunction with its association with language. Then, Rameau's ideas on harmony as a means of musical expression will be explored, as epitomized in his conception of the fundamental bass. Finally, Laborde's interpretation of the situation will provide a culturally resonant understanding of the epistemological contrasts at work in the dichotomy between harmony and melody as the basic expressive mechanism in music.

Verba suggests that investigating this dichotomy between Rousseau and Rameau—and by extension d'Alembert and Laborde—regarding the primary means of expression in music, melody or harmony, relates to a larger issue of what is natural in music.[90] Both Rameau and Rousseau agree that expressiveness should be the sole criterion for judging a piece of music, therefore, Verba adds, "if they reach opposite conclusions, it is because they differ on the means of expression in music."[91] According to Rousseau, the melodious music coming out of Italy was a reflection of the Italian language which so easily accommodates the art of music; the French language, however,

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[89] "D'où je conclus que le François n'ont point de Musique et n'en peuvent avoir; ou que si jamais ils en ont une, ce sera tant pis pour eux," Jean-Jacques Rousseau, *Lettre sur la musique française*, in *Ecrits sur la musique, la langue, et le théâtre*, *Jean-Jacques Rousseau: Œuvres complètes* [hereafter referred to as *OC*], eds. Bernard Gagnebin and Marcel Raymond, vol. 5 (Paris: Editions Gallimard, 1995), 328; translated as "Letter on French Music," trans. John T. Scott, in *Essay on the Origin of Languages and Writings Related to Music,* ed. John T. Scott, *The Collected Writings of Rousseau* [hereafter referred to as *CWR*], eds. Roger D. Masters and Christopher Kelly, vol. 7 (Hanover: University Press of New England, 1998), 174.
[90] Verba, *Music and the French Enlightenment*, 31.
[91] Ibid., 21.

being a language of reason is not so well adapted to this task. Rousseau speculates that these properties evolved because "every national music derives its principle character from the language to which it belongs."[92] Rousseau believes that the best music would come from the language best suited to produce it:

> If it were asked which of all the languages must have the best grammar, I would reply that it is the language of the people who reason the best; and, if it were asked which of all the people must have the best music, I would say that it is the one whose language is the best suited for it….Now, if there is a language in Europe suited for music, it is certainly Italian, because this language is sweet, sonorous, harmonious, and accented more than any other, and these four qualities are precisely the most appropriate for song.[93]

Rousseau explains that Italian is the most musical language in Europe, touting its linguistic characteristics:

> It is sweet because its articulations are not very compounded, because in it the grouping of consonants is rare and without roughness, and, since a great number of syllables are formed of vowels alone, the frequent elisions make its pronunciations more flowing. It is sonorous because the majority of its vowels are bright, and because it has no compound diphthongs, because it has few or no nasal vowels, and because its rare and smooth articulations better distinguish the sound of the syllables, which become clearer and fuller because of it.[94]

For Rousseau, the Italian language succeeds at producing the desired expressiveness in music due to its sonorous, gentle, and harmonious nature, but it obtained these qualities because it descended directly from the first languages—languages that developed purely to express feelings or passions. As described in Rousseau's *Essai sur l'origine des langues*,[95] early languages, such as those from the Heroic Age of Greece, created a form of expression which, according to Verba, was "direct and spontaneous, through an inarticulate, but highly inflected form of vocalization—in Rousseau's terms, a voice shaped by accent—further enlivened through the use of rhythmic patterns or cadences, resulting in a vocal line that is essentially

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[92] Rousseau, *Lettre sur la musique française*, in *OC*, vol. 5, 294; trans. Scott, *CWR*, vol.7, 145.
[93] Ibid., in *OC*, vol. 5, 297, "Si l'on demandait laquelle de toutes les langues doit avoir une meilleure Grammaire, je répondrais que c'est celle du Peuple qui raisonne le mieux ; et si l'on demandait lequel de tous les Peuples doit avoir une meilleure Musique, je dirais que c'est celui dont la langue y est le plus propre….Or s'il y a en Europe une langue propre à la Musique, c'est certainement l'Italienne ; car cette langue est douce, sonore, harmonieuse, et accentuée plus qu'aucune autre, et ces quatre qualités sont précisément les plus convenables au chant."
[94] Ibid., in, *OC*, vol. 5, 297; trans. Scott, in *CWR*, vol. 7, 148.
[95] Jean-Jacques Rousseau, *Essai sur l'origine des langues* (Paris, 1781).

singing."[96] Verba provides further clarification of Rousseau's hypothesis by adding that the warm climate in Greece made it ideal for this softer, melodious, expressive form of language in which the line between music and word was blurred; Italy, she suggests, having a comparable geography, developed a similar pleasant musical language.[97]

Yet, to Rousseau, the French language is made up solely of articulations, which make it difficult to express the passions, thus having a direct influence on the French language's lack of ability to create competent, expressive melodies. Rousseau says that

> a language that only has articulations and voices therefore only secures half its [available] wealth; it imparts ideas, it is true, but in order to produce feelings, images, it still must have a rhythm and sounds, that is, a melody. That is what the Greek language had, and what ours lacks.[98]

Rousseau believes that the Greek language degenerated from one of genuine passion as the art of reasoning began to overshadow emotion. As a result, in Rousseau's estimation, the effect on melody as a means to convey pure feelings was adverse: "As language was perfected, melody imperceptibly lost its ancient energy by imposing new rules upon itself, and the calculation of intervals was substituted for the subtlety of inflection."[99] For Rousseau, as the art of reasoning advanced, the passion in language suffered; regarding this phenomenon, he says that "the study of philosophy and the progress of reason, having perfected grammar, deprived language of that lively and passionate tone which at first had made it so tuneful."[100] Slowly the power of melody was dispersed as music and language diverged; Rousseau explains:

> Thus melody, beginning to no longer be so attached to discourse, imperceptibly assumed a separate existence, and music became more independent of the words. That was also when the wonders that it had produced when it was only the accent and the harmony of poetry gradually ceased, and when it gave to poetry that dominion over the passions which speech has since exercised only over reason.[101]

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[96] Verba, *Music and the French Enlightenment*, 41.
[97] Ibid., 44. Rousseau does not discuss Italy in the *Essai sur l'origine des langues*. Verba most likely draws her comparison here from the treatment of Italian music Rousseau provides in the *Lettre sur la musique française*.
[98] Jean-Jacques Rousseau, *Essai sur l'origine des langues*, in *OC*, vol. 5, 411, "Une langue qui n'a que des articulations et des voix n'a donc que la moitié de sa richesse ; elle rend des idées, il est vrai, mais pour rendre des sentimens, des images, il lui faut encore un rythme et des sons, c'est-à-dire une mélodie: voilà ce qu'avait la langue grecque, et ce qui manque à la nôtre."
[99] Ibid., in *OC*, vol. 5, 424; translated as *Essay on the Origin of Languages*, trans. John T. Scott, in *CWR*, vol.7, 329.
[100] Ibid., in *OC*, vol. 5, 425; trans. Scott, in *CWR*, vol. 7, 329.
[101] Ibid.

The gravest consequence of these events for Rousseau is that they led to the use of multiple voices and in turn, harmony. Rousseau does not see harmony as a natural occurrence, but, in Verba's terms, rather as a "supplement or form of compensation for the absence of natural feelings or passions or melody; it was a negative product of culture and society."[102] Belinda Cannone concurs; regarding Rousseau's position, she says that "favoring harmony at the expense of melody entails favoring knowledge and reason to the detriment of the expression of the sentiments."[103] Rousseau offers, in somewhat severe terms, the following summary of melody's downfall concurrent with harmony's ascent:

> Song was soon nothing more than a tiresome and slow series of drawn out and shouted sounds, without sweetness, without meter, without grace…Song, thus stripped of all melody and consisting uniquely in the strength and duration of sounds, must finally have suggested ways of making it still more sonorous with the aid of consonances. Several voices, endlessly drawing out in unison sounds of an indefinite duration, accidentally hit upon certain chords that, reinforcing the noise, made it seem more pleasant to them, and it is in this way that the practice of descant and of counterpoint began….Melody being forgotten and the attention of the musician having been turned toward harmony, everything was gradually directed toward this new object.[104]

Harmony, for Rousseau, is a man-made phenomenon, a product of culture, which was engineered to compensate for the loss of the true expression generated by melody. Verba interprets this to mean that harmony could "only transcend this negative role, by lending support to melodic expression."[105] According to Verba, Rousseau disqualifies harmony as a natural phenomenon on two grounds: 1) the harmonies in practice cannot be equated with those created by the resonating string (the *corps sonore*), or, in other words, the practice and the theory do not always align with one another, and 2) pleasure derived from harmony alone is a purely physical sensation, therefore not the source of expression in music, which is just a way of stating that any pleasure from harmony is not based on music which is imitative in nature.[106]

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[102] Verba, *Music and the French Enlightenment*, 42.
[103] Belinda Canonne, *Philosophies de la Musique: 1752-1789* (Paris: Aux Amateurs de Livres, 1990), 67.
[104] Rousseau, *Essai sur l'origine des langues*, in *OC*, vol. 5, 426-27; trans. Scott, in *CWR*, vol.7, 330-1.
[105] Verba, *Music and the French Enlightenment*, 53.
[106] Ibid., 43.

The first point has been partially addressed in the previous chapter in the discussion on enharmonicism and temperament. Just intonation had fallen out of favor with practicing musicians during the eighteenth century, due to the advent of temperament systems such as those suggested by Zarlino, Rameau, and Rousseau himself. This created discrepancies between the speculative tunings of the intervals and the actual tunings used in the tempered systems. When the speculative and the practical aspects of music did not align, Rameau could allow practical experience and good taste to take precedence over the rules he had established because of his extensive work as a composer. Rousseau, however, deficient in the breadth of musical training and experience of Rameau and, for that matter, of Laborde, found it much more difficult to permit such deviations from the rules. It also may be argued that the harmony created by the perfect chord provides the beginning and ending of every harmonic progression. While many of the chords in use during the eighteenth century are the result of man's creative inspiration, the dissonances they create all work to move the music away from and then back to the natural perfection of the triad as produced by the overtone series of the *corps sonore*.

In discussing the second point, Rousseau acknowledges that "although the principle of harmony might be natural, since it offers itself to the sense only under the appearance of unison, the feeling that develops it is acquired and artificial, as are the majority of those attributed to nature."[107] Rousseau emphasizes that this "natural" reaction to harmony is purely physical; the true feeling comes from "melodious inflections":

> The beauty of sound is from nature; its effect is purely physical. It results from the concurrence of various air particles put into motion by the *corps sonore* and all of its aliquot divisions—perhaps to infinity. When taken all together, they produce a pleasant sensation: everyone in the universe will take pleasure in listening to beautiful sounds, but if this pleasure is not animated by melodious inflections that are familiar to them, it will not be delectable; it will not change into voluptuous pleasure. The most beautiful melodies, according to our taste, will always poorly affect an ear that is not accustomed to them; music is a language that requires a dictionary.

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[107] Jean-Jacques Rousseau, *Examen de deux principes avances par M. Rameau dans sa brochure intitulée "Erreurs sur la musique dans l'encyclopédie,"* in *OC*, vol. 5, 355; "translated as Examination of Two Principles Advanced by M. Rameau in His Brochure Entitled: 'Errors on Music in the Encyclopedia,'" trans. John T. Scott, in *CWR*, vol. 7, 276.

> Harmony, properly so called, is in a still less favorable situation; as it only has conventional beauties, it in no way appeals to untrained ears. In order to feel and savor it, harmony must have become customary some time ago.[108]

The idea that music could, and often should, imitate (*mimesis*) that which is natural has been a concern of music scholars since the ancient Greeks. Alan Lessem explains that "at the root of each and every artistic activity, the ancient Greeks believed, lay *mimesis*: the recreation of observed reality."[109] Rousseau believes melody alone has the power to move a listener on a deeper emotional level because of its imitative nature: "The sounds of a melody do not act on us solely as sounds, but as signs of our affections, of our feelings; it is in this way that they excite in us the emotions they express and the image of which we recognize in them."[110] Rousseau cautions that if occasionally the non-musically educated soul can be moved by harmony, such as in "the ardor of soldiers by military instruments, it is because every great noise, every striking noise can be good for that, since it is only a question of a certain agitation that is transmitted from the ear to the brain."[111] Yet, in an instance such as this, he assigns a greater importance to the meter which, he reminds the reader, is merely a part of the melody.[112] Rousseau summarizes what he believes to be the difference between harmony and melody:

> The most beautiful chords, like the most beautiful colors, can convey to the senses a pleasant sensation and nothing more. But the accents of the voice pass all the way to the soul; for they are the natural expression of the passions, and by depicting them they arouse them. It is by means of them that music becomes oratorical, eloquent, imitative, they form its language; it is by means of them that

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[108] Rousseau, *Essai sur l'origine des langues*, in *OC*, vol. 5, 415, "La beauté des sons est de la nature ; leur effet est purement physique, il resulte du concours des diverses particules d'air mises en mouvement par le corps sonore, et par toutes ses aliquotes, peut-être à l'infini; le tout ensemble donne une sensation agréable: tous les hommes de l'univers prendront plaisir à écouter de beaux sons; mais si ce plaisir n'est pas animé par des infléxions mélodieuses qui leur soient familiéres il ne sera point délicieux, il ne se changera point en volupté. Les plus beaux chants à notre gré toucheront toujours médiocrement une oreille qui n'y sera point accoutumée; c'est une langue dont il faut avoir le Dictionnaire.

L'harmonie proprement dite est dans un cas bien moins favorable encore. N'ayant que des beautés de convention; elle ne flate à nul égard les oreilles qui n'y sont pas exercées, il faut en avoir une longue habitude pour la sentir et pour la goûter."

[109] Alan Lessem, "Imitation and Expression: Opposing French and British Views in the Eighteenth Century," *Journal of the American Musicological Society* 27, no. 2, 325. See also Chaconne for a discussion on the natural expression of the passions and imitation in music in France circa 1750, *Philosophies de la musique*, 83-95.

[110] Rousseau, *Essai sur l'origine*, in *OC*, vol. 5, 417, trans. Scott, in *CWR*, vol. 7, 323.

[111] Rousseau, Examination, in *OC*, vol. 5, 359, trans. John T. Scottt, in *CWR*, vol. 7, 279.

[112] Ibid.

> it depicts objects to the imagination, that it conveys feelings to the heart. Melody is in music what design is in painting, harmony produces merely the effect of colors. It is by means of the song, not by means of the chords, that sounds have expression, fire, life; it is the [melody] alone that gives them the moral effects that produce all of Music's energy. In a word, the physical part alone of the art is reduced to very little and harmony does not pass beyond that.[113]

Rameau, d'Alembert, and Laborde embrace the opposite position—harmony is the actual foundation of music and musical expression. Rameau believes harmony is the true basis of all expression in music, and that it is indeed a natural phenomenon:

> Only harmony has the power to arouse the passions; melody draws its force only from this source, from which it emanates directly. As for the differences in low and high, etc., they are only surface modifications of the melody; therefore they add almost nothing to it, as will be demonstrated in the course of this work through striking examples[114]

Rameau's rationalist point of view led him to seek a theory to defining music scientifically, using *a priori* axioms reflecting the Cartesian principles that were prevalent in the sciences at the time. Further along in his career as a theorist, he came to couple this with a strong reliance upon Newtonian experimentalism in which principles were determined based upon observation and results from experiments. Verba explains that for Rameau, everything in music had to evolve from a self-evident principle formulated in mathematical terms, which could be derived by observing the results of musical phenomena.[115] This natural principle of music gives rise to the fundamental bass, which was derived from the *corps sonore*.

In the *Traité de l'harmonie*, Rameau's viewpoints on the harmony and melody are clear from the first page: "Music is generally divided into harmony and melody, but we shall show in the following that the latter is merely a part of the former and that a knowledge of harmony is sufficient for a complete understanding of all the properties of

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[113] Ibid., in *OC*, vol. 5, 358-59; trans. Scott, in *CWR*, vol. 7, 279.
[114] Jean-Philippe Rameau, *Observations sur notre instinct pour la musique* (Paris, 1754), vi-vii, "c'est à l'Harmonie seulement qu'il appartient de remuer les passions, la Mélodie ne tire sa force que de cette source, dont elle émane directement: & quant aux différences du grave à l'aigu, &c. qui ne sont que des modifications superficielles de la Mélodie, elles n'y ajoûtent pour lors démontre dans le cours de l'Ouvrage par des exemples frappans."
[115] Verba, *Music and the French Enlightenment*, 58-9.

music."[116] He supports this conclusion in his discussion of the origin of consonant and dissonant intervals as they are derived on the monochord. Beginning with the intervals accredited to Pythagoras, the octave [1:2], the fifth [2:3], and the fourth [3:4], he creates divisions of the monochord string which are smaller and smaller, eventually ending with the ratios for the tone [8:9], the major semitone [15:16], and the minor semitone [24:25]. "These are the tones and semitones which form the successive degrees of the natural voice, from which melody originates. We begin to perceive, therefore, that melody is only a consequence of harmony."[117] Christensen explains Rameau's methodology: "Rameau generates dissonance following a tried and true canonist method by subjecting consonant interval ratios to a variety of simple mathematical manipulations."[118] For example, if you add the minor third [5:6] to the fifth [2:3], the resultant interval would be the minor seventh [5:9].[119] Rameau also addresses the issue that melody may appear to dictate the rules of harmony, but in his discussion of the methods for writing an admirable melody, he claims that this simply is not so:

> It would seem at first that harmony arises from melody, since the melodies produced by each voice come together to form the harmony. It is first necessary, however, to find a course for each voice which will permit them to harmonize well together. No matter what melodic progression is used for each individual part, the voices will join together to form a good harmony only with great difficulty, if needed at all, unless the progressions are dictated by the rules of harmony.[120]

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[116] Rameau, *Traité de l'harmonie*, 1; translated as the *Treatise on Harmony* by Philip Gossett (New York, 1971), 3, "On divise ordinairement la Musique en Harmonie & en Melodie, quoique celle-cy ne soit qu'une partie de l'autre, & qu'il suffise de connoître l'Harmonie, pour être parfaitement instruit de toutes les proprietez de la Musique."

[117] Rameau, *Traité*, 23; Gossett, 27, "Ce sont ces *Tons* & *Semi-Tons* qui forment les degrez successifs de la voix naturelle, dont la Melodie tire son origine; de sorte que cecy commence à nous faire appercevoir que la Melodie n'est qu'une suite de l'Harmonie."

[118] Christensen, *Rameau and Musical Thought*, 98.

[119] The ratio of 5:9 for the minor seventh is obtained when using justly tuned intervals, but there are other acceptable ratios for the interval of the minor seventh obtained through the use of other tuning systems. For example, if the Pythagorean tuning of the same intervals is employed, then the following results: a fifth [2:3] added to a minor third [27:32] forms the interval of a minor seventh [9:16].

[120] Rameau, *Traité*, 138; Gossett, 152, "Il semble d'abord que l'Harmonie provienne de la Melodie, en ce que la Melodie que chaque voix produit, devient Harmonie par leur union; mais il a fallu determiner auparavant une route à chacune de ces voix, pour qu'elles pussent s'accorder ensemble. Or quelqu'ordre de melodie que l'on observe dans chaque Partie en particulier, elles formeront difficilement ensemble une bonne harmonie, pour ne pas dire que cela est impossible, si cet ordre ne leur est dicté par les Regles de Harmonie."

The principle upon which Rameau's harmonic theories were founded is called the *basse fondamentale*, or fundamental bass. Rameau defines the fundamental bass as "the essence of composition, for harmony as well as melody lies principally, especially at present, in that bass we call fundamental."[121] Essentially, the fundamental bass generates the two basic chord types, the perfect triad and the seventh chord that are the foundation of all music. Rameau explains that it is the bass motion of these two harmonic sonorities—movement by the interval of a fifth—which provides the foundation of all musical structure:

> The source of harmony does not subsist merely in the perfect chord or in the seventh chord formed from it. More precisely, it subsists in the lowest sound of these two chords, which is, so to speak, the harmonic center to which all the other sounds should be related. This is one of the reasons why we believed it necessary to base our system of the division of a string. This string, which gives the lowest sound, is the source of all those sounds which arise from its division, just as the unit, to which it was compared, is the source of all numbers.[122]

In the *Traité*, Rameau bases his understanding on the division of a string on the monochord. He had not yet learned of the overtone series, but he had been acquainted with it, however, by the time of his next work, *Nouveau système de musique théorique et pratique*,[123] in which the generation of chord tones through monochord string divisions of the *Traité* are replaced by their generation in the overtone series. Rameau, having been introduced to the concept of overtones in the work of Joseph Sauveur by Father Louis-Bertrand Castel—a French scientist with whom Rameau established a working relationship early in his career, quickly recognized their importance to his fledgling theory of music.[124] In the introduction to the *Nouveau système*, Rameau discusses the previously undiscovered "germ of harmony," which produces "three different sounds at

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[121] Rameau, *Traité*, 185; Gossett, 206, "Le grand nœud de la Composition, soit pour l'Harmonie, soit pour la Melodie, consiste principalement & sur tout pout le present, dans le Basse, que nous appellons *Fondamentale*" (trans. Gossett).

[122] Rameau, *Traité*, 127 ; Gossett, 141, "Le principe de l'Harmonie ne subsiste pas seulement dans l'Accord parfait, dont se forme celuy de la Septième; mais encore plus précisément dans le Son grave des ces deux Accords, qui est, pour ainsi dire, le *Centre Harmonique*, auquel tous les autres Sons doivent se rapporter. C'est aussi l'une des raisons pour laquelle nous avons crû devoir établir nôtre Systême sur la division d'une corde; en ce que cette corde qui nous donne ce Son grave, est le principe de toutes celles qui proviennent de sa division; de même que l'unité qu'on luy compare, est le principe de tous les nombres" (trans. Gossett).

[123] Jean-Philippe Rameau, *Nouveau système de musique théorique et pratique* (Paris: Ballard, 1726).

[124] Christensen, *Rameau and Musical Thought*, 138.

once."[125] According to Rameau, these three sounds, which are contained in the fundamental of every *corps sonore*, are the octave, the perfect twelfth, and the major seventeenth, which produce the perfect triad.[126] Gene Henry Anderson provides Rameau's definition of the *corps sonore* in both the *Traité* and his later works: "the 'sounding body' equated with the arithmetical unit or undivided string in the *Traité*, but expanded in the *Nouveau système* to include the resultant harmonic series when 'bodies sound.'"[127] Christensen further defines the cultural understanding Rameau would have had of the *corps sonore*:

> The term *corps sonore* was widely used by seventeenth-century scientists to refer to any periodically vibrating system. Rameau used the term in his *Traité* in such a sense (Book 1, Chapter 4), but obviously without being aware of the overtone series. After the *Nouveau système*, Rameau defined the *corps sonore* as any vibrating system that emitted exclusively the harmonic overtones of the perfect twelfth and major seventeenth.[128]

Rameau did not explore the theoretical ramifications of the *corps sonore* in the *Nouveau système*, however, as it was mainly a practical, pedagogical addendum to the more speculative *Traité*. Christensen reveals that Rameau would not investigate this acoustical principle fully until 1737.[129] The *Génération harmonique* provides Rameau's first lengthy opportunity to explain his harmonic system using the concept of the *corps sonore*.[130] He addresses the melodic reliance upon harmony once again in his *Observations*, when he says, "as soon as one experiences the effect of a song, it is always necessary to support all of it with the harmony from which it derives; it is in this same harmony that resides the cause of the effect; by no means is it the melody, which is only its product."[131] This passage reflects Rameau's willingness to use practical experience as an alternate path to judging a piece of music. Yet, Verba suggests that in the

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[125] Rameau, *Nouveau système*, iii; *CTW*, II, 5, "Il y a effectivement en nous un germe d'Harmonie, dont apparament on ne s'est point encore aperçu: Il est cependant facile de s'en appercevoir dans une Corde, dans un Tuyan, &c. dont la resonance fait entendre trois Sons differents à la fois."
[126] Ibid., 17.
[127] Gene Henry Anderson, "Musical Terminology in J.-P. Rameau's *Traité de l'harmonie*: A Study and Glossary Based on an Index" (Ph.D. diss., University of Iowa, 1981), 91.
[128] Christensen, *Rameau and Musical Thought*, 138, n. 19.
[129] Ibid., 138-9.
[130] Jean-Philippe Rameau, *Génération harmonique ou traité de musique théorique et pratique* (Paris: Prault fils, 1737).
[131] Rameau, *Observations*, 58, *CTW*, III, 295, "Dés qu'on veut éprouver l'effet d'un chant, il faut toujours le soutenir de toute l'harmonie dont il dérive; c'est dans cette harmonie même que réside la cause de l'effet, nullement dans la mélodie, qui n'en est que le produit."

Observations, Rameau "places harmony—which is subject to scientific laws—in a primary role in the direct evocation of feelings or passions, and assigns melody a more secondary position."[132]

One of the greatest successes of Rameau's harmonic theories, as founded upon the fundamental bass resulting from the *corps sonore*, is his success at reducing the potential harmonic progressions and chords into a more manageable system. Verba describes Rameau's advance in the field of music theory as the narrowing of potential harmonies into a "few essential ones governed by a few underlying principles."[133] This is one of the considerations that d'Alembert provides for his admiration of Rameau's work in his "Preliminary Discourse" from the *Encyclopédie*; d'Alembert asks "but what is most distinguishing about Rameau? It is that he has reflected with great success on the theory of this same art; to have found the principle of harmony and melody in the fundamental bass; and by this means to have reduced to more certain and simpler laws, a science formerly devoted to arbitrary rules or dictated by blind experience."[134]

Rameau's belief in music as being governed by the natural laws of harmony, as opposed to Rousseau's firm conviction that the natural basis of music was melody, transmits itself through Laborde's work as well, although it comes filtered through d'Alembert's *Élémens de musique*. Laborde's recognition of not only Rameau's great accomplishment in creating his system, but also of d'Alembert's achievement in making it accessible to a much wider audience is another instance of Laborde's support for both men in his *Essai*: "This famous system was invented and calculated by the great Rameau, which one ought to read for oneself in the excellent *Élémens de musique* of M. d'Alembert, who has perfected it."[135]

As Rousseau believed so strongly in the primacy of melody, his opinions of the fundamental bass are somewhat different from those of Laborde, Rameau, and

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[132] Verba, *Music and the French Enlightenment*, 38.
[133] Ibid., 58.
[134] Alembert, Jean Le Rond d'., *Discours préliminaire des editeurs*, in *Encyclopédie, ou Dictionnaire raisonné des sciences, des arts, et des métiers*, vol. I (Paris: 1751), xxxii; "Mais ce que le distingue plus particulierement, c'est d'avoir refléchi avec beaucoup de succès sur la théorie de ce même Art: d'avoir sû trouver dans la Basse fondamentale le principe de l'harmonie & la mélodie; d'avoir réduit par ce moyen à des lois plus certaines & plus simples, une science livrée avant lui à des regles arbitraires, ou dictées par une expérience aveugle."
[135] Laborde, *Essai*, II, 45, "Ce fameux systême, inventé & calculé par le grand Rameau, doit se lire dans les excelens *Élémens de Musique* de M. d'Alembert, qui l'a perfectioné."

d'Alembert. In the *Dictionnaire*, Rousseau addresses the topic of the fundamental bass under the general dictionary heading of *basse*. In addition to a basic definition and a thorough explanation of the concept, Rousseau provides the rules which govern the motion of the system and the tools to identify the fundamental bass of an existing melody. In the penultimate paragraph, however, Rousseau subtly dismisses the importance of the fundamental bass, claiming a more lofty stature for his theory of the unity of melody.[136] Rousseau states:

> After having briefly exposed the manner of composing a fundamental bass, it would remain to supply the means to transform a continuous bass and that would be easy, if it was only necessary to look at the diatonic course and to a beautiful song of this bass, but I do not believe that the bass, which is the guide and support of harmony, its soul so to speak, the interpreter of song, confines itself to such simple rules. There are other rules which are born of a more reliable and more radical principle; a fertile, but hidden principle, which has been felt by all artists of genius, without having been developed by anyone. I think I have thrown out its germ in my *Letter on French Music*. I have said enough on the subject here for those of you who understand me. I can never say enough for the others.[137]

Then Rousseau, without denouncing Rameau's system outright, finishes the article by mentioning that he does not say anything in this article about the "ingenious system of M. Serre of Geneva…because the principles that I had glimpsed which dignify a sagacity of praise, has since been developed by M. Tartini in a work which I will account for before the end of this one."[138]

Laborde does not approve of Rousseau's assessment of the fundamental bass, claiming that the article in his *Dictionnaire* "in which Rousseau is the most unfair is positively the one which provides Rameau's immortal fame: his beautiful discovery of

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[136] Verba explains that the main tenet of the "unity of melody" is that it "forbids the use of more than one melody as a time, since it is impossible for music to be expressive and pleasing unless all the parts work together to reinforce a single melody" (Verba, *Music and the French Enlightenment*, 18). See also, Rousseau, *Dictionnaire,* 536-39.

[137] Rousseau, *Dictionnaire*, 48 "Après avoir exposé sommairement la manière de composer une *Basse-fondamentale*, il resterait à donner les moyens de la transformer en Basse-continue; & cela serait facile, s'il ne falloit regarder qu'à la marche diatonique & au beau Chant de cette Basse: mais ne croyons pas que la Basse qui est le guide & le soutien de l'Harmonie, l'ame &, pour ainsi dire, l'interprète du Chant, se borne à des règles si simples; il y en a d'autres qui naissent d'un principe plus sûr & plus radical, principe fécond mais cache, qui a été senti par tous les Artistes de génie, sans avoir été dévéloppé par personne. Je pense en avoir jetté le germe dans ma Lettre sur la Musique Française. J'en ai dit assez pour ceux qui m'entendent; je n'en dirais jamais assez pour les autres."

[138] Ibid., "Je ne parle point ici du Systême de M. Serre de Genève, parce que les principes qu'il avait entrevus avec une sagacité digne d'éloges, ont été depuis développés par M. Tartini dans un Ouvrage dont je rendrai compte avant la fin de celui-ci."

the fundamental bass."[139] Laborde associates Rousseau's handling of the topic with the manner in which subsequent theorists deal with the same subject. Laborde also claims rather curtly that the fundamental bass does not work for these men, not due to a flaw in the system of the fundamental bass, but rather because of their music, which does not adhere to its principles:

> The manner in which Rousseau realizes it in his *Dictionary* demonstrates that he seemed to downplay its relevance; or rather, he provided a subdued response, one that he would like others to make. He has the shrewdness to expect to undo what he really must understand to be Rameau's greatest accomplishment. In spite of his efforts and those of several writers who wanted to distinguish themselves by attacking the system of the fundamental bass and who only had this means of attracting attention to themselves, this system, as ingenious as it is true, will be no less admired by those in future centuries. The fundamental bass provided nothing less than the solution to all that is allowed in harmonic practice, although it may have been thoughtlessly suggested in certain works that there were some difficulties that the fundamental bass was not able to solve. In those cases it is not the fundamental bass which is faulty, because the fundamental bass only rejects what is fundamentally bad.[140]

Laborde also believes that Rousseau's pen had been guided by jealousy, as in the "Preface" to his *Dictionnaire*, when Rousseau says, "I have treated the harmonic part of the fundamental bass system, although imperfect and defective, to so much consideration, it may not be, in my estimation, the system of nature and truth, as the result is dull and confusing filler, rather than good harmony."[141] If Rousseau's statement was not made out of jealousy, it may be possible to attribute it to ignorance, reflected in Rousseau's lack of musical training, or bad faith, according to Laborde.[142] Laborde continues with this line of reasoning by suggesting that "it may be shown that Rousseau has not understood the

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[139] Laborde, *Essai*, III, 468-9, "L'article sur lequel Rousseau est le plus injuste, est positivement celui qui assure à Rameau une gloire immortelle: sa belle découvert de la basse fondamentale."

[140] Laborde, III, 469, "La maniere dont il en rend compte dans son Dictionnaire, prouve le peu de cas qu'il en fait, ou plutôt celui qu'il voudrait que les autres en fissent. Il a l'adresse de vouloir détruire ce qu'il voit bien devoir faire le plus d'honneur à Rameau; mais malgré ses efforts & ceux de quelques Ecrivains qui ont voulu se distinguer, en attaquant le systême de la basse fondamentale, & qui n'avaient que ce moyen d'attirer sur eux quelques regards, ce systême aussi ingénieux que vrai n'en sera pas moins admire dans les siecles futures, & n'en donnera pas moins la solution de tout ce qui praticable en harmonie, quoiqu'on ait assure inconsidérément dans quelques ouvrages qu'il y avait des difficultés que la basse fondamentale ne pouvait résoudre. Dans ces cas-là, ce n'est pas la basse fondamentale qui a tort; ce sont ceux qui connaissent si mal l'harmonie; car la basse fondamentale ne rejette que ce qui est évidemment mauvais."

[141] Rousseau, *Dictionnaire*, viii, "J'ai traité la partie Harmonique dans le systême da la basse fondamentale, quoique ce systême, imparfait & défectueux à tant d'égards, ne soit point, selon moi, celui de nature & de la vérité, & qu'il en résulte un remplissage sourd & confus, plutôt qu'une bonne harmonie."

[142] Laborde, *Essai*, III, 677, n. b, "l'ignorance ou l'a mauvaise foi peuvent seules avoir dicté cette phrase."

fundamental bass well and has explained several parts of it quite badly."[143] He adds that, "nevertheless, we would think to insult him if we suspected him of not understanding the fundamental bass well enough to produce the justice for it that it deserves. If it is not ignorance, then it is bad faith, and what has created the bad faith, if not jealousy?"[144]

Laborde says this jealousy is evident from the "gratuitous preference" he gives to Tartini's system of fundamental bass over that of Rameau's.[145] Laborde is correct about the preference, as Rousseau uses his *Dictionnaire* to present Tartini's system of fundamental bass to his readers as an alternative to Rameau's.[146] In the "Preface" to the *Dictionnaire,* Rousseau states that Rameau's system:

> is the first and only one, until M. Tartini's. When this [Tartini's system of fundamental bass] appeared, it may have united, by its principle, this multitude of isolated rules, which seemed arbitrary and, at that time, embodied the art of harmony, which was a study of memory rather than reason.[147]

Although his praise for Tartini is more muted and his discussion of Rameau's system of fundamental bass more respectful than in the article on fundamental bass previously discussed, there can be no mistaking Rousseau's opinions in the "Preface" to his *Dictionnaire*:

> Although better in my opinion, the system of M. Tartini, not even being generally known and, at least in France, not having the same authority as M. Rameau's, has not been substituted in a book that is destined principally for the French nation. I am then content to explain for my well-informed readers the principles of this system in an article in my *Dictionary*. As for the remainder of the work, I believe that regarding the heart of the harmonic doctrine I must defer to the nation for which I wrote, to prefer his [Rameau's] opinions to mine. I must not abstain,

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[143] Ibid., "il soit démontré que Rousseau n'entendait pas bien le systême de la basse fondamentale, puisqu'il en a si mal expliqué plusieurs parties."

[144] Ibid., "nous croirions néanmoins lui faire injure si nous le soupçonnions de ne l'avoir pas entendu assez pour lui rendre la justice qu'il mérite. Si ce n'est pas l'ignorance, c'est donc la mauvaise foi; & alors, qui a pu la faire naître, si ce n'est la jalousie?"

[145] Ibid., "Elle est encore prouvée par la préférence qu'il donne gratuitement au systême de Tartini sur celui de Rameau."

[146] A concise overview of Tartini's theories may be found in Alejandro Enrique Planchart, "The Study of the Theories of Giuseppe Tartini," *Journal of Music Theory* 40, no. 1 (1960), 32-61; and the "Preface" to Fredric Johnson, "Tartini's *Trattato di musica seconda la vera scienza dell'armonia*: An Annotated Translation with Commentary" (Ph.D. diss., Indiana University, 1985), iv-xxvi. The basic idea of Tartini's conception of fundamental bass is that when two individual strings are plucked simulataneously, the two notes produced create a third sound, or *terzo suono*. This third sound represents the fundamental bass of the original sonorities (Johnson, "Tartini's *Trattato*," viii-x).

[147] Rousseau, *Dictionnaire*, ix, "c'est le premier, & c'étoit le seul, jusqu'à celui de M. Tartini où l'on ait lié, par des principes, ces multitudes de règles isolées qui sembloient toutes arbitraires, & qui faisaient, de l'art Harmonique, une étude de mémoire plûtôt que de raisonnement."

> however, on this occasion, from the necessary objections in the intellect of the articles I have discussed. This might have caused me to sacrifice the usefulness of this work to the prejudice of its readers. This would have been to flatter without teaching and to swap complacency for cowardice.[148]

Laborde counters Rousseau's endorsement with a list of reasons to prefer Rameau's system of fundamental bass to Tartini's:

1) Because Rameau's system existed forty years prior to Tartini's, therefore, Rameau is credited with its invention.
2) Because although Rameau's system is prior to Tartini's, he embraces a greater number of subjects.
3) Because the greatest part of what Tartini says is contained in Rameau.
4) Because what Tartini introduces under the guise of different ideas, is already learned in the work of Rameau.[149]

Laborde concludes by saying "if one of these two systems must have the advantage, one sees that it must not be Tartini's."[150]

Laborde's writing leaves no room for alternate interpretations in passages such as this, in which he makes his opinions on writers known, both the negative, such as with Rousseau, and the positive, as in the case of Rameau and d'Alembert. These three men are not the only writers mentioned by Laborde in his *Abrégé d'un Traité de Composition*, but they do seem to be the most prominent figures, men who influenced Laborde's own understanding of the modern principles of music theory in France during the eighteenth century. The divergent positions of these men regarding melody and harmony and their practical application in musical practice provide a foundation for Laborde and his

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[148] Ibid., "Le systême de M. Tartini, quoique meilleur, à mon avis, n'étant pas, du moins en France, la même autorité que celui de M. Rameau, n'a pas dû lui être substitute dans un Livre destine principalement pour la Nation Française. Je me suis donc contenté d'exposer de mon mieux les principes de ce systême dans un article de mon Dictionnaire; & du reste, j'ai cru devoir cette déférence à la Nation pour laquelle j'écrivois, de préférer son sentiment au mien sur le fond de la doctrine Harmonique. Je n'ai pas dû cependant m'abstenir, dans l'occasion, des objections nécessaires à l'intelligence des articles que j'avois à traiter; c'eût été sacrifier l'utilité du Livre au préjugé des Lecteurs; c'eût été flatter sans instruire, & changer la déférence en lâcheté."

[149] Laborde, III, 677, "1) Parceque celui de Rameau existait prés de quarante and avant celui de Tartini, & que par conséquent Rameau a le mérite de l'invention. 2) Parceque quoique antérieur à celui de Tartini, il embrasse un plus grande nombre d'objets. 3) Parceque la plus grande partie de ce que dit Tartini est continue dans ce qu'enseigne Rameau. 4) Parceque, dans ce que Tartini présente sous des idées différentes, on n'apprend rien qui ne soit dans Rameau."

[150] Ibid., "si l'un des dues systêmes doit avoir l'avantage, on voit que ce ne doit pas être celui de Tartini."

comprehension of the debate between the primacy of harmony or melody in musical expression. With this foundation in place, we can turn our attention to the material regarding this subject in the *Abrégé d'un Traité de Composition* to more fully understand Laborde's unique position in these matters.

Eighteenth-Century Theories of Music in the *Abrégé d'un Traité de Composition*

Having made a more discerning examination of Laborde's beliefs and opinions regarding his contemporaries' views on music theory in France, now it will be possible to address the relevant material in his *Abrégé d'un Traité de Composition* in order to comprehend his viewpoints on these topics more accurately. Much like the approach taken in the previous chapter on the music of the ancients, Laborde's presentation of three theoretical concepts specific to his composition treatise will be addressed—harmony, melody, and fundamental bass. As in the preceding chapter, this method will keep the discussion centered on Laborde's work in his *Abrégé d'un Traité de Composition*. Also, as the analysis will be organized into specific musical topics, it reflects the overall organization of the *Abrégé d'un Traité de Composition*.

As considered earlier in this chapter, the concepts of melody and harmony in the latter half of the eighteenth century were closely entwined and yet diametrically opposed. Theoretical treatises would debate the origins of harmony and melody, recognizing them as integral to one another's existence; theorists would hold one or the other in a high regard, viewing one as the generator of the other. No matter which side of this debate an author came to be on, in necessitating the priority of one or the other, the two ideas always seem to be addressed together in some manner. Laborde's address of the two topics is no exception. Laborde presents melody and harmony in two separate chapters in the *Abrégé d'un Traité de Composition*, chapters 6 and 11, respectively.[151] First, Laborde's presentation of melody will be broached, but the subject of harmony, by the necessity mentioned above, will cause it to enter into the discussion rather abruptly.

[151] Laborde, II, Chapter 6, "On Melody," 13-23; Chapter 11, "On Harmony," 31-37.

Melody

Laborde describes melody as "a pleasant succession of simple sounds."[152] He leaves the choice of the sounds to the composer's taste and style to "create melodies which flatter the ear, as the fortunate mixture of colors in our bouquets manages to delight our vision."[153] Here Laborde chooses to restrict the power of melody in a composition, proclaiming it to be subservient to the natural forces of harmony. This immediately establishes Laborde's position within the same school of thought as Rameau and d'Alembert, while placing him opposite of Rousseau's belief in melody's supremacy in music. Laborde cautions those who would place too much emphasis on the melody over harmony, as it is "as wrong as it is impossible."[154] Laborde's brief warning acknowledges his argument for harmonic dominion over melody. Laborde's use of the descriptive term "wrong" implies a strong sense of what is tasteful; the use of "impossible" refers to what is natural. Thus, Laborde believes reliance upon melody over harmony is not only in bad taste, but it does not have any basis in scientific fact; in other words it not only opposes the tenets of *musica pratica*, but also of *musica speculativa*. Here there is an unmistakable inference to the derivation of the major triad from the resonance of the *corps sonore* as validation to harmony's preeminence.

Laborde suggests an exercise of sorts to elucidate his position. He addresses this to those who would find melody to be of more import than harmony:

> If those who placed melody so strongly over harmony wanted to be of good faith, they would easily acknowledge that in the theater or in concerts, music has never made them feel the delightful feelings that are found in harmony, either sweet and appreciable, or noisy and brilliant. In effect, what would become of these obliged accounts without harmony? These pieces of expression where the torn-up soul, sharing the feigned, often cold pains of an actor, who must owe his success to the precision with which he renders what a talented composer, with expressive accompaniment and the strength of rhythm, orders him to perform? Abandon him on stage without an orchestra. Leave him to sing a recitative, whoever he may be, devoid of accompaniment. Compare this piece to another which is sustained by harmony and then pronounce judgment.[155]

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[152] Ibid., 13, "La *Mélodie* consiste dans une agréable succession de sons simples."
[153] Ibid., "C'est au goût du Compositeur à choisir ses sons, & à s'en server de maniere à créer des chants, qui flatent l'oreille, comme dans nos bouquets, le mélange heureux des couleurs parvient à flater la vue."
[154] Ibid., "est aussi faux qu'impossible."
[155] Ibid., "si ceux qui la mettent si fort au dessus de l'harmonie, voulaient être de bonne foi, ils conviendraient aisément qu'au Théâtre ou dans les Concerts, la Musique ne leur a jamais fait éprouver de sensations délicieuses que par l'harmonie, soit douce & sensible, soit bruyante & terrible. Que

Laborde's detailed description of a performance refers to the recitative. Recitative relies on the harmonic structure of the music to help convey the intense and often quickly changing emotions associated with the form. It will be remembered from the discussion on enharmonicism in the previous chapter that Rousseau claims that in the recitative the "voice must multiply and diversify the musical inflections to the imitation of the oratorical, and often invaluable, grammatical accent."[156] Why would Rousseau appear to support the importance of a harmonic concept such as enharmonicism as used in a recitative over the melodic when he advocates a subordinate role to harmony?[157]

Rousseau understands that harmony must work with the melody, such as in a recitative, to achieve exceptional results:

> Melody, harmony, meter, the choice of instruments, and the voices are the elements of the musical language. Melody, through its proximate relationship with the grammatical and oratorical accent, is the one which provides the character to all the others. Thus it is always from melody that the principal expression in instrumental as well as vocal music must be drawn.[158]

To elaborate this point, return to Rousseau's description of the use of the enharmonic in the recitative to convey emotion. He adds that this is the best sort of music to achieve this effect. Laborde agrees with this statement when he says that the music itself is "incoherent and shatters the sense of musical phrase, as one idea comes to ruin another."[159] Rousseau believes the harmonic structure of the recitative is vital, but the idea of incoherent musical phrases suggests he does not view the recitative as a melodic

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deviendraient en effet, sans l'harmonie, ces superbes récits obliges, ces morceaux d'expression, où l'âme déchirée partage les fientes douleurs d'un Acteur, souvent froid, & qui ne doit ses succès qu'à la précision avec laquelle il rend ce qu'un habile Compositeur, moyénant de roches acompagnemens & la force du rhythme, lui ordone d'exécuter? Abandonez-le sur la scène sans orchestre, laissez-le chanter un récitatif, quel qu'il soit, dénué d'acompagnement: comparez ce morceau avec un autre soutenu par l'harmonie; & pronocez ensuite."

[156] Rousseau, *Dictionnaire*, 197, "c'est dans une scéne sublime & pathétique où la Voix doit multiplier & varier les inflexions Musicales à l'imitation de l'accent grammatical oratoire & souvent inappréciable."

[157] I should mention that the use of the term harmonic, while often referring to such a chord, does not always refer to a chord which is harmonious. The enharmonic chords are harmonic in the sense of being comprised of vertical sonorities as opposed to melodic, or horizontal, sonorities. A harmonious sonority would be considered consonant, while an inharmonious sonority would be called dissonant.

[158] Rousseau, *Dictionnaire*, 208, "La Mélodie, l'harmonie, le Mouvement, le Choix des Instrumens & des Voix sone les élémens du langage musical; & la Mélodie, par son rapport immédiat avec l'Accent grammatical & oratoire, est celui qui donne le caractère à tous les autres. Ainsi c'est toujours du Chant que se doit tirer la principale *Expression* tant dans la Musique Instrumentale que dans la Vocale."

[159] Laborde, II, 42, "qui est incohérent & qui brise le sens de la phrase musicale, ainsi qu'une idée en vient briser une autre."

entity in the first place. Rousseau says that "music only paints through melody, and chords soon become trying to the ears and always leave the heart cold."[160] Laborde replies that at least Rousseau's hypothesis is clearly expressed. In an attempt to return the favor of opinion back to harmony, Laborde counters Rousseau's proposition with his own. Laborde states that "it is only necessary to hear an opera that has been performed for several years in order to secure an emotion from it, and to wonder about the cause of the pleasure that is felt."[161] Laborde believes that "this beauty comes from the imitative expression that only harmony can create."[162] As a means to prove his point, Laborde conjectures that if a famous opera of the day such as *Orphée, Iphigénie,* or *Roland*[163] were to be performed without instrumental accompaniment by an orchestra, would the

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[160] Ibid., 275, "la Musique ne peint que par la *mélodie*,…ses beaux Accords, lasse bientôt les oreilles, & laisse toujours le cœur froid."

[161] Laborde, II, 13, "il ne faut, pour assurer, qu'entendre les Opéra que l'on nous donne depuis quelques années, & s'interroger sur la cause du plaisir qu'un y ressent."

[162] Ibid., 13-4, "on avoûra que ce plaisir vient de la beauté d'une expression imitative que l'harmonie seule peut faire naître."

[163] Laborde does not indicate the specifics of each of these operas, but as, by his own account, they are well-known in Paris in Laborde's day, the fact that Laborde does not include the particulars of each opera becomes less of a mystery. *Roland* most likely refers to the opera written by Niccolò Piccinni, with a libretto by Jean-François Marmontel. It premiered at the Palais-Royal Theater on 17 January 1778. It had 24 performances between this date and 28 June 1781 (Pitou, II, 472). As this opera was being performed during the publication of Laborde's *Essai*, it qualifies as a famous opera of the day. The only other *Roland* he could be referring to would be the one written by Lully with a libretto by Philippe Quinault from the seventeenth century. Lully's version did provide the impetus for Piccinni's version, however, as the Italian was invited to Paris to set the story of Roland to music to see if he could exceed Lully's version; but Piccini's *Roland* is most likely the opera to which Laborde refers (Pitou, II, 473). The opera *Orphée* most likely points to *Orphée et Euridice* by Christof Willibald Gluck, with a libretto in Italian by Raniero de Calzabigi which was translated into French by Pierre-Louis Moline. It premeired in Paris on 2 August 1774, Gluck having made many changes in the music from the Italian version dictated by the performance practices in France. (Pitou, II, 400). Its first successful run entailed 45 performances. This is also a very famous opera at the time of Laborde's *Essai.* The identity of *Iphigénie* is not as definitive, as there were three operas from the time period in question which bear this name. The first is by Gluck with a libretto by du Roullet based upon Jean Racine. It was first performed at Versailles, and did not produce any enthusiasm at first, except by the young dauphine Marie-Antoinette, who favored Gluck's music. It then found a second life, being staged annually at the Opéra from 1175-1780. The second is *Iphigénie en Tuaride,* also by Gluck, with a libretto by Nikolas-François Guillard. It premiered in Paris on 18 May 1779 and was immediately more successful than his previous *Iphigénie*. In fact according to Pitou, *Iphigénie en Tuaride* "proved to be Gluck's most popular composition in the French capital" (Pitou, II, 288). However, the director of the Opéra, Pierre-Hacques de Vismes, had also encouraged Piccinni to set the same story. Piccinni's version of *Iphigénie en Tauride*, which was the third version of this story to be set in less than ten years, with a libretto by Alphonse Du Congé du Breuil, did not premier n Paris until 23 January 1781. It also did not do as well as the eponymous Gluck version. Pitou provides some ruminations on the manner in which this double-booking played out (Pitou, II, 290-91). Therefore the Gluck version of *Iphigénie en Tarude* is more than likely the opera Laborde is referring to, especially when it is recognized that the Piccinni version did not even premier until after the publication of the *Essai*.

melody alone then indeed be enough to provide the same expressive power that occurs with the full harmonic sonorities.[164]

Perhaps this speculative query would be enough to make his point, but Laborde has not finished with his critique of Rousseau quite yet. He calls Rousseau's musical experience into question when he offers: "if Rousseau had had more knowledge of harmony than he does, he would have given preference, neither to melody or to divided harmony, but certainly to their union, from which an inexpressible charm results."[165] This may seem as if Laborde is trying to secure some type of middle ground on the issue, but it is just a rhetorical slight of hand as he follows this comment with a description of the charm which results from the union of melody and harmony; it is a charm "that we are able to call the melody of harmony, and which takes place when the harmony does not make a vain noise, but rather sings or expresses."[166] In this statement Laborde confirms Rameau's assertion that harmony is the means to achieve the ideal imitative, musical expression that Rousseau assigns to melody.[167]

By reiterating the doctrine of a harmonic foundation for music, Laborde continues to characterize Rousseau in an unflattering manner regarding his treatment of melody as the originator of harmony. For example, Rousseau criticizes the use of an accompaniment tune in an opera chorus: the employment of a tune of accompaniment in this manner creates a somewhat cacophonous performance that sounds as if "one was reciting two speeches at the same time in order to produce a stronger oratory."[168] Laborde is content to answer this charge—he describes it as Rousseau's feeble attempt at an epigram—by referring the reader to Rameau's *Indes galantes*: "Misfortune to the one who will not have heard with pleasure *l'air de Suavages* serve as accompaniment to the

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[164] Ibid., 14. "Qu'on exécute, sans instrumens, *Roland, Iphigénie, Orphée*, &c. & l'on verra si la *mélodie* peut suffire."
[165] Ibid., "Si Rousseau avait eu plus de connaissances qu'il n'en avait en harmonie, il n'aurait donné la préférence, ni à la mélodie ni à l'harmonie séparées l'une de l'autre, mais certainement à leur union, de laquelle il résulte un charme inexprimable."
[166] Ibid., "il résulte un charme inexprimable, que l'on peut appeler la *mélodie de l'harmonie*, & qui a lieu lorsque l'harmonie ne fait pas un vain bruit, mais lorsqu'elle chante on qu'elle exprime."
[167] It will be remembered that Verba suggests that this hierarchical dichotomy between melody and harmony relates to a larger issue. That issue is whether harmony or melody is natural in music. Laborde stands firmly on the side of harmony being natural in music.
[168] Rousseau, *Dictionnaire*, 276, "ce qui est comme si on s'avisoit de réciter deux discours à la fois, pour donner plus de force à leur éloquence."

chorus "Fôrets paisibles," in the opera *Indes galantes*!"[169] Laborde concludes that "this sublime tune takes us back to the melody, accompanied by the harmony, and more naturally than all the paradoxes of Rousseau could do."[170] Laborde undoubtedly supports harmony's role as the fundamental originator in music, but how does Laborde define, and therefore how should we consider, harmony?

Harmony

Laborde defines harmony as "a series of chords which more or less pleases the ear."[171] He designates a distinction between two categories of chords: "Nature gives us the perfect chord, composed of a sound, its third and its fifth; art has given us the other chords, which are all derived from the seventh and the sixth."[172] Laborde has once again described the notes derived from the fundamental sound as a result of the *corps sonore*. The overtones are the twelfth, which provides the fifth, and the nineteenth, which furnishes the third; these are the notes which comprise the perfect chord. The perfect chord occurs naturally, due to the physical properties of the vibrating string and the overtones it produces. The other category of chords is comprised of those created by the art of musical practice; by definition, they are not perfect chords. According to Laborde's definition, these are chords derived from the interval of the seventh, which are what we would consider seventh chords, and chords with the interval of the sixth. Most often these are inversions of root position chords, such as the sixth chord with diminished fifth, which is created by inverting a dominant seventh chord.

Laborde states that the rules of harmony were initially based upon the "approval of the ear," but several scholars, such as Marin Mersenne,[173] Joseph Sauveur,[174] Rameau, and Tartini have "finally fixed some invariable rules that are proven to anyone who wants

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[169] Laborde, II, 14, "Malheur à celui qui n'aura pas entendu avec plaisir l'*air de Sauvages* server d'acompagnement au chœur *Forêts paisibles*, dans l'Opéra des Indes Galantes!"
[170] Ibid., "Cet air sublime nous ramene à la mélodie, acompagnée de l'harmonie, plus naturelement que tous les paradoxes de Rousseau ne pouraient faire."
[171] Ibid., II, 31, "L'harmonie est une suite d'acords qui plait plus ou moins à l'oreille."
[172] Ibid., "La nature nous donne *l'acord parfait*, composé d'un son, de sa tierce, & de sa quinte; l'art nous a donné les autres accords, qui sont tous dérivés de la *septieme* & de la *sixte*."
[173] Marin Mersenne, *Harmonie universelle contenant la théorie et la pratique de la musique* (Paris: S. Cramoisy, 1636).
[174] Joseph Sauveur, *Principes d'acoustique et de musique: ou Système général des intervalles des sons, et son application à tous les systèmes et à tous les instrumens musique* (1701; reprint Geneva: Minkoff, 1973).

to take the trouble to study them."[175] The rules of harmony found in these works are not always easy to ascertain according to Laborde, due in part to the interpolation of art and science in theoretical treatises: "This material, so dry in and of itself, handled by musicians who were not geometricians enough and geometricians who were not musicians enough finally has become so obscure and disheartening."[176] In Laborde's opinion, this situation in which the musical practitioners speculate and the theorists describe practice creates difficulty for a music student in the eighteenth century, as a confused and muddled onslaught of texts has left no clear definitive explanation of harmony or a concise set of rules which govern it. With a sharp edge, Laborde says that as a result of this situation "the few people who may have had the perseverance to study the voluminous precepts are drowned in arguments which have never been heard, even by their authors."[177]

In Laborde's estimation, there is a welcome beacon of clarity that has arisen from this quagmire of intellectual speculation: d'Alembert's *Élémens de musique*. As discussed previously, Laborde reveres d'Alembert's ability to distill the works of Rameau into something comprehensive and didactic. Rameau, whose works are filled with "useful things, ingenious and new," wrote in a manner which is "almost unintelligible and devoid of the method which is so necessary in order to instruct by gradation; [for this reason they] would only be read by a few people."[178] D'Alembert has taken the thicket of Rameau's material and condensed it into his *Élémens* in order to form what Laborde refers to as "the elixir of everything Rameau has written."[179] Once again, Laborde reasserts his belief in the prominence of the speculative foundations of harmony and the fundamental sound and its overtones that are created by the *corps sonore*; he does this by aligning himself with the teachings of Rameau. By furthering his support to include

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[175] Laborde, II, 33, "Dans les premiers tems, les regles de l'harmonie ne furent fondées que sur l'approbation de l'oreille. Mais le Pere Mersenne, M. Saveur, Rameau & Tartini ont enfin fixé des loix invariables, qui sont démontrées à ceux qui veulent prendre la peine de les étudier."
[176] Ibid., "Cette matiere, si seche par elle-même, traitée par des Musiciens qui n'étaient pas assez Géometres & par des Géometres qui n'étaient pas assez Musiciens, est devenue enfin si obscure & si rebutante."
[177] Ibid., "il est peu de persones qui aient la constance d'étudier ces préceptes volumineux noyés dans des raisonemens qui n'ont jamais été entendus, même par les Auteurs."
[178] Ibid., "les Ouvrages de notre grand Rameau, remplis de choses utiles, ingénieuses & neuves, ne seraient lus que par peu de persones, étant presque inintelligibles & dénués de cette méthode si nécessaire pour instruire par gradation."
[179] Ibid., "l'élixir de tout ce qu'a écrit Rameau."

d'Alembert's distillation of Rameau's theories in the *Élémens*, Laborde espouses a system of music that is far more accessible to a practicing musician.

As a means to support this position, Laborde unsurprisingly returns to undermining Rousseau's assessment of the speculative nature of the subject, a tact he takes often throughout the *Abrégé d'un Traité de Composition*. Rousseau asserts that in addition to the principal sound and the sounds of the perfect chord that are produced by the *corps sonore*, there is "an infinity of other sounds formed by all the aliquot divisions of the *corps sonore*, which are not a part of this perfect chord."[180] Laborde rebuts: "we do not know through which experiment he has understood or believed to hear sounds other than the third and the fifth, but we formally declare that we have never heard any others from the *corps sonore*."[181] In fact Laborde addresses this specific issue in his chapter regarding melody. In providing the harmonics of the principle sound, Laborde explains that each sound does indeed produce its own harmonic overtones. They are far too weak, however, for anyone to hear. Regarding the overtones created by the fundamental sound, Laborde says "as they always compose, each one, the perfect chord, it is most fortunate that they are so weak in their nature, because if they were stronger, a continuous cacophony would result."[182] This statement reveals that Laborde does not question the veracity of Rousseau's declaration that sounds other than the third and fifth are produced by the *corps sonore*; he has simply stated that it is quite difficult to discern them aurally in actual practice.

Rousseau then approaches the subject of the derivation of the perfect chord from a different vantage point. He extends the previously established truism that "all sound produces a truly perfect chord, since it is formed by harmonics, and it is through them that it is a sound."[183] The reasoning here is tautological, but the point is that the fundamental sound produces the perfect chord through its harmonics; therefore the

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[180] Rousseau, *Dictionnaire*, 239, "le corps sonore ne donne pas seulement, outre le Son principal, les Sons qui composent avec lui l'accord parfait, mais une infinité d'autres Sons, formés par toutes les aliquotes du corps sonore, lesquels n'entrent point dans cet accord parfait."
[181] Laborde, II, 35, "Nous ne savons pas par quelle expérience il a entendu on cru entendre d'autres sons que la tierce & la quinte, mais nous déclarons formelement que nous n'en avons jamais entendu d'autres."
[182] Ibid., 14, "comme ils portent toujours chacun l'acord parfait, c'est fort heureusement qu'ils sont si faibles de leur nature; car s'ils étaient plus forts, il en résulterait une cacophonie continuelle."
[183] Rousseau, *Dictionnaire*, 239, "Tout Son donne un accord vraiment parfait, puisqu'il est formé des tous ses harmoniques, & que par eux qu'il est Son."

harmonics compose the essence of the fundamental sound. Rousseau supports Laborde's previous allegation regarding the weakness of the overtones by stating that "these harmonics are not heard, and unless it is extremely strong, only a simple sound is distinguished."[184] From this point Rousseau makes a striking assumption in support of his belief in the primacy of melody in music: "Hence it only follows that the only good harmony is the unison and, as soon as consonances can be distinguished, the natural proportion is being distorted and the harmony has lost its perfection."[185]

Laborde has several retorts to Rousseau's hypothesis. First he addresses the proposal that a sound may only exist through its harmonics. Laborde considers the idea preposterous. It is true that when a string resonates three distinct sounds are produced. Laborde adds that the conclusion may be drawn that the sound being heard is the union of the three sounds. The three tones are heard as one tone, but they are three distinct tones nonetheless. However weak the overtones may be, even if they can be distinguished only with great difficulty, it does not refute the reality of their existence. For this reason, Laborde says that "we do not need three sounds in order to make one."[186] Laborde believes that the overtones result from the resonance of the *corps sonore*; the fundamental sound does not occur when the overtones reconcile with the fundamental: "if it was necessary for the essence of sound that it was one composed of three, each one of these three principles would be nothing separately, and would not become something until reunited with the two others."[187] In other words, Laborde declares that the individual overtones are distinct entities that could themselves create other sounds naturally as a result of the *corps sonore*; each sound is singular, yet the overtones are a result of the fundamental sound. If each sound was not already unique, they could not exist separately to eventually combine to produce the fundamental.

Second Laborde discusses Rousseau's statement that the only good harmony is the unison. Laborde prefaces his comments on this topic by acknowledging that

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[184] Ibid., 239-40, "Cependant ces harmoniques ne s'entendent pas, & l'on distingue qu'un Son simple, à moins qu'il ne soit extrêmement fort."
[185] Ibid., 240, "d'où il suit que la seule bonne *harmonie* est l'unisson, & qu'aussi-tôt qu'on distingue les Consonnances, la proportion naturelle étant altérée, l'*harmonie* a perdu sa pureté."
[186] Laborde, II, 35, "donc, il n'en faut pas trios pour en faire un."
[187] Ibid., 35-6, "s'il était nécessaire, pour l'essence du son, qu'il fût un composé de trios, chacun de ces trios principes ne seroit rien séparément, & ne deviendrait quelque chose, que par sa réunion avec les deux autres."

Rousseau's point is moot due to the conclusion that each sound is distinct in and of itself, but Laborde will address the point for the sake of argument. Therefore, Laborde recognizes that the following comments are based upon hypothetical ideas: "Even if it were true that sound only exists through its harmonics, would it be necessary to conclude from this that the only good harmony is the unison?"[188] Applying the concept of octave equivalence to Rousseau's assertion, Laborde wonders if "we are able to define harmony at the unison and the octave as the same."[189] Even if the octave and the unison are judged to be the same, Laborde would not consider that to be the only agreeable harmony as his own definition of harmony calls for a series of chords—chords that can likely be assumed to contain more intervals than just the unison and the octave. Another arguable aspect of Rousseau's idea is that is does not account for the interval of the seventh, or the chords which contain the seventh. The seventh is not one of the tones produced by the *corps sonore* according to the definitions set forth by both Laborde and Rousseau. Laborde's experience as a musician in the eighteenth century demands that he recognize the importance of the seventh in the writing of successful harmony. Rousseau's allegations appear to have been proffered with musical practice divorced from more speculative concerns. Laborde accounts for both. For these reasons Laborde rejects the unison as the source of the best harmony: "Can we deny that this may not be the most successful synthesis of the chords that create good harmony and even harmony that is properly produced?"[190]

In concluding his treatment of harmony, Laborde refers to two instances in which Rousseau has offered concepts that stand in opposition to those offered by Rameau. To this end, Laborde ruminates that "Rousseau may have undertaken to say the opposite of what Rameau had said solely to contradict him, for he does not support even his feelings with a plausible reason."[191] Laborde cites Rousseau's first conflict with Rameau: "Rameau has said that a soprano part of certain simplicity naturally suggests its own bass

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[188] Ibid., 36, "Mais quand il serait vrai que le son n'existe que par ses harmoniques, faudrait-il en conclure *que la seule bonne harmonie est l'unisson*?"
[189] Ibid., "Peut-on appeler harmonie l'unisson & même l'octave?"
[190] Ibid., "peut-on nier que ce ne soit l'heureux mélange de ces accords qui fait la bonne harmonie, & même l'harmonie proprement dite?"
[191] Ibid., "Il semble que Rousseau ait pris à tâche de dire le contraire de ce qu'avait dit Rameau, uniquement pour le contredire, car il n'apuie son sentiment par aucune raison même plausible."

and that a man having a fair, although untrained ear, will strike-up this bass naturally."[192] Rousseau responds that musicians have a prejudice in this regard and experience proves that "not only will the man who never has heard of either bass or harmony not be able to find them for himself, but if he hears them, they will also displease him."[193] Rousseau states that "he will like this simple unison a lot better."[194] Laborde grants Rousseau a small advantage by accepting this proposition, yet he does so in a biting retort which does not relinquish his own position in the slightest: "We acknowledge this fact, but we do so by restricting it to the persons who are born with a false ear, or with a total insensitivity to the charms of music."[195]

Rameau's second statement, which Laborde presents, offers an aesthetic declaration: "Rameau also has had reason to say that 'harmony is the source of the greatest beauty.'"[196] Rousseau believes, in a pure, egalitarian manner, that all men, both the scholarly and the ignorant, are able to judge music equally. Laborde says this is not the case, any more than the ignorant could judge a painting, a statue, or a monument.[197] The rhetoric in this statement may sound harsh from our modern perspective, but, whatever the tone of the claim, Laborde supplies an ostensibly sound reason for his observation concordant with the credence of his own era. Laborde says that "the ignorant are able to say this pleases or displeases me, but in no genre will he have the right to pronounce, after his feelings, that a thing is beautiful or not."[198] Laborde believes that the judgment of beauty is a right of the educated musician: "it is quite fair that this concern the right of those who have spent their life learning to distinguish true beauty, which in

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[192] Ibid., "Rameau a dit, que les *dessus* d'une certaine simplicité suggerent naturelement leur *basse*, & qu'un home ayant l'oreille juste, quoique non-exercée, entonera naturelement cette basse." Laborde does not mention where in Rameau's writing he is referencing, but the passage reflects the material expressed in Rameau's *Traité*, Book IV, Chapters 40 and 41.
[193] Rousseau, *Dictionnaire*, 241, "Non-seulement celui qui n'aura jamais entendu ni Basse ni *harmonie*, ne trouvera de lui-même, ni cette *harmonie* ni cette basse; mais elles lui déplairont si on les lui fait entendre."
[194] Ibid., "il aimera beaucoup mieux le simple Unisson."
[195] Laborde, II, 36, "Nous convenons de ce fait, mais en le restraignant aux persones qui sont nées avec l'oreille fausse, ou avec une insensibilité totale aux charmes de la Musique."
[196] Ibid., "Rameau a eu aussi raison de dire que *l'harmonie est la source des plus grandes beautés de la Musique*." Once again the original reference to Rameau is not provided. This particular reference, however, is taken directly from Rousseau's *Dictionnaire*, 242. Rousseau does not provide an original reference either, yet the sentiment this quote expresses may be found throughout the corpus of Rameau's writings.
[197] Ibid.
[198] Ibid., "L'ignorant peut dire, cela mi plait, ou me déplaît; mais, dans aucun genre, il n'aura le droit de prononcer, d'après son sentiment, qu'une chose est belle ou ne l'est pas."

all genres, only consists in proportions."[199] Laborde simply believes that "it is necessary to know these proportions in order to be able to formulate judgments based upon them."[200] For Laborde, beauty based in proportion must be found in harmony.

Laborde leaves it to the trained ears to proclaim any final decision regarding beauty, pleasure, and the primacy of harmony in music. Rousseau takes the opposite approach by expressing melody's accessibility to all men, kindred experts and novices. Rousseau finds no beauty in the science of music: "the physics of sounds are very limited in the pleasure they give to us, and are only able to have very little effect on the human heart."[201] Rather than counter this last defamation of harmony's authority, Laborde leaves the ultimate judgment to those who are knowledgeable of music's workings: "we abandon this assertion to the judgment of those who experience the sensations most intensely when they hear the instrumental music perfectly executed by an orchestra similar to the one of the Opera, the Concert Spirituel, or the Messieurs les Amateur."[202]

Harmony and the Ancients

Before leaving the topic of *harmony*, a brief discussion of the ancients' use of harmony is warranted, as it is briefly mentioned by Laborde. Harmony did not have the same practical associations as it does for us. Initially, harmony had a more metaphysical interpretation among the ancient Greeks. Aristotle says that *harmonia*, or "a working together," is the basis of both science and religion; it penetrates the entire cosmos and is therefore a universal property.[203] Herbert M. Shueller describes the ancient Greek concept of harmony: "it is both unity and concord in the abstract and the organic unity of the cosmos, or cosmic unity in the multeity, in the concrete."[204] He goes on to differentiate four separate, yet interconnected variations of harmony for the ancients: "All

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[199] Ibid., 36-7, "Il est bien juste que ce soit le droit de ceux qui ont passé leur vie à instruire, & à distinguer la vraie beauté, qui, dans tous les genres, ne consiste que dans les proportions."
[200] Ibid., 37, "il faut donc les connaître pour pouvoir en juger."
[201] Rousseau, *Dictionnaire*, 242, "les physique des sons est très borne dans le plaisir qu'il nous donne, & n'a que très peu de pouvoir sur le cœur humain."
[202] Laborde, II, 37, "Nous abandons cette assertion au jugement de ceux qui éprouvent les sensations les plus vives, lorsqu'ils entendent de la Musique instrumentale parfaitement exécutée par un orchestre semblable à celui de l'Opéra, du Concert-Spirituel, ou de Messieurs les Amateurs." Comment on Laborde's reference to orchestral music as the barometer of educated taste, not opera.
[203] Aristotle, *Metaphysics*, 986a, in Barker, *Greek Musical Writings*, II, 33.
[204] Schueller, 13.

examples among the Pythagoreans of the source of *Harmonia* indicate that many things or cases are really one. There were four harmonies: (1) of strings ("chords"), (2) of body and soul, (3) of the state, and (4) of the starry sky (the true original)."[205] From this perspective, it may be observed that the ancients treated harmony mainly as a speculative topic; it did not have the practical associations that concern Laborde, Rameau, d'Alembert, and Rousseau.

Laborde does not address the more metaphysical explanations of harmony; he only explores harmony's more practical aspects in the composition treatise. Therefore, he only deals with the first definition of harmony provided by Schueller, the harmony created by the *corps sonore*. Laborde acknowledges that the ancients "preferred the use of melody over symphony, the term that they gave to their so-called harmony."[206] Laborde explains that the ancients usually played their instruments at the octave or the unison, occasionally at the third or the sixth and rarely in three parts.[207] Laborde also suggests that the ancients sometimes gave the name harmony to melodies sung at the octave, or rather, "to the concert of voices which were performed at the octave and which was more commonly called homophony."[208] The foundation of his position in this matter comes from Seneca:

> Do you not see how many different voices a choir is composed of? However, from all these various sounds, only one sound results from them. There are some high pitched voices, some basses, and some mid-range. The voices of the men blend to those of the women; the accent of the flute becomes part of them. We do not distinguish its particular sound; rather we take in a general harmony.[209]

Laborde claims that this statement alone does not prove that the ancients knew harmony. The women sing in an octave higher than the men, the flutes play an octave higher than the women. Laborde says that "all these sounds in different octaves only make a single sound, but that does not prove that the ancients might have composed in several parts."[210]

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[205] Ibid., 14.
[206] Laborde, II, 33, "c'est la préférence qu'ils donnaient à la *mélodie* sur la *symphonie*; c'est ainsi qu'ils appelaient alors leurs prétendue *harmonie*."
[207] Ibid.
[208] Ibid. The term Laborde provides here is *antiphonie*. Rousseau explains that the Greeks use the term to mean voices performing the same part at different octaves, or homophony (Rousseau, *Dictionnaire*, 32).
[209] Seneca, epistle 84, "On Gathering Ideas." Lucius Annaeus Seneca, often called Seneca the Younger (4 BC – 65 CE), wrote a total of 124 letters, all addressed to Lucilius, often dealing with topics of morality.
[210] Ibid., 32, n., "tous ces sons à des octaves différentes ne font qu'un son unique, mais cela ne prouve pas que les Anciens composassent *à plusieurs parties*."

The singing and playing of the same melody at different octaves may have sounded harmonic to the ancients, but Laborde reasons that it was only anitphony, the name given by the ancients to singing at the octave.[211] Laborde concludes that the ancients were "far from suspecting the beauties of an art which, although still in its infancy, is immensely superior to what it was in their times."[212] Laborde's modern understanding of harmony, based on the principle of the fundamental bass and the use of tertian harmonic structures, stands in stark contrast to the ancient's suggestion of voices singing at the octave, thus creating a homophonic, rather than harmonic, texture.

Fundamental Bass

The material on *melody* and *harmony* in the *Abrégé d'un Traité de Composition* has very little practical information for the musician and composer to use. The speculative nature of these topics reflects the overall intent of the *Essai* as a reference work, not a pedagogical aide. However, there are a few chapters in Laborde's *Abrégé d'un Traité de Composition* in which more practical aspects of composition are addressed in a pedantic manner, such as in Laborde's presentation of the *fundamental bass*.[213]

As previously discussed, Laborde rightly credits Rameau with the creation the fundamental bass, and celebrates d'Alembert for perfecting it.[214] If d'Alembert's work in his *Élémens de musique* distilled an elixir of Rameau's ideas regarding his theory of the fundamental bass, then Laborde's explanation of the same subject may be seen as the essence of the material found in d'Alembert's work. Laborde has winnowed the material about the fundamental bass down into a concise overview. His intent is merely to provide a brief overview of the fundamental bass, as he has already referred the reader to d'Alembert's *Élémens* for a more in depth presentation of the subject.

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[211] Aristotle uses the term antiphony in his *Problems* in this manner. He calls singing at the octave antiphonic, while he considers sounds at the interval of the fourth or the fifth to be consonant (Aristotle, *Problems*, 19.16, trans. W. S. Hett, Aristotle in Twenty-Three Volumes, ed. E. H. Warmington, no. 15 (Cambridge: Harvard University Press, 1936), 389). Barker explains that the Greek word *antiphōnos*, translated as answering, is often used by Aristotle to distinguish the "Correspondence of the octave" from the other consonant intervals (Barker, *Greek Musical Writings*, II, 92, n. 47).
[212] Laborde, II, 33, "Ainsi ils étaient bien loin de se douter des beautés d'un art, qui, quoique encore dans son enfance, est infiniment supérieur à ce qu'il était de leur tems."
[213] Ibid., 45-6, Chapter 15.
[214] Ibid., 45.

Laborde commences his discussion with the following caveat: "the fundamental bass does not exist, if it does not prevail beneath the other parts."[215] His statement mirrors Rameau's hypothesis from the *Traité*; Rameau says that "the fundamental bass cannot subsist unless it is always found below the other parts."[216] A fundamental bass is a reflection, then, of the fundamental note of each individual chord—what today would be referred to as the root of the chord; therefore the motion of the fundamental bass reflects the movements of the roots of the chords. Allan R. Keiler defines the fundamental bass of Rameau to be that:

> fictitious (or analytic) bass line that consists of the roots of the chords of a succession of harmonies, an analytic device that Rameau used to represent the root movement of chords abstracted from the particular inversions that actually occur in any sequence of harmonies.[217]

As Keiler implies, the fundamental bass should not be confused with the actual bass part, which may called the thoroughbass, figured bass, or the basso continuo in the eighteenth century. The two are similar, but the actual bass part will often contain notes that do not equate with the chord's fundamental bass, such as in an inverted chord. There is a strong similarity between the fundamental bass and the basso continuo, as they both reflect the same sonorities. The fundamental bass provides a more speculative explanation of a chord, while the basso continuo is the practical realization of the sonority implied by the fundamental bass. Keiler uses the term "analytic" to describe the function of the fundamental bass, and in so doing delineates this dual function that the fundamental bass may serve as both music and analytic tool:

> The fundamental bass of Rameau makes use of musical notation as analytic vocabulary for analytic statements about music. The fundamental bass must thus conform to musical as well as analytic constraints. The fundamental bass, in other words, must already exist as a possible musical bass within the general musical style, since it is the musical notation available within the musical corpus that is transformed in function to serve as analytic notation.[218]

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[215] Ibid., "Elle ne peut pas exister, si elle règne toujours les autres parties."
[216] Rameau, *Traité*, 134, Gossett, 148, "Le Basse fondamentale ne peut subsister, si elle ne regne toûjours au-dessous des autres parties."
[217] Allan R. Keiler, "Music as Metalanguage: Rameau's Fundamental Bass," in *Music Theory: Special Topics*, ed. Richmond Brown (New York: Academic Press, 1981), 84.
[218] Keiler, 92. Keiler offers further insight into the difference between the basso continuo and the fundamental bass by suggesting a musical example where they are one in the same: "Consider the simplest possible situation, a musical example whose chords happen to be entirely in root position. The bass would then, presumably, have to be understood in two different ways: as a musical part, hence somemthing

Laborde provides support for the notion that the fundamental bass should be thought of in a more speculative manner, in order to verify a musical composition, although it uses the notation of actual musical practice: "the fundamental bass is not part of the music which can be played. It is only the proof of the composition."[219] Christensen adds that for Rameau, "the fundamental bass was a principle derived from and confirmed by musical practice. It was not an a priori postulate demonstrated by mathematical or philosophical arguments to be imposed heavy-handed from the outside upon music."[220]
Laborde claims that "all harmony cannot be good unless it is subjected to the fundamental bass."[221] Much in the same manner as Keiler, Laborde explains the fundamental bass as an analytic means to qualify a composition.

Laborde then provides the basic rules which should guide the movement of the fundamental bass. The notes of the fundamental bass will only support perfect chords, seventh chords, and the chord of the sixth and fifth (also known as a major sixth chord and, in modern language, a supertonic chord in first inversion), a first inversion seventh chord with the subdominant note in the bass, for example in the key of C: the chord of the sixth and fifth would be F, A, C, D. The seventh chord in Laborde's writing may refer to either the dominant function seventh chord, called a dominant-tonic, or a non-dominant function chord, a simple dominant. As compared to the chord of the fifth and sixth already described, the first inversion of the dominant-tonic seventh chord, for example

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intended by the the composer and part of the corpus that defines the subject of inquiry" (Keiler, 91). In other words, the bass must be considered as actual music, *musica pratica*. Keiler continues that the bass must also be considered "at the same time, as the result of analysis, that is, an analytic statement about harmonic progression—the musical substance has been turned into a metalinguistic representation of harmonic structure" (Keiler, 91). Therefore, the bass also represents a speculative analysis of the actual musical excerpt, *musica speculativa*. Rameau's theory of the fundamental bass, in attempting to reconcile theory and practice, provided a means by which music could be discussed analytically. Keiler explains that "the source of Rameau's analytic vocabulary was figured-bass theory; the basso continuo as a musical part and the figures that indicated interval content in the other parts were converted by Rameau into the analytic language of the fundamental bass" (Keiler, 100). Thus the language of music became tied to the language of the developing field of music analysis, and, according to Keiler, they were never truly separated in the works of Rameau (Keiler, 100). This analytic foundation for music that Rameau formulated helped prepare the way for the canonization of the masterworks during the nineteenth century, much in the same way the historical work being done by Laborde and others of his era aided in the establishment of a musical canon as discussed in chapter 2.

[219] Laborde, II, 46, "La basse fondamentale n'est pas une partie de Musique qui puisse être exécutée, elle est seulement la preuve de la composition."

[220] Thomas Christensen, "Rameau's *L'Art de la Basse Fondamentale*," *Music Theory Spectrum* 9 (1987), 32.

[221] Ibid., 46, "Toute harmonie ne peut être bonne, quand elle n'est pas soumise à la basse fondamentale."

F#, A, C, D, due to its leading tone, would be referred to as the chord of the diminished fifth and sixth.

Now to the rules—for a progression from one perfect chord to another, Laborde says there must be at least one common tone between the two chords to support the movement of the fundamental bass. For example, Laborde explains that if you want to move from the perfect chord on C to another perfect chord, the new chord must contain at least one of these notes: C, E, or G.[222] This would allow for a perfect chord built with a root note of F, A, E, or G.

Next Laborde refers to the fundamental bass motion of the chord of the fifth and sixth, which places the subdominant note in the bass. He explains that the chord that precedes one of these subdominant function chords must contain a common tone that is one of the subdominant's consonant tones. Laborde provides the following example: "in the chord F, A, C, D; F, A, or C must be present in the preceding chord. D, which is a dissonance, may be found there or not."[223]

The fundamental bass motion from the dominant and subdominant to a perfect chord are both movements by the interval of a fifth. The fundamental bass of the dominant, both the simple and the dominant-tonic, should descend by a fifth. The fundamental bass of the subdominant should ascend by a fifth. Laborde further explains that the movement from the dominant-tonic, or dominant seventh chord, to tonic is called an absolute repose, or perfect cadence. Furthermore, the fundamental bass motion of the subdominant to tonic is called an imperfect or irregular cadence, or as it is known today, a plagal cadence.[224]

Laborde's final piece of practical advice regarding the fundamental bass is that suspensions in the fundamental bass should be used "very sparingly."[225]

Laborde summarizes the fundamental bass by categorizing three distinct movements it can make:

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[222] Ibid., 45.
[223] Ibid., "Ainsi dans l'acord *fa, la, ut, re*, il faut que *fa*, ou *la*, ou *ut* se rencontrent dans l'acord précédent: *re*, qui est une dissonance, peut s'y rencontrer ou non."
[224] Ibid.
[225] Ibid., 46, "Quand le basse fondamentale syncope, c'est une licence qu'il ne faut se permetre que rarement."

- To ascend or descend by a third or a sixth.
- To ascend by a fourth or fifth.
- To ascend diatonically to a perfect chord.[226]

The first two categories reflect the motion from a perfect chord to a perfect chord and the cadential motions described above respectively. The third category refers to progressions such as the resolution of a deceptive cadence.

Laborde concludes that "these are, more or less, the principal rules of this system, which has created so much controversy in its origin."[227] He then ruminates on the importance for a young composer to learn the rules of the fundamental bass:

> We cannot overly recommend studying the system of fundamental bass with the greatest care, and to get used to its rules and their exceptions to the best of your ability. You must manage to know the rules so well that you no longer keep occupied with them when you compose. This has the air of a paradox, nevertheless it is not. A composer who would enjoy himself through learning the fundamental bass in everything he does, besides losing a considerable amount of time, would strengthen, by this constraint, the boundaries of his genius. When he then has attained a certain point of knowledge of the fundamental bass, he picks up a habit that he can no longer lose. He composes according to the rules of this bass and does not depend more upon himself to create anything which may be submitted to his course.[228]

Laborde could not provide a stronger endorsement to adopt the principals of the fundamental bass. When they become second nature to a composer, they will guide all that he does to help him invoke the genius within, truly an investment worthy of the eventual dividends. When a composer adheres to the rules of the fundamental bass, he will create beautiful harmony, and, in turn, beautiful melodies.

By contemplating the speculative origins of harmony, including the theory of the fundamental bass and its practical applications, Laborde has formulated a theoretic

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[226] Ibid., "1º. Monter u descendre de tierce ou de sixte. 2º. Monter de quatre ou de quinte. 3º. Monter diatoniquement sur un accord parfait."
[227] Ibid., "Voilà à-peu-près les principales regles de ce systême, qui a tant fait de bruit dans son origine."
[228] Ibid., "Nous ne saurions trop conseiller de l'étudier avec le plus grand soin, & de se familiariser le plus que l'on poura avec ses regles & leurs exceptions. Il ne faut parvenir à les connaître si bien, que pour ne plus s'en occuper lorqsu'on compose. Ceci a l'air d'un paradoxe, ce n'es est pourtant pas un. Un Compositeur qui s'amuserait à tirer la basse fondamentale de tout ce qu'il fait, outre qu'il perdrait un tems considérable, resserrerait, par cette contrainte, les bornes de son génie; mais quand il est parvenu à un certain point de connaissance de la basse fondamentale, il contracte une habitude, qu'il ne peut plus perdre, de composer selon les regles de cette basse, & il ne dépend plus de lui, de rien faire qui ne soit soumis à sa marche.

construct that is his own, yet is influenced by the wealth of materials available to him from contemporary scholars. Aside from Rameau, d'Alembert, and Rousseau, Laborde does refer to other contemporary writers on music, such as Euler and Padre Martini, in the *Abrégé d'un Traité de Composition*, but these references are addressed in the body of the translation itself. Therefore when regarding many of the concepts in Laborde's composition treatise, understanding of his conclusive stance on subjects such as harmony, melody, and the fundamental bass, comes from being juxtaposed with the varying positions of Rameau, d'Alembert, and Rousseau. When the investigation is extended into the rest of the *Essai*, Laborde's position becomes even clearer in this regard. Laborde strongly supports Rameau's theories; he has disdain, even contempt for Rousseau's, but he probably associates foremost to d'Alembert and the condensed view of Rameau's theories that is provided in the *Élémens de musique théorique et pratique.* From this standpoint, Laborde forges a musical theory steeped in the speculative tradition, yet strongly tempered with the actual needs of musical practice.

Although it is common to find a thriving symbiotic relationship between *musica speculativa* and *musica pratica* throughout the history of literature on music in Europe, this bifurcation does not account for all of the material in Laborde's *Abrégé d'un Traité de Composition*. In the following chapter, the exploration of this lacuna—material that defies a clear classification as either speculative or practical music—will further illuminate Laborde's contribution to music scholarship at the end of the eighteenth century in France as being a synthesis of not only *musica speculativa* and *musica pratica*, but of the historicism blossoming at the time as well.

CHAPTER 5

LABORDE'S *ABRÉGÉ D'UN TRAITÉ DE COMPOSITION*

In this chapter, we will consider the design and content of the *Abrégé d'un Traité de Composition* and how it compares to works by Laborde's contemporaries. Having previously reviewed Laborde's relationship to the music theory of the ancients and to that of the eighteenth century, it will be possible to address the *Abrégé d'un Traité de Composition* and its contents with a surer sense of its historical and cultural contexts. The tone of this composition treatise is not didactic. It is not the work of a dedicated pedagogue, nor is his work necessarily intended for serious students of composition. Laborde does not lay out all of the tools a composer would need to write a piece of music, and he often refers the reader to other works such as d'Alembert's *Élémens* for more a detailed explanation, as he did with his treatment of the fundamental bass. There are few practical instructions, even fewer practical exercises, and there are as many historical references as there are musical examples, if not more so. What value did Laborde's *Abrégé d'un Traité de Composition* then have to a reader at the end of the eighteenth century? How did he approach the subject of music theory, and how did it conform to and diverge from the majority of the music treatises of his era? And what value does it have for us at the beginning of the twenty-first century?

Laborde's Methodology

Several answers to questions of Laborde's methodologies have been considered regarding the *Essai* as a whole in the previous chapters. First, the work is an early attempt at creating a treatise on music that incorporates a historicist methodology. Second, it provides a comprehensive overview of the breadth of musical knowledge both contemporary and ancient at the end of the eighteenth century. Finally, Laborde explores a full range of musical topics, providing insights into the realms of both speculative and practical music theory. Christensen describes the difference between these two concepts

in Aristotelian terms: "speculative music theory concerned itself with formal causes, while practical music theory concerned itself with efficient causes."[1] In other words, the speculative branch of music theory deals with the nature of music's existence, while the practical branch of music theory addresses the use of these ideas in musical composition and performance.

For example, in the *Abrégé d'un Traité de Composition*, Laborde explores the tension created by these two approaches in regard to intervals, as discussed in Chapter 3 of this dissertation. The justly tuned intervals that are created using the tools of the speculative tradition are adapted to reflect the practice of using a tempered tuning system. Numerically, this is reflected in the use of ratios indicative of consonant intervals employing the numbers from Zarlino's *scenario* with, for example, a justly tuned major third indicated as 4:5. This is compared to the application of tempered tuning, which derives the major third as a result of the ratio 64:81 without it adhering to Zarlino's designation for consonant intervals as only containing the numbers 1 through 6.

As for the methodology Laborde employs, he does not offer any sort of description of it in the *Essai*. Laborde addresses the issue of his methodology however, albeit in a slight and passing manner in the "Forward" to the *Essai* when he says that "our only plan has been to collect in a single work, nearly all the good writings on music from several thousands of volumes that have appeared to us. This is the sole merit of this enterprise."[2] He even adds that "some of our readers perhaps will desire to find more method in this edition to the work."[3] The implication is that he is only attempting to collect and provide some inaugural classifications of this material. The decision not to formulate a specific methodology for the *Essai* then is Laborde's own, but that does not preclude the fact that he does employ a methodology, whether he did so willingly or not. The sheer scope of the *Essai* required it to have some organizational structure.

Laborde uses various methodological systems throughout the *Essai* that are common to musical writings of the eighteenth century, such as the methods used to

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[1] Christensen, *Rameau and Musical Thought*, 29.
[2] Laborde, I, v, "Nous n'avons eu d'autre projet que celui de rassembler dans un seul ouvrage, presque tout ce qui nous a paru écrit de bon sur la Musique, dans plusieurs milliers de volumes, Voilà l'unique mérite de cette entreprise."
[3] Ibid., "Quelques-uns de nos Lecteurs desireront peut-être trouver plus de méthode dans la rédaction de l'Ouvrage."

organize the dictionaries, encyclopedias, composition treatises, organologies, and pedagogical manuals of the era, to catalog the material in the *Essai*, yet none of these methodologies is indicative of the *Essai* as a whole. Laborde uses the alphabetic approach of lexicographers, such as Sébastien de Brossard and Rousseau,[4] and the encyclopedists Denis Diderot and d'Alembert[5] in *Livres V* and *VI* of the *Essai*, when he classifies the bibliographic entries of the various musicians, composers, and writers. Yet he also approaches these sections geographically by dividing the different books into chapters according to country and by historical era. He also uses this historical-geographic approach in the first *Livre* of the *Essai*, as he traces the historical development of music using geographic boundaries to provide structure and perspective. In this respect, he emulates the work of Burney.[6] Burney's methodology may also be seen in *Livre IV* of the *Essai*, in which Laborde recounts the evolution of the chanson from ancient times through the fifteenth century, using geographic as well as historical boundaries to delineate his narrative. He emulates the organological work of Marin Mersenne and Michael Praetorius[7] in his exploration of musical instruments in *Livre II*. The topical approach in *Livre III*, the *Abrégé d'un Traité de Composition*, is similar to the arrangement of information in the music treatises of eighteenth-century French writers such as Rameau and d'Alembert. Laborde's organization and presentation of the fundamental compositional materials such as intervals, melody, and harmony, provides Laborde a format, familiar to his audience, in which to present a great range of information—some of which is speculative, some is practical, and still other parts are not quite either, as this chapter shall address—under the rubric of "composition." Although

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[4] Sébastian de Brossard, *Dictionnaire de musique* (Paris: Christophe Ballard, 1703); Rousseau, *Dictionnaire*.

[5] Denis Diderot and d'Alemebert were co-editors of the *Encyclopédie* from its first volume in 1747 until d'Alembert resigned in 1758, Diderot remained the editor until its completion in 1769 (Verba, *Music and the French Enlightenment*, 74). Blom provides a colorful account of the early years of these two men and Rousseau before the advent of their venture on the *Encyclopédie* (Philipp Blom, *Enlightening the World: Encyclopédie, The Book that Changed the Course of History* (New York: Palgrave, Macmillan, 2005), 26-49).

[6] Charles Burney, *The Present State of Music in France and Italy* (London: 1773), and *A General History of Music from the Earliest Ages to the Present Period* (London: 1789). Of course the latter work was unknown to Laborde at the time of the *Essai*, so it was actually Burney who may have borrowed a methodology from Laborde.

[7] Marin Mersenne, *Harmonie universelle* (Paris: 1636-7), Books 12-18. Michael Praetorius, *Syntagma Musicum*, vol. 2, (Wolffenbüttel: E. Holwein, 1619). There is no evidence that Laborde was familiar with Praetorius's work. As he is a German writer, he is not afforded an entry in the bibliographic sections of the *Essai*.

he employs various methodologies that are used in other sources, the issue of recognizing his own approach is not one of great concern to Laborde.

Laborde leaves the more discerning methodological decisions regarding his *Essai* to others: "our only goal has been to prepare some materials for some combatants more determined than we and less devoted to their own peace of mind."[8] This is a choice in which Laborde has found solace. He says that "we are content with inviting them to observe that this work is only an essay, only an assembly of materials destined for the construction of a very large structure, and we hardly believe it without faults."[9]

Even accounting for Laborde's humble modesty, a common stance for French authors that often appears as an affectation in self-referential writings of the time, he understands that the task he has begun is vast and that he can only make a beginning. He even has an awareness that he is venturing into uncharted scholarly territory when he says:

> It is without doubt to desire that some more practiced pen than ours may undertake a work that will go even deeper into an art which becomes more interesting each day, through the progress that it made in France, above all for some years. The field is vast, and the subject is almost new, but we must resolve to fight the illustrious enemies, the *old lies and the modern mistakes*.[10]

If the materials in the *Essai* as a whole utilize various methodological approaches, has this multi-faceted procedure permeated the writing of his *Abrégé d'un Traité de Composition*? As mentioned above, Laborde organizes the chapters in his composition treatise by theoretical topic, such as intervals, cadences, scales, etc., as was the norm in French composition treatises of the eighteenth century. Yet, the material contained in his chapters does not conform easily to any one specific categorization. Therefore addressing the topics he presents, as well as the manner in which he explains them, be it speculative or practical, will provide further insight into his overall methodological approach.

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[8] Ibid., vi, "notre unique but a été de préparer quelques matériaux à des combattans plus détermines que nous, & moins amis de leur repos."

[9] Ibid., "Nous nous contenterons de les prier d'observer que cet ouvrage n'est qu'un essai, qu'un assemblage de matériaux destines à la construction d'un très-grand édifice, & que nous sommes éloignés de le croire sans défauts."

[10] Ibid., v-vi, "Il est sans doute à desirer que quelque plume plus exercée que la nôtre, entreprenne un ouvrage plus approfondi sur un art qui devient chaque jour plus intéressant, par les progrès qu'il fait en France, sur-tout depuis quelque années. Le champ est vaste, & le sujet presque neuf; mais il faut se résoudre à combattre de terribles ennemis, les *mensonges anciens, & les erreurs modernes*."

Portions of Laborde's composition treatise are speculative in nature. Laborde does not emphasize or investigate any of the more esoteric aspects of *musica speculativa* in his *Abrégé d'un Traité de Composition*, such as a contemplation of the music of the spheres; rather, he deals with the more concrete, mathematical aspects of speculative music such as tuning systems and the derivation of intervals as discussed in Chapter 3.[11] In this sense he has adapted the speculative tradition to suit his personal requirements in a manner similar to the French authors of the seventeenth century. Christensen describes the speculative work of musical scholars of the seventeenth century such as Descartes and Mersenne as follows:

> Among the problems they addressed were the classification of modes, the mathematical generation and hierarchy of intervals, and the evaluation of tuning systems. Occasionally these theorists would turn to more abstract topics such as the harmony of the spheres, modal affections, or the interpretation of ancient Greek music. But their primary focus was upon the *material* of musical practice.[12]

With this explanation of the treatises of the seventeenth century in mind, it may be suggested that Laborde's composition treatise also employs this methodology by demonstrating the speculative foundations of music theory according to the material of musical practice as it was at the end of the eighteenth century. This approach may also be found in the writings of his contemporaries Rameau, Roussier, and Tartini.[13] They utilized the mathematical certainty obtained through employing numbers to verify the musical experience of the ancients and the writers of the eighteenth century. In other words, *musica speculativa* is used to validate *musica pratica*, but the practice does not always adhere to the strict mathematics used in speculative theory. This is evident in Laborde's treatment of interval derivation and his proposed tuning systems. Joel Lester confirms this when he says that "accomplished musicians such as Rameau and Tartini always understood that their primary theoretical mission was to explain the musical practice of their time."[14] For this reason, theorists with experience in composition, such

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[11] Laborde does approach these more esoteric ideas elsewhere in the *Essai*. For example, he describes the correlation the Egyptians made between the notes of the scale and the planets and the days of the week. Laborde, I, 19-20.
[12] Christensen, 30.
[13] Rameau, *Génération harmonique*; Roussier, *Mémoire sur la musique des anciens* ; Tartini, *Trattato di musica*.
[14] Joel Lester, "Rameau and Eighteenth-Century Harmonic Theory," in *The Cambridge History of Western Music Theory*, ed. Thomas Christensen (Cambridge: Cambridge University Press, 2002), 772.

as Tartini, Rameau, and Laborde could allow for exceptions to their theories on the grounds of license or *bon goût*. This allowed *musica speculativa* and *musica pratica* to coexist in a symbiotic state that still allowed for discrepancies between the two methods.

While the speculative approach to music theory furnishes a solid mathematical foundation to music for theorists such as Laborde, the practice of music often creates situations that are not easily explained by the rules of speculative theory, such as in the derivation of the minor mode, thus creating tension in the relationship between *musica speculativa* and *musica pratica*. The practical topics that Laborde addresses in his *Abrégé d'un Traité de Composition*, such as cadences, enharmonic respellings, and counterpoint, do not follow the pedagogical model supplied by the eighteenth-century writers of guidebooks for the practice of playing the keyboard. Laborde's presentation of *musica pratica* focuses on the materials and the rules needed for musical composition. In this respect he begins with the rudiments such as pitches, intervals, scales, and the range of the voices; he then advances to particular aspects of musical composition such as the fundamental bass and cadences. Aside from a brief chapter on accompaniment,[15] Laborde does not present this practical material in a didactic manner typical of the handbooks of the period that aided the keyboard player, such as in the treatises of Rameau, Johann David Heinichen, Anton Bermetzrieder, Carl Philipp Emmanuel Bach, and Daniel Gottlob Türk.[16] Laborde broaches the topic of accompaniment in Chapter 26, in which he proposes the *règle de l'octave* [rule of the octave], a pedagogical tool used to teach keyboard fingering, figured bass, and the harmony of the diatonic scale to keyboard students in the eighteenth century, but at least half of the chapter veers from this pedagogical course to address Laborde's critique of Rousseau's definition of accompaniment in his *Dictionnaire*. The topical approach to composition that Laborde employs could also entail a litany of other compositional subjects such as harmony, counterpoint, rhythm, melody, form, etc. Of these, Laborde deals with certain of these

[15] Laborde, II, 60-63.
[16] Rameau, *Code de musique pratique* (Paris, 1760); Johann David Heinichen, *Der General-bass in der Composition* (Dresden: Heinichen, 1728); Anton Bermetzrieder, *Leçons de clavecin et Principes d'harmonie* (Paris, 1771); Carl Philipp Emanuel Bach, *Versuch über die wahre Art das Clavier zu spielen*, 2 vols. (Berlin: G. L. Winter, 1753-62); Daniel Gottlob Türk, *Klavierschule*; *oder, Anweisung zum Klavierspielen für Lahrer und Lernende, mit kritischen Anmerkungen* (Leipzig: Schwickert, 1789).

materials, such as harmony, melody, and counterpoint, but does not discuss others, such as rhythm and form.

The compositional materials Laborde addresses are similar to those found in the eighteenth-century composition treatises of d'Alembert, Johann-Joseph Fux, Johann Philipp Kirnberger, and Friedrich Wilhelm Marpurg.[17] These works provide the basic tools and rules of composition, yet not one of these works utilizes the same approach or addresses the same combination of materials. For example, Fux addresses the rules of counterpoint, while Kirnberger defines the basic types of consonant and dissonant chords used in harmonic music. Laborde's composition treatise is no different in offering a unique perspective on the material. For example, Laborde includes a chapter on counterpoint that outlines the fundamental rules for writing in two voices, including musical examples that present the manner in which to deal with the resolution of the dissonances most often encountered in this style of music.[18] This is an unusual topic for Laborde to handle, considering the great influence Rameau's harmonic paradigm had on the formation of his musical beliefs. In addition, most French treatises from this time concentrate on harmony, not counterpoint. Finally, counterpoint is often considered to be too learned of a style for popular consumption in France. Rameau does offer a chapter on fugue and imitation in the *Traité*,[19] a chapter that contains more rules than actual music; but Laborde's chapter, loaded with more musical examples than almost any chapter in the *Abrégé d'un Traité de Composition*, more closely resembles pages from the treatises of some of his German contemporaries such as Fux.[20] Laborde's inclusion of counterpoint, although an uncommon subject to be addressed in great detail in the composition treatises of eighteenth-century France, is more indicative of the encyclopedic nature of his work, rather than any desire to foster the propagation of counterpoint as a compositional tool in

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[17] D'Alembert, *Élémens*; Johann-Joseph Fux, *Gradus ad Parnassum* (Vienna, Van Ghelen, 1725) Johann Philipp Kirnberger, *Die Kunst des reinen Satzes*, 2 vols. (Decker unt Hartung, 1771-79); Friedrich Wilhelm Marpurg, *Handbuch bey dem Generalbasse und der Composition*, 3 vols. (Berlin: Johann Jacob Schützens, 1755-58).

[18] Laborde, II, 51-55, Chapter 23, "On Counterpoint."

[19] Rameau, *Traité*, 332; Gossett, 348.

[20] Fux, *Gradus*. Fux's work outlines the means to compose counterpoint in a step by step manner, within a clear pedagogical model that allows a student to learn to compose counterpoint. Laborde's account of counterpoint is by no means exhaustive, but it is one of the most didactic chapters in Laborde's composition treatise and for this reason calls to mind the work of Fux. As Fux wrote in Latin, Laborde does acknowledge *Gradus* in the *Essai*, and he describes Fux as an author of "the greatest reputation," (Laborde, III, 341).

France. And even though counterpoint was not particularly fashionable in Paris at the end of the eighteenth century, Laborde's presentation of the topic demonstrates that it has historical value as a compositional style and an intrinsic musical value as well. The inclusion of counterpoint in his composition treatise may also point to the higher educational status of his intended audience, as counterpoint was considered a learned art in the eighteenth century. While dilettantes may have believed that a fugue lacked expressiveness, thus making it inaccessible to untrained ears, Laborde's inclusion of the subject breaks it down into more accessible, component parts that showcase the manner in which the rules of counterpoint create musical lines that are very similar to the harmonic motion so prevalent in French treatises of the time. Thus Laborde opens up the foreign, learned style of counterpoint, so that it might be approached somewhat less hesitantly by his intended audience, if they so desired.

Having now discussed the topics that Laborde's *Abrégé d'un Traité Composition* shares with other music treatises of the eighteenth century, we can address the subjects that he has not included to see what these lacuna reveal about his work. As indicated above, Laborde's composition treatise is not meant for the practicing performer in the manner that the works of Bermetzrieder, Bach, and Türk are; it is not pedagogic. Therefore, Laborde has not intended his work to offer much in the way of guidance to the practicing musician. Certainly, Laborde aspires to educate, but due to the manner in which it is written, his truncated presentation of compositional material could make it quite difficult for a musician to compose a substantial piece of music or for a keyboard performer to learn much to improve his craft.

Another idea that Laborde does not address in his composition treatise is musical form. Forkel and Heinrich Christoph Koch are contemporaries of Laborde who include discussions of musical form in their treatises,[21] yet the closest Laborde comes to discussing form is a brief explanation of fugue,[22] which is more accurately a compositional process than a musical form. The absence of the subject of musical forms in Laborde's work indicates a far larger component of material that Laborde omitted, that

[21] Forkel, *Allgemeine Geschichte der Musik*; Heinrich Christoph Koch, *Versuch einer Anleitung zur Composition*, 3 vols. (Leipzig: A. F. Böhme, 1782-93).
[22] Laborde, II, 51.

associated with musical rhetoric,[23] otherwise known as *musica poetica.* As this tradition is outside the purview of Laborde's *Abrégé d'un Traité de Composition*, a brief explanation of *musica poetica* here will be sufficient. According to Patrick McCreless, the goal of *musica poetica* is "the musical heightening of a text, either in general, or by the means of figures in particular."[24] Musical rhetoric deals with the expressive qualities that the composer imbues in a piece of music that persuades or affects the listener. Rhetorical and musical ideas share a connection through the associations that can be made between music and speech; the "heightening of a text" that McCreless describes unites words and music, and the most prominent means to unite the words and music in a form of expression can be identified as melody. Neubauer explains that the writers in the eighteenth century that dealt with the affects "agreed that music ought to represent and arouse the emotions."[25] Rhythm, meter, and phrasing are all musical concepts that can be associated with the rules of rhetoric. Yet, Laborde does not explain any of these topics—rhythm, meter, or phrasing—in his composition treatise. While Laborde's composition treatise would not be categorized as *musica poetica*, there are two instances where he does address the issues of musical rhetoric, although not in any depth or detail. The first is found in his rejection of Rousseau's claim that melody is the expressive foundation of all music. Melody, as previously stated, is the most conspicuous means to join the rhetorical to the musical. Laborde acknowledges melody's ability to convey expression, but by placing it in a subservient role to harmony, he, in effect, denies the expressive powers of anything beyond the melody, such as phrasing and meter, which can be associated with the tradition of *musica poetica*. The second appears in a brief chapter on

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[23] This connection between forms and rhetoric is made by both Forkel and Koch. Scott Burnham describes the relationship between form and rhetoric in Koch: "in the still strong wake of a long tradition of rhetorical approaches to music, Koch worked hard to demonstrate that musical phrases were analogous to grammatically sound sentences" (Scott Burnham, "Form," in *The Cambridge History of Western Music Theory*, ed. Thomas Christensen (2002), 881).

[24] Patrick McCreless, "Music and Rhetoric," in *The Cambridge History of Western Music Theory*, ed. Thomas Christensen, 870. The figures he refers to are the *Affektenlehre*, a seventeenth and eighteenth century doctrine of affections. For a thorough investigation of the cultural history of musical rhetoric and music as language in the eighteenth century, see Karl David Braunschweig, "The Metaphor as Music as Language in the Enlightenment: Towards a Cultural History of Eighteenth-Century Music Theory" (Ph. D. diss., University of Michigan, 1997). See also Paul Henry Lang, "The Enlightenment and Music," *Eighteenth-Century Studies*, 1, no. 1 (1967), 93-108.

[25] Neubauer, 51. Neubauer actually investigates the difference between musical rhetoric and the theory of the affects that provides an interesting overview of the realm of *musica poetica* (Neubauer, 31-59).

design.[26] In this chapter Laborde quotes Rousseau's dictionary entry on the topic; he defines "design" as "the invention and the driving of the subject, the disposition of each part, and the general prescription of the entire work."[27] While at first this may sound like a vague definition of fugue from our modern-day perspective, Rousseau's use of the terms "invention" and "disposition" align his definition of design with the rhetorical tradition of antiquity. The five traditional parts of a speech according to the classical rules of rhetoric are the *inventio, dispositio, elocutio, memoria,* and *actio*.[28] The first two segments, *inventio* [invention] and *dispositio* [disposition], are clearly employed by Rousseau in his definition of design. Laborde goes on to explain that the term Rousseau has defined as "design" is often called "motive" by the Italians.[29] Laborde believes that the motive must be used throughout a piece to provide a touchstone for the listener. This statement comes as close as Laborde ever does to endorsing the importance of a melodic concept, even though he includes a biting coda—one that he has taken from Rousseau's Dictionnaire—that addresses a composer's ability to overuse melodic material. Laborde's inclusion of this criticism speaks to his faith in the expressive power of harmony, whereas Rousseau probably meant it as a criticism of poor compositional technique. He states that "Rousseau says quite correctly that it is a lack of design that allows its subject to be forgotten, but it is a greater error to continue with it until boredom sets in for the listener."[30] Aside from these two specific cases, there is also a geographical reason that Laborde may not engage in a thorough discussion of *musica poetica*: the main proponents of *musica poetica* in the eighteenth century were German—Johann Mattheson, Johann Adolf Schiebe, Koch, and Forkel among them.[31]

Many theorists of the eighteenth century cannot be categorized neatly within the domain of one aspect of music theory, whether speculative, practical, or rhetorical. For example, Rameau wrote works of both a speculative and a practical nature. Koch's work

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[26] Laborde, II, 49, Chapter 19, "On Design."
[27] Rousseau, *Dictionnaire*, 142.
[28] Neubauer offers an explanation of the five classical divisions of rhetoric in their relationship to the music of the seventeenth and eighteenth centuries, *The Emancipation of Music from Language*, 33-41.
[29] Laborde, II, 49.
[30] Ibid., "Rousseau dit avec grande raison, que c'est une faute de *dessein*, de laisser oublier son sujet; mais que c'en est une plus grande, de le poursuivre jusqu'à l'ennui." Laborde quotes this from Rousseau, *Dictionnaire*, 143.
[31] Johann Matheson, *Der Volkommene Capellmeister* (Hamburg: C. Herold, 1739); Johann Adolf Schiebe, *Der critische Musicus* (Leipzig: B. C. Breitkopf, 1745).

is both practical and rhetorical. Laborde follows in the tradition of these writers, a tradition that harkens back to Boethius, and includes Kircher and Zarlino, all theorists who attempted to integrate the practical and speculative aspects of music theory. Yet Laborde does more than try to bring the traditions of *musica speculativa* and *musica pratica* into concord with one another—he infuses a strong historical strand throughout his writing as well. For example, as discussed in Chapter 3, the topic of enharmonicism in the *Abrégé d'un Traité de Composition* is presented from numerous perspectives, alternating between the approaches of the various traditions, including the historical. Within a single chapter he addresses the speculative derivation of various quarter-tones, a description of the practical means by which a note may be enharmonically respelled to foster a modulation, and the ways the ancients employed the enharmonic in their music and the effect it provided.[32] In addition to his historical perspective on theoretical issues, Laborde also broaches topics in the *Abrégé d'un Traité de Composition* that are uncommon among the treatises of his day, such as the history of notation, the evolution of the modern practice of *chant sur le livre* from the liturgical plainchant tradition, and the use of tablature, all of which speak to this new historicist approach that will be dealt with in further detail within this chapter.

The use of historical material in a music treatise is not unique to Laborde or to the writers of the late eighteenth century. Even the earliest musical writings from Ancient Greece refer to earlier musicians and their works. For example, today Nicomachus remains one of the primary sources of information that we have on Pythagoras for whom there are no extant theoretical works. As Laborde is not the first author to consider the musical past, why do his deliberations on the music of the past stand apart from the majority of the writers who had come before him? How is his approach to music history different from his predecessors? Laborde's work, and that of a few of his contemporaries such as Forkel and Burney, differs from that of authors writing before the end of the eighteenth century in that they did not use historical materials from the ancients solely to validate their own speculative or practical traditions;[33] they were also interested in

[32] Laborde, II, 39-44, Chapter 14, "On the Enharmonic."
[33] Carl Dahlhaus observes that one of the reasons that historicism emerged from the *querelle des anciens et des modernes*. This was a dispute as to whether antiquity or modernity should be given prominence in literature and art. One of the results of the attempt to settle this dispute came from suggesting that every age

historicizing them. In other words, they did not view historical materials as didactic tools that could be utilized to teach specific lessons; rather, as the idea of history came to be considered as progressive, they believed historical phenomena could offer insights into contemporary society. They also concluded that historical phenomena had intrinsic value as well, reflecting a particular cultural, political, and social moment in time. Laborde approaches the materials of the speculative and the practical traditions through this new historical tradition. Thus to the musical traditions of *musica pratica* and *musica speculativa*, Laborde also invokes a new, historical musical idiom, that will be termed *musica historica*.[34]

This proposed methodology of *musica historica*, when associated with *musica speculativa* and *music pratica*, will reveal further aspects of Laborde's *Abrégé d'un Traité de Composition* that make it unique. As previously mentioned, Laborde covers much of the same material in his treatise that so many of his contemporaries do, such as derivation of intervals, rules for a strong fundamental bass, etc., yet Laborde's work exhibits a unique viewpoint. There are two perspectives that will not only clarify Laborde's understanding of the musical world at the end of the eighteenth century, but they will also help us ascertain the distinctive nature of his work. First, Laborde applies a historicist methodology to many of the topics he covers; second, he presents numerous topics that are not a part of a large number of the French theorietical works of the eighteenth century. Christensen believes in the necessity of exploring the cultural context and distinctive features of a work to be invaluable to a modern scholar of music theory's history:

> Greater insight will be gained when we look first at theories (like artworks) for what is unique and defining about them, not for what is common and invariant. Put another way, real historical understanding presupposes discovering relations within a cultural context before relations *across* cultural boundaries, although both are ultimately indispensable to the historian.[35]

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be understood on its own terms rather than be placed in comparison to one another. This is one of the tenets of historicism as it has been defined in this study. Dahlhaus adds that this compensation "nullified, or at any rate impaired, the contention of the classicists that standards for the modern age could be extracted from the legacy of Antiquity" (Carl Dahlhaus, *Grundlagen der Musikgeschichte*, trans. J. B. Robinson, 54).

[34] I have chosen the Latin term *historica*, meaning "narrative, account, or story," which is in turn derived from the Greek term *historìa*, meaning "knowing or learning by inquiry." I feel it is apt as it maintains the traditional Latin terminology often applied to the speculative and practical traditions.

[35] Christensen, "Music Theory and Its Histories," 18-9.

If, by Laborde's own admission in the "Foreword" to the *Essai*, the *Abrégé d'un Traité de Composition* is merely a collection of material, why would an assertion be made that it is actually more so—that it is representative of a watershed period in the history of music theory? First, this dissertation has only done as Laborde requested by continuing the work on the material which he has so graciously provided. Second, the idea of history as progress developed during this era. According to Tosh, the writers of the Enlightenment "sought to reveal the shape of history by tracing the growth of human society from primitive barbarism to civilization and refinement."[36] Laborde applies the linear evolution of history to music, but the notion of historical progress, however, only provides part of his historical understanding of music. For, if historical progress is the only consideration of the historian, then the historical phenomenon cannot be viewed as anything other than a precursor to the present. Tosh concurs with this position when he says that "if the past exists strictly to validate the achievements of the present, there can be no room for an appreciation of its cultural riches."[37] Laborde's historical writing is also informed by the need to understand the musical phenomena of the past on their own terms. The notion of history as progress coupled with the historicist desire to contemplate history as valuable in its own right may be observed in Laborde's writing, thus encouraging the suggested methodological approach of *musica historica* blending with the more traditional *musical speculativa* and *musica pratica*. Also, Laborde asks for scholastic conscientiousness as a means to lead to the truth, avoiding the "old lies and modern mistakes." While his scholastic rigor, from a twenty-first century perspective, may be sub-standard, he has completed a very comprehensive, thorough, and well-researched document for his time. He also recognizes that the "subject" is almost new. He could be referring to the subject of music itself, from his modern perspective as compared to the music of antiquity, thus referencing the full title of his work, *Essai sur la musique ancienne et moderne*. However, the new subject to which Laborde refers could just as easily be the nascent idea of history as a process, a chain of developments, rather than a series of selected dates and events.

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[36] John Tosh, *The Pursuit of History: Aims, Methods, and New Directions in the Study of Modern History*, 3rd ed. (Harlow: Pearson Education Limited, 2000), 13-4.
[37] Ibid., 14.

Laborde's use of various methodological approaches —the speculative, the practical, and the historical—may give the appearance that the material in the *Abrégé d'un Traité de Composition* is cobbled together in a haphazard manner. If it is remembered that his sole aim is to present the information, however, it permits him to use various methodological approaches, and the reader should not superimpose a pre-existing methodology upon his work.[38] This freedom from methodological restraints then reveals patterns in the material that suggest the amalgamation of the more traditional practical and speculative approaches and the newer historical concept that has been offered in this dissertation. And while Laborde does not suggest this methodology, it does have a contemporary precedent from the eighteenth century. As discussed in the introduction, Forkel established a methodology similar to the one suggested here. And although Forkel's methodology in his "Über die Theorie der Musik" does not include a historical element,[39] its five musical categories can be molded into a tri-partite division of music theory that corresponds to the categories of *musica speculativa* (physics and mathematics), *musica pratica* (grammar and rhetoric), and critical analysis (criticism) as observed by Christensen.[40] The critical analysis of music, as has been suggested, has

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[38] It is not as if Laborde himself is working in complete ignorance of the methodological tools in the field of music. On two facing pages of the first book of the *Essai*, Laborde describes both the tri-partite division of music given by Boethius: "*la musique mondaine, la musique humaine, et la musique instrumentalis*." Boethius's categorization clearly defines practical and speculative elements of which Laborde is aware (Laborde, I, 4). On the following page he presents a chart which he has taken from the works of Padre Martini which divides the music of the ancients into categories. It is actually a schemata taken from Aristides Quintilianus, *De Musica*, Book I, Chapter 5. The first division is two-fold. He divides the music into the "théorique et pratique." Laborde defines "la musique théorique ou spéculative" as "presenting the principles, causes, properties and effects of all pleasant harmony" (Laborde, I, 5, "La Musique *théorique* ou *spéculative*, présente les principes, les causes, les propriétés & les effets de toute harmonie agréable."). He defines "*la musique pratique ou active*" as "that which is achieved in pleasing us by performing with the precepts of *musique spéculative*" (Laborde, I, 5, "La Musique *pratique* ou *active*, est celle qui parvient à nous plaire en exécutant avec les préceptes de l'autre."). Laborde is well acquainted with both the speculative and practical approaches taken toward music, although he never mentions them by name within the body of the *Abrégé d'un Traité de Composition*.

[39] Although the outline Forkel provides in the *Theorie der Musik* does not address history directly, Forkel was quite interested in the scholarly study of music as a historical phenomenon. He explored that interest in his historical music treatise, *Allgemeine Geschichte der Musik* [Treatise on the History of Music]. See Duckles, "Johann Nikolaus Forkel."

[40] Christensen, "Music Theory in Clio's Mirror," 12. Forkel does develop a historical methodology in his *Allegemeine Geschichte der Musik* that may be superimposed upon his division of music theory. Forkel describes man's musical evolution in three stages. The first stage occurs in societies where rhythm is the music's only organizing factor. The second stage, according to Duckles, "was marked by the beginnings of a sense of tonal relationships, the specific identification of sounds with feelings, the employment of rudimentary scales, and the invention of simple melodic patterns" (Duckles, "Johann Nikolaus Forkel," 284). The final stage related to man's invention of harmony and the modern system of tonality. Forkel's

strong ties to historicism. The emergence of a canon of masterworks fostered the need for the critical analysis of music. Regarding this, Leslie Blasius suggests that:

> the notion of a "canon" of great instrumental works comes into being as a consequence of a conscious step over a historical divide. Likewise criticism (of which analysis stands as a later reconciliation with theory) from its inception concerns itself deeply with the temporality of the canonical artifact.[41]

Historicism, as it developed at the end of the eighteenth century, provided the right cultural framework for the creation of a class of masterworks, thus divorcing the literature performed at concerts from the contemporary and providing a corpus of materials available to the analyst, separate from the practical concerns of the performer and the speculative considerations of music's origins that engaged the attention of the scientists of the Enlightenment.

When this historicism, as suggested above, is incorporated into the speculative and practical traditions extant in the majority of French music treatises at the end of the eighteenth century, the organization of and the specific materials presented in the *Abrégé d'un Traité de Composition* are far easier to categorize and discuss. Viewing the contents of the *Abrégé d'un Traité de Composition* as a whole, the majority of chapters may be seen as belonging either to the speculative tradition or the practical tradition, or even a combination of the two. If the chapters of the *Abrégé d'un Traité de Composition* were to be divided into the speculative and the practical, the materials in Chapters 8, 10, 15-23, and 25-27 are more practical in nature. These chapters, which are on subjects such as counterpoint and the fundamental bass, impart basic instructions for the musician that enables him to compose a piece of music. The materials in Chapters 1-7, 9, and 11-14 are speculative in nature. These chapters contain information about the derivation of the musical tools that the composer employs. Working within a speculative/practical dichotomy of music theory, the assignment of Laborde's chapters in this manner provides a framework which furnishes some insight into his text, but it does not provide an

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categories reveal an inherent belief in history as progress, yet as with Laborde, Forkel's writing was also tempered with a historicist attitude which allowed for the past to stand on its own merits. Duckles explains that Forkel believed that "our understanding of the music of a remote culture must not be based solely on the fragmentary reports of its historians; it must take into account the society, the economic conditions, the state of the arts and sciences, and above all the nature of the music itself, in so far as it can be recovered." (Duckles, "Johann Nikolaus Forkel, 284).

[41] Leslie Blasius, "Mapping the Terrain," in *The Cambridge History of Western Music Theory*, ed. Thomas Christensen (Cambridge: Cambridge University Press, 2002), 40.

accurate description of the entire work's true character, as all of the information he supplies cannot be categorized in this bipartite manner. Often, a single chapter will contain both speculative and practical aspects that are then enhanced with historical material as well, such as in the chapter on enharmonicism discussed above.

Thus, as a bipartite expression of music theory as a continuum between a speculative and a practical tradition does not account for large portions of information in Laborde's *Abrégé d'un Traité de Composition*,[42] or in his *Essai* as a whole, a new methodological construct must be established to accommodate all of the material in Laborde's work. One example of this sort of topic comprises an entire chapter from the composition treatise; Chapter 24, "On *Chant sur le livre*," is neither speculative, nor practical in nature, but rather historical. As a means to formulate an identity for the hypothesized approach of *musica historica* that may be discovered in Laborde's composition treatise, this chapter will address several topics that illustrate Laborde's historical approach to music theory. The topics are notation, scales, chant, and tablature. The method of this chapter is the same as in the previous two chapters. The topics have been taken from those in Laborde's *Abrégé d'un Traité de Composition*. Through this more thorough examination of Laborde's historical methodology, it will be shown that he contributes a third means of assessing the materials of music theory at the end of the eighteenth century.

Musica Historica* in the *Abrégé d'un Traité de Composition

Notation

Laborde addresses notation in Chapter 7 of the *Abrégé d'un Traité de Composition*. Laborde does not handle the topic from a practical standpoint. To this end, he assumes that the audience for his composition treatise has a basic understanding of modern musical notation when he says that "we do not enter into the details of the clefs or the values of the notes here. We suppose our readers to be musicians enough to already be educated in them."[43] As Laborde provides no demonstration of the various clefs and notes used in eighteenth-century notation, it becomes clear that his treatment of the

[42] Laborde, II, 55-56, "Chapter 24, On *Chant sur le livre*."
[43] Laborde, II, 25, "Nous n'entrons point dans le détail des clefs, ni des valeurs des notes; nous supposons nos Lecteurs assez Musiciens pour en être instruits."

subject should not be categorized as *musica pratica*. Laborde's explanation for the creation of music's notational system stems from a very practical matter, however: the need for simple memory aides for the musician. He says that as "we were not content having invented the names for the sounds, we believed it necessary to portray them to the eyes as a memory aide."[44] Laborde adds that "for this reason, we acknowledge different characters or figures, more or less easy to understand and remember."[45] He acknowledges that the notational systems have changed and developed over time and from place to place as they have been produced "in accordance with the spirit of the nations who have used them, or rather, according to the degrees of perfection that the art of music has received from time to time."[46] While his description of notation allows for the constant transformation that is a reflection of the musical practice, his discussion does not provide insight into the very nature of music's existence as is required by our definition of *musica speculativa*. Laborde presents a practical subject in music theory in a setting that is neither purely practical, nor solely speculative.

This non-practical approach is indicated not only by the divorce Laborde creates between the material from any substantial musical examples or compositions,[47] but also from Laborde's strategy of placing modern musical notation within its proper historical context. Over the course of two pages, Laborde outlines the history of Western music notation. He briefly describes four periods of notational evolution over the course of more than two thousand years: 1) the ancient Greeks, 2) the early Middles Ages (pre-Guido d'Arezzo), 3) the redesign of Guido, and 4) the five line staff. Laborde does not delineate these four categories himself; they have been superimposed upon the information that he has provided in an attempt to show that he is engaged in the process of writing history that demonstrates the historical progression of music notation.

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[44] Ibid., II, 24, "On ne se contenta pas d'avoir inventé des noms pour les sons: on crut nécessaire de les peindre aux yeux, pour soulager la mémoire."

[45] Ibid., "on convint pour cela de différens caracteres ou figures plus ou moins faciles à comprendre & à retenir."

[46] Ibid., "selon le génie des Nations qui s'en sont servies, ou plutôt selon les degrés de perfection que l'art de la musique a reçus de tems en tems."

[47] Laborde does provide a brief musical example in this chapter, but it is provided as a means to illustrate the use of an eight line staff by musicians before Guido d'Arezzo. Laborde also does refer the reader to the musical examples at the end of this book in the *Essai* to see examples of a well-notated musical composition.

The Greeks, according to Laborde, notated music with the letters of their alphabet. The letters were "whole, cut off, upright, reversed, etc., and marked on the same line above each syllable of the text with which they were to be sung."[48] Laborde then references Athenaeus who has reported that an Athenian, Stratonicus, had invented the pitches as well as a means to notate them.[49]

Laborde then discusses a manuscript that he viewed at St. Sauveur of Messine which he describes as being over 800 years old. He dates the eight-line staff to establish that it pre-dates the work of Guido. This treatise, which he does not identify by name, employed a notational system which, in Laborde's mind, "proves they were looking for a way to simplify the ancient method."[50] The system consists of drawing eight, equidistant, parallel lines. At the head of each of these lines a different letter was positioned. This made each line suitable to label the sound which corresponds to its letter. The text would be written below the eight parallel lines. Finally, above each syllable, a dot would be placed upon the line that corresponded to the note that the composer wanted to assign that

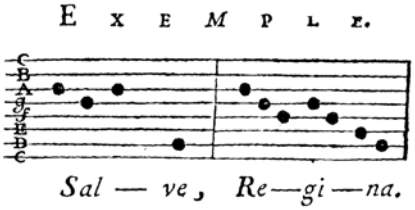

Figure 5.1

Eight-line staff, circa ninth century CE

syllable. Laborde supports this method for its ability to "distinctly label the high and low sounds."[51] Laborde has provided a small example of this type of notation, seen in Figure 5.1.[52]

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[48] Laborde, II, 24, "Ces lettres étaient entieres, coupées, droites, renversées, &c. & se marquaient sur une même ligne, au dessus de chaque syllabe du texte qu'ils voulaient chanter."

[49] Athenaeus, *Deipnosophistae*, 8.352, trans. and ed. by Charles Burton Gulick, in 7 vols., *Loeb Classical Library*, ed. T. E. Page, vol. 4, (London: William Heinemann, Ltd., 1927), 94-7.

[50] Laborde, II, 24, "Un manuscrit, que l'on peut voir à Saint-Sauveur de Messine, & qui a plus de huit cent ans ancieneté, prouve que l'on chercha à simplifier l'anciene méthode."

[51] Ibid., 25, "Cette méthode avait cela de bon, qu'elle marquait distinctement les sons aigus & les sons graves."

[52] Ibid., 24. The eight-line staff he presents bears a strong resemblance an eight-line staff found in the *Musica enchiriadis*, trans. Raymond Erickson, Music Theory in Translation Series, ed. Claude V. Palisca, 8. There are a couple of differences between the two, however. Laborde's example uses the text *Salve*

Laborde then chronicles Guido's role in the transformation of the notational system. About the year 1024, Laborde says, Guido d'Arezzo reduced the number of lines on the staff from eight to four and began to use the spaces between the lines to notate music as well. Laborde explains that in doing this Guido "had as much range in four lines, as they previously had in eight."[53] As with the previous eight-line system, Guido continued to use dots to represent the notes. According to Laborde, the dots were used to indicate what would come to be called notes because at that time the music being notated was "plainchant, in which all of the notes are of equal duration."[54] For this reason, diverse marks were not required to notate the differences in musical duration. Almost as an editorial aside, Laborde indicates that it is from this notational system that employs dots that the name counterpoint was derived, literally point, or dot, against point.

During Guido's era, when the practical music system reflected a vocal repertory that employed the range of approximately two octaves, comprised of fifteen pitches, the four-line staff system was sufficient to accommodate the practice of the day. Laborde explains that through the following centuries, as musical practice expanded to incorporate a larger range of voices and instruments, the notation system had to be modified again. There had to be some means to distinguish between the music intended for the high-pitched and low-pitched parts. The first thing that was done to accomplish this, according to Laborde, is that a fifth line was added to the four-line system of Guido. In addition to the development of the five-line staff, the clef system was refined.[55] The clefs indicated not only the notes of the staff, but also the range in which the notes were to be played. These developments in musical notation produced a system that could distinguish a range of seven and one-half octaves. Laborde then notates the individual ranges of the

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Regina, while the text for the eight-line staff in the *Musica enchiriadis* is *Allelulia*. The example in the *Musica enchiriadis* also shows four separate parts in parallel organum; Laborde's example only shows one voice part. These variants are slight, so while it is unlikely that he is referring to the music in the *Musica enchiriadis*, the similarities between the two suggest that the treatise Laborde refers to was written during the same era, the late ninth to early tenth centuries. As Laborde has provided no more information on the original source, the exact identity of his reference has been hard to determine with the available resources.

[53] Ibid., 25, "Vers l'an 1024, Gui d'Arezzo réduit ces huit lignes à quatre, & se servit des interlignes, aussi bien que des lignes; & par ce moyen il eut autant d'étendue en quatre lignes, qu'on en avait alors en huit."

[54] Ibid., "Il est constant qu'il ne se servit que de *points*, pour représenter ce que nous appelons aujourd'hui des *notes*; parceque la Musique n'étant alors que le *plainchant*, dont toutes les notes sont égales."

[55] While Laborde does not provide any practical explanation of the earlier clef system at this point in the treatise, he does offer descriptions of the F clef and the C clef used on the four line staff for plainchant notation in his chapter on *chant sur le livre* which is examined later in the present chapter.

instruments in order to illustrate this expanse.[56] He also indicates the approximate ranges of the human voices.[57]

In his explanation of notation, Laborde has contributed information of a practical nature for the composer in this section, mainly the ranges of the instruments and the voices, but the majority of the material about notation, while based on practical developments, does more to create a proper historical context for modern notation than to explain how to recognize and use it. By his own admission, he expects that his audience would have a working knowledge of this subject matter, so there is no need for any practical treatment of the material. It is from a historical viewpoint that Laborde offers the evolution of the art of musical notation, thus, it is hoped enriching our insight on the subject.

Scales and Solfège

Scales. Upon a cursory glance the material in Chapter 12 of Laborde's *Abrégé d'un Traité de Composition*, entitled "On the Scales of the Greeks and of Ours," may appear to be solely practical, but a closer inspection reveals not only a speculative slant to the material, but Laborde also creates a historical bridge between the ancient and the modern, as he did in his narrative on notation. He achieves this through an exploration of the evolution of solmization.

Laborde defines a scale in music as a "diatonic succession of notes."[58] Then, rather than use the scale to demonstrate the rule of the octave and the figured bass symbols—a subject he addresses later in the treatise in a chapter on accompaniment, as already discussed—he describes a diatonic scale for the ancient Greeks as being composed of two conjunct tetrachords (Figure 5.2).[59] Laborde claims that the diatonic scale of the Greeks was simpler than the modern diatonic scale. The diatonic scale of the ancients is formed from two conjunct diatonic tetrachords in which the half-steps are

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[56] The ranges of the instruments are provided on an extensive and detailed chart provided between pages 24 and 25 of the *Abrégé d'un Traité de Composition*. The lowest pitched instrument being the double bass (*contre basse*) and the highest pitched instrument is a small vertical flute (*flûte du tambourin*). This material is discussed in Appendix C.

[57] The ranges of the voices are provided in Chapter 8 of the *Abrégé d'un Traité de Composition*. He divides the voices into seven classes which span the range of four octaves and a fifth.

[58] Laborde, II, 37, "Une *Échele* est, en Musique, la succession diatonique des notes."

[59] Ibid.

located at the low-pitched end of both the tetrachords—an example of this type of tetrachord is B C D E. The modern diatonic scale is formed of two disjunct tetrachords that place the half-steps at the top of both tetrachords, rather than at the bottom—an example of this type of tetrachord is C D E F. The proof Laborde provides for his assertion that the ancient Greek diatonic scale was simpler, which he credits to d'Alembert, is that it is composed from a single mode.[60] Following d'Alembert's model, Laborde explains that the modern diatonic scale, on the other hand, requires two separate modes for its creation.[61] Laborde provides two diatonic scales, one ancient and one modern, to demonstrate his point. The ancient diatonic scale he supplies is B C D E F G A. The modern diatonic scale is built on C: C D E F G A B C.

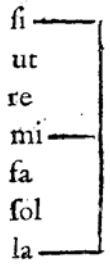

Figure 5.2

The two conjunct tetrachords of the Greek "diatonic scale"

By introducing the fundamental bass of both scales, Laborde furnishes a speculative derivation of the diatonic scale. The fundamental bass of the ancient diatonic scale contains C, G, and F, all of which belong to the key of C.[62] We may label these fundamental bass notes in the key of C as the tonic, dominant, and subdominant, respectively. It is through the use of these three notes, and the fundamental bass motion of a fifth that they represent as they are generated by the geometric triple progression, that Laborde defines the key. With the modern diatonic scale, a fourth note is needed in the fundamental bass in order to account for all of the notes of the scale. The sixth note of the scale, in this instance the note A, must be harmonized with the note D, which is not

[60] D'Alembert, *Élémens* (1752), 27-34. D'Alembert used this method, which he, in turn, had borrowed from Rameau's *Démonstration*.
[61] Ibid., 34-39.
[62] Laborde, II, 37-8.

one of the three definitive fundamental bass notes in the key of C. The note D, however, is the dominant note in the key of G.

For this reason, Laborde has declared that although the ancient scale may be performed without pause, the two disjunct tetrachords of the modern scale create a forced rest after the fourth note.[63] He indicates that this is because the first tetrachord of the modern scale is in the original tonic key, while the second is in the dominant key. D'Alembert explains that the scale is literally divided into two parts. The first grouping consists of C, D, E, F, G, in which the corresponding fundamental bass is C, G, C, F, C. The fundamental bass motion of F to C creates the impression of a cadence. The second construction is then begun by restating the G, then followed by A, B, and C. The fundamental bass for this half is G, D, G, C, respectively.[64] This two-part formulation then uses two keys to form a modern diatonic scale; in this example, the first part is in the key of C and the second fragment has modulated to the key of G. This fact leads Laborde to state that the ancient scale was indeed simpler.[65]

Laborde's application of the fundamental bass to the Greek scales is a sagacious approach to their music, as the Greek scales were melodic entities in both theory and practice. The assumption that the Greek diatonic scale resulted from fundamental bass motion of a fifth—motion resulting from the natural principle of the triple progression that provides the foundation for the major scale in Rameau's theories—even if they were unaware of it, connects the Greek practice to the modern practice through a speculative means. Yet, he understands that the Greeks did not have the same knowledge of harmony or the resources of the fundamental bass available to them. This application of the concept of harmony and the use of the fundamental bass as representative of the

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[63] Ibid, 38.

[64] D'Alembert, *Élémens* (1752), 36-7. This is a slight variant from Laborde's account which suggests the pause occurs after the fourth note of the diatonic scale. D'Alembert says that it is after the fifth note because taken with the fourth note a cadence is heard. The fifth note of the scale is then repeated as the first note of the second half of the modern diatonic scale.

[65] This process calls to mind the accompaniment pattern for the *règle de l'octave* [rule of the octave], a pedagogical device created at the beginning of the eighteenth century. Rousseau defines the rule of the octave as a "harmonic formula…which ascertains, from the diatonic motion of the bass, the appropriate harmony on each scale degree of the key" (Rousseau, *Dictionnaire*, 405, "Formule harmonique…laquelle determine, sur la marche diatonique de la Basse, l'Accord convenable à chaque degree du Ton."). Rameau did use this technique of shorthand for teaching proper fingering to prove that the harmonic motion through the scale both ascending and descending was a result of a fundamental bass motion of perfect fifths (Christensen, *Rameau and Musical Thought*, 171-3).

prescribed harmonic motion common to the music at the end of the eighteenth century to the Greek diatonic scale is an anachronism. Laborde has imposed a temporality to his analysis of the diatonic scale that establishes a historical bearing for his discussion. Labored provides further insight into the historical progression of the diatonic scale by engaging in the treatment of solfège. This affords Laborde the opportunity to discuss historical musical phenomena from the Middle Ages, a period that was often viewed by the scholars of the Enlightenment as uncultivated. Yet Laborde's burgeoning historicism allowed him to approach the Middle Ages as having intrinsic historical value worthy of investigation.

Solfège. Laborde discusses the evolution of the solfège syllables that have come to be associated with the diatonic scale in the eighteenth century.[66] The names that the Greeks originally assigned to the sounds were the labels given to the individual strings on the kithara. Laborde indicates that a change to a syllabic solfège system was made because "these [Greek] names were more appropriate for the practice of the instruments than for song. How can one pronounce "proslambanomenos" on a single tone?"[67] The new, shorter names given to the notes, according to Laborde, were *té, ta, tè, tô, ta, tè, tô*; these labels correspond to the modern solfège as *si*, *ut*, *re*, *mi*, *fa*, *sol*, *la*, respectively.[68] When the Romans adopted the Greek musical system, they assigned the first fifteen letters of their alphabet to the fifteen notes created from the Greek system of four joined tetrachords.[69]

In the sixth century CE, Pope Gregory found this system to be too cumbersome for the musical practice of his time and reduced the number of letters to seven: A, B, C, D, E, F, and G. Thus Gregory had "changed the tetrachords of the Ancients into a

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[66] Laborde does not present this material in the same chapter as that concerning the derivation of the Greek and the modern diatonic scales, Chapter 12, "On the Scale of the Greeks and Ours." Nor is the information found in contiguous chapters of the text, rather the majority of the material discussed in this section of the paper is taken from Chapter 6, "On Melody." This reinforces Laborde's own admission that the *Essai* does not have a strict methodology by design. Yet, it does not refute my belief that the thread of historical material unties the practical and speculative aspects of music theory in nascent form of music historiography. The information on solfège comes before the material on the diatonic scales of the Greeks and the moderns, so the ideas contained in the material on solfège are easily accessible when the discussion of the creation of the diatonic scale of the Greeks commences.

[67] Ibid., 20, "Ainsi ces noms étaient plus propres pour la pratique des instrumens, que pour celle du chant; car comment pouvoir prononcer *proslambanomenos* sous une seule note?"

[68] Ibid. Laborde does not indicate the source for his description.

[69] Anicius Manlius Severinus Boethius, *De institutione musica* (c.500), Book 4, chapter 16.

heptachord, or system of seven notes."[70] Gregory's modifications endured until the middle of the eleventh century. At that time, Guido d'Arezzo "used six syllables *ut, re, mi, fa, sol, la* that he took from the Hymn of Saint John."[71] The name of the seventh note, *si*, according to Laborde, is an invention of the previous century. He credits the application of the name *si* to the seventh scale degree to a seventeenth-century musician named Le Maire.

Le Maire may not have actually been the first to use the syllable *si* however. Laborde cites two instances in which another musician may have employed a solfège syllable on the seventh scale degree before Le Maire. First, Laborde mentions an account from the Abbé Brossard of the existence of a manuscript published in Basil in 1501. This manuscript allegedly has a wooden plate at the beginning in which an engraving clearly displays the labels *ut, re, mi, fa, sol, la, si* in Gothic letters.[72] Brossard believes the manuscript to be housed in the library of the College of the Four Nations, but as Laborde was unable to locate the treatise and substantiate this account, he discerns the account to be mere rumor. Second, Laborde introduces a Flemish national, named David Mostart, who worked as a musician at the end of the seventeenth century and who wrote a small music treatise in 1598. In this work, Mostart substitutes his own labels for the syllables provided by Guido: *bo, ce, di, ga, lo, ma, ni, bo*. Although Mostart does not use the syllable *si*, he has extended the use of solfège syllables in his systems to include the seventh scale degree, thus spanning the range of an octave. Rasch has confirmed that Mostart did publish a practical music treatise, *Korte onderwysinghe van de musyk-konste*,[73] but it has been lost to us. Rasch explains that the treatise did indeed contain a proposal for a solimization system for all seven notes in the octave.[74] Laborde hypothesizes that Mostart's addition of the syllables *ni* and *bo* to represent the seventh and octave notes of the diatonic scale may have come to Le Maire's attention. Le Maire may have then simply substituted the *si* for Mostart's *ni* and, in so doing, "he may have

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[70] Ibid., 38 "Ce fut Saint-Grégoire qui changea les *tétracordes* des Anciens en un *heptacorde* ou systême de sept notes."
[71] Ibid, 20, "Cet usage substitute jusqu'au milieu du onzième siecle, que Gui d'Arezzo…se servit des six syllabes *ut, re, mi, fa, sol, la*, qu'il prit de l'hymne de Saint Jean."
[72] Ibid, 22.
[73] David Mostart, *Korte onderwysinghe van de musyk-konste* (Amsterdam, 1598).
[74] Rudi A. Rasch, "Mostart, David," in *The New Grove Dictionary of Music and Musicians*, 2nd ed.

contributed greatly to the introduction of the practice that caused him to be taken for its inventor."[75]

These stories are not the only references scholars at the end of the eighteenth century have made about musicians other than La Maire using solmization on the seventh scale degree. Rousseau recounts that sources have credited this accomplishment to a man named Vander Putten, but as Rousseau has no knowledge of him, he cannot speak to the veracity of the claim. Rousseau believes that if Le Maire truly was the first to use the syllable *si*, he should receive those accolades, and he sees no reason why this should not be the case. Rousseau does add however, that if the intent of these accolades is to acknowledge "the first man to have seen the necessity of a seventh syllable, and consequently added one, it is not necessary to have done a lot of research to see that Le Maire does not deserve this title at all."[76] In other words, Rousseau reiterates Laborde's hypothesis that other musicians have used a syllable for the seventh scale degree before Le Maire, such a Mostart's use of *ni*, which he transformed into the syllable, *si*, which gained favor in France during the eighteenth century.[77]

From a practical standpoint, the addition of a solfège syllable for the seventh scale degree made the study and performance of music far easier. The addition of the syllable *si* to the solmization system suppressed the need for mutations. Rousseau refers to Mersenne[78] in whose writings there are several instances where he explains "the necessity for this seventh syllable in order to avoid the mutations."[79] In the time between Guido's solmization of the first six notes of the diatonic scale and the assignment of the label *si* to the seventh scale degree, the use of solfège could complicate a musical passage rather quickly. The reason for this is that Guido's original six syllables only contain one half-

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[75] Laborde, II, 23, "il ait beaucoup contribué à en introduire la pratique, ce qui l'en aura fait passer pour l'inventeur."

[76] Rousseau, *Dictionnaire*, 431, "mais si le véritable inventeur est celui qui a vu le premier la nécessité d'une septième syllabe, & qui en a ajouté une en conséquence, il ne faut pas avoir fait beaucoup de recherches pour voir que Le Maire ne mérite nullement ce titre."

[77] Rousseau adds that Mersenne "attests that several men had invented or put into practice this seventh syllable about the same time…but some named the syllable *Ci*, others *Di*, others *Ni*, others *Si*, others *Za*, etc.," (Dictionnaire, 431, "il témoigne que plusieurs avaient inventé ou mis en pratique cette septième syllabe à-peu-près dans le même tems…mais que les uns nommaient cette syllabe *Ci*, d'autres *Di*, d'autres *Ni*, d'autres *Si*, d'autres *Za*, &c."). This material is located in Marin Mersenne, *Harmonicorum libri*, *in quibus agitur de sonorum natura* (Paris, 1635-6), 170-2.

[78] Ibid.

[79] Ibid., "on trouvera en plusieurs endroits des écrits du P. Mersenne la nécessité de cette septième syllabe, pour éviter les Muances."

step, from *mi* to *fa*, while the diatonic scale contains two, *mi* to *fa* and *si* to *ut*. Rousseau states that since Guido only applied six syllables to the scale, and the scale contains seven separate pitches, "by necessity, you must repeat the name of one of the notes."[80] The mutation is the means by which this may be accomplished so that the basic intervallic structure of the diatonic scale may be maintained. Thus the singer had to mutate, or *muancer*, the scale by transposing the location of the syllable *mi* to indicate a new half-step in order to accommodate this lacuna in Guido's system.

Laborde provides a practical guide to teach the singer how to mutate.[81] Laborde begins with the diatonic scale as it would be sung in the eighteenth century: *ut*, *re*, *mi*, *fa*, *sol*, *la*, *si*, *ut*. He then explains that in order to sing this properly with solfège syllables, the half step from *si* to *ut* must be sung with the syllables *mi* to *fa*. Laborde says that the mutation begins a tone before the two notes that comprise the half-step, so that *re*, *mi*, and *fa* is substituted for *la*, *si*, and *ut*: *ut*, *re*, *mi*, *fa*, *sol*, *re*, *mi*, *fa*.[82] In this manner, the mutation can account for the second half-step in the diatonic scale.

Rousseau explains that the names, *mi* and *fa*, that are assigned to represent all the half-step intervals when utilizing the mutation "ascertain simultaneously those notes which are the closest [the smallest intervals], either by rising or descending melodically."[83] Laborde provides one such example in which the half-step both rises and falls melodically. This occurs due to the inclusion of a flat on the seventh scale degree: *re*, *mi*, *fa*, *sol*, *la*, *sib*, *la*. Laborde explains that the mutation in this example will begin after the *fa*. The *sol*, *la*, *sib*, *la* will be transformed into *re*, *mi*, *fa*, *mi*: *re*, *mi*, *fa*, *re*, *mi*, *fa*, *mi*.[84] Once again the mutation occurs on the note before the first note of the interval of the half-step.

Mutations thus provided a tool which allowed the singer to substitute the solmization *mi- fa* for every instance of a half-step in the melody. Laborde says that "one can easily see the difficulty that there is in using solfège in this manner, and how much

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[80] Ibid., 304, "il fallait nécessairement répéter le nom de quelque Note."
[81] Laborde, II, 21-22.
[82] Ibid, 21.
[83] Rousseau, *Dictionnaire*, 304, "Ces noms déterminaient en même tems ceux des Notes les plus voisines, soit en montant, soit en descendent."
[84] Laborde, II, 21.

time one must study in order to make its use second nature."[85] The assignation of the *si* to the seventh scale degree during the seventeenth century made the use of mutations unnecessary in France. Rousseau adds that when "the seventh note of the scale was named *si*, the mutations became extraneous and were banished from French music."[86] Laborde adds that "by means of this new syllable, it renders all of the mutations useless by naming each of the notes of the octave."[87]

Laborde approaches the topics of solfège and scales from various perspectives. His account of the derivation of the diatonic scale entails speculative components such as the use of the fundamental bass to validate its existence. Practical theoretical matters are also discussed; for example, every instance Laborde recounts in which a change is brought about in the system of scales and solfège occurs for reasons that arise from the necessities of musical practice. The fifteen-note system of the ancients was reduced to an octave system by Pope Gregory to accommodate the needs of the liturgical music of his era. In a similar vein, the syllable *si* was added to the six syllable system of Guido as musical practice began to move toward the major-minor system in the seventeenth century. While resulting from musical practice, these revelations should not be categorized as *musica pratica*, nor are they speculations about the true nature of music, therefore not to be appraised as *musica speculativa*. Once again, Laborde is using the materials of the two-fold theoretical division to unfold a third area of research, the historical. Over the course of two thousand years, the malleable nature of scales and solfège reveals similarities and disparities that identify the progress of, and subsequently unify, the western theoretical tradition. Even the material on mutations, the most practical aspect discussed in this section, is already a historical entity at the time of Laborde's writing. The mutation no longer serves a practical purpose; now it simply delineates a step in the evolution of the solmization of the seventh scale degree.

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[85] Ibid, 22, "On voit aisément la difficulté qu'il y a de solfier ainsi, & combien de tems il faut étudier pour se la rendre familiere." Laborde goes on to suggest that it is this long period of study combined with this cumbersome method which gives the Italians a "great superiority" in reading and performing music. He adds, however, that for some years they have begun to abandon the use of muances for the use of the *si* on the seventh scale degree.

[86] Rousseau, *Dictionnaire*, 304, "la septième Note de l'Echelle se trouvant nommée, les *muances* devinrent inutiles, & furent proscrites de la Musique Françoise."

[87] Laborde, II, 23, "où, par le moyens de cette nouvelle syllabe, il détruit toutes les muances, en nommant tous les tones de l'octave."

Chant sur le livre and Plainchant

Laborde devotes two chapters in his *Abrégé d'un Traité de Composition* to the subject of chant,[88] focusing on the subject of *chant sur le livre* for the greater part of these chapters. Aside from the material on counterpoint in Chapter 23, there is more practical information here than anywhere else in the *Abrégé d'un Traité de Composition*. Laborde supplies numerous rules for the composition of *chant sur le livre*, accompanied by musical examples, thus making an actual performance of a *chant sur le livre* possible based on his instructions.

Laborde's inclusion of *chant sur le livre* in his composition treatise, especially as it is abridged and not oriented toward liturgical music, may be seen as an anomaly in the eighteenth century. In fact, there are very few authors who wrote on the subject in the era. Laborde acknowledges that even the audience for his *Essai*, which he assumes to have a basic understanding of music, would not be familiar with *chant sur le livre* when he says that "we have extended ourselves on this subject because it is less well-known than other parts of composition."[89] Modern day scholar Jean-Paul Montagnier provides a thorough bibliography of printed materials from the eighteenth century regarding *chant sur le livre*.[90] He categorizes the majority of these works, save the brief comments from Rameau and Rousseau and an overview provided by Abbé Jean Lebeuf in the *Mercure de France*, in the practical tradition: "All of these works are conceived according to the same model (one which is characteristic of the era), first introducing the various harmonic intervals and their properties before entering even further into the study of counterpoint and imitation."[91] Indeed, Laborde explains the derivation of the intervals in the *Abrégé d'un Traité de Composition* before providing the rules for *chant sur le livre*, but Montagnier's categorization that most of the writing about *chant sur le livre* in the

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[88] Laborde, II, Chapter 24, "On *Chant sur le Livre*," 55-6, and Chapter 25, "On Plainchant," 56-60.
[89] Laborde, II, 57, "nous nous sommes étendus sur cette partie, parce qu'elle est moins connue, que les autres parties de la Composition. "
[90] Jean-Paul Montagnier, "Le *Chant sur le Livre* au XVIIIe siècle: les *Traités* de Louis-Joseph Marchand et Henri Madin, *Revue de musicologie* 81, no. 1 (1995), 39.
[91] Ibid., 40, "Tous ces ouvrages exceptées la dissertation de Lebeuf et les quelques remarques de Rameau et Rousseau, sont conçus selon le même modèle (d'ailleurs typique à l'époque) présentant d'abord les divers intervalles harmonique et leurs propriétés avant d'entrer plus avant dans l'étude du contrepoint et de l'imitation."

eighteenth century as being practical in nature is too general a claim to be of much use in understanding Laborde's contribution.

Laborde's approach, although in part pedagogical, once again entails more than just a straightforward, music-primer approach to the subject matter. His purview extends beyond the *musica pratica* represented by the rules for composing a *chant sur le livre* to encompass a historical context for this liturgical performance tradition. Laborde defines *chant sur le livre* as taking "a complete subject or melody and composing and singing at the same instant, over this subject, a melody which is different and which creates good harmony with the first melody."[92] The tradition of *chant sur le livre*, which was also known by the names *descant*, *fleurtis*, and *contrapunctum* in the eighteenth century, is an improvisatory oral tradition, as singers trained in its rules improvise melodies above a given plainchant. Laborde is not the only eighteenth-century writer to address this topic. Rousseau stresses the need for practical experience and musical sagacity when he says that "*chant sur le livre* requires a great deal of practical knowledge and an ear in those who perform it."[93] Jean Prim, one of the few modern day scholars who has done research on this subject, also emphasizes the necessity for experience in the art of improvisation and in the practice of plainchant when he describes *chant sur le livre* as "the art of trained singers who have no need of a written part, as do the untrained, in order to improvise on the printed plainsong alone, and perform their descant according to the rules."[94]

Lebeuf, an eighteenth-century scholar on Gregorian chant, describes *chant sur le livre* in an open letter to the *Mercure de France* in May 1729. The following explanation summarizes the concepts of this art form's performance practice in the eighteenth century:

> Here it is not a question of singing from an open book what this open book presents to the eyes, but rather you should sing from the open book everything else than what is actually notated. To *chant sur le livre* then is to compose harmonies on the notes that are printed in an open book which correspond to these notes. To sing *sur le livre* is to work on a canvas that the printed chant presents. It

[92] Laborde, II, 55, "C'est prendre un sujet ou un chant tout fait, & composer & chanter, dans le même instant, au-dessus de ce sujet, un chant qui soit différent & qui fasse une bonne harmonie."
[93] Rousseau, *Dictionnaire*, 85, "Le *Chant sur le Livre* demande beaucoup de science d'habitude & d'oreille dans ceux qui l'exécutent."
[94] Abbé Jean Prim, "*Chant sur le livre* in the French Churches in the Eighteenth Century," *Journal of the American Musicological Society* 14, no. 1(1961), 39.

> is to embroider with a thread of fabric, disclosed and depicted to the vision of the notated chant in the open book. This tapestry is what we call the *chant sur le livre*. It is not the *chant du livre* [chant of the book, the actual plainchant], no more than the cloth is the tapestry. The *chant du livre* is only the foundation, the backing, and the support. There is only one type of chant at all which is appropriate for the *chant du livre* that is the pure plainchant. These are the books of plainchant that are opened and exhibited before the musicians. When one begins to sing a note from the book of plainchant, a musician who knows the rules of *chant sur le livre*, that is to say one who knows how to harmonize with the plainchant, draws from the core of his knowledge, two, three, or four consonant sounds, more or less in number, following the slow tempo to which the notes of the plainchant are beaten. Thus he continues in this manner until the end of the piece of notated plainchant. He accompanies with musical flowers that which is sung by those following the notes of the plainchant in the book. As the voices of the tenors and those higher in range than the tenors are the most flexible and teachable, it is for these voices that one reserves the practice of these accompaniments and the bass voices sing the notes of the plainchant in the book.[95]

Laborde explains that not all types of plainchant are appropriate for the performance of a *chant sur le livre*. The types of plainchant that are best suited for *chant sur le livre* are proses, responsories, antiphons, and introits, categories of chant that Lebeuf categorizes as "pure plainchant." These chants are ideal because they have a uniformity of rhythm. The presence of a constant rhythm stands in opposition to the rhythmic structure of the more common forms of Gregorian chant that according to Prim

[95] Abbé Jean Lebeuf, "Réponses aux questions proposes dans le Mercure du moins de novembre dernier, à l'occasion de quelques contestations musicales, formées à Troyens en Champagne," *Mercure de France*, May 1729, 846-8, "Il n'est point question ici de chanter dans un Livre ouvert, ce que ce livre ouvert presente aux yeux; mais de chanter devant un livre ouvert toute autre chose que ce qui est note. Chanter sur le livre, est donc composer sur les Notes qui sont ou imprimées dans un livre ouvert, des accords qui correspondent à ces Notes: chanter sur le livre est travailler sur un canevas que le livre ouvert presente; c'est broder sur un fond d'étoffe exhibé & représenté à la vûë par un Livre note qui est ouvert. Cette broderie est ce qu'on appelle le Chant sur le livre; ce n'est point le Chant du livre, non plus que la toile n'est pas la Tapisserie, le Chant du livre n'en est que le fondement, le soutien, & le support. Il n'y a qui que ce soit qui ne convienne que le Chant du Livre est du Plain-Chant tout pur. Ce sont des Livres de Plain-Chant qu'on ouvre & qu'on expose à la vûe des Musiciens; & au moment qu'on commence à faire sonner une Note du Livre de Plain-Chant un Musicien qui sçait les regles du Chant sur le Livre, c'est-à-dire qui sçait faire des accords, tire du fond de sa science un deux, trios, ou quatre sons concordans plus ou moins en nombre suivant la lenteur dont les Notes du Plain-Chant sont battues; & ainsi en continuant jusqu'au bout de la Piece notée en Plain-Chant, il accompagne de fleurs Musicales ce que chantent ceux qui suivent les Notes du Livre de Plain-Chant. Comme les voix de Taille & c'elles d'au-dessus sont le plus fléxibles & les plus maniables, c'est à ces Voix qu'on a réservé la pratique de ces accompagnemens, & les Voix basses chantent seules les Notes du Livre de Plain-Chant." As a means to elucidate Lebeuf's meaning for "musical flowers," Prim explains that the improvised counterpoint would be composed with quarter and eighth notes, the number of which would be reflected by the tempo of the plainchant. The improvised chant, drawn form the notes which produce harmony with the plainchant would thus create the musical flowering of the solid plainchant foundation. This explanation thus presents a derivation of the label *fleurtis* often given to *chant sur le livre* in the eighteenth century (Prim, 41). Also *fleurtis* is discussed by Lebeuf, 850.

are "flexible and strewn with pauses in agreement with the commas, half-periods, incises, and according to the expression of the content."[96] Prim suggests that this is because the chant usually reflects the cadences of the text. The voice will pause for punctuation and use a rhythmic flexibility to help convey the emotion of the text. Prim contrasts this voice with "the plainchant that is to serve as a basis for the *chant sur le livre*," which "must be uniformly stressed on all the notes."[97]

The phenomena of *chant sur le livre*, while an art not limited to the French in the eighteenth century, was a practice that reflected the French ideas of taste, thus allowing it to flourish in France. Viewed as a matter of *goût*, it is not surprising that *chant sur le livre* did not produce the same effect in other countries where French taste was both literally and figuratively foreign. While it did enjoy certain popularity in France, *chant sur le livre* was not practiced in every church. Prim states: "not all the churches used it, and even those which did admit it still had recourse, according to the solemnity of the occasion and the selections to be sung, to pure plainsong and to regular music.[98] Prim further explains that the motivation behind the employment of a liturgical music other than *chant sur le livre* was sometimes for musical reasons—the church did not have musicians well-trained in the art of *chant sur le livre*, other times it was for liturgical reasons—the cathedral of Notre-Dame had statutes in place which forbade descant in most situations.[99] The use of *chant sur le livre* in the eighteenth century often reflected the taste of the parishioners. *Chant sur le livre* was performed at the Royal Chapel at Versailles, for example, where certain musicians in the service of the king "felt a nostalgia for it, and others were ambitious to learn it."[100] Prim continues that the fact that the Royal Chapel performed *chant sur le livre* "may be considered among the most significant, [in recognition] of the high esteem in which the eighteenth century held this kind of composition."[101] Indeed,

[96] Prim, 39.
[97] Ibid.
[98] Ibid., 45.
[99] Ibid., 43.
[100] Ibid.
[101] Ibid.

numerous churches required their *Maîtres de Musique* to be schooled in the art of *chant sur le livre*.[102]

Before he delves into the practical aspect of singing *chant sur le livre*, Laborde establishes the historical lineage of the chant tradition that produced it, the tradition of plainchant. He explains that "plainchant has only taken the form which we know it by today since the time of Guido, who provided the notational system of four lines."[103] Laborde hypothesizes that before Guido established his notational system, plainchant consisted of fragments of Greek music that were preserved in the chant repertoire, unbeknownst to us.[104] To demonstrate that Guido's system greatly simplified the art of music notation, Laborde returns to the ancient notational system. Using the ancient system, each sound had a name and particular character. The symbol of the desired sound was placed above each corresponding syllable of text. Thus, Laborde explains, "the characters were written with the text on the same line."[105] With this description, Laborde does not cast the ancient system as being too difficult, but he destroys any notion of the system's simplicity when he explains that the number of Greek characters that it was necessary for the musician to memorize numbered around 1,620. In Laborde's estimation, this number of individual musical characters was "fantastic and quite difficult to remember."[106]

Laborde affirms Guido's important place in the history of the art of music notation by greatly simplifying the system by devising the four line staff. As previously acknowledged, however, his system did not allow for any rhythmic variety. Every note was of equal rhythmic duration. Laborde goes on to credit Jean de Muris, Doctor and Canon of Paris and a teacher at the Sorbonne, with the creation of a system of signs in 1330 that could indicate the values of variant rhythms of the notes in a mensurable

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[102] Prim discusses the training of the *Maîtres de Musique* and the various practices at several churches throughout France in his article, 42-5. The subject of which churches practiced *chant sur le livre* is addressed in Montagnier, 43-44.
[103] Laborde, II, 56, "Le *plain-chant* n'a pris la forme qu'il a aujourd'hui, que depuis que Gui d'Arezzo eut inventé les notes, & les eut placées sur quatre lignes."
[104] Ibid., 56-7.
[105] Ibid., 57, "ainsi les caracteres se trouvaient écrits avec le texte sur une même ligne."
[106] Ibid., "Mais les nombre des caracteres grecs qu'il fallait graver dans sa mémoire, montait à mille six cent vingt; ce que était prodigieux, & bien difficile à retenir par cœur."

chant.[107] Laborde admits that all of the rhythmic notation symbols created by de Muris have been replaced by other symbols in their stead, but he conjectures that this is because the art of music notation "improves everyday."[108]

As the clefs used for notating plainchant appear in a different form than those that are used in modern notation, Laborde supplies a brief description of the two clefs employed at that time. He states that only two clefs need to be learned in order to read plainchant: the C clef and the F clef (Figure 5.3),[109] which are used for high-pitched and low-pitched chants respectively.

Laborde explains that the C clef can rest on any of the four lines of the staff in the manner indicated in Figure 5.3. While he indicates three different positions for the F clef, he reveals that "it rarely rests on the second line, sometimes on the fourth, and almost always on the third line."[110] This assessment becomes more reasonable when a

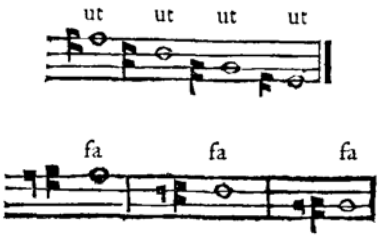

Figure 5.3

The C and F clefs employed in plainchant

fifth line is placed below the staff. This would have the F clef resting on the fourth line, the location of the F, or bass, clef in modern notation. Once again Laborde has integrated a practical aspect of music theory into a historical context, thus reinforcing his earlier material on the subject of notation. It should also be mentioned that he included this discussion of the clefs as a historical matter that reflects the notational practice in Guido's era. The inclusion of the historical precedents of the modern clefs in the *Abrégé d'un*

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[107] Jean de Muris, *Notitia artis musicæ* (1321). Laborde's indication of the year 1330 for the introduction of this system is of course incorrect, but it is certainly approximate.
[108] Laborde, II, 57, "Cet art se perfectionne tous les jours."
[109] Ibid.
[110] Ibid., "La clef de *fa* sert au chant grave, étant d'un quinte plus basse que la clef d'*ut*, & se pose rarement sur le seconde ligne, quelquefois sur la quatrième, & presque toujours sur la troisième."

Traité de Composition stands in contrast to Laborde's treatment of the modern clefs in the same treatise; he determines the inclusion of the modern clefs to be unnecessary, as presented in the previous section of this chapter. This once again speaks to the idea that he expected the audience for this work to have a basic understanding of the practice of music as it was at the end of the eighteenth century in France.

Finally, at this point in the chapter, Laborde presents the rules for performing a musically satisfying and technically accurate *chant sur le livre*. The rules, which may be seen in their entirety in the translation of Laborde's *Abrégé d'un Traité de Composition* included as part of this dissertation in Appendix A, describe the relationship between two voices: the original plainchant and the improvised *chant sur le livre*. They outline good procedures for harmonic part writing from an eighteenth-century, Ramist perspective. For example, the rule which states that "when the bass descends a fifth, it is necessary to put the octave in the second note" (Figure 5.4),[111] delineates the voice leading procedure that occurs in the harmonic motion of an authentic cadence. The application of a harmonic paradigm here, while it may be admissible from both a practical and a speculative standpoint, does not align so well from the historical perspective of the performance practice. Chant is a counterpoint tradition. The question to be asked then is whether *chant sur le livre* in the eighteenth century would be categorized as either counterpoint or harmony. Based on the historical sources, a substantial claim may be made that it is indeed counterpoint, albeit one used for an improvisatory performance tradition, but it is a type of counterpoint that has been filtered through the harmonic applications wrought in the music of the eighteenth century.

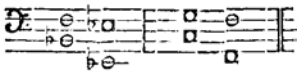

Figure 5.4

A rule in *Chant sur le livre* that reflects cadential bass motion by fifths

Laborde's rules for *chant sur le livre* produce solid harmonic voice leading, but it must be recognized that the rules do indeed indicate just that—voice leading, which

[111] Laborde, II, 58.

historically implies the art of counterpoint.[112] Regardless of any similarities in the voice-leading, these rules are not for harmonic part writing. The idea that these rules are for counterpoint is further confirmed by the other labels assigned to this art during the eighteenth century, *contrapunctum* and *descant*. In fact, Prim hypothesizes that "*chant sur le livre* is no more than the continuation and survival of the ancient *discantus*, [the] rival of *organum*."[113] Prim considers this hypothesis quite feasible because of the "stability of French institutions under the ancien régime."[114] The church's facilities for music education remained constant fixtures for centuries, allowing for the transmission of musical materials in a manner that makes the connection between the medieval tradition of *discantus* and the tradition from the seventeenth and eighteenth centuries of *chant sur le livre* quite probable. Regarding this concept, Abbé Jean Lebeuf, an eighteenth-century writer who responded to questions regarding *chant sur le livre* in the *Mercure de France* in May 1729, offers:

> Anyone who could possibly believe that I am deceiving myself here by calling *chant sur le livre* counterpoint, will one day find within this material what is needed to convince themselves that counterpoint is only a result of an expanded and embellished *discantus*; and that the *discantus* of which several of the ancients have spoken, was only a precursor to *chant sur le livre*, which was still, in a manner of speaking, in its cradle.[115]

To further elucidate the idea that the rules for *chant sur le livre* provided by Laborde indicate counterpoint, rather that any prescribed harmonic motion, it should be understood that the music created when *chant sur le livre* is performed may entail more than the two voices—one singing the plainchant, the other one improvising *sur le livre*. When more than one voice improvises above the plainchant, each individual voice is always considered in its relationship to the original chant, not in their relationship to one

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[112] Laborde recognizes that this is not the same thing as a textbook understanding of counterpoint, however. This is merely an improvisatory performance tradition that employs the rules of counterpoint. As previously mentioned in this chapter, Laborde offers his own chapter containing many of the rules for counterpoint in the more traditional sense. While not as exhaustive or as didactic as the works of Fux or Zarlino, Laborde provides enough practical information on counterpoint that an attempt could be made by a beginner to compose a brief example. See Laborde, II, 51-55.

[113] Prim, 46.

[114] Ibid.

[115] Abbé Jean Lebeuf, "Réponses aux questions proposes dans le Mercure" (May 1729), 854, "Ceux qui pourraient croire que je me suis mépris ici en appellant contrepoint *le Chant sur le Livre*, y trouveront un jour de quoi se convaincre que le Contrepoint n'est qu'une suite du *Discantus* augmenté & embelli, & que le *Discantus* dont plusieurs anciens ont parlé, n'était que le *Chant sur le Livre* encore tout naissant, & pour ainsi parler, dans le berceau."

another.[116] Thus, there is no true harmonic structure, just a potential myriad of voices all performed in correlation to one notated chant. As a result, numerous, individual two-voice counterpoints are performed simultaneously devoid of any concern for harmonic compatibility beyond the improvised melody's relationship to the cantus. Regarding this phenomenon of *chant sur le livre's* performance practice, Prim mentions that "what seems most essential to *chant sur le livre* is the complete lack of regulation, not of the relations between each descant and its basis, but of the relations between the simultaneous descants."[117] Prim observes the improvisatory nature of the form created potentially disarming sonorities; regarding this phenomenon, he says that "it is as if the practitioners of *chant sur le livre* believed that the two melodies would necessarily be in harmony with each other by the mere fact that both were in harmony with a third."[118]

The practice of *chant sur le livre* in the eighteenth century is governed by rules which reflect the traditional rules of counterpoint, yet the harmonic practice of the eighteenth century is an evident influence. Perhaps this is most apparent in the description of *chant sur le livre* provided by Lebeuf in the *Mercure de France*, as quoted above. Montagnier points out that "Lebeuf does not use the term counterpoint, but that he does make reference to the knowledge of harmony, as if his concept of *chant sur le livre* was [at first hand] a harmonic rather than a contrapuntal decree."[119] Rousseau appears to supports this idea when he emphasizes that the need for the musicians to have experience and knowledge of this art when they perform it is all the more necessary since "it is not

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[116] There does not appear to be a consensus among the sources of the time as to the appropriate number of voices required to perform *chant sur le livre*. Rousseau suggests that it is a "plainchant or counterpoint in four parts" (*Dictionnaire*, 85). Madin, however believes that "*chant sur le livre* pleases a great number of people only to the degree that it appears and really becomes confusion, by the mixing of harmonies of thirty or so musicians who sing it all at the same time, some according to the rules and others…by guess" (M. H. Madin, *Traité du counterpoint simple ou chant sur le livre* (Paris, 1742), Chapter I, cited in and translated by Prim, 42.). Rousseau's and Madin's accounts fall on opposite ends of a spectrum, which more than likely included a wide range of permissible performers for *chant sur le livre*, reflective of the varied performance practices in the eighteenth century. Montagnier confirms that the number of improvised parts is never clearly indicated with any consistency in the printed works of the time (Montagnier, 46, "Néanmoins, le nombre de parties improvisées, n'est jamais indiqué clairement.").

[117] Prim, 46.

[118] Ibid.

[119] Montagnier, 41, "Il est intéressant de remarquer que LeBeuf n'emploie pas le terme de "contrepoint," mais qu'il fait référence à la connaissance des accords, comme sis a conception du chant sur livre était (de prime abord) plutôt d'ordre harmonique que contrapuntique."

always easy to reconcile the modes of plainchant to those of our music."[120] Rousseau adds that there are musicians in the service of the Church that are so accomplished in this sort of performance that "they begin and even carry on fugues, when the subject can incorporate it, without confusing and crossing the parts, or making an error in the harmony."[121] Here then we have confirmation of Laborde's original definition of *chant sur le livre* as an improvised counterpoint which creates a good harmony. He once again relies upon a speculative foundation of music theory to validate an aspect of musical practice. In this case, in order to sound well-formed, the improvised melodies created by the counterpoint to the original plainchant are subject to the rules of harmony—rules that are implicit in the motion of the fundamental bass. In other words, if the improvised melody is to sound well with the plainchant, its motion should adhere to the fundamental bass of the original plainchant.

In addition, even if the performers of *chant sur le livre* approach their individual performance as a work of improvised counterpoint, the educated listeners of the day could not help but bring their aural experience and understanding of the abundant harmonic sonorities found in the period's non-liturgical music into this liturgical setting. In other words, as it is difficult for a listener to divorce himself from his own experience, a listener in the eighteenth century may very well have heard the harmonic underpinnings of this system even if they were not intended to be there. Thus, in the eighteenth century, *chant sur le livre* reflected the rich history of the liturgical chant tradition, yet was viewed, or more appropriately heard, through the system of harmonic relationships that had come to define the musical language in France at the end of the eighteenth century.

Laborde's discussion of these practical rules for performing *chant sur le livre* does not conclude his coverage of the topic of chant. He offers another historical digression regarding the role of the Catholic Church and the propagation of plainchant. The reason he furnishes for the historical aside in this instance is that not only does the information satisfy the curiosity of the inquisitive, but it is also necessary so that "the

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[120] Rousseau, *Dictionnaire*, 85 "il n'est pas toujours rapporter les Tons du Plainchant à ceux de notre Musique."

[121] Ibid., "Cependant il y a des Musiciens d'Eglise, si verse dans cette sorte de Chant, qu'ils y commencent & poursuivent même des Fugues, quand le sujet en peut comporter, sans confondre & croiser les Parties, ni faire de faute dans l'Harmonie."

seniority of the music practiced in France may be established."[122] In other words, a progressive understanding of the development of the chant tradition in France can lead to a fuller comprehension and appreciation of the importance allotted this practice.

Laborde explains that the art of "plainchant formerly was so valued that several popes and sovereigns made a particular study of it."[123] During the Carolingian era, Charlemagne (742-814) reinstated Gregorian chant in the churches of the West. Robert II (972-1031), son of Hugues Capet, "composed the chants for several responses and anthems which are still today the most beautiful pieces of church music."[124] The practice of chant flourished in the church for centuries. It provided a touchstone for the papacy to institute unity within the church. Laborde says rules, statutes, and laws were passed to oblige those who would seek to "cultivate this precious talent," and those who made a profession of it were honored.[125]

However, those who did not follow the rules established by the church did not always have the honor afforded such musicians. Laborde recounts the trouble encountered by the Church of Sisteron, a small town in the Provence region of France. In 1431, shortly after the end of the Great Schism, which lasted from 1378-1415, the Pope[126] sent a representative to Sisteron to investigate their discipline regarding music. Laborde says that the Pope "was indignant due to the fact that most of those who were serving the church might not have a smattering of training in the art of music."[127] The Pope believed that without knowledge in the art of music, decency in the divine office would be impossible.[128] To this end, the church ordained that those who did not know the rules of the musical art should instruct themselves to do so in a timely manner, under

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[122] Laborde, II, 60, "Cette digression nous a paru curieuse & nécessaire pour établir l'ancieneté de la Musique travaillée en France."
[123] Ibid., 59, "La plain-chant était autrefois si estimé, que plusieurs Papes & Souverains en ont fait une étude particuliere."
[124] Ibid., "Le roi Robert, fils de Hugues Capet, composa le chant de plusieurs répons & antienes, qui font sont encore aujourd'hui les plus beaux morceaux de la Musique d'église."
[125] Ibid., "Il y eut même des regles, des statuts & des loix, pour obliger ceux qui jouiraient des foundations, faites pour entretenir le chant dans les ceremonies religieuses, à cultivar ce précieux talent."
[126] There were two popes in the year 1431. Martin V died early in the year and the conclave resulted in the ascendance of Eugene IV. As the historical documentation of the account of the events at Sisteron are scarce, or at least unknown to me at this time, I can only conjecture towards which Pope he is making reference to. It seems more likely that it would have been Eugene IV as he was just beginning his papacy and as he became the Pope so early in the year 1431.
[127] Laborde, II, 59, "il fut indigné que la plupart de ceux qui desservaient cette église, n'eussent aucune tienture de l'art de la Musique."
[128] Ibid.

such a penalty, Laborde adds, "that the Bishop of the place would want [to administer] to compel them to do so, if they were not doing it."[129]

Laborde's account implies that the church's mission in the fifteenth century was to ensure the education of those in service to the church so that they might have a "smattering" of understanding on the subject of music. In turn, this would provide some semblance of uniformity in the musical practice of the chant liturgy. This plan did not meet with uniform approval. In 1661, the rectors of Sisteron advised themselves to protest this musical obligation by claiming that the statutes referred only to plainchant and not to music practices in several parts.[130] This dispute led to the issuance of two Decrees by the Parliament at Aix. The decrees, issued in 1664 and 1667, "did not permit the parsons to resign their parsonages, unless 'the resigned would be in no fit state to practice the art of music in the year of their reception.'"[131] Laborde believes this statement verifies the idea that plainchant was not the only form of music being practiced in the churches at that time, and that the church endeavored to unify the practice as it had existed in France for several centuries.

This historical passage regarding the development and dispersal of the chant tradition is indicative of Laborde's task as a nascent historian of the theoretical tradition. Many of the passages he writes are filled with well developed historical insights that enrich our understanding of the speculative and practical traditions of music theory—such as with his commentary on notation—but others—such as the historical material about plainchant—are, on the contrary, rather flimsy. As the historical material on chant reveals, this is due in part to the inconsistencies in his documentation. He also does not provide musical examples to enhance or explain the historical events he describes, thus detaching the historical features from the speculative and practical aspects of the material. Of course, the interpretation of his text as being undocumented could be just as easily a result of a modern-day reading of a text that is over 200 years old. The facts regarding the events at Sisteron may have been very familiar to his reading audience, and

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[129] Ibid., 60, "sous telle piene que l'Evêque du lieu voudrait leur imposer, s'ils ne le faisaient pas."
[130] Ibid.
[131] Ibid., "qui ne permet aux Bénéficiers de résigner leurs bénéfices, qu'à condition *que les resignataires seront en état de pratiquer l'art de la Musique, dans l'année de leur reception*."

therefore he may have believed no extra documentation was needed. In the next section, another reference of Laborde's is discussed that supports the likelihood of this claim.

Although insufficiently documented, Laborde truly enriches the *Abrégé d'un Traité de Composition* by including the subject of chant, specifically *chant sur le livre*. The uncommon stature of this subject in the writings of the eighteenth century causes this material to stand out in Laborde's treatise, especially since his work mainly addresses more traditional theoretical subjects—harmony, melody, scales, intervals, etc. *Chant sur le livre* is a musical practice with which the intended audience of his *Essai* would have been aware, but, as it received miniscule attention in the musical publications of his era, it is not a subject they would have been used to reading about. Laborde's rules for performing *chant sur le livre*, while atypical, are an elegant demonstration of his ability to position a set of practical rules with speculative associations within their historical context.

Tablature

In the *Abrégé d'un Traité de Composition*, the final chapter addresses tablature. This chapter of Laborde's composition treatise—much like the chapter on *chant sur le livre*—stands out when comparing his work to those of other contemporary French authors that have been discussed in this study. Rousseau offers a brief entry on "tablature" in his *Dictionnaire*,[132] and defines tablature in a manner similar to Laborde's, but he does not provide the detail that Laborde does. Rousseau and Laborde's inclusion of the subject of tablature is more of an exception to the status quo in theory treatises of the time.[133] The art of tablature, or in Laborde's words, "the manner in which we notate

[132] Rousseau, *Dictionnaire*, 497-8.

[133] There is the practical reason for this. Most treatises are dealing with notation that represents vocal or keyboard instruments. It acts as the unspoken standard for a musician needing education in music, much as it does today. There is no section committed to the explanation of tablature in d'Alembert's *Élémens* or in Rameau's *Traité*. This is standard for the time. Many publications of the era did address the subject of the guitar, however. The majority of these treatises that deal with the guitar specifically can be placed into two categories. The first group consists of pedagogical guides to assist the student; the second group is comprised of larger encyclopedic works. Laborde's *Essai* belongs to the latter group. For an overview of the French treatises that address the subject of the guitar, see Caroline Delume, *Guitare: Méthodes, dictionnaires et encyclopédies, ouvrages généraux, prefaces d'oeuvres* (Courlay: J. M. Fuzeau, 2003).

the music for certain instruments like the guitar, the lute, the theorbo, etc.,"[134] hardly concerns his contemporaries.

Laborde treats the subject of tablature as a practical topic, describing the basics of reading tablature notation. He explains that tablature in the eighteenth century is notated using letters of the alphabet. To begin the tablature, one should draw as many parallel lines as there are strings on the instrument. Thus, each line indicates an open, or unfretted, string on the instrument. In tablature notation, the unfretted string is indicated by placing the letter *a* on the line which corresponds to the particular string. The letter *b* signifies that the first fret should be used. The letter *c* denotes that the second fret should be used, and so forth, in the following manner (Figure 5.5).[135]

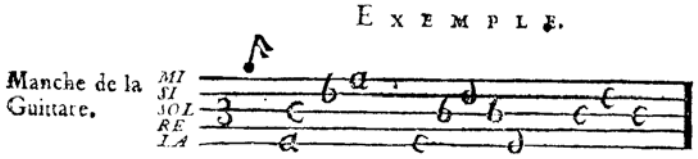

Figure 5.5

Laborde's example of tablature notation for guitar

Laborde explains that the small sixteenth note in the upper left-hand corner of Figure 5.5 "shows that all the letters of this measure represent sixteenth notes."[136] When all of the rhythmic values of a measure are the same, whether sixteenth, eighth, or quarter notes, they will be labeled in this manner. When the rhythmic value changes over the course of a measure the different durations must be notated (Figure 5.6).[137] Laborde believes this method simplifies the art of reading tablature and playing the music at the same time, but "as the tablature changes according to the different instruments, [as they

[134] Laborde, II, 63, "la maniere dont on note la Musique pour certains instrumens, comme la guitarre, le luth, le théorbe, &c."
[135] Ibid. Laborde's system appears to be modeled on the French system of lute tablature developed in the seventeenth century by Denis Gaultier called *Nouveau Ton*.
[136] Ibid., "la petite double croche, qui est au-dessus de la ligne de l'exemple, marque que toutes les lettres de cette mesure sont des doubles croches."
[137] Ibid., 64.

have] more or fewer strings and different tunings, these different tablatures cannot be memorized very easily."[138] The slight variations in the tablature notation that would occur from one fretted, stringed instrument to another could cause a student of tablature

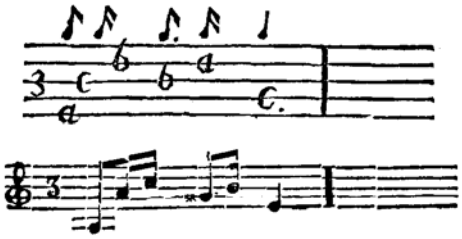

Figure 5.6

Tablature notation with changing rhythmic values

for fretted, stringed instruments to encounter some difficulties.[139] The changing number of lines representing the strings makes it troublesome to read the tablature as music without playing the instrument the tablature is intended for in the same manner that we can sightread music in standard notation.[140]

Laborde mentions one virtuoso who has mastered the tablatures in such a way that she can use them as music without needing the assistance of her instrument. Her name is Mademoiselle Genti. Laborde states that Mademoiselle Genti not only plays the guitar, lute, and theorbo equally well, she also gives instruction on playing them. In addition, she has "composed several accompaniments of the most attractive songs."[141] Choron and Fayolle also convey that Mademoiselle Genti was a famous virtuoso on the guitar, lute, and theorbo who composed several chansons with accompaniment on these instruments.[142]

In the previous section a claim was made that some of the shortcomings in Laborde's method and documentation from our modern perspective may not be due to his

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[138] Ibid., "Mais comme la tablature change selon les différens instrumens qui ont plus ou moins des cordes, & ont un accord différent, on ne peut se mettre dans la tête ces différens tablatures."
[139] Using the system of notation that Laborde is offering, the guitar would have a five line "staff" to reflect the five strings on the instrument. The notation for the theorbo, having fourteen strings, would look quite different.
[140] Laborde, II, 64.
[141] Ibid., "elle a compose plusieurs acompagnemens des plus jolies chansons."
[142] Choron and Fayolle, 267.

lack of scholarly process, but rather from our being unfamiliar with the culture of late eighteenth-century France that we have today, compared to an educated reader of Laborde's treatise from his era. Regarding Genti, Laborde exclaims that "this famous virtuoso is well-known enough in order not to need our praises."[143] Choron and Fayolle insist that this famous musician "lived in Paris in 1778, where she was then held in high esteem for a long time."[144] These accolades imply that the audience for Laborde's *Essai* would have been familiar enough with Genti, at least by reputation, to need no lengthy explanation about her or her talents. This concept then accounts for what could be perceived of as a lack of scholarly rigor in the citation process that Laborde employs in the *Abrégé d' un Traité de Composition*.[145] If Laborde has taken this approach with Genti, it is feasible that he would also truncate his explanations on other subjects, if he believed that his perceived audience for the *Essai* would already have more than a passing acquaintance with the subject matter.

Laborde's use of the historical materials of music theory in the *Abrégé d'un Traité de Composition* has been explored in this chapter. His writing reflects the convergence of three distinct ideological approaches to music theory: two existent, the speculative and the practical, and one emerging, the historical. The writing in the *Abrégé d'un Traité de Composition* attests to this endeavor and endows Laborde's work with a unique perspective among the French composition treatises of the era. Some of Laborde's information, such as the brief introduction to tablature, is atypical. Few authors of musical composition treatises of the period saw the need to include information on the art of notating and reading tablature. Likewise Laborde supplies practical rules for composing a *chant sur le livre*, an unconventional topic for writers to address in the treatises of the eighteenth century. Yet, Laborde presents practical rules for its performance along with a historical contextualization of the chant tradition, further enriching the presentation of the material. With other topics, such as scales, however, Laborde enhances the normal presentation for a French treatise of his era with historical information. Scales are often considered as a practical tool to teach the rule of the octave

[143] Laborde, II, 64, "Cette célebre Virtuose est assez connue pour n'avoir pas besoin de nos éloges."
[144] Choron and Fayolle, 267.
[145] Fortunately, due to the scope of the *Essai* as a whole, the majority of the names that Laborde mentions throughout the composition treatise have received an entry in the bibliographic chapters found in Volume III. The citations for these references are indicated in the body of the translation.

and figured bass in the treatises of the eighteenth century. He not only provides this material, but he also explains a practical means for deriving the diatonic scale using tetrachords, and he also endorses a speculative interpretation of the diatonic scale with historical underpinnings that links the practice of the ancients to our own, however tenuously. He then strengthens this connection by chronicling the historical development of the art of notation and solfège to bridge the practice of the ancients to that of the moderns. As previously discussed, this historicist approach, which treats the historical material not only as part of a continuum of progress, but also as distinguished phenomenon, is a new and different method for a French writer at the end of the Enlightenment.

As this chapter demonstrates, Laborde presents musical materials from antiquity, the Middle Ages, and modern times as historical phenomena, and in so doing provides part of the foundation of modern historical inquiry into music. Laborde's methodology within the *Abrégé d'un Traité de Composition* is not consistent, however. He does not always provide a historical context for the theoretical materials he offers, and when he does, facts are sometimes unsupported, and references are not always cited. The treatise is by no means purely practical, yet some of the practical materials that Laborde offers are unique or underrepresented in other French theoretical works from the eighteenth century. There is a strong speculative element to the work, but only in the sense of the generation and classification of musical materials, not the more mystical aspects of *musica speculativa*. The majority of French composition treatises of the eighteenth century combine the speculative and the practical traditions in some manner; in this respect, Laborde is not unique. But by including material of a historical nature, Laborde imbues the *Abrégé d'un Traité de Composition* with a distinct viewpoint among French composition treatises of the eighteenth century.

CONCLUSION

Jean Benjamin de Laborde compiled all the information he could acquire about music at the end of the eighteenth century into his *Essai sur la musique ancienne et moderne*. He intertwined theoretical, historical, biographical, and, from our perspective, ethnomusicological information to produce a rich, yet somewhat uneven work. One of the central reasons for the uneven results is that Laborde employed various methodologies throughout the *Essai* as a whole to catalog and disperse the information he gathered; he approached each topic with a methodology that he viewed as appropriate for the subject. For example, in *Livre* II, which deals with instruments, he cataloged the material as an organologist might conceive it, and presented it according to instrument classifications. As Laborde's goal for the *Essai* was simply to collect and present all the information on music he had amassed through the course of his studies in an accessible manner, the entire work's lack of a unifying methodology should not give reason for concern. The inconsistencies that the various approaches may have produced on the large scale are more than compensated for by the breadth of material he provides on the small scale. This is evident in *Livre* III of the *Essai*, the *Abrégé d'un Traité de Composition*.

While Laborde's composition treatise is organized according to topics in a manner similar to other French treatises of the era, he has taken the bipartite methodological paradigm found throughout the history of music theory, the speculative and the practical, and infused it with a historical element. As this dissertation has demonstrated, the *Abrégé d'un Traité de Composition* offers familiar approaches to *musica speculativa*, such as the derivation of intervals. Laborde also provides materials in the composition treatise that can be categorized as *musica pratica*, such as the rules for composing counterpoint. Throughout his composition treatise, Laborde's treatment of speculative and practical matters often incorporates a historical sensibility that results from the historicization of these familiar subjects. This technique, in part, endorses the notion of history as progress, as illustrated through Laborde's description of the evolution of the notational system. In addition to positioning historical information about music

within the concept of history as progress, Laborde also employs another historicist approach, one that investigates materials as unique historical phenomena. For example, Laborde addresses the diatonic tetrachord of the ancients in a manner that acknowledges it as a unique speculative construct from the practice of antiquity. He then draws a successful comparison between the diatonic tetrachord of the ancients and the modern diatonic scale, which contains two of these tetrachords. Laborde treats the diatonic tetrachord as a unique historical phenomenon, divorced from musical practice; he demonstrates that both societies use it, albeit in entirely different ways. Laborde thus establishes the diatonic tetrachord as vital to the musical cultures of both antiquity and the eighteenth century, but, as they are not used in the same manner in musical practice (the correlation is based upon *musica speculativa*), each can be understood in the specific use of its own culture. In other instances Laborde investigates materials from the period between antiquity and his own era as historical phenomena. For example, Laborde's inclusion of the performance practice of mutation, *chant sur le livre*, and tablature notation, may or may not have a causal link with either the music of antiquity or that of modernity. By treating musical subjects historically, either as unique historic entities or as a part of a larger evolutionary musical scheme, Laborde contributed to the formation of a third methodological procedure with which to investigate the material of music theory—a methodology that may be placed with *musica speculativa* and *musica pratica—musica historica*.

This does not suggest, however, that Laborde has created the ideal methodological model for *musica historica* in his application of the historicist method to music theory in the *Abrégé d'un Traité de Composition*. Just as there are vicissitudes exhibited in the methodology of the *Essai* as a whole, Laborde uses a mutable methodological approach in the composition treatise that often changes within the same chapter. He has woven the historical material into his composition treatise in a manner that belies the newness of the approach. In writing the composition treatise, Laborde utilized the tools that the development of historicism at the end of the eighteenth century provided; this, in part, created the unique perspective of the *Abrégé d'un Traité de Composition*. Historicism fostered the development of the historiography of music theory in Laborde's *Essai*, as well as in the work of other prominent scholars of the era such as

Martini, Burney, and Forkel; their work, in turn, contributed to the transformation of music and music theory into a scholastic discipline. As previously mentioned, Laborde's approach to the theoretical material is guided by the standard topical organization of the French music theory treatises of the day. Into this basic outline, however, Laborde inserts historical material as he deems it germane to the specific topics being discussed. This creates an imbalanced result. While at the beginning of the treatise, each topic builds upon the previous one—the explanation of sound leads to the discussion on intervals, which in turn carries the discussion to consonance and dissonance—the topics soon begin to appear in a seemingly random order. Along the same lines, Laborde also presents the historical materials in abundance on some topics, as in the discussion of harmony, and at other times, such as in the chapter on cadences, he offers no historical information at all.

As Laborde intended for his *Essai* to be a repository of information, he would not have found these inconsistencies troubling. The work he was doing was that of a self-proclaimed collector. This dissertation has taken seriously Laborde's request for further work to be done on this material to provide a better understanding of the information he has supplied. Laborde may not have been explicitly aware of the role he was playing in the development of a historical foundation for music theory. His lack of methodological consistency also poses numerous challenges to the modern scholar, such as even how to begin to categorize the work as a whole, let alone any of its constituent parts. Laborde's determination to include everything he had discovered about music has produced a document that may be less organized and, compared to Burney's or Forkel's historical works, may wander more, but by not restraining himself to one specific methodology, Laborde has created a treatise that is different and unique. Laborde has written a work that not only embodies the encyclopedic spirit of the French Enlightenment, but that also provides—errors and all—a means to understand the process of historicization that was occurring in music at the end of the eighteenth century.

This present study is not exhaustive; it only begins to answer the questions posed by Laborde's contribution to music scholarship. This study, which has focused only on the *Abrégé d'un Traité de Composition*, reveals the potential research opportunities awaiting further study of Laborde's entire *Essai*. Though this study has drawn on the available resources to this author appropriate for its scope and design, there are numerous sources

Laborde mentions that remain to be found, offering the prospect of archival work, especially in Europe. The handwritten autobiography that Laborde included in a letter that is bound within a copy of the *Essai* now held in Belgium in the *Bibliothèque Royale Albert I* will need to be carefully translated and examined to offer a more comprehensive overview of Laborde's life. With a more thorough biography of Laborde, including the material in his autobiography—a project I hope to address in the future—an account of his *Essai* enriched by the details of Laborde's life may be commenced. In addition to combing Laborde's biographical information to provide insight into the *Essai*, work regarding its reception remains to be done. This would include an exploration of the various reviews published in the numerous Parisian journals after the *Essai* was released.[1] It would also entail comparing the material in the *Essai* with that contained in Laborde's *Mémoires sur les proportions musicales, le genre énharmonique des Grecs et celui des modernes*, the only other major treatise on music Laborde published.[2]

In the remainder of the 1,000-plus pages of the *Essai* that remains to be translated, a bounty of unexplored materials awaits. As each of the other Books of the *Essai* is translated, new research opportunities will arise. After being translated and studied, the abundance of bibliographic material in the later books of the *Essai* may furnish invaluable insight into the French intellectual culture of the eighteenth century, and may also provide a greater understanding of their views on antiquity and the Middle Ages. Similarly, Laborde's extensive archival work and research on the French chanson of the twelfth and thirteenth centuries in *Livre* IV may prove to be an invaluable resource to a scholar interested in this subject matter. It would also be of interest to delve into the reasons that Laborde began archival work, which he did in numerous places, including the Vatican and the library of the King of France. Investigation into Laborde's archival

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[1] For reviews of Laborde's *Essai*, see *Journal de Paris*, no. 103 (12 April, 1780), 425-27; and no. 105 (14 April, 1780), 433-35; *Journal Encyclopédique*, vol. 4, pt. 2 (June 1780), 276-94; vol. 4, pt. 3 (June 1780), 450-68; vol. 5, pt. 1 (July 1780), 78-91; and Vol. 5, pt. 2 (July 1780), 285-303; *Mercure de France* (6 May 1780), 14-36. In the category of contemporary responses to Labord's work, I would also include the marginal notes made by André Ernest Modeste Grétry (1741-1813), a prolific French opera composer, in his personal copy of Laborde's *Essai*. They have been collected by Ernest Closson, "*Les notes marginales de Grétry dans 'l'Essai sur la musique ancienne et moderne' de Laborde*," *Revue belge de musicologie*, ii (1947-48), 106-24.

[2] Jean-Benjamin de Laborde, *Mémoire sur les proportions musicales, le genre énharmonique des Grecs et celui des modernes* (Paris: Imprimerie de Philippe-Denys Pierres, 1781).

work would also involve the history of archival research, providing one man's particular method as a model for this type of scholarship at the end of the eighteenth century.

Aside from my desire to compose a formal biography of Laborde, there are two aspects of the *Essai* that are of a great personal interest to me beyond the *Abrégé d'un Traité de Composition*. The first is a translation and close study of the historical material located in *Livre* I of the *Essai*; this book contains information regarding the historical development of music from the ancients to the eighteenth century in Europe, as well as chapters on the music of various world cultures such as the Chinese and the Arabs. The intention of such a project would be two-fold. First, it would bring about further awareness of the burgeoning historicism that Laborde has adequately demonstrated in his *Abrégé d'un Traité de Composition*, providing additional confirmation of the assertions of this dissertation. Second, as Laborde addresses topics in the *Essai* beyond those of the composition treatise, he explores aspects of musical life in various cultures throughout the course of history that have only been touched upon in this project. Further research, suggested by the material in *Livre* I, would allow for a more thorough and accurate representation of the eighteenth century understanding of the musical world and its history.

With my previous training in ethnomusicology, I would enjoy exploring Laborde's treatment of world music cultures in *Livres* I and II of the *Essai*. He presents information on the music of foreign cultures, such as those of the Chinese, the Turks, and the Arabs. He provides detailed descriptions and drawings of numerous instruments from the China, Africa, and the Middle East. Considering how he came by this material and why he chose to include it would produce insight not only into the eighteenth-century European understanding of the world, but also into the history of ethnomusicology as an academic discipline. Some of his sources are already known; for example, the material on Chinese music was collected by Joseph Marie Amiot (1718-1793), a Jesuit missionary in China during the eighteenth century, who provided his research to the French.[3] Yet the source of other materials remains to be discovered, such as Laborde's source of information on Arab music. The beginnings of ethnomusicology are usually traced back to the nineteenth

[3] Joseph Marie Amiot, *Mémoire sur la musique des Chinois* (Paris, 1779).

century, yet Laborde's *Essai* presents an opportunity to show that the field's foundations were already being laid in the eighteenth century.

Jean-Benjamin de Laborde's *Abrégé d'un Traité de Composition* does not explore any new theoretical ground if the two-fold paradigm of *musica speculativa* and *musica pratica* is applied. The speculative information he collects comes from the best theoretical minds of antiquity and of the seventeenth and eighteenth centuries. The practical information he offers does not compare to the more comprehensive, pedagogical guides written during the eighteenth century. Yet, as suggested by this study, Laborde's *Abrégé d'un Traité de Composition* deserves a place in the canon of important theoretical works on music of the eighteenth century for its unique, yet uneven, approach to music theory that encompasses not only the speculative and the practical, but also includes the nascent *musica historica*.

APPENDIX A
TRANSLATIONS FROM LABORDE'S *ESSAI SUR LA MUSIQUE*

TRANSLATOR'S INTRODUCTION

This appendix contains translations of the *Foreword* and the *Introduction* to Jean-Benjamin de Laborde's *Essai sur la musique ancienne et moderne*, followed by a translation of the *Abrégé d'un Traité de Composition*. This is the first substantial translation of Laborde's work into the English language. The goal of this translation is to balance the original flavor of Laborde's writing style while making it accessible to the modern English speaking audience; to this end, Laborde's lengthy sentences have been subdivided into smaller sentences, but Laborde's often critical, humorous, yet insightful style of prose has been preserved.

In the translation, numerous technical terms related to music have been left in their French form because the French term is typically used in English texts, such as *corps sonore* and *chant sur le livre*. Other French terms have been translated to reflect their modern usage. For example, the *fausse quinte*, or false fifth, has been translated as diminished fifth. In other instances the terminology for a chord has been translated literally from the French because of the term's relevance to music theory in eighteenth-century France. For example, the phrase "perfect chord" is a more accurate translation of the French *accord parfait*, than "major triad," as it refers to the chord that is created by the *corps sonore*—the chord that is the foundation of Laborde's harmonic system. The term "major triad" in this case would not provide the specific cultural information that is implicit in the term "perfect chord." For other chord types, the literal French translation has been used with the modern equivalent provided in the commentary, such as with the "chord of the fifth and sixth," which would be labeled a first inversion supertonic chord in modern nomenclature. Some French words have several accurate English translations, and have been translated accordingly, based upon their context. *Chant* for example can be defined as "song," "melody," or "plainchant," and all three translations were required in Laborde's text.

French treatises of the eighteenth century employ solmization syllables—*ut, re, mi, fa, sol, la, si*—to indicate the fixed notes of the diatonic major scale on C. The modern equivalents—C, D, E, F, G, A, B—have been provided in the translation. When referring to material that is located in one of the numerous charts Laborde uses, the two are employed simultaneously to allow the reader to reference the charts with ease.

Laborde's *Essai* contains a myriad of historical references. The commentary provided by the translator in the footnotes explains and identifies the people and works that he mentions as they occur in the treatise. With the information Laborde provides, coupled with the available resources, there are a few references that have been difficult to identify that offer additional information; these are indicated as such in the notes. Whenever Laborde acknowledges someone whom he discusses elsewhere in the *Essai*, those page numbers are listed in the note as well. In order to provide the reader with a more authentic reading of Laborde's work, all of the figures, charts, and musical examples have been faithfully placed into the translation in the exact position that he offers them in his text.

The corresponding page numbers of Laborde's treatise have been inserted in brackets at the corresponding location throughout the body of the translation. The page numbers in the *Foreword* and the *Introduction* refer to Volume I of the *Essai*; the page numbers in the *Abrégé d'un Traité de Composition* refer to Volume II. Laborde has offered a number of his own footnotes throughout the text to comment upon his writing. They are differentiated from this author's by a capital letter L in brackets, [L], at the start of the note. Editorial comments by the present author in Laborde's footnotes are enclosed in brackets either within or at the conclusion of Laborde's comments.

ESSAI
SUR
LA MUSIQUE
ANCIENNE ET MODERNE.

TOME PREMIER.

A PARIS,
De l'Imprimerie de Ph.-D. PIERRES, Imprimeur ordinaire du Roi;
Et se vend
Chez Eugene ONFROY, Libraire, rue du Hurepoix.

M. DCC. LXXX.
Avec Approbation, & Privilége du Roi.

FOREWORD

[p.*v*] Our original materials had been collected only in order to develop an article on music from our *Voyage de la Suisse & de l'Italie* (Journey from Switzerland and Italy):[1] having found them too voluminous for this goal, we are determined to develop an exceptional treatise from them ourselves.

We report in good faith that this work, written without pretense, is only the outcome of thirty years of readings and of the extracts which were the fruit of them. Our only plan has been to collect, in a single work, nearly all of the good writings on music from several thousands of volumes which have appeared to us. This is the sole merit of this enterprise.

Some of our readers will perhaps desire to find more method in this edition of the work, but we must mention that we have not been able successfully to acquire in a timely manner the necessary knowledge for the development of our ideas on music; it has happened that some of this knowledge has only reached us after we had already delivered the related articles to the printers. The demonstration of these same ideas appeared at that time incomplete to us, in such a way that we therefore have had to insert notes into this part of our discussion.

It is doubtless desirable that some more practiced pen [*vi*] than ours may undertake a work that will go even deeper into an art that becomes more interesting each day, through the progress that it made in France, above all for some years. The field is vast, and the subject is almost new, but we must resolve to fight the illustrious enemies, the *old lies and the modern mistakes*. We believe we have avoided taking a single step in this perilous direction, and our only goal has been to prepare some materials for some combatants more determined than we and less concerned with their own peace of mind.

We have avoided, with the greatest care, getting mixed up in quarrels which, for five or six years, occupied so much room in our journals, without having produced any

[1] Laborde published a work in 1780 entitled *Tableaux de la Suisse, ou Voyage pittoresque fait dans les trieze cantons du corps helvétique, Vol. 1: Tableaux topographiques, pittoresques, historiques, moraux, politiques, littéraires de la Suisse* (Paris: Imprimiere de Clousier, 1780). As both titles indicate works of a similar nature, either Laborde's *Voyage de la Suisse et d'Italie* has been lost, unless it exists in a private library, or he changed the name to reflect only the time he spent in Switzerland.

other effect than to give rise to the enmity between people, perhaps, initiated in order to amuse themselves.

In spite of the care that we have taken in order to respect opinions and to hurt no one, we are not unaware that we will meet a crowd of critics, of whom perhaps several will be of good faith. We are content with inviting them to observe that this work is only an essay, only an assembly of materials destined for the construction of a very large structure, and we hardly believe it [to be] without faults. We will entertain with the greatest gratitude the information that others are willing to give us, as well as all the pieces of information that escaped us in our research.

But we will abstain from responding to the anonymous critics, who have been far too numerous for some time and are as harmful to the artist, as they are pointless to the progress of the arts.

Perhaps here would be the moment to report the obligations [*vii*] that we have to several people of letters, as humble as they are enlightened, who have been glad to help us with their knowledge, particularly in order to decipher some old manuscripts of which the writing and the style are as difficult to read as to understand; but we have preferred to display to them the recognition that we have of the help that they have deigned to provide us in the course of the same work.

If we have not mentioned some artist or some work, it is only the result of an oversight or because they are unknown to us. It will provide us the greatest service to be informed about it, thereby giving us the means to repair our faults in a second edition that we will be able to produce some years from now, if the public appeared to desire it. There we would then recognize with names those to whom we have this obligation.

INTRODUCTION

Music only affects us in proportion to the sensitivity of our organs [ears]. There are some men for whom harmony is only noise; there are others who are sent into rapture by it until they break it off due to the memory of their concerns and their grieving [until reality returns them from their rapture]. We see people who pass from cheerfulness to melancholy and from languor to agitation, depending on the pleasure of the skillful musician who knows the means of his art well. Suppose, therefore, having the most sensitive ears and most excellent music: they necessarily experience [*viii*] extraordinary impressions from it. While for some great men this may be the possible effects of music, we are not about to give credence to all the miracles attributed to it.

What history has kept for us are some of the astonishing impressions that music produced among the Greeks. When these impressions are placed next to the imperfection of this art in the nation of ancient Greece, it only proves their extreme sensitivity. [The Greeks are] born under a hotter climate than ours, more sensitive to passions than we are, blessed with a more lively taste, with a more exquisite feeling for the pleasures,[2] and of a more active shrewdness for all they saw and heard. In addition, [they were] raised for the most part in the freedom of popular government, by confiding, without fear, in those who could stroke their imagination, and sparing nothing that was capable of obtaining pleasure for them. It is to the sensitivity of the sensory organs of the Greeks that you must honor all the marvels that we have poured forth on the subject of their music, rather than on the power of an art that was only in its infancy among them, or even which did not exist yet, since it all works towards proving that they did not even suspect the charms of harmony.[3]

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[2] [L: Every footnote that is from Laborde's text is preceded by the bracketed capital letter "L" as a means to indicate that what follows is his observation. In these particular notes, if comments beyond Laborde's are made by the present author, they will be enclosed in brackets either within, or at the conclusion of Laborde's contribution.] The Athenians at the time of Socrates, believed that the pleasure of a feeling is preferable to all the truths of morality.

[3] [L] Tartini did not believe that the Ancients were quite so skillful, since he does not dare to maintain that they might have known harmony and conjectures that they only used the purely melodic kind of music.

Tartini thinks that even if the Ancients had known harmony, in the sense that we understand it, they would not have used it. Here are his reasons: "Each emotion has movements and intonations which are proper for it: cheerfulness is fast in its march and its tones go toward the high pitched. Sadness, on the

[*ix*] Another source of the extreme sensitivity of the Greeks for music was the poetry with which it was almost always united, and of which the effects, considered to be a lot more assured than those of the music, have probably for a time been attributed unfairly—more often than not—to this latter art. The following passage favors this opinion; it is printed in *Discourse on the State of Greek Music*, p. 100.[4]

"In this moment, some melodious songs struck our ears. We would celebrate that day a holiday in honor of Theseus. Choirs, formed of the most brilliant young people of Athens, went to the temple of this hero: they reminded us of his victory over the Minotaur, his arrival in this town, and the return of the young Athenians whom he had released from bondage. After having listened to them with attention, I say to Philotimus: I do not know if it is the poetry, the song, the precision of the rhythm, the interest of the subject, or the delightful beauty of the voices that I admire the most, but it seems to me [*x*] that this music fills and elevates my soul. It is, Philotimus quickly interjected, that instead of enjoying ourselves by stirring our small passions, it is going to arouse, from the bottom of our hearts, the most honorable feelings in man, those which are the most

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contrary, is slow and falls in the low register. Having posited that, how would the Greeks, great imitators of nature, have composed, as we do in four parts, where we hear it in the low and high registers at the same time, where the effect of the one which tends to [produce] happiness is in opposition to the effect of the other, which tends to [create] sadness?" [Giuseppe Tartini, *Trattato De musica secondo la vera scienza dell'armonia* (Padua: 1754), 141.] We are not persuaded of the truth of this power of reasoning, and it seems to us that it is possible to use the low and the high registers in sad as well as in happy music. [Tartini (1692-1770) was an Italian theorist, violinist, and composer. He offered a competing theory of the fundamental bass, one that Rousseau championed over Rameau's. In his speculative treatise *Trattato di musica*, Tartini bases his harmonic system on his discovery of the *terzo tuono* (third sound) that occurs when two strings are played at the same time. Fredric Bolan Johnson explains the third sound: "if two tones in just intonation are sounded simultaneously and loudly enough, the judiciously-positioned listener will hear yet another tone, which will be pitched lower than the two sounded tones," Fredric Bolan Johnson, "Tartini's *Trattato di musica seconda la vera scienza dell'armonia*: An Annotated Translation with Commentary," (Ph.D. diss., Indiana University, 1985), viii. Johnson adds that "it is important to understand that Tartini thinks of the third sound as the fundamental bass of the three sounds," Ibid., n. Tartini's explanation of the third sound may be found in Tartini, *Trattato di musica*, 1-19. Johnson and Planchart offer further explanation: Johnson "An Annotated Translation, iv-xxvi; Alejandro Enrique Planchart, "A Study of the Theories of Giuseppi Tartini," *Journal of Music Theory* 4, no. 1 (1960), 32-61. Regarding Tartini see also Laborde, III, 368-369.]

[4] Based on the information Laborde provides and the available resources, the exact identification of the *Discourse on Greek Music* is not possible at the present time. Mathiesen recounts a description of a similar festival in Proclus's *Chrestomathia*, in which choirs sing in procession in celebration of Athena and Dionysus. Mathiesen says that this sort of event exemplifies the "elaborate ceremony—frequently involving maidens and young boys—of the special festivals and the important position choral singing occupied in the pageant" (Mathiesen, *Apollo's Lyre*, 88). Mathiesen describes Proclus (412-485 BC) as "a neo-Platonist philosopher and systematizer of ancient learning" (Mathiesen, *Apollo's Lyre*, 28).

useful to society: courage, recognition, devotion to the homeland. It is because of its joyful setting with poetry, rhythm, and all the means of which you come to speak that it achieves an impressive character of greatness and of nobility. Such a character never fails to make an impression, and it endears itself all the more so to those who are meant to capture it, as it gives them a higher opinion of themselves."

This fragment shares at least the effect and the impression realized between poetry and music; and in effect it is difficult to think that the melody by itself had been able to produce a similar effect. Music, without poetry, can interest us enough in order to cause us to shed tears and in order to inspire a pleasant melancholy, but it is difficult to think that it will give a person a more advanced idea of himself, or to expand the circle of his ideas: especially if this music is, as we must believe it was at that time, stripped of these harmonic reinforcements which constitute its true power.

However it was this harmony that Plato wanted to banish.[5]

[*xi*] As a result of wanting to look for a perfect music, this philosopher formed the idea of a music that cannot be found among men. For is it reasonable to establish, as he does, that with a lyre we may be able to represent the sentiments quite well and the thoughts that the listener may have within the parameters of foretelling and distinguishing them. Does a musician only work through the sounds of an instrument, an order or a prayer, a consent or a refusal, a piece of advice or a persuasion? This is evidently what is demonstrated [as being] impossible to us.

No matter what people say to us, in the fourth book of his academic questions, Cicero has written, "as the ones who have a great mastery of music, they know as soon as the flutes warm up,[6] what the new piece that is going to be played is, and they say,

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[5] [L] The Greeks called double-octave antiphony [organum] the piece of music performed by different instruments at the octave and at the double octave, in opposition to the ones which played in unison, which they called homophonic or symphonic. However, in our time the music of the church that we label antiphony, or anthem [antiphonal], is sung by the entire choir [with] the children of the choir being two octaves higher than the adult singers and the response sung in unison. These are the definitions of antiphony and symphony of the ancients. [Plato (c.427-c.347 BC), the student of Socrates, wanted to place restrictions and censors on all types of artistic expression as Laborde goes on to discuss. The material detailing the plans for Plato's reforms may be found in Book III of the *Republic*, his famous Socratic dialogue. See Laborde, III, 29, 148-49. Aristotle defines antiphony as the performance of two voices at the octave (Aristotle, *Problems*, 19.16, trans. W. S. Hett, Aristotle in Twenty-Three Volumes, ed. E. H. Warmington, no. 15 (1936), 389.).]

[6] Laborde uses the term *flûtes* here, but most likely he is referring to the ancient Greek, double-piped reed instrument, the aulos, which was often used to accompany dramatic works. As Laborde has consistently

without error that it is *Antiope* (a tragedy of Pacuvius), or *Andromache* (a tragedy of Ennius)."[7] We reply that this is impossible: it could be, as the flutes [auloi] were warming up on the mixolydian mode, the mode of sadness, or on the Dorian mode, the one of battles, that they were able to notice easily the genre of the tragedy being represented, but that, in the same genre, they named one piece rather than another. It is absurd to want to persuade us that this was the case.

Plato[8] had such little knowledge of music that having [*xii*] believed he had distinguished several kinds of harmonies, he adopted the one which he believed to be suitable in government, which he proposed, and [then] banished all others. Similarly, having examined the different kinds of poetry which were in use among the Athenians at that time, he only allowed the one which they used for singing hymns to the praises of the Gods, or for fables, which they used in order to form morals, and prohibited the ones which could, according to him, cause a false idea of Divinity, like the poems of Homer, or cloud the soul by stimulating the passions, like tragedies.[9]

What to conclude of this reform? It is that Plato was equally a bad musician and a bad poet.

The indignant supporters of antiquity maintain that the expressions found in old music mirrored the variety of their speech and were based on the abundance of different

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used the term "flute" throughout his treatise—as a translation of the Latin *tibia*—in cases such as this when he is referring to the aulos, a literal translation has been maintained, but "aulos" has been inserted in the text editorially as well. Laborde describes the two-pipe aulos as the *flute double*, accompanied with an iconographic representation of the instrument being played; see Laborde, I, 227. For a comprehensive discussion of the instrument see Mathiesen, *Appolo's Lyre*, 105-107, 177-222.

[7] Marcus Tullius Cicero, *Academica,* 2, 20.2-4, trans. by James S. Reid (London: Reprografischer Nachdruck der Ausgabe, 1885; reprint, Hildesheim: Georg Olms Verlagbuchhandlung, 1966), 198. Cicero (106-43 BC) was a famous Roman orator; see Laborde, III, 155-59. Marcus Pacuvius (c.220-130 BC), notable Roman poet/dramatist and painter, was known for his works of tragedy; his uncle and teacher was Quintus Ennius (239-169 BC) who is often considered the father of Roman poetry.

[8] [L] Plato calls instrumental music a choice without meaning, an abuse of melody. Plato had, without doubt, some connection with the cold Fontenelle, who knowing not a word of music, believed to have fashioned a *bon mot* [witticism] by writing: "Sonata, what do you want of me?" How many people would be able to say with as much reason, "Algebra, what do you want of me?" Nevertheless, this science would not be a lesser of the more beautiful discoveries of the human spirit. [Bernard le Bovier de Fontenelle (1657-1757) was a member of both L'Académie Française and L'Académie des Sciences, for which he became the perpetual Secretary in 1697, a post he held for 42 years. Laborde mentions that he also wrote the librettos for several operas, Laborde, IV, 132. Regarding the aesthetic implications behind his famous quote, see Maria Rika Maniates, "'*Sonata, que me veu- tu?'* The Enigma of French Musical Aesthetics in the Eighteenth Century," *Current Musicology* 9 (1969), 117-40.]

[9] The poetry reforms are in Plato, *Republic*, 386a-394c; the drama reforms are in 394d-398c; the music reforms are in 398d-400e.

modes, of which the authors make mention, and of which we have no experience in their use.

We will discuss this subject, and we will try to reduce and bring back to the truth the prestige which has been able, naturally enough, to result from the display of these varied modes.

But although we may be quite persuaded of the inconsiderable progress [*xiii*] that music had made among the ancients, we are far from thinking that this art had not been nurtured with care.

Proof of this truth comes through the importance music had in the world and even in the education of children.[10] They learned to sing as soon as to read; ignorance of song was a prejudgment of a bad education: the greatest men used to give a part of their time to it [singing], and music was among the most elevated forms of knowledge.[11]

Cicero tells us in the first of the Tusculan disputations that, "among Greeks, one did not pass for scholarly, unless one could sing. Epaminodas," he says, "who, according to me, [*xiv*] was the first man of Greece to be very skillful at playing instruments; and

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[10] [L] The Getes, a barbarous people, used music very mysteriously. They never sent their ambassadors for any treaties of peace and alliance. They only had the hand-harp, which they regarded as the symbol of peace, to make the nations understand, as their proposals were duty bound to be settled through the agreements of the music. [The Dacia were a Thracian people, who were known as the Getes in ancient Greek writings, were inhabitants of a region that corresponds to modern day Romania and Moldova.]

Riccimer, king of the Vandals, having lost a large battle against Belisarius, was forced to escape to the mountains, where he sought refuge. Being overwhelmed with pain, he sent to his general to ask for bread in order to prevent him from dying of hunger, a sponge in order to dry his tears, and an instrument of music in order to soothe himself (*Life of Emperor Justinian*). [Flavius Petrus Sabbatius Iustinianus, or Justinian I (483-565), is known as the last Roman Emperor. He expanded the territory of the Empire through the strength of his military. Flavius Belisarius (505-565), a general in Justinian's army, was a great military leader; he is greatly responsible for the territorial acquisitions of Justinian's reign. The work Laborde refers to is most likely Procopius's *History of Justinian's Wars* (545).]

Plutarch teaches us that the Aegians established a punishment against those who would offend the dignity of music. Athenaeus reports that the Arcadians liked music so much, that the people of Cynete, who were a part of their nation, were driven away from their town for having scorned it [music]. [Mestrius Plutarch (c. 46 – c. 127) was a Greek historian and writer who also served for years as one of the two priests at the temple to Apollo at Delphi. He is remembered for his extensive biographical work the *Parallel Lives* and 78 essays on various topics, collectively called the *Moralia*. Athenaeus of Naucratis (2nd century BC) was a Greek author who is best remembered for his collection the *Deipnosophists*, a collection of discussions on numerous topics that have preserved numerous references to works of antiquity that would be otherwise lost. For more on Athenaeus, see Laborde, III, 138-40.]

[11] Aristides Quintilianus's (c. 3rd century CE) treatise, *De musica*, encompasses a full range of information on music in antiquity. The second volume of *De musica* is devoted, in part, to the value of music education. Aristides Quintilianus, *De musica*, II, in *Greek Musical Writings*, II, trans. and ed. Andrew Barker (Cambridge: Cambridge University Press, 1984), 457-494.

Themistocles,[12] having refused to play a lyre that someone presented to him at a banquet, created a bad impression [*xv*] of himself and was regarded as a man who had been poorly raised."[13]

Socrates knew music. Cicero preserved the name Damon—who taught this philosopher [Socrates]—for us.[14] Plutarch mentions that Plato had learned music from the two most skillful musicians of his time; so that the most generally established use of music among the Greeks was the study of song, and that Greece was at that time a people of musicians. We see furthermore that those who made a particular occupation of music were often given the greatest tasks. Claude Elien teaches us in his *Histoires diveres* (book 1, chapter 21), that Ismenus, a flute [aulos] player, was sent as ambassador to Persia.[15] Tyrtaeus, also a player of the flute [aulos], acted as general to the Lacedaemonians

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[12] [L] In the origin of the Greek republic, were their oldest maxims, their declamations, their laws, and even their history written in verse? The rites of their religion were accompanied by dance and song. Their oracles were uttered in verse, or rather sung, by the priest or priestess of the god to whom they put questions to. Melody, combined with poetry, continued to be the vehicle of all institutions of religion, of morals, and of politics. In this way, these two arts formed only one, which became the natural object of the attention and respect of the public and the most essential part of education.

It is for that [reason] that ignorance of music was considered by the Greeks to be a major flaw. This is the foundation of the reproach made to Themistocles. It is believed that it was for this reason that he had not known to repress the enormous crimes committed in the country of Cynete, and this reproach was well-founded, since this ignorance used to cloak the shortcomings of the three large articles of education—religion, morals, and politics. Such was the importance of the old music, as much as it was applied to education (See the work of the late M. Gregory, Doctor at Edinburgh). [M. Gregory is most likely the famous professor of mathematics at the University of Edinburgh, David Gregory (1659-1708).]

Lycurgus believed that music was very useful in order to overcome enemies in combat and in order to keep good morals. He ordained that all the male children, at the age of five years, would begin to learn to play the flute [aulos], and at the age of seven years to dance [to music] in the Phyrigian mode, being armed with javelins, swords, and shields. They had a dance named the *gymnopédie*, composed of two choirs, one in which all the men danced nude, and the children in the other. The daughters of Sparta also sometimes danced completely nude in public in front of the altar of Diana. It was during one of these dances that Theseus fell in love with Helen, whom he abducted.

These spectacles, which would appear scandalous today, made no impression on a nation accustomed to such activities. Also the Lacedemonians used to say "that they were covered with the public honesty and that their songs used to impart respect in the hearts of the spectators." [Lycurgus (c.800 BC) is remembered as the Father of Sparta, who established the laws which made Sparta a city-state of warriors. These accounts are probably taken from Plutarch's biography of Lycurgus in his *Parallel Lives*, which contains passages regarding the important role music played in Spartan life.]

[13] Cicero, *Tusculan Disputations I*, 1, 4, trans. and ed. A. E. Douglas (Chicago: Bolchazy-Carducci Publishers, 1985), 23.

[14] According to Aristides Quintilianus, Damon created the *harmoniai*, in the sense of the tuning systems to be used in practice. Aristides Quintilianus, *De musica*, II, 80.30 – 81.1, in *Greek Musical Writings*, II, 483. Laborde credits Damon with the invention of the Hypo-Phyrigian mode, Laborde, III, 141.

[15] Claude Elien, *Histoires diveres* (Paris: Moutard, 1772).

[Spartans], the day of the famous battle against the Messenians.[16] Therefore it is certain that the Greeks possessed the art of depicting[17] [*xvi*] sounds, as well as the art of singing, and that Pythagoras was the inventor of this art which is called *paramésantique*, or semiotics.[18] Boethius teaches it to us in his *Treatise on Music*.[19] Unfortunately, only some of their notated airs remain to us,[20] yet we still have their notes, for in addition to the names of the strings, every sound was still distinguished among them by some characters or some shorthand. They used the Greek alphabet. The letters were either whole or cut or upside down,[21] some for the voice, others for the instruments, and as they were yet large in number and [*xvii*] all different, they placed them on a line parallel to the words, instead

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[16] Tyrtaeus (late 7th century BC) was a Greek elegiac poet. His poetry was written to help lead the Spartans to victory in battle.

[17] [L] Cato reports in his origins that among the Ancients it was also the custom in banquets to sing of the achievements and virtues of the great men with flute [aulos] accompaniment. *In originibus dixit Cato, morem apud majores hunc epulorum Fuisse, ut deinceps, qui accubarent cenerent, ad tibiam, clarorum virorumlaudes atque virtutes*. Cicero *tunscul* 4. [Cicero, *Tusculan Disputatons III and IV,* IV, 3, trans. Margaret Graver (Chicago: University of Chicago Press, 2002), 40.]

Several passages of Cicero, of Quintilius, of Boethius, and of Plutarch prove that not only the musicians and the actors, but even the orators had a manner of notation by which they clearly expressed the different inflections of the voice— in other words, in order to sing, to declare, or to declaim. What's more, they were all accompanied by a flute [aulos] which prevented them from allowing the tone to fall below the given pitch.

Duclos [Charles Penaut Duclos (1705-1772), French writer, librettist, and historian, was a member of L'Académie Française] has denied that one might be able to notate the declamation and assures us that if this operation were possible, it would be bad because it rendered the actors cold and the impersonators childish.

[18] Pyhtagoras (582-496 BC) was a Greek mathematician who is credited with the discovery of the ratios that form the musical intervals of the octave the fourth and the fifth. See the discussion in Chapter 4, and Laborde, III, 150-152.

[19] Anicius Manilus Severinus Boethius, *De institutione musica* (c.500), 1.185, 1.196-198, translated as *Fundamentals of Music*, trans. Calvin M. Bower (New Haven: Yale University Press, 1989), 5, 17-19.

[20] [L] M. Rousseau only reports two of them in his *Dictionary of Music*. The first is the first ode of the *pythiques* of *Pindare*. The second is on a hymn to Nemesis. [Rousseau, *Dictionnaire*, Plate C.]We will provide four of them, which may be found in our first book. [Laborde, I, supplement to Book I (following 200), i-xix.]

[21] [L] MM. Burette and Duclos have rightly reported the number of these letters at 1620. It is therefore not surprising that the young men might take three years to sight-read music. The author of the letter on "The State of Greek Music," reduces them to 990, of which 495 were for the voice, and 495 were for the instruments, but he has not considered that Alypius has kept 1620 of them for us. [The letter "on the State of Greek Music" appears to be the same work he references earlier in the introduction. See n. 4. Aypius (4th century CE), a Greek author on music, wrote his *Introduction to Music* that contains the notational symbols for the *tonos* of all three genera. He was translated into Latin by Marcus Meibomus in the seventeenth century, Marcus Meibomus, *Antiquæ musicæ auctores septem Græce et Latine*, I (Amsterdam, 1652).] We have a great obligation to Guido d'Arezzo for so simplifying such a complicated art. [Pierre-Jean Burette (1665-1747) was a man of great knowledge. He practiced medicine, knew numerous languages, entered into the Académie des Belles-Lettres in 1705, was asked to write for the *Journal des Savans* in 1706 (which he did for 33 years), and worked in the King's Library from 1718. He also has a marked interest in and talent for music from a young age. His knowledge of Latin and Greek, which was mainly self-taught, helped encourage his interest in the music of the ancients. See Laborde, III, 599-601.]

of employing the notes, which we use today. As they all had the same figure, we are obliged to distinguish them by their different positions in the scale.

In as much as the Greeks had a certain manner of writing their music, some fragment of it would be preserved for us, if it had been worth keeping. What do we think, therefore, about so many of the marvels that the histories of the Greeks recount relative to their music?

Must you believe Aristotle when he tells us that the horses of the Sybarites liked music so passionately, that the Crotoniates, knowing the weakness of these animals, decided one day to take with them a large number of flute players into combat?[22] At the sound of these instruments, the horses of the Sybarites, standing up on their own back feet, as if to dance, throw their masters down to the earth and dance to the side near the Crotoniates, who had no trouble defeating their enemies, already half-defeated by their own horses. Athenaeus has taken this story from the book of Aristotle where his work on the Republic of Sybaris is found.[23] Pliny did not fail to adopt it in his book 8, Chapter 42[24] and the learned Varro has really dared to maintain, in his work *re rustic*, book 3, that there was a swamp in Lydia, in which one used to see some floating islands, which at the sound of the flute [aulos], formed a circle and then came together at the shore.[25]

Aristotle assures us also that the Etruscans would only whip their slaves to the sound of flutes [auloi], feeling that it was [*xviii*] humane to provide some consolation to the pain, and in the same way putting a part of their punishment onto themselves. We know the extent to which we should take these stories seriously.

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[22] While the shrill sound of the aulos could potentially have caused these horses to dance, the aulos may not be the type of wind instrument Laborde has intended to identify with this mention of the term *flûte*. He may be referring to the salpinx, an instrument similar to the straight trumpet, that, according to Mathiesen, "could produce specific pitches heard over the chaos of battle," Mathiesen, *Apollo's Lyre*, 230.

[23] Athenaeus, *Deipnosophists*, 12, 520c-520f, trans. Charles Burton Gulick (Cambridge: Cambridge University Press, 1927), 343-45. Gluck translates the instruments in this passage as "pipes," a more accurate translation than Laborde's use of "flutes" in his description of the same passage.

[24] Pliny, or Caius Plinius Secundus (23-79 CE), wrote a monumental natural history that contains 37 books, Caius Plinius Secundus, *Naturalis Historiæ* (77 CE). Laborde, III, 160.

[25] Marcus Terentius Varro (116-27 BC) was a Roman scholar who oversaw the public library of Rome under the rule of Julius Caesar. Varro, *Rerum rusticarum libri III*.

In order to see if the music of the Ancients was capable of such great effects, let us listen to them discuss this art. It is Socrates and Plato who are going to speak in the third book of the *Republic*, written by the latter.[26]

Plato

Will we not allow in our music these instruments which have so many strings and from which we can derive so much knowledge?

Socrates

No, I do not believe it so.

Plato

Our town must then take care not to nourish the makers of such instruments.

Socrates

It seems so to me.

Plato

But what will we say about the players and of the makers of [*xix*] the flute [aulos]? It will be necessary therefore to banish them for the same reason, since the multi-string instruments are only imitating the flute?

Socrates

That is my opinion.

[26] Plato, *Republic*, III, 399c-399e. Laborde mistakenly describes the dialogue as being between Socrates and Plato. The dialogue occurs between Socrates and several of his students. At this point in the *Republic*, Socrates is addressing a man named Glaucon. The point that Plato makes is that the music of Apollo, which is associated with the stringed lyre, is far more cultured and belongs to the educated ears of the city, while the music of the flute [aulos], associated with the satyr Marsyas, produces a far more pastoral and earthy music.

Plato

So much so that we will only keep the old lyre and leave the flute [aulos] to the inhabitants of the countryside?

Socrates

Nothing is more reasonable, since we must prefer the instruments of Apollo to those of Marsyas as well." What does one want to say to all this gibberish, to these stringed instruments in which the imitation of the flute [aulos] may be found? To this preference of the instruments of Apollo to those of Marsyas? etc., etc.

Let us confess that Plato makes Socrates speak badly, or rather that Socrates, in [regard to] music, reasoned no better than Plato.

This philosopher defends the use of the different parts in accompaniments and wants us never to play other things on the lyre than what the voice sings. The reason provided is that the mixing of the low and high registers, of the top and the bass, and the contrast of the movements, is able to befuddle the spirit of a young man, who only has three years to give to music, for that is the time limit prescribed to an amateur.

What to think of such reasoning! And after having read them, as well as many others which we spare the readers, are we not forced to agree that the Ancients were absolutely ignorant[27] in music, and that all the related miracles of this art which are attributed to them are fables in which we must lose all belief?

We have believed that it could be adequate to give this small essay on the music of the ancients at the beginning of a work which must introduce a very extensive treatise of music, and as a result our sensible readers would be struck by our reflections and have an mistake corrected, which perhaps they had not yet considered dismissing. Therefore, they would read with more interest about the developments of an art that we believe we can boldly provide, as music has never been as advanced as it is in this century.

[27] [L] It was prohibited by the laws of the Greeks to produce music that would be too pleasant for fear that by softening the spirits, it would corrode their morals. It seems that Plutarch may have foreseen the reproach that one was supposed to make about music from his time, by its very great simplicity, when he says "that this was not by ignorance that the music of the Ancients was so bare and so simple, but that they wanted it this way through politics."

ESSAY ON MUSIC

THIRD BOOK

AN ABRIDGED COMPOSITION TREATISE

CHAPTER 1

On Music

[1] The great Rameau tells us that music is the science of sounds; sound is the principal object of music.

But music is not only the physical object and the relationships found between different sounds that make up the mathematical object of it. Its end must always be to please and to arouse different passions within us.

CHAPTER 2

On Sound

[2] The ancients have believed that sound was caused by the *corps sonore*[28] in the same manner that smell is produced by the flower, that is to say, by spreading in the air

[28] The *corps sonore*, or sounding body, first proposed by Rameau in his *Nouveau système de musique théorique et pratique* (Paris: Ballard, 1726), and first explored in his *Génération harmonique ou traité de musique théorique et pratique* (Paris: Praut fils, 1737), refers to the naturally produced overtones of any sounding body. The first two partials produced are the twelfth and the seventeenth. Along with the fundamental tone—the *corps sonore*—these two notes form the major triad, thus the major triad is formed from a natural phenomenon. Regarding the *corps sonore*, Rameau says "harmony is a natural effect which consists of a pleasant mixture of different sounds, in which the cause originates in the agitated air shocked by each sonorous body [*corps sonore*] in particular" (Rameau, *Génération harmonique*, 1). Rousseau provides a more practical explanation of the *corps sonore*: "one must only give this name to the part of the instrument that actually sounds, and without which it would not sound. Thus on a cello or on a violin each string is a *corps sonore*, but the box of the instrument, which only echoes and reflects the sound, is not the *corps sonore* and makes no part of it" (Rousseau, *Dictionnaire*, 135). Christensen describes the *corps sonore* as "Rameau's term for any vibrating system such as a vibrating string which emitted the harmonic partials above its fundamental frequency" (Thomas Christensen, "Eighteenth-Century Science and the *Corps Sonore*: The Scientific Background to Rameau's Principle of Harmony," *Journal of Music Theory* 31, no. 1 (1987), 23). As the English translation of *corps sonore* does not provide anything more in the way of understanding, the French idiom *corps sonore* will be left in tact throughout the body of this translation.

small bodies capable of affecting our sensory organs. We are now persuaded that the body which resonates loses nothing of its substance, and that it sheds nothing at all that may be transported into the organs of our hearing.

Therefore, what is sound and how is it produced in our senses?

We say that some time always passes before the sound reaches our ears, and that this time is all the longer when the place where the sound is produced is distant from us, so that in order to be transmitted to a distance of 1,000 feet, you must give it about one second.[29] By observing a bell when it is struck or a string when it is plucked, we will easily notice that the body is in a state of trembling or agitation in which all of its parts are shaken. These vibrations set the neighboring air into similar vibrations, which is transmitted successively to the most distant parts of the air, until they come to strike our organ of hearing. It is therefore the air which, receiving such vibrations, transports the sounds up to our ears and as a result, the perception of a sound is nothing other than the intimate communication of the affected air to our organ of hearing. And when we hear the sound of a plucked string, our ears receive as much noise from it as the string has made of vibrations. But there are sounds of different [3] sorts—where do we search for the causes of these differences? This answer is perhaps only found in relation to the vibrations.

When a string completes 100 vibrations in a second, and when another completes 200 of them, the sound of the first will be deeper, or lower, and the other sharper, or higher.

This is the difference between low and high sounds, upon which all the science of music revolves, in which all merit consists in knowing how to combine different sounds through the ratios of the low and the high,[30] so that when they are joined together a

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[29] [L] When we fire a canon, those who are distant from it only hear the noise some time after they have seen the flame of the explosion. The ones who are removed 24 thousand feet (a little bit more than a league and a half in France or a mile in Germany) only hear the sound 24 seconds after the sight of the fire. Also, the sound of thunder only reaches our ears some time after the flash of lightning, and if we observe that twenty seconds passes between the flash of lightning and the thunder, we can conclude from it that the seat of the thunder is 20 thousand steps away from us.

[30] [L] The ancients, having devoted the deep sounds to the religious, majestic, and sad ceremonies, and the high sounds to gaiety, to impetuousness, and even to fury, could not stand the mixing of the low and the high. Ignoring the art of uniting them without harshness and of causing this harmony to be the result of them, sometimes terrible and rousing, sometimes soft and persuasive, they considered it as an offense to mix them together. It is an unquestionable proof that they never have known music in several

pleasant harmony results from them. The famous Euler, to whom we accredit the definition of sound, has noticed that we would not be able to hear a sound which would make less than twenty vibrations in a second because it would be too low, nor a sound which would make more than 4 thousand vibrations in a second because it would be too high. [31]

CHAPTER 3

On Intervals

Thus we name the distance that exists between a low register sound and a high register sound.[32] This distance is divided into degrees, of which the first is called unison. It is when two voices or two instruments, or one voice and one instrument form the same sound.

[4] The 2nd degree is called …….second.
The 3rd…….third.
The 4th…….fourth.
The 5th…….fifth.
The 6th…….sixth.
The 7th……seventh.

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parts[polyphony], or at least, that if they have had some idea of it, they have condemned it to never exist, because by allowing only the top and the bottom, they would have united the low and the high. Therefore they have never known harmony.

[31] Leonhard Euler (1707-1783), *Tentamen novae theoriae musicae* [Essay on a new theory of music] (1739). Euler was a scientist and mathematician with a keen interest in music. He did research in the acoustical mathematics associated with vibrations and found himself to be skeptical of Rameau's principle of the *corps sonore* as the foundation of music. He also believed in the coincidence theory of consonance which held that the simpler the ratio of an interval, the more consonant it would be. Therefore he could not accept Rameau's use of octave identity to reduce compound intervals such the twelfth (1:3), to their equivalent within the octave, in this case the fifth (2:3), as he would have viewed the two intervals as having varying degrees of consonance due to the different ratios they derive from, not as being equivalent. Regarding this Christensen says that "Euler could not accept that intervals of chords compounded or inverted by an octave could be considered identical" (Christensen, *Rameau and Musical Thought*, 245). While acknowledging his "sublime genius" and his fame, Laborde questions Euler's position on consonance as "we cannot ignore that several of these proportions are invented and against our principle of harmony" (Laborde, III, 339). The most obvious reference here is to the perfect fourth (3:4) having a simpler ratio than the major third (4:5), but in Laborde's harmonic theory the major third would be considered a more consonant interval. This is another instance of Laborde allowing practice to circumvent the mathematical rigors of the speculative tradition.

[32] [L] We suppose that we have started on the lowest or deepest tone and that the others are formed by raising the voice successively according to its natural degrees.

The 8th…….……octave.

The 9th…….ninth.

etc., etc., etc……

The 15th…….....double-octave.

The 22nd…….…….triple-octave.

etc., etc., etc…….

CHAPTER 4

What are the Consonances; why they are perfect.

What are the Dissonances; why they are imperfect.

We call perfect what is subject to rational proportions; that is to say, for example, when one thing does twice, what another thing does once in an equal time then there is proportion between these two things.

When a string that creates six vibrations in one second is plucked at the same time as a string which creates twelve, two sounds result which form a consonance, because at that time a connection exists between these two sounds. This is in contrast to two strings, one of which would make nineteen vibrations, while the other one would form twelve. There is no connection at all—or if one exists, it is impossible for the ear to discern it. Therefore, the simplest consonance is the one where the high-pitched sound completes precisely two times as many vibrations as the low-pitched sound. This consonance is called an octave; and the high-pitched [note in the] octave is related to the low-pitched sound in the proportion of 2 to 1, since the high-pitched tone creates two times as many vibrations as the low-pitched sound.

The double octave will produce four vibrations while the low sound [5] creates one ; the triple octave will form eight; the quadruple, sixteen; the quintuple, thirty-two. There is then this proportion established:

1, 2, 4, 8, 16, 32, 64, 128, 256, etc.

Thus the proportion of …

The unison is of …….1 to 1.

The octave of…...……...2 to 1.

The double octave of ……...……. 4 to 1.

The triple octave of ……8 to 1.

The quadruple octave of ……... 16 to 1.

The quintuple octave of …… 32 to 1.

The sextuple octave of …….. 64 to 1.

The septuple octave of …….. 128 to 1.

The octuple octave of ……256 to 1.

Etc.,…… Etc.,

All the proportions that we are using derive their origin from the number 2; since 4 comes from two times two, 8 from two times four, etc. Thus by allowing only the number 2 in music, do we achieve the knowledge of the consonances named octaves.

By introducing the number 3, let us see what will result from it.

The proportion of 1 to 3 introduces two sounds to us, of which one produces three times more vibrations than the other in the same amount of time.

Let us suppose then that in the proportion of 1 to 3, the number 1 matches the sound *ut*[C]: since the sound *ut*[C]-*8ve* is expressed by the number 2, the number 3 produces for us a higher sound than *ut*[C]-*8ve*, but lower than *ut*[C]-2^d*8ve*, which matches the number 4, since the number 4, as well as all those generated from the number 2 belong to the octaves.[33] We know that the sound expressed by the number 3 is the one that musicians mark by the note G; they name the interval from C to G a fifth because in the succession of the notes of the scale, C, D, E, F, G, A, B, C, etc., the note G is the fifth from C.

[33] The solfège symbols used in a French treatise of this era often refer to the specific notes they represent in a C major diatonic scale, *ut* being C, *re* being D, etc. The majority of the solfège has been translated to the corresponding note name, but in this chapter, the solfège labels are maintained in instances when they refer to the diagrams Laborde has provided that have been reproduced here as in the original manuscript. In these instances the modern note name is provided along with the original French in the body of the text to facilitate comprehension when referring to the diagrams.

Therefore if the number 1 produces the sound *ut* [C]; the number 2, the sound *ut*[C]-*8ve*; the number 3, the sound *sol*[G]-*8ve*; and the number 4, the sound *ut*[C]-*2^{d}8ve*; the sound *sol*[G]-*2^{d}8ve*, which is the octave of the number 3, will yield [the number] 6; by climbing another octave, it produces 12; to the triple octave, 24, etc…[6]

	8e	8e	2e 8e	2e 8e	3e 8e	3e 8e	4e 8e	4e 8e	5e octave.
ut,	ut,	ſol,	ut,	ſol,	ut,	ſol,	ut,	ſol,	ut,
1.	2.	3.	4.	6.	8.	12.	16.	24.	32.

As a result, the proportion from 1 to 3 expresses the interval composed of an octave and a fifth, and which, because of the simplicity of these numbers, must form the most noticeable consonance to the ear after the octave. It is also the interval which is tuned the easiest on an instrument after the octave.

If we label the unison with the sound *fa* [F], the number 3 would indicate the sound *ut*[C]-*8ve* in such a way that the following sounds would match these numbers:

	8e	8e	2e 8e	2e 8e	3e 8e	3e 8e.
fa,	fa,	ut,	fa,	ut,	fa,	ut.
1.	2.	3.	4.	6.	8.	12.

From *fa*[F]-*8ve* to *ut*[C]-*8ve*, the interval is a fifth, contained in a proportion of 2 to 3. Similarly, from *fa*[F]-*2^{d}8ve* to *ut*[C]-*2^{d}8ve*, from *fa*[F]-*3^{d}8ve* to *ut*[C]-*3^{d}8ve*, etc., there is also the interval of a fifth, since the proportion from 4 to 6 and from 8 to 12 is the same as the one from 2 to 3.

Beyond that we arrive at the knowledge of another interval contained in the proportion from 3 to 4, which is from *ut*[C]-*8ve* to *fa*[F]-*2^{d}8ve*, and similarly from *ut*[C]-*2^{d}8ve* to *fa*[F]-*3^{d}8ve*, etc., or simply from C to F. It is what musicians call a fourth; a consonance which is not as pleasant as the fifth because its proportion, being from 3 to 4, begins to be more complex than that of the fifth, which is from 2 to 3.

It is then the number 3 which has supplied to us the consonances of the fifth and the fourth.

Let us now take three times the number 3 in order to have the number 9. It will give us a higher sound than the sound *fa*[F]-*3^{d}8ve*,[34] therefore the number 9 produces the sound *sol*[G]-*3^{d}8ve* in such a way that *ut*[C]-*2^{d}8ve, fa*[F]-*3^{d}8ve, sol*[G]-*3^{d}8ve, ut*[C]-*3^{d}8ve*

[34] The text says *fa-2nd8ve* at this point. This is apparently a misprint as the number associated with *fa-2nd8ve* is eight according to the model he provides, which is not a higher number or sound than the number nine, the *fa* was transposed to *fa-3rd8ve* as it would be associated with the number sixteen, providing the first *fa* a numerical association higher than nine.

will be labeled by 6, 8, 9, 12. Hence, transposing the sounds from the lower octaves up, with the proportions remaining the same, we will have:

ut,	fa,	ſol,	8e ut,	fa,	ſol,	2e 8e ut,	fa,	ſol,	3e 8e ut,	fa,	ſol,	4e 8e ut,
6.	8.	9.	12.	16.	18.	24.	32.	36.	48.	64.	72.	96.

[7] These are proportions that give us knowledge of new intervals. The first one is from *fa* [F] to *sol* [G]n the proportion of 8 to 9; this is what musicians call a second and also a whole-tone. The second interval is the one from *sol* [G] to *fa*[F]-*8ve*, contained in the proportion of 9 to 16; this is what we call a seventh, an interval which is a whole tone, or a second smaller than the octave. These proportions from 8 to 9, and from 9 to 16, being no longer expressed by the small numbers 1, 2, 3, 4, and 6, are no longer in the class of the consonances, but rather they begin the class of [intervals called] the dissonances.

Let us take the number 9 three times in order to have 27; this number will indicate a higher tone than *ut*[C]-*2^{d}8ve* and precisely a fifth higher than *sol*[G]-*8ve*. This will then be *re*[D]-*2^{d}8ve*, and its octave *re*[D]-*3^{d}8ve* will match the number 54, and *re*[D]-*4th8ve* will match the number 108, etc. Let us represent these tones from some lower octave; we will have the following proportions:

ut,	re,	fa,	ſol,	8e ut,	re,	fa,	ſol,	2e 8e ut,	re,	fa,	ſol,	3e 8e ut,	re,	fa,	ſol,	4e 8e ut,
24.	27.	32.	36.	48.	54.	64.	72.	96.	108.	128.	144.	192.	216.	256.	288.	384.

Here we discover that the interval from *re* [D] to *fa* [F] is contained in the proportion from 27 to 32, and the one from *fa* [F] to *re* [D], in the proportion from 32 to 54. The first interval furnishes the minor third and the second interval the major sixth.

We would be able to triple the number 27 again, but the modern theorists that we follow here take the number 5 and its multiples in order to have the other tones.[35]

Until now we have seen that the number 2 furnished the octaves; the number 3, the fifth and the fourth; 3 multiplied by 3, the second and the seventh; and 9 multiplied by 9, the minor third and the major sixth. Let us now introduce the number 5 and see what sound will be produced by five vibrations when the sound *fa* [F] only creates one.

[35] [L] By tripling 27, we would have 81; the higher octaves from 5 are 10, 20, 40, and 80. Modern theorists use 80, instead of 81, and they call the difference between these two numbers a comma. See note on page 10. [Laborde is referring to note 10 of his treatise. It is note 37 in this translation.]

In the same amount of time that *fa*[F]-*8ve* produces two vibrations, *fa*[F]-2^d*8ve* makes four, *ut*[C]-2^d*8ve,* six; then the tone [8] that we are looking for is between *fa*[F]-2^d*8ve* and *ut*[C]-2^d*8ve*. It is named *la*[A]-2^d*8ve*, of which the ratio with *fa*[F]-2^d*8ve* creates what we call a major third and forms a pleasant consonance, since it is contained in the proportion of these small numbers, 4 to 5. Moreover, this tone *la*[A]-2^d*8ve* makes an agreement with *ut*[C]-2^d*8ve*, contained in the proportion from 5 to 6, that we name a minor third, like the one of which we have already spoken contained between the numbers 27 and 32. The difference between the two minor thirds is almost imperceptible to the ear. This same number 5, being applied to the other tones—*sol* [G], *ut* [C], and *re* [D]—will furnish us with their major thirds in the same way, taken up into the second octave above; that is to say, the sounds *si*[B]-2^d*8ve, mi*[E]-3^d*8ve, fa#*[F#]-3^d*8ve*, which, being transposed from the first octave, will now produce these tones with their numbers:

fa,	fa ✕,	ſol,	la,	ſi,	ut,	re,	mi,	8e fa,
128.	135.	144.	160.	180.	192.	216.	240.	256.

By taking away the tone F#, we will have the diatonic scale, which consequently results from the numbers

2.
3.
3 × 3.
5.

By applying the number 5 a second time, it will supply the major thirds of the four tones *la, mi, si, fa#* [A, E, B, F#], which are *ut#, sol#, re#, la#* [C#, G#, D#, A#].

Ordering it in the following manner forms the complete octave of twelve sounds:

C, C#, D, D#, E, F, F#, G, G#, A, A#, B.

And all these tones derive their origin from the numbers

2.
3.
3 × 3.
5.
5 × 5.

Thus while the sound *ut* [C] produces 384 vibrations, each of the other sounds renders the following number of vibrations:[36]

Nombres dont la multiplication donne la ſomme des vibrations de chaque ſon de la Gamme.		*Somme des vibrations.*	*Différences entre ces vibrations.*
ut	2 × 2 × 2 × 2 × 2 × 2 × 2 × 3 · ·	384	
ut ♯	2 × 2 × 2 × 2 × 5 × 5 · · · · · · ·	400	16.
re	2 × 2 × 2 × 2 × 3 × 3 × 3 · · · · ·	432	32.
re ♯	2 × 3 × 3 × 5 × 5 · · · · · · · · ·	450	18.
mi	2 × 2 × 2 × 2 × 2 × 3 × 5 · · · · ·	480	30.
fa	2 × 2 × 2 × 2 × 2 × 2 × 2 × 2 × 2	512	32.
fa ♯	2 × 2 × 3 × 3 × 3 × 5 · · · · · · ·	540	28.
ſol	2 × 2 × 2 × 2 × 2 × 2 × 3 × 3 · ·	576	36.
ſol ♯	2 × 2 × 2 × 3 × 5 × 5 · · · · · · ·	600	24.
la	2 × 2 × 2 × 2 × 2 × 2 × 2 × 5 · ·	640	40.
la ♯	3 × 3 × 3 × 5 × 5 · · · · · · · · ·	675	35.
ſi	2 × 2 × 2 × 2 × 3 × 3 × 5 · · · · ·	720	45.
8e ut	2 × 2 × 2 × 2 × 2 × 2 × 2 × 2 × 3	768	48.

While the sound *ut* [C] produces 384 vibrations, we see that its octave, *ut*[C]-*8ve* produces 768, which is precisely double [the number of vibrations]. In order to find the number of vibrations of the following octaves, we only have to multiply 384 by 4, or 768 by 2, and we will find that *ut*[C]-*2^{d}8ve* will produce 1536 vibrations. Next, multiply 384 by 8, or 768 by 4, or 1536 by 2, and we will find that *ut*[C]-*3^{d}8ve* produces 3072 vibrations. And so on and so forth.

In order to understand the formation of the sounds of these three numbers—2, 3, and 5—you must observe that the sign placed between each number means "to multiply."

Thus the first row of [the] figure means two multiplied by two makes four; multiplied by two makes eight; multiplied by two makes sixteen; multiplied by two makes thirty-two; multiplied by two makes [10] sixty-four; multiplied by two makes 128; multiplied by three makes 384. And so on and so forth.

[36] Laborde has taken this chart from Euler, *Tentamen Novæ Theoriæ Musicæ*, 152.

We see in the far left-hand column of the chart that the differences between these tones are not equidistant from tone to tone, that some are larger and others are smaller. This is what makes the unequal distances between tones, as there are some commas[37] of difference between certain tones: i.e. that some fifths are not in tune; that the two minor thirds of which we have spoken are not even; the A# is not the same thing as the B-flat; [nor] the B as the C-flat; the B# as the C; the C# as the D-flat; the D# as the E-flat; the E as the F-flat; the E# as the F; the F# as the G-flat; the G# as the A-flat. But as these differences are not considerable, we ignore them on keyboard instruments, such as the harpsichord, the organ, etc.

We name the two intervals which divide the distance from a tone to another as half-tones. Thus, on these instruments [harpsichord, organ, etc.], the octave is being divided up into twelve half-tones of more or less equal distance between them. As a result, no fifths, nor thirds, etc., are perfectly tuned, but this difference is so small, that the ear cannot perceive it.

Still it is this difference that makes what we experience in one key, a feeling that we do not experience in another; and like the fifths and the thirds, the experiences are different in each key. This difference gives each key a character which is appropriate to it, and it is this difference which makes the key that invites us to cheerfulness, whereas the other carries us to sadness. Such is, in our opinion, the origin of these great modes of the Ancients, of which each one had a different character and served the same purpose for the Ancients as the keys do for us, as we soon hope to prove.

The true origin of the tones which are in use today is then drawn from the numbers 2, 3, and 5. If we wanted to introduce the number 7, [11] the number of the tones of the octave would become larger, and we would generate the quarter tone, which the Ancients knew, and from which they developed what they called the enharmonic [genre]; but since these quarter-tones are banished from our music, we will not push our research further into this genre. It is to M. Euler that we must attribute the demonstration

[37] [L] The comma is the small interval which creates the difference from the major tone to the minor; its ratio is from 80 to 81. This is called the comma-major, or the ordinary comma.

One also distinguishes the other types of commas. First, the one which is called minor, whose ratio is from 2025 to 2048; this is the difference from a major half-tone to a mean half-tone. Second, the one which is called maxim, or the comma of Pythagoras; this is in the ratio of 524,288 to 531,441. It is the difference at the point which the twelfth fifth of a sound surpasses the nineteenth octave of the same sound.

that we have provided;[38] we have only endeavored to make it clearer for the musicians who are not geometricians—or "specialists in geometry."

The consonances consist then of the unison,[39] the octave, the fifth, the fourth, the third, and the sixth.

And the dissonances are formed by the second and the seventh. The major seventh, or leading tone, is the origin of the major dissonances; the minor seventh, or simply, the seventh, is the origin of all minor dissonances.

We establish then that all proportionate intervals form a consonance. This is why we say perfect consonances; and dissonant intervals are only those in which the connections are irrational, that is why we say they are imperfect dissonances

CHAPTER 5

On Composition

[12] What we call composition consists of only two things.

The first is to line up and arrange several sounds, either similar or different, one after the other, in such a way that this series of sounds will have nothing unpleasant about

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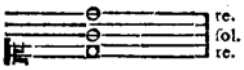
[38] Euler, *Tentamen novæ theoriæ musicæ*. Euler's text delves into the mathematical production of the intervals in a way that Laborde's short explanation does not, but Laborde has provided a simplified version of Euler's findings that would have been far more accessible to the audience of Laborde's work than Euler's complex mathematical equations involving the use of logarithms to derive the intervals.

[39] [L] The difference of the sounds, taking the lowness and the highness of the sounds into consideration, is what constitutes consonance; thus the unison would not be one of them. Nevertheless one counts it among the number of consonances.

The unison is the principal of the numbers, and two is the first of them. The octave (which matches the number 2) is naturally the first consonance, and in terms of composition, we call it double, because it merges with its principal. A proof that the octave is a part of its principal is that on an instrument, when one causes a string to resonate with a little force, another string, taken up to another octave, higher or lower, will tremble. On the other hand, if one tunes three strings in this manner,



and we cause the string *sol* to resonate, there will only be the fifth *re* which will tremble, the fourth *re* underneath will not stir.

Another proof that the octave constitutes part of its principal is that on the flute, more or less breath will make a higher or lower octave sound, respectively.

Zarlino says that the octave is the mother, the source, and the origin of all the intervals, it is from the division of these two numbers that all the ratios of harmony are generated. [Zarlino, *Le istitutione harmoniche*, III, 158]

it and may make pleasure for the ear; this is what the Ancients called melody and what we name song.

The second consists of having two or several sounds heard together in such a way that this mixture will be pleasant. That is to say, it is to devise several different melodic lines which will be able to go together in such a way that the mixture or collection of different sounds of which they are composed will contain nothing that shocks the ear.[40] This is what we call harmony, and what would only be worthy of the name composition. A dual use has prevailed, however. We hear this word [composition] used equally for melody and harmony, thus, to set up a pleasant series of sounds that produce a beautiful song when they are put together from other sounds to create a harmonic whole. All of this is composition.

Then it boils down to two things: to set certain rules in order to organize the sounds, one after the other, so that a pleasant melody results from them,[41] and to provide the means to accompany this melody with a good harmony. That is to say, to have several different melodic lines heard at the same time, without this mixture having anything unpleasant [about it].

CHAPTER 6

On Melody

[13] Melody consists of a pleasant succession of simple sounds.[42]

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[40] [L] Athenaeus, book 3, says that an Epicurean cook used all the laws of music in his art. He sometimes mixed his meats according to the proportion of the fourth, sometimes following the ones of the fifth or the octave. That is to say, like from 3 to 4, or from 3 to 2, or from 2 to 4. [Athenaeus, *The Deipnosophists*, 3, 101f-103b, trans. Gulick, 437-443. Athenaeus has quoted this information from a play by Damoxenus entitled *Foster Brothers*.]

[41] [L] A composer must also know the range and character of the voices and the instruments, the ease or difficulty of the performance, as he will know the particular rules established by convention, taste, and whim (or by the pedant, according to Rousseau, because he did not know to make proper use of the aforementioned ranges and characters), like fugues, counterpoint, imitation, etc.

[42] [L] M. Algarotti says that melody is like *virtue*, which consists of a point of perfection out of which too much and too little come to end up. [Count Francesco Algarotti (1712-1764) was an Italian writer who Laborde claims is famous for his taste and the truth of his gratifying knowledge. See Laborde, III, 332. Algarotti became a count through Frederick the Great of Prussia. After Algarotti's death Frederick erected a monument to him in Pisa, the city in which he died. He wrote numerous works on the arts and

It is to the composer's taste to choose his sounds and to use style to create some melodies from them which flatter the ear, as the fortunate mixture of colors in our bouquets manages to delight our vision. It is here that we must restrict the power of melody; all of the bad faith or ignorance that adds wonder to melody is as wrong as it is impossible. If those who placed melody so strongly over harmony wanted to be of good faith, they would easily acknowledge that in the theater or in concerts, music [i.e. melody] has never made them feel the delightful feelings that are in harmony, either sweet and appreciable, or noisy and brilliant. In effect, what would become of these *recits obligés*[43] without harmony; these pieces of expression where the torn-up soul, sharing the feigned, often cold pains of an actor, who must owe his success to the precision with which he renders that which a talented composer orders him to perform with expressive accompaniment and the strength of the rhythm? Abandon him on the stage without an orchestra; leave him to sing a recitative, whoever he may be, devoid of accompaniment. Compare this piece with another which is sustained by harmony and then pronounce a judgment.

Concerning the word "melody" from his *Dictionary*, Rousseau says that "music only paints through melody, and that the chords, soon trying to the ears, leave the heart always cold."[44] This proposition is at least clearly expressed; it is only necessary to hear an opera that has been performed for us for some years in order to attain satisfaction from it, and to wonder about the cause of the pleasure that we feel. We will admit that this pleasure comes from the beauty of an imitative expression that [14] only harmony can

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philosophy, among them an essay on opera, *Saggio sopra l'opera in musica* (1755), which Laborde says is "full of excellent reflections" (Laborde, III, 332).]

[43] The *recitative obligé*, according to Rousseau, is a type of recitative found in the operas of the eighteenth century that was not used in France until the premiere of his own *Devin du village* in 1752 (Rousseau, *Dictionnaire*, 405). This genre of recitative is accompanied by the orchestra which, according to Dill, "exploited highly punctuated rhythmic accompaniment" (Dill, "Eighteenth-Century Models of French Recitative," 234). Rousseau explains that this form of recitative is perfect for scenes of great emotional turmoil in which words fail the character and the orchestra reflects the emotional state of the character: "The agitated actor is transported by a passion that does not allow him to speak, he interrupts himself, stops himself, and acts hesitantly, during which the orchestra speaks for him. These silences, thus filled, affect the listener infinitely more than if the actor had said everything himself that the orchestra had said for him" (Rousseau, *Dictionnaire*, 404-5).

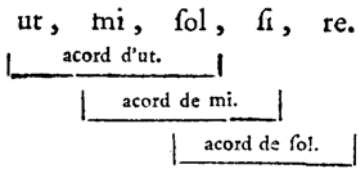
[44] Rousseau, *Dictionnaire*, 275.

create. When we play [the operas] *Roland, Iphigénie, Orphée*,[45] etc., without instruments, we will see if the melody is enough.

If Rousseau had had more knowledge than he did of harmony, he would have given preference neither to melody nor to divided harmony, the one or the other, but certainly to their union from which an inexpressible charm results, one that we are able to call the melody of the harmony, and which takes place when the harmony makes not a vain noise, but [rather] when it sings or expresses.

It is with the same thoughtlessness that he criticizes the employment of melody when a tune of accompaniment is sometimes used in a chorus; he says this is, (believing himself to be making an epigram) "as if one recited two speeches at the same time." We will satisfy ourselves to answer this with: Misfortune to the one who will not have heard with pleasure "the Tune of the Savages" (*l'air des Suavages*) that acts as an accompaniment to the chorus "peaceful forests" (*Fôrets paisibles*) in [Rameau's] opera *les Indes galantes*.[46] This sublime tune takes us back to the melody, accompanied by the harmony, and more naturally than all the paradoxes of Rousseau could do.

We claim that an ordinary sound is composed of two others, which are the octave from its fifth (or the twelfth) and the double octave from its major third (or the nineteenth). Some well-finished and well-practiced ears sometimes hear even the high pitched octaves of these intervals. We call these sounds the harmonics of the principal sound. As they always constitute, each one, the perfect chord, it is most fortunate that they are so weak in their nature, because if they were stronger, a continuous cacophony would result from them. In the perfect chord [major triad] on *ut* [C], for example, we would always hear together:



[45] As discussed in the dissertation, Pitou presents information on each of these operas. See Pitou, *The Paris Opéra*, II, *Roland*, 472-73; *Iphigénie*, 288-291; *Oprhée*, 400-401.
[46] This chorus occurs in *Les Indes galantes* (1735), Act 4, scene 6. For a description of the opera and a bibliography on the subject, see Pitou, II, 285-87.

And in the dominant seventh chord on *sol* [G], we would hear:

ſol, ſi, re, fa, la, ut.

acord de ſol.

acord de ſi.

acord de re.

acord de fa.

[15] It is via these harmonies that Rameau and Tartini, through absolutely opposing paths, have looked for the principle, without either one of them being able to find it.

Instruments assign the boundaries of feasible sounds for us, both in the low and the high registers; when they are elevated or very low, they are no longer able to stand out from one another. There is no need to address what the range of the tones may be in the interval that exists between the lowest and the highest pitches. In this great interval, the tones are repeated in each octave; it is therefore the octave alone which acts as a boundary in the entire range of the tones, and all the intervals that we are able to form naturally are understood within the octave.

Although nature does not divide this octave into equal parts, and they (the intervals) may have some differences between them that arithmetic causes to expand, it is suitable to look at these differences, being almost imperceptible to the ear, as equal. As we have adopted that each one of these parts would be a half-tone, as a result, the whole octave is composed of six tones or of twelve half-tones. All the voices are able to form these twelve sounds, seven of which are natural [*sons naturels*] and five are artificial [*sons artificiels*]. We call then the first seven diatonic and the last five chromatic:

Sons naturels, *ut*, *re*, *mi*, *fa*, *ſol*, *la*, *ſi*.

Sons artificiels, { *ut*𝄪, *re*𝄪, *fa*𝄪, *ſol*𝄪, *la*𝄪. ou *re*b, *mi*b, *ſol*b, *la*b, *ſi*b.

The Ancients accepted yet a third kind of sound that they named enharmonic, of which we will speak in a chapter particularly reserved for this subject. They are almost unplayable, and when it would be possible to employ them, no one today has ears sensitive enough to be aware of their merit. These enharmonic sounds were created from a diluted sound in several parts.

Today what we call enharmonic is absolutely different from the meaning that the Ancients gave this word; for us it only consists in having the name of a chord changed when we are able to assign two names to one of the notes that constitute it. For example, the chord B, D, F, A-flat that we call a diminished seventh, is a chord in the key of C that is followed naturally by the perfect chord C, E, G. If instead of taking this path, we change the A-flat into G#; this diminished seventh chord, B, D, F, A-flat, changes into a major sixth chord with a [16] diminished fifth B, D, F, G#, and it is followed by the sixth chord [first inversion triad] C, E, A, or by the perfect chord A, C, E, which both constitute the key of A minor. Thus, instead of having been in they key of C, which is the key that the music leads the ear to [believe is its destination]; through this change of name from A-flat to G#, we are in A minor; this is what we call enharmonic. There are clearly some analogies between our enharmonic and that of the Ancients; although we may allow ourselves [according to the perceptions] of our taste to call A-flat and G# the same pitch, there is in fact a difference between these two tones. We have already said that it is this difference which prevents our fifths and our thirds from not being perfectly exact. This difference is easy to certify by the arithmetic.

The twelve sounds, of which we speak, can be repeated several times by descending and by ascending again. These are called different octaves. All of our music is contained in the space of seven and a half octaves; as it will soon be seen, from the deepest or lowest sound of the double bass up to the highest or the most elevated sound of the *flute du tambourin*, that there are seven and a half octaves.[47]

The Ancients had divided their diatonic sounds into fifteen degrees, which they arranged in four classes, called tetrachords, because they each contained four sounds or tones.

The system of the Ancients started on the lowest sound and went down [the chart] to the high as in the following table:

[47] Laborde provides a fold-out plate between pages 24 and 25 that contains the ranges of the instruments and voices. The ranges are provided in Appendix C.

Proſlambanomenos.

1er Tétracorde *hypatôn.*
- Hypatè-hypatôn.
- Parhypatè-hypatôn.
- Lichanos-hypatôn.

2e Tétracorde *meſôn.*
- Hypatè meſôn.
- Parhypatè-meſôn.
- Lichanos-meſôn.

3e Tétracorde *diezeugmenôn.*
- Meſè. . . . . , | Meſè. . . . . .
- Parameſè. . . . . | Tritè-ſynèmmenôn. .
- Tritè-diezeugmenôn . | Paranètè ſynèmmenôn.
- Paranètè-diezeugmenôn. | Nètè-ſynèmmenôn. .
- Nètè-diezeugmenôn.

3e Tétracorde *ſynèmmenôn.*

4e Tétracorde *hyperbolæôn.*
- Tritè-hyperbolæôn.
- Paranètè hyberbolæôn.
- Nètè-hyberbolæôn.

Notes de notre Muſique qui répondent aux Cordes des Anciens. En Enharmonique.	En Chromatique.	En Diatonique.	*Noms de leurs Cordes en lettres Greques.*	*Tétracordes.*	*Noms des Cordes en Français.*
la	la	la	Προσλαμβανόμενος.		L'ajoutée.
ſi	ſi	ſi	Τ'πάτη-ὑπατῶν.		La principale des principales.
ſi ×	ut	ut	Παρυπάτη-ὑπατῶν. .	1er Tétracorde *hypatôn* ou *des principales.* (Ces deux tétracordes étaient toujours joints enſemble.)	La ſous-principale des principales.
ut	ut ✡	re	Λιχανὸς-ὑπατῶν. . .		Celle des principales qui ſe touchait de l'index.
mi	mi	mi	Υπάτη-μέσων.		La principale des moyenes.
mi ×	fa	fa	Παρυπάτη-μέσων . . .	2e Tétracorde *meſôn* ou *des moyenes.*	La ſous-principale des moyenes.
fa	fa ✡	ſol	Λιχανὸς-μέσων. . . .		Celle des moyenes qui ſe touchait de l'index.
la	la	la	Μέση.		La moyene.
ſi	ſi	ſi *b* | ſi	Παραμέση.	3e Tétracorde *ſynèmmenôn* ou *des conjointes.* (Quand il était joint au 2me.)	Celle d'après la moyene.
ſi ×	ut	ut	Τρίτη-διεζευγμένων. .	3e Tétracorde *diezeugmenôn* ou *des ſéparées.* (Quand il était joint au 4me.)	La troiſieme des ſéparées.
ut	ut ✡	re	Παρανήτη-διεζευγμένων.		La pénultieme des ſéparées.
mi	mi	mi	Νήτη-διεζευγμένων.		La derniere des ſéparées.
mi ×	fa	fa	Τρίτη-ὑπερβολαίων. . .	4e Tétracorde *hyberbolæôn* ou *des aiguës.* (Séparé ou uni avec le 3me.)	La troiſieme des aiguës.
fa	fa ✡	ſol	Παρανήτη-ὑπερβολαίων. .		La pénultieme des aiguës.
la	la	la	Νήτη-ὑπερβολαίων. . .		La derniere des aiguës.

The system of Greek tetrachords

Their system was so composed of four tetrachords, thus named:

Leur ſyſtême était donc compoſé de quatre Tétracordes, ainſi nommés :

En Grec.	*En Latin.*	*En Français.*
1. Τετράχορδον-ὑπατῶν.	1. Tetrachordon-hypatôn. . . .	1. Tétracorde des *principales*;
2. Τετράχορδον-μέσων	2. Tetrachordon-meſôn..	2. Tétracorde des *moyenes*.
3. Τετράχορδον-διεζευγμένων. .	3. Tetrachordon-diezeugmenôn.	3. Tétracorde des *ſéparées*, quand ſa premiere corde commençait à la *paramèſe* ;
. . . . . -συνημμένων.	. . . . . -ſynèmmenôn. .	Et tétracorde des *conjointes*, quand ſa premiere corde commençait à la *mèſe*, & lui était commune avec le ſecond tétracorde, auquel alors il était joint.
4e Τετράχορδον-ὑπερβολαίων. . .	4. Tetrachordôn-hyperbolæon. .	4: Tétracorde des *aiguës*.

Chaque tétracorde s'acordait de trois façons, ſelon les trois genres *diatonique*, *chromatique* & *enharmonique*.

Each tetrachord is tuned in three ways, according to the three genres *diatonic*, *chromatic,* and *enharmonic.*

[18] In the diatonic tetrachord, a half-tone, a tone, a tone:

B, C, D, E or *E, F, G, A* or *A, B-flat, C, D.*

In the chromatic, a half-tone, a half-tone, and a tone and ½, or a minor third:

B, C, C#, E or *E, F, F#, A.*

In the enharmonic, a quarter-tone, a quarter-tone, and two tones, or a major third:

B, B double-sharp, C, E or *E, E double-sharp, F, A.*

The enharmonic consisted of the difference from E raised by a quarter-tone [E double-sharp] to F, which is not easy to perceive, especially in some of the more lively movements.

We see in the table above that in the tuning of the chromatic and enharmonic tetrachords, the first and last tone did not change; they were also named fixed or stationary tones, [and] because of that, only the second and third tones, which sometimes having one intonation, sometimes another, are called the changeable or moveable tones.

The Aristoxenians claimed to have six string changes for their tetrachords—two for the diatonic, three for the chromatic, and one for the enharmonic.[48] Ptolemy reduced

[48] Aristides Quintilianus describes these six variations of the tetrachords in the 3rd century CE, *De musica*, 1.17.1-11, in Barker, *Greek Musical Writings*, II, 418-19.

them to five.[49] As the authors of that time almost all contradicted each other, we have stopped this discussion here with that which is more general.

Concerning the word "tetrachord" from his *Dictionary*, Rousseau claims "that a tetrachord for the Ancients formed a complete whole as the octave does for us."[50] This is a paradox which cannot even be discussed seriously, because it is impossible at any given time that the ear would only notice that the *paramèses* (an octave above the *hypate-hypaton*) and the *hypate-hypaton* were generating the same sound, so to speak—the only difference being one is high and the other low, and thus between them had a relationship that they did not share with any other tones. The proof of this is that the Greeks could not suffer two different sounds struck together; they sang at the octave, or the double octave, and believed that they were singing the same thing. They thought that the octave and its principal sound only made one sound.[51] Therefore they did not think of this as a tetrachord—one quarter will never be able to make a complete whole.[52]

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[49] Claudius Ptolemy (c.85-c.165 CE). Laborde's claim that Ptolemy reduced the number of different tuning from six to five is difficult to confirm. Ptolemy, like the Aristoxenians, starts with six different forms of the tetrachords, but, unlike the Aristoxenians, he describes one type of the enharmonic, two of the chromatic, and three of the diatonic in his treatise (Ptolemy, *Harmonics*, I, 33.1-37.21, in Barker, *Greek Musical Writings*, II, 306-311). He continues that the enharmonic tuning and one of the chromatic tunings should not be used, as the intervals of these two forms create sounds that are unfamiliar to the ears (Ptolemy, *Harmonics,* 38.3-38.8, in Barker, *Greek Musical Writings*, II, 311). If Laborde is considering this statement in his tabulation, he would have suggested that Ptolemy had reduced the number of acceptable tunings for the tetrachord to four, which he does not. The only possible means for Laborde to arrive at a combination of five total tunings is to recognize that Ptolemy identifies two more forms of the diatonic tetrachord, thus producing a total of five separate tunings for that *genus* (Ptolemy, *Harmonics*, 38.15-40.20, in Barker, *Greek Musical Writings*, II, 311-14). If this is the case, then the comparison Laborde draws between Ptolemy's system and that of Aristoxenus is not valid, as he would be comparing a system that accounts for all three *genera* of the tetrachord, Aristoxenus's, with a system that only employs the diatonic, Ptolemy's. That this inconsistency in Laborde's reference is immediately followed by the statement that all of the authors contradicted each other on this subject is quite ironic. For a thorough discussion of Ptolemy's treatment of the tetrachords, see Mathiesen, *Apollo's Lyre*, 447-452.

[50] Rousseau, *Dictionnaire*, 512.

[51] Regarding performing at the octave, Aristotle says "for the one note contains in a sense both notes, so that when one is sung in this consonance the consonance is sung, and when they sing both or when one note is sung and the other played on the flute, they both, as it were, sing one note. Therefore only one melody is produced, because "the 'octave' notes have the sound of a single note" (Aristotle, *Problems*, 19.18, trans. W. S. Hett, 389).

[52] Laborde claims that the Ancients knew the difference between the interval of an octave and the fourth which defined the boundaries of a tetrachord in order to refute Rousseau's assertion that the tetrachord of the ancients acts in the same manner as the octave does in modern music. Perhaps Laborde has misinterpreted Rousseau's comments. It is obvious from Rousseau's article on the tetrachord that he knew that it was not the same construction as an octave. He explains that the four strings of a tetrachord for the ancients spanned the range of a fourth (Rousseau, *Dictionnaire*, 508). He then goes on to draw a parallel between the function, not the forms, of the ancient tetrachord and the modern octave (Rousseau, *Dictionnaire*, 512). As Laborde is familiar with Rousseau's *Dictionnaire*, he surely understands that

If their first music was contained in a simple tetrachord, and [19] if it is true that their first lyre only had three or four strings, it is because at that time their music was not real, but simply a declamation, and the range of this tetrachord only proves that the voice in the declamation could exceed the boundaries of this tetrachord and consequently could not come down from the *hypate-hypaton*, nor to rise from the *hypate-meson*.[53]

As their first music (or rather plainchant) was consecrated in religion, they confined themselves to the tetrachord *hypaton*, which was the lowest, and which they equated most strongly with the majesty of the gods. When they introduced music in the declamations and in the tragedies, in order to accompany what was supposed to be heard distinctly by the people, they found that the first tetrachord was too low and too dull for this use. They invented the second tetrachord, called *meson*, which was composed of the last string of the first tetrachord and of three new, higher strings: (these are the three strings added to the lyre by Terpander,[54] according to Pliny). Music, not content then to be consecrated in the religious ceremonies and in the moral institutions, wanted to be a part of the things of simple amusement and to serve as encouragement to cheerfulness. The sounds of the first two tetrachords were not high enough to carry out this effect. It was necessary to invent the third tetrachord, *synemmenon* and *diezeugmenon*. The abuse of cheerfulness, like the bacchanals, the orgies, the mysteries of the good goddess, etc., would have caused the fourth tetrachord, *hyperboleon*, to be invented because the more piercing the sounds became, the more they animated the spirits which were already overheated by wine and debauchery.

Rousseau understands the difference between the interval of the fourth and that of the octave. So why does Laborde react in this manner? How should his words be interpreted? Laborde believes this analogy is incorrect because the octave is the first partial produced by the *corps sonore*. It also delineates the boundaries of the different pitches that are used in modern practice. This is not the case with the tetrachord system of the Greeks. If the fundamental note of a tetrachord was sounded along with the fundamental note of the next tetrachord, the notes would not be an octave apart; they would span the range of a fifth or a fourth, depending on whether the tetrachords were conjunct or disjunct, respectively, which the ancients would have heard quite differently than a performance on the octave. In a sense, both Laborde and Rousseau have a point that is valid. Rousseau compares the function of the tetrachord to the modern octave. They each provide boundaries in the performance of the basic scalar unit, but Laborde counters that the octave and the fourth would not illicit the same response in performance from the ancient Greeks.

[53] In other words, the lowest note [*hypate-hypaton*] and the highest note [*hypate-meson*] of the lowest tetrachord [*hypaton*] form the very restrictive range of the declamations being described.

[54] Terpander (7th century BC) was a Greek poet and musician from Lesbos, who, in addition to having received credit for increasing the number of strings on a lyre from four to seven, won prizes for his music in his lifetime. He also established music education in Sparta. See Laborde, III, 116-17.

It seems to us that this is a most natural course for the invention of the tetrachords. We will never believe that the Greeks had been so limited [in their development of music] to be content having a complete system of music in the interval of a fourth, nor that their ears, if sensitive in poetry and in prose, could not have been aware that this range in music, to be complete, had to go up the octave. The proof that they were aware of this is that after having invented the two first tetrachords, of which the first was composed of B, C, D, E, and the second of E, F, G, A, they saw that something was missing in these two intervals of the fourth, [so] they added a string under the lowest string, and named it *proslambanomenos*, or added [string], which gave them the A. Then by leaving from the *proslambanomenos*, [20] or A, and ascending to the end of their second tetrachord, they had A, B, C, D, E, F, G, A, which made one complete octave; and the last two tetrachords added since, created a second octave for them. The first tetrachord *does not make a complete whole for the Ancients, [in the same way] that the octave forms one for us*.

Thus, we come to see the names that the Ancients gave to their sounds, but these names were actually the names of the strings of their lyre or of their cithara, which correspond to the different names that we give to our strings such as bourdon, chanterelle, second, third, fourth, etc. Thus these names were more appropriate for the practice of the instruments than for song, because how can one pronounce '*proslambanomenos*' under a single note? Also they did not take a long time to substitute other shorter names in their place.[55]

Noms Grecs,	té,	ta,	tè,	tô,	ta,	tè,	tô.
Noms modernes,	ſi,	ut,	re,	mi,	fa,	ſol,	la.

By adopting the music of the Greeks, the Romans changed the names of the fifteen sounds of the four tetrachords and assigned the names of the first fifteen letters of their alphabet to them: A, B, C, D, E, F, G, H, I, K, L, M, N, O, P, which lasted until

[55] Nicomachus was one of the first of the Ancient Greeks to suggest solmization (Nicomachus, *Enchiridion*, 241.1-242.18, in Barker, *Greek Musical Writings*, II, 250-53). They are also provided in Aristides Quintilianus, *De Musica*, 77.30-80.6, in *Greek Musical Writings*, II, 479-482. See also, Diane Touliatos, "Nonsense Syllables in the Music of Ancient Greek and Byzantine Traditions," *Journal of Musicology* 7, no. 2 (1985), 231-243.

Pope St. Gregory.[56] Then this Pope, having found that the number of letters was too considerable, reduced them to seven.

A.	. . . . .	A mi la.
B.	. . . . .	B fa ſi.
C.	*D'où nous eſt venu*	C ſol ut.
D.	*l'uſage de dire:*	D la re.
E.	. . . . .	E ſi mi.
F.	. . . . .	F ut fa.
G.	. . . . .	G re ſol.

"Thus it is customary for us to say"

This custom continued until the middle of the eleventh century, when Guido d'Arezzo, popularly called Gui Arétin, used six syllables—*ut*, *re*, *mi*,*fa*, *sol*, *la*—that he took from the hymn of Saint John; as we have already said, thus the usage of the names was thus universally established.[57] Nevertheless, as the sounds repeat every seven tones, and as Guido d'Arezzo [21] had only given six names to them, it was necessary to transform, or rather mutate [them] continually, that is to say, to always name each half-tone that was found in the measure as *mi*. This process needs to be detailed a little in order to be understood.[58]

Our forefathers not knowing the syllable *si* and not naming their notes as *ut* (or *do*),[59] *re*, *mi*,*fa*, *sol*, *la*, were naming what today we call *si* as *mi*; in this way they prepared a leading note [tone]. Thus instead of singing, as we do,

ut, re, mi, fa, ſol, la, ſi, ut, (demi-ton)

they sang,

ut, re, mi, fa, ſol, re, mi, fa. (muance)

Thus, the mutation began after *sol*, by singing *re*, *mi*,*fa*, instead of *la*, *si*, *ut*.

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[56] See also, Brossard *Dictionnaire*, trans. and ed. by Albion Gruber, Musical Theorists in Translation, vol. 12 (Henryville: Institute of Medieval Music, 1982), 139-140; Burney, *General History of Music*, v. 1, 429-30.

[57] See also, Brossard, *Dictionnaire*, trans. Gruber, 140.

[58] In addition to Laborde's insightful presentation of this material, Rousseau does provide a brief description of this historical performance practice in which every half-step sung in solfège had to use the labels *mi-fa* as there was no name at the time for the seventh note of the scale, the note that we refer to as *si* today (Rousseau, *Dictionnaire*, 304-05).

[59] [L] The Italians say *do*, in order not to say *out*, which would be hard to pronounce.

If there was a *B-flat* in the measure, the mutation began two notes earlier; thus, instead of singing,

demi-ton

ut, re, mi, fa, ſol, la, ſi b, *ut,*

they sang,

muance

ut, re, mi, fa, re, mi, fa, ſol.

By this means the two half-tones of this measure—E to F and A to B-flat—were [both] *mi-fa* and *mi-fa*, and the mutation began after the first F by saying *re*, *mi*, *fa*, *sol*, instead of *sol*, *la*, *si-flat*, *ut*.

If the melody began two notes before the half-step, then the mutation began as in this example:

demi-ton

ſol, la, ſi, ut, re, mi, fa, ſol;

Instead of using solfège thus, it was sung,

muance

ut, re, mi, fa, re, mi, fa, ſol.

If the melody descended after the B-flat accidental, the mutation descended also, as in this example:

demi-ton

re, mi, fa, ſol, la, ſi b, *la,*

then, it was sung,

muance

re, mi, fa, re, mi, fa, mi.

[22] The following example gives two mutations in an ascending melody:[60]

demi-ton demi-ton

ut, re, mi, fa, ſol, la, ſi, ut, re, mi, fa ♯, *ſol,*

1re muance 2e muance

ut, re, mi, fa, ſol, re, mi, fa, ſol, re, mi, fa.

[60] In these two examples the top line indicates the modern solfège, while the bottom line presents the same melody using the mutations.

Solfège was used in this way as in the following melody:

demi-ton	demi-ton	demi-ton	demi-ton	demi-ton	demi-ton
mi, fa,	*si, ut,*	*fa ✕, sol,*	*ut ✕, re,*	*sol ✕, la,*	*re ✕, mi,*
mi, fa,	1re muance *mi, fa,*	2e muance *mi, fa,*	3e muance *mi, fa,*	4e muance *mi, fa,*	5e muance *mi, fa.*

We easily see the difficulty in using solfège in this way and how much study time is necessary to make it familiar. Also we presume that it is this long study, and this tiresome method, which give Italian musicians the great superiority that they have in reading music and the precision with which they perform it. We believe, however, that for some years they have abandoned the method of mutations, to assume ours, although Father Martini mentioned the Ancients again in his book that was published in 1774;[61] but this scholarly theorist allows us to see clearly that [the method of mutation] is not linked to that of his own country, and that he knew better than anybody all of its drawbacks.

It is quite strange that a man as skillful as Guido d'Arezzo may not have thought to name the seventh sound. Having no doubt that the eighth note would be the exact octave of the first, and consequently the same, that he would have preferred this complex mutation sequence to an operation as easy as the one of assigning a seventh name.

Nevertheless several centuries passed without the process of naming the seventh note destroying the disadvantage [of not having it], and M. Abbé Brossard maintains in a manuscript deposited in the library of the king, that in 1501 Balthasar Prasperg, from Merspurg in Germany, had a treatise of choral music published in Basel, at the beginning of which there is a woodcut where we see engraved very clearly, although in Gothic letters:

ut, re, mi, fa, sol, la, si.

[61] Giovanni Battista Martini (1706-1784), *Saggio del contrapunto* (Bologna, 1774-75). Martini was an Italian musician, composer, and scholar. Before Hawkins, Burney, Laborde, and Forkel, published their respective histories, Martini published a two-volume history of music, Martini, *Storia delia musica* (Bologna, 1757-81). See also Laborde, III, 355-56.

and he adds that this treatise is in the library of the College of the Four Nations, but in spite of everything in our research, we have not been able to locate it there.[62] It seems to us that it is generally agreed upon that the *si* was thus named by a musician of the last century named le Maire;[63] [23] perhaps, however, the idea does not originate with him. From about the end of the last century, a Flemish national named David Mostart, provided a small treatise *Concerning the Institution of Music*,[64] in which he substitutes the [following seven] syllables for the six syllables of Guido d'Arezzo:

muance

ut, re, mi, fa, ſol, re, mi, fa.
bo, ce, di, ga, lo, ma, ni, bo.

By the means of this new syllable, it renders all of the mutations useless by naming each of the notes of the octave. This new idea caused a sensation and had some supporters, as well as some critics, but as this changed too much too fast, we prefer the usage that persisted for six centuries. Perhaps if he had only proposed adding the syllable *ni*, this novelty, so simplifying, would have then succeeded as it was supposed to. It is possible that le Maire had known the work of David Mostart, that he may have been aware of its usefulness, and that having only changed the name of *ni* into *si*, he may have contributed greatly in introducing its practice that caused him to be taken for its inventor.

Jean Rousseau is the first who had a method of music printed according to the system of *si*.[65] The Germans had to get accustomed to the effort there. It was only in 1697

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[62] Balhasar Prasperg, *Clarissima planeatque choralis musice interpretatio Domini Balthasser Prasbergii, cum acutissimis regulis atque exemplorum annotationibusque et figuris* (Basel: Michael Furter, 1501). Today this manuscript is housed at the University of Göttingen. Brossard did not cite Prasperg's collection in his *Dictionnaire*, but he published a bibliographic guide that is most likely the source to which Laborde refers, Brossard, *Catalogue des livres de musique, théorique et pratique, vocale et instrumentalle* (1724).

[63] According to Laborde, Jean Le Maire is a seventeenth century composer who found the use of mutations absurd. He proposed a seventh syllable to be added to the six syllable system of Guido. Laborde also mentions other musicians who have been associated with the creation of a label for the seventh scale degree as discussed in the body of the dissertation. See Laborde, III, 448-49. Brossard lists the title of his treatise as *Méthode nouvelle pour apprendre…la musique* (1650), Sebastian de Brossard, *Dictionnaire de musique* (Paris: Christophe Ballard, 1703), reprint, trans. Albion Gruber (Henryville: Institute of Medieval Music, Ltd., 1982), 235.

[64] David Mostart, *Korte onderwysinghe van de musyk-konste* (Amsterdam, 1598). This system, which is credited to Mostart, is called bobization. It is a moveable "do" system that came to prominence in Germany during the first half of the seventeenth century as a means to counter the difficulty associated with learning the process of mutation. See Allen Scott, "Bobization and Bebization: Two Alternative Solmization Systems of the Early Seventeenth Century," *Theoria* 9 (2001), 25-45.

[65] Jean Rousseau, *Méthode Claire, certaine et facile pour apprendre à chanter la musique* (Paris, 1683). Rousseau (1644-1699) was a violist, composer, and theorist. His treatise was dedicated to Michael Lambert and was well regarded; it was published in Amsterdam and is referenced in Mattheson's *Der vollkommene*

that Speer had a method according to this system printed,[66] and the Italians began to adopt it. Le Maire had proposed changing the names of the notes; he wanted us to name them:

ta, ra, ma, fa, ſa, la, ʒa, ta,
ut, re, mi, fa, ſol, la, ſi, ut.

In 1685, one named Lancelot[67] had also proposed to name them:

ta, la, mi, da, ſe, re, ni, ta,
ut, re, mi, fa, ſol, la, ſi, ut.

But having no real usefulness, these changes have not been adopted and were not supposed to be.

CHAPTER 7
Figures or characters that have been used at different times to notate the music of the Ancients

[24] We were not content having invented names for the sounds. We believed it necessary to portray them to the eyes, as a memory aide. For that purpose we acknowledged different characters or figures, more or less easy to understand and to remember, in accordance with the spirit of the nations who have used them, or rather, according to the degrees of perfection that the art of music has received from time to time.

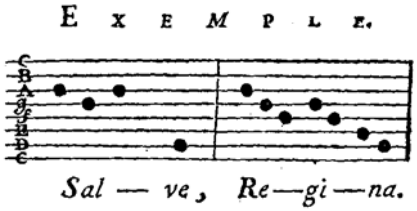
Capellmeister (Robert A. Green, "Rousseau, Jean," in *The New Grove Dictionary of Music and Musicians*, 2nd ed.). Laborde claims that Rousseau played extremely well and was one of the best teachers of his time, (Laborde, III, 532).

[66] Daniel Speer, *Grund-richtiger Kurtz-Leicht und Nöthiger jetzt Wol-vermehrter Unterricht der Musicalischen Kunst, oder Vierfaches Musicalishches Kleebatt* (Ulm, 1697). Daniel Speer (1636-1707) provides one of the few works in German that Laborde references in the entire *Essai*. Rosemary Roberts and John Butt explain that this treatise "is based on Speer's wide practical experience of music and provides a valuable source of information concerning contemporary musical conditions and practices" (John Butt and Rosemary Robert, "Speer, Daniel," in *The New Grove Dictionary of Music and Musicians*, 2nd edition, 168).

[67] Lancelot, *Méthode facile* (1685). Laborde reports that Lancelot's handbook that would "teach in a short time the true principles of plainchant and of music," Laborde, III, 643.

The Greeks used the letters of their alphabet. These letters were whole, cut off, upright, reversed, etc., and marked on the same line above each syllable of the text to which they were to be sung. We have drawn the figures exactly as [they are in] the valuable collection of the scientist Meibomious.[68] Athenaeus proclaims to us in his Book 8, chapter 2 that according to Phaenias, Stratonicus, an Athenian, invented the pitches, as well as the means to notate them.[69] We will speak of this discovery in our Book 5, article *Stratonicus*.[70] There you will be able to see the importance of this phrase from Athenaeus and how it confirms our way of thinking.

A manuscript that can be seen at St. Sauveur of Messine, and which is more than 800 years old, proves that they were looking for a way to simplify the ancient method by drawing eight parallel lines of an equal distance, and at the head of one of these, one of the letters was placed, suitable for labeling the sounds.[71] Below these eight lines the text was written, and above each syllable, a dot was placed on the line of the sound that they wanted to give to this syllable.



[68] [L] See these figures at the end of this Book. [Marcus Meibomius, also known as Meibom (1620-1710), is a Danish scholar who was interested in the music of the ancients. He provided Latin translation of the Greek texts of numerous writers of antiquity such as Aristoxenus, Alypius, Nicomachus, and Aristides Quintilanus. Marcus Meibom, *Antiquæ musicæ auctores septem*, 2 vols. (Amsterdam, 1652).] The figures Laborde refers to are found in Laborde, I, supplement following page 200, i-xx. Laborde's figures are taken from material found in Meibomus, *Antiquæ musicaæ*, I, 22-28. This passage in Meibomus is a Latin translation of Aristides Quintilainus, *De musica*, I, 12.13-28.6.

[69] Athenaeus quotes the second book of Phaenias's *On Poets*: "Stratonicus of Athens, it is agreed, was the first to introduce the multiplicity of notes in simple harp playing; he was also the first to receive pupils in harmony, and to complete a table of musical intervals" (Athenaeus, *Deipnosophistae*, 8, 352c, trans. Gulick, 95-97).

[70] Laborde, III, 114.

[71] The *Musica enchiriadis* (late 9th century CE) contains an eight-lined staff, but that does not appear to be Laborde's source. The text of the example in the *Musica enchiriadis* is not *Salve regina*, but *Alleluia*. Also, the *Musica enchiriadis* presents four parts of parallel organum on the eight-line staff as opposed to the one voice presented by Laborde (*Musica enchiriadis*, trans. Raymond Erickson, Music Theory in Translation Series, ed. Claude V. Palisca (New Haven: Yale University Press, 1995), 8). Aside from these small differences, Laborde's example is clearly related to the one in the *Musica enchiriadis*; they were probably written during the same period of time, the late ninth century or early tenth century CE. As Laborde has provided no other indication of his source, however, finding the original treatise with the available resources has proven difficult.

[25] This method had a good feature in that it distinctly labeled the high sounds and the low sounds.

About the year 1024, Guido d'Arezzo reduced these eight lines to four and also used the spaces between them in addition to the lines; and in this way he had as great a range in four lines, as they had in eight at that time. It is established that he only used dots to represent what we today call notes. Because at that time music only constituted plainchant in which all the notes are of equal duration, they did not need signs in order to notate the difference of their length. This is where we derive the name of counterpoint. This method [of writing] would be enough, when the systems were only those of fifteen sounds in two octaves at the very most, but since their quantity is so greatly increased, it became necessary to find some means to distinguish them.

First of all a line was added to the four lines of Guido; then we must address clefs which raise the sounds an octave. As you may see in the table that you will find at the end of this Book, the general range of the wind instruments by M. Francouer—the nephew and master of music of the Chamber of the King—and the general table of the unisons that compose seven and a half octaves are printed there. [72] Also you may refer to the chapter from our first book, where we have indicated the means to sight-read the music of the twelfth, thirteenth, and fourteenth centuries.[73]

We do not enter into the detail of the clefs or the values of the notes here. We suppose our readers to be musicians enough that they are educated in them.

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[72] Louis-Joseph Francoeur (1738-1804) was a violinist, composer. He was appointed to be *Maître de Musique de la chamber du Roi* [Music Master of the King's Rooms] in 1776, and in 1779 he was appointed to be director of the Opéra. He was also the nephew of the famous violinist, composer, and director of the Opéra, François Francoeur (1698-1787). Louis-Joseph Francoeur published his treatise *Range of all the Wind Instruments*, to which Laborde refers, in 1772. Louis-Joseph Francoeur, *Diapason de tous les instrumens à vent*, Paris, 1772. Regarding Louis-Joseph Francoeur, see also Laborde, III, 419-420. Regarding François Francoeur, see also Laborde, III, 418-19.

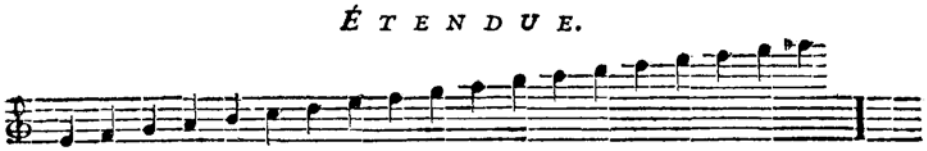
[73] Laborde, I, 149-156, 199-200. The chapter Laborde refers to is entitled "The manner to write music from the fourteenth century to around the sixteenth century." While this chapter does not address the music of the twelfth or thirteenth centuries, he has provided a supplement to the chapter (199-200) that deals with notation that predates the material from the chapter. Laborde addresses the chanson of the twelfth and thirteenth centuries in *Book Four*, Chapter V, "*Des Chansons Française et des Poëtes Chansonniers des douzième et treizième siecles.*" He also presents the similar material on the fourteenth and fifteenth centuries in *Book Four*, Chapter VIII, "*De quelque Poëtes Lyriques Française des quatorzième et quinzième siecles.*" This book of the *Essai* also contains an extensive chart, detailing Laborde's archival work to catalog the chansons from the twelfth and thirteenth centuries in Chapter VII of *Book Four*.

CHAPTER 8

Ranges of the voices

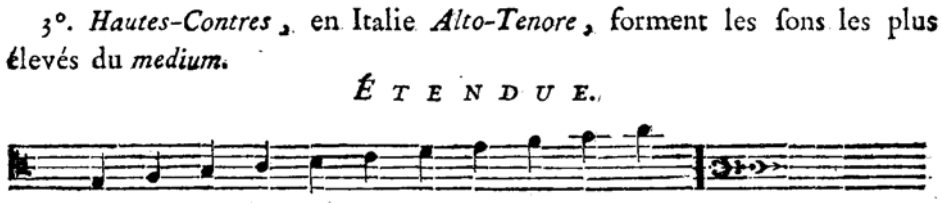
As all the voices do not resemble each other, and further, as they have a particular character, more or less derived from their range, they are distinguished in seven classes.

First, the highest [*Premiers-Dessus*], in Italy, "soprano;" formerly in France, "superius;" these are the voices of women and children that form the highest sounds. [74] Some men also have this voice, either naturally or through an operation against nature.

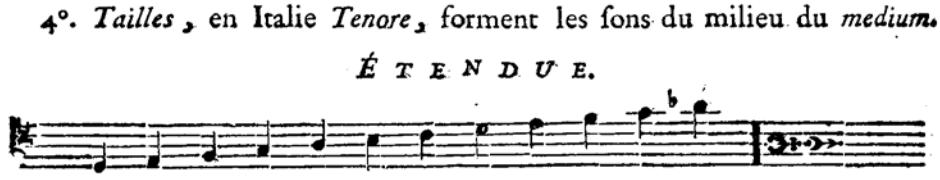


[26] 2º - Second soprano, or bass soprano, in Italy the *Discanto*.

3º - *Hautes-Contres*, in Italy the Alto-Tenor, they produce the highest of the medium-range sounds.



4º - *Tailles*, in Italy the Tenor, they produce the middle of the medium-range sounds.



[74] *Étendue,* the French word for range, heads each of these musical examples.

5º - *Concordant* or Baritone, the voice between the bass and the tenor: one no longer uses it.

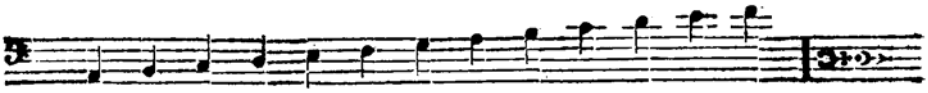
5°. *Concordant* ou *Baryton*, entre la Baſſe & la Taille : on ne s'en ſert plus.

ÉTENDUE.

6º - Bass-Tenor, they produce the lowest of the medium-range sounds.

6°. *Baſſes-Tailles*, forment les ſons les plus bas du *medium*.

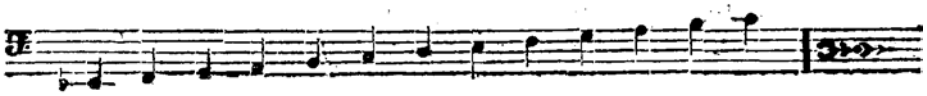
ÉTENDUE.



7º - Contra-Bass, they produce the lowest sounds.

7°. *Baſſes-Contres*, forment les ſons les plus graves.

ÉTENDUE.



CHAPTER 9

On the Modes or Keys

[27] The name mode to us does not have the same meaning that it had among the Ancients.

At present we only know two modes, the major and the minor. That is to say, all music that is in a major key is in the major mode, and all music in a minor key is in the minor mode. It is the third which is the essence of the mode, since it is the third which forms the major key or the minor key.

The major mode is from nature, since it is generated by the resonance of the *corps sonore*, which produces the major seventeenth, double-octave of the major third, as well as the twelfth, an octave above the fifth of the fundamental sound.

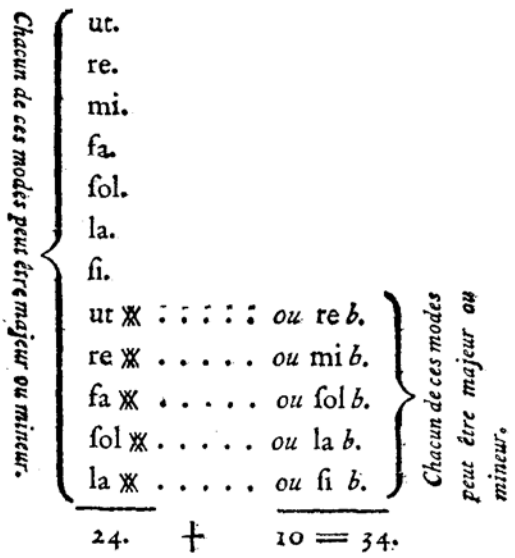
The minor mode is not produced in nature; it is only there through a reversal explained by Rameau and, better still, by M. d'Alembert in his excellent *Elémens du musique théorique et pratique*, p.22.[75]

In the major mode, the third, the sixth, and the seventh should always be major.

In the minor mode, the same intervals should always be minor; however, we almost always make the seventh major. It is what we call the leading tone.

Although there are effectively only these two modes, we use this term in another sense. We say that an air is in the mode of D, when it is in the key of D, major or minor, and then mode becomes synonymous to key.

[28] Thus, in this sense we count thirty-four keys.



"**Each of these modes can be major or minor"**

These thirty-four modes become twenty-four, since there are ten of them which are only repetitions of the others, like C# and D-flat, etc.

To pass from one mode or one key into another is called modulation.[76] From there comes the distinction of the principal mode and of the relative mode. The principal mode

[75] D'Alembert's treatment of the minor mode covers several more pages than page 22. D'Alembert, *Élémens* (1762), 20-24. See the discussion regarding the derivation of the minor mode in Chapter 3, 84-87. For Laborde's biographical information on d'Alembert, see Laborde, III, 541.

is the one in which the piece normally begins and ends, and the relative modes are those which are passed through in the course of the piece.

Among the Ancients,[77] the mode was only the range from one such sound to another such sound.

[29] Having only a very limited range in their music, the Ancients initially only esteemed three modes, the tonics of which had the interval of a tone between them: the Dorian in the low register, the Phrygian in the middle, and the Lydian at the high register. Then they divided up these tones into two intervals and increased the number of their modes by two, adding the Ionian and the Aeolian. The first was inserted between the Dorian and the Phrygian and the second between the Phrygian and the Lydian.

The system was then expanded towards the high and low pitched ranges, new modes were established which derived their names from [the] first five, by adding the preposition "*hyper*" ("above") for those at the top, and the preposition "*hypo*" ("under") for those of the bottom. Thus the mode Lydian was followed by the Hyper-Dorian, by the Hyper-Ionian, by the Hyper-Phrygian, by the Hyper-Aeolian, and by the Hyper-Lydian, in ascending order. Likewise, the Hypo-Lydian came after the Dorian mode, [then] the Hypo-Aeolian, the Hypo-Phrygian, the Hypo-Ionian, and the Hypo-Dorian, in descending

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[76] Laborde employs the more modern definition of modulation here—the movement between two keys. This is indicative of the shift in the musical treatises of the time from the older definition of modulation which is, according to Rousseau, the "manner to establish and treat the mode, Rousseau, *Dictionnaire*, 295. This matter is discussed in more detail in Chapter 3. See also Verba, "Rameau's Views on Modulation and Their Background in French Theory," *Journal of the American Musicological Society* 31, no. 3 (1978), 467-79.

[77] [L] The Ancients differ a lot among themselves on the definitions, divisions, and names of their modes. They are unanimous in saying that it is a composition of sounds, that is to say, the space of an octave, or of two separated tetrachords, filled with all the intermediate sounds, according to the type; and what constituted each mode was the manner in which the two half-tones were placed in the octave. Thus, as there are only seven ways to place them, there were only then seven modes. Nevertheless, the Ancients have admitted or rejected a large number of them at different times (See the *Dictionary* of Rousseau, article, "Mode") [Rousseau, *Dictionnaire*, 284-295].

The idea that the Ancients attached to this term "mode," or "key," was quite different from the one that we have of it. They only hear mode as a certain degree of elevation in the total system of their harmony, in which the sounds always followed one another according to the same order. In lieu of that, for us, the modes are distinguished from one another, not only by their degree of elevation, but also by the different arrangements within the different progressions of sounds (which constitutes the major and the minor modulation), and in addition to that, by the various modifications that effect these same sounds, for the sake of accuracy are inseparable from the manner of tuning the musical instruments; modifications which diversify, to the judgment of the ear, the major modulations as well as the minor; although all the majors, as well as all of the minors, may be essentially the same (see the memoir of M. Burette, tom. 5 of the Academy of Belles-Lettres, p.196). [Burette's work is the fifth volume of a serial publication published by the Academy of Belles-Lettres during the eighteenth century (1719-c.1781), *Mémoires de littérature tirez des registres de l'Academie royale des inscriptions et belles lettres.*]

order. But the Hypo-Dorian was the only one that may have been performed accordingly in all its range; as the others reached the higher end of the mode, they cut off the high-pitched sounds from them, in order to not exceed the range of the voice.

We are persuaded that what the Ancients called mode is only what we call today key, with the exception that in each mode they covered no more than an octave, whereas today, in our keys, we cover a much larger range. In the plate that faces this page, we will provide a table of all the modes, along with our keys, and we will be in no state to judge the relationships that exist between them.[78]

[30] We have been able to see in the previous table that what the Ancients called modes is in effect today what we call keys, since the two classes have retained similarities for more than two thousand years. But the modes could have more particular characteristics than our keys, by the type of poetry that was set to the music in these modes, by the kind of instruments which are used to accompany the voices in these modes, and by the intervallic spans that were employed there.

This is more or less all that it is possible to conjecture about these great modes which have given rise to so many tales, of which several, nevertheless, could be explained naturally enough. The thing which seems to be the most amazing to us is that music may have a distinct enough character that the keys may have maintained an unchanging state for so many centuries.

The Greeks still had some other incorrectly named modes, for these modes were only used for some types of composition, such as the tragic mode was intended for the theater; the *nomic*, consecrated to Apollo; the *dithyrambic*, devoted to Bacchus [Dionysus]; the *syntonolyden* of which Plato speaks, and of which no one seems to know [anything more], etc…[79]

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[78] Appendix B contains a reproduction of the plate to which Laborde refers.

[79] Laborde has most likely cited this material from a passage in Rousseau, *Dictionnaire*, 294. Aristides Quintilianus differentiates the nomic and the dithyrambic as styles, or *tropoi*, of composition, as opposed to the *tonoi*, what Laborde has described as modes, such as Dorian and Aeolian. Quintilianus says that "melodic composition is distinct from melodic performance, in that the latter is the expression of a melody, the former a creative capacity. Styles of composition fall into three generic classes, dithyrambic, nomic, and tragic….They are called "styles" [*tropoi*] because through their melodies they reveal, in one manner or another, the character of a state of mind" (Aristides Quintilianus, *De musica*, 30.1-30.8, in Barker, *Greek Musical Writings*, II, 432). Regarding the *tropoi* Barker adds that "the three *tropoi* mentioned are best construed generically, rather than with exclusive reference to *nomoi*, dithyrambs, and tragedies. *Nomoi* were solo songs sung by professionals, noted for highly colored effects. The nomic *tropos* probably

They had also several modes that we came to name, which according to various authors carried different names; we are able to consult this subject in the *Dictionary* of Rousseau, article "Mode."[80]

CHAPTER 10
Cadences

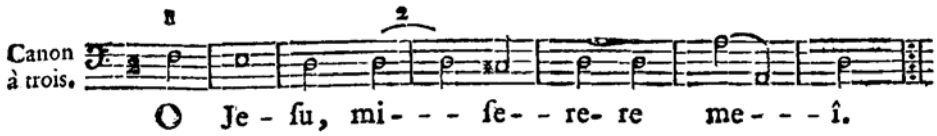
The word cadence is developed from the Latin verb *cadere*, which means *tomber* (to fall, end, or close), because a cadence is actually a falling [off] of the melody or the harmony, from one tone to another, upon which it is able to rest, and which determines [the conclusion of] a passage quite well.

At least three sounds are necessary in order to form a true cadence; the sound from which it starts, the one through which it passes, and the one upon which it [comes to] rest.

There are three types of cadences: [81]

- The perfect cadence
- The imperfect cadence
- And the indirect cadence

[31] There are three kinds perfect cadences, as in this canon, where all three are collected:[82]



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includes all emotionally affecting solo pieces. Dithyrambs were choral, and scarcely distinct in form of choral lyrics. It may be the fact that they were performed by a group of amateurs that links them with medium pitch, and the designation may embrace a wide range or choral music. Tragedy included both solo and chorus: probably solos are intended here [in this passage from Quintilianus], and specifically those of a solemn and serious character" (Barker, *Greek Musical Writings*, II, 432, n. 146). Aristides describes the performance of the *nomoi* in *De Musica*, II, 59.1-59.13, in Barker, *Greek Musical Writings*, II, 463.

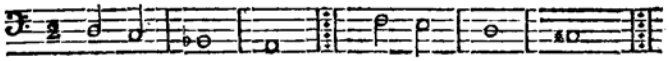
[80] Rousseau, *Dictionnaire*, 284-295.

[81] For more on cadences, see Rameau, *Traité*, 54-73, 216, and *Génération harmonique*, 156-58; d'Alembert, *Élémens* (1762), 61-63; Rousseau, *Dictionnaire*, 62-68.

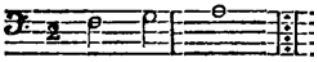
[82] The three perfect cadences in this example align with the three lines of text: the first with *O Jesu*, the second with *Miserere*, and the third with *mei*. Each of these would be called an authentic cadence today. The first two would support dominant chords in inversion resolving to a tonic in root position, while the third perfect cadence provided indicates a dominant to tonic resolution with both chords in root position.

There are also three kinds of imperfect cadences:

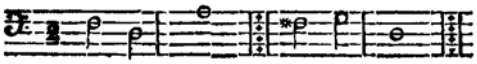
~ Descending a half-tone to the final, either natural or accidental[83]



~ Ascending a whole-tone from the penultimate until the final[84]

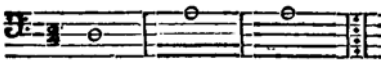


~ Ascending a fifth or descending by a fourth[85]

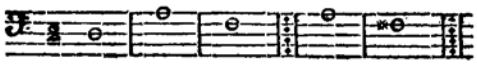


The indirect cadences are only of simple rest:[86]

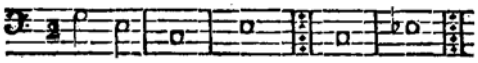
~ The final on the same tone as the penultimate [note]



~ The final descending from the penultimate by a major or minor third



~ The final ascending from the penultimate by a major or minor third



[83] This imperfect cadence would be called a dominant in second inversion resolving to a tonic traid in first inversion in today's nomenclature.
[84] This is a deceptive cadence. This type of cadence was also called a *cadence rompue*, or broken cadence, in the eighteenth century. See also Rameau, *Génération harmonique*, 156-57.
[85] This is a plagal cadence, often called a *cadence imparfait* in the eighteenth century.
[86] Laborde uses the term *cadences détournées*, or indirect cadences. This type of cadence is categorized by Rameau and Rousseau as the *cadence interrompue*, or the interrupted cadence; see Rameau, *Génération* harmonique, 156-58; Rousseau, *Dictionnaire*, 67-68. The interrupted cadence, instead of having a bass motion of a fifth, has the bass motion of a third. Christensen explains that the interrupted cadence "is a kind of deceptive cadence that violates the expected fifth progression in the fundamental bass" (Christensen, *Rameau and Musical Thought*, 200).

CHAPTER 11

On Harmony

Harmony is a series of chords which more or less please the ear. Nature gives us the perfect chord, composed of a sound, its third, and its fifth; art has given us the other chords, which are all derived from [the intervals of] the seventh and the sixth.

[32] The Ancients, they say, knew harmony. We have no proof of it, and those proofs which may be derived from a few passages of Seneca appear questionable at least;[87] but what is it that makes us believe that they did not [33] know it? They preferred

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[87] [L] Here is the famous passage by Seneca, epistle 84 ["On Gathering Ideas"], which proves, they say, that the Ancients knew harmony: "*Non vides quàm multorum chorus constet? Unus amen ex omnibus sonus redditur. Aliqua illic aucta est, aliqua gravis, aliquua media. Accedunt viries fœmina, interponuntur tibia, singulorum ibi latent voces, omnium apparent*."

"Do you not see of how many different voices a choir is composed? However from all these various sounds, only one results from them. There are some high voices, some basses, and some mid-range. The voices of the men blend to those of the women, the accent of the flute [aulos] becomes part of them; we do not distinguish its particular sound, but we take in a general harmony." That only means, or is able to mean, that the voices of the men are low and high, as are the bass, the medium and the high; that the voices of the women are an octave above the high voices of the men; that the flutes [auloi] are an octave above the voices of the women, and that all these sounds in different octaves only make a single sound. But that does not prove that the Ancients might have composed in several parts. Aristides Quintilianus defines music as "the art one learns to sing well, and the art one learns to compose a beautiful melody," [Aristides Quintilianus, *De musica*, 4.19-4.26] and Bacchius defines it as "the knowledge of the melody and of what belongs to it." [Bacchius (c. 4th century CE), a Greek author on music, wrote a catechism on music entitled *Introduction to the Art of Music*. It was translated by Meibomus in the seventeenth century (Meibomus, *Antiquæ musicæ*, I.)] Aristides, first book, says that we hear through harmony "the order of several sounds that follow one another," but he did not say "the mixture of several sounds." What [could be] more convincing proof that the Ancients have never known what we call harmony? Cassiodorus defines harmony (which one called "symphony" at that time) in a manner which proves that he did not know it as we do, for he says that it is enough that several sounds agree pleasantly, in order to satisfy all the conditions of this definition, following which, it is not necessary to change the chord, nor to vary, by the different modulations, the parts as each sing their subject. Nevertheless, Cassiodorus, being one of the last ancient authors who may have written on music, should have known all of what his predecessors knew. [Flavius Magnus Aurelius Cassiodorus (c. 485–c. 580 CE) was a Roman statesman. He wrote about music in his *Institutiones divinarium et humanarum litterarum*, 2 vols. The second volume of this work contains discussions on the seven liberal arts; music is contained in Book 5. See, *Institutiones*, II, 5.5 and 5.7.]

Their ignorance towards harmony is then proven by that of Cassiodorus, and as a result the harmony of the Ancients was similar to the one that the Iroquois brought to Louis XIV about the end of the last century and performed for him in order to give him an idea of their music. Several among them sang in unison or at the octave, and the others accompanied this song by growling like swine, with some tremors marked by a well-planned movement; and this is how they moderated the high-pitched voices, by the mixture of the gravity of the rhythm and of the rhythmic growling of the other singers; as Cassiodorus says it (See "The Music of the Ancients" by Perrault). [Charles Perrault (1628-1703) was a member of the Académie Française, the Inspector General of Construction for the King, and the author of numerous famous fairy tales for children. According to Laborde he wrote many esteemed works, among them a comparison between the ancients and the moderns, in which he describes the music and musicians of antiquity and provides excellent ideas on Greek music (Laborde, III, 658-59). The "Music of the Ancients"

the use of melody over symphony—the definition that they gave to their so-called harmony.

They ordinarily played their instruments at the octave or at the unison, sometimes, it is said, "to the third or to the sixth, and rarely in three parts." Thus they were quite far from suspecting the beauties of an art which, although still in its infancy, is immensely superior to what it was in their times.

Sometimes the Ancients gave the name harmony to the octave, that is to say, to the concert of the voices which were performed at the octave and which was called, more commonly, antiphony.[88]

In the beginning the rules of harmony were only founded upon the approval of the ear, but the Father Mersenne,[89] M. Sauveur,[90] Rameau, and Tartini have finally fixed some invariable rules that are proof to anyone who wants to take the trouble to study them. This material, so dry in and of itself, handled by musicians who were not

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to which Laborde refers is most likely part of this larger work Laborde described, Charles Perrault, *Paralelle des anciens et des modernes*, 4 vols. (Paris: Chez Baptiste Coignard), 1688-96. The fourth volume includes a section that compares the music of the ancients to that of the moderns.]

All the times that Plato spoke of harmony, he bestows it with the meaning that we give to the modes: he says that the Ionian and Lydian harmonies are weak and effeminate, etc., that the Dorian harmony is appropriate to conserve good morals, etc. [Plato, *Republic*, 398e-399c.] M. de l'Abbé Fraguier, illustrious scientist of the Académie of Belles-Lettres and admirer of the Ancients, being sensible himself, although old, took some lessons of accompaniment on the harpsichord in order to learn the first elements of music. Charmed by the sweetness of this harmony, which blended in the melodious sounds of the voice [that] pleasantly stroked his ear; he felt indignant against those who refused to acknowledge [that] the Ancients [had] a type of accord so harmonious. He could have been indignant about the Ancients, or of their ignorance in music, if they had not known this sweet harmony, or from their bad taste, if having known it, they had despised it. [Abbé Claude-François Fraguier (1666-1728), in addition to being a member of the Académie des Belles-Lettres, was admitted to the Académie Français in 1707. He believed he had found a passage in Plato that proved that the Greeks knew harmony in the modern sense. Burette proved this assertion false, citing a passage from Aristotle that demonstrates that the Greeks only knew the octave and the unison [most likely Aristotle, *Problems*, 19.18]. Fraguier, not being convinced, held strong to his belief. See Laborde, III, 625-26.]

[88] Aristotle employs the term antiphony, in Greek *antiphōnos*, meaning "answering," to designate the "correspondence of the octave" (Barker, *Greek Musical Writings*, II, 92, n. 47). Aristotle contrasts the concept of antiphony with that of consonance, which he recognizes as the intervals of the fifth and the fourth. Aristotle says "in the case of the octave the low note is in the same position in the low register as the high note in the high register. In this way it is at one and the same time the same and different. But in fourths and fifths this is not so, so that the sound of the octave is not apparent; for it is not the same" (Aristotle, *Problems*, 19.17, trans. W. S. Hett, 389).

[89] Marin Mersenne (1588-1648), *L'harmonie universelle contentant la théorie et la pratique de la musique* (Paris: S. Craimosy, 1636-37). Mersenne deals with many speculative aspects of music in this treatise, using his mathematical background to research acoustical phenomena; he was the first to provide an absolute determination of an audible tone (at 84 Hz). See Laborde, III, 357.

[90] Joseph Sauveur (1653-1716), *Principes d'acoustique et de musique, ou systême général des intervalles des sons et son application à tous les systêmes et à tous les instrumens de musique*, Paris, 1701. See Laborde, III, 682.

geometricians enough and geometricians who were not musicians enough, has finally become so obscure and disheartening. As a result, the few people who may have the perseverance to study the voluminous precepts are drowned in arguments which have never been heard, even by their authors.

Were it not for the courage of M. d'Alembert, the works of our great Rameau—filled with useful things, ingenious and new, [but] being almost unintelligible and devoid of the [organizational] methodology [provided by d'Alembert], which is so necessary in order to instruct by gradation—would only be read by a few people. Angered to see so many useless works, M. d'Alembert has wanted to emphasize Rameau's works; he has furnished us with his *Élémens théorique et pratique* which is, so to speak, the elixir of everything that Rameau has written. Clarity, soundness, precision, this is what characterizes this valuable work, perhaps the only useful one for the young [34] musician, and of which we would not hesitate to advise the repeated and most thoughtful reader to it.[91]

Rousseau compares chords to the words of which dictionaries are composed. It is no longer a matter of making a beautiful piece of music and an excellent piece [full] of significance, as it is finding the necessary connections—and this is never learned, unless our voices are arranged according to the laws of nature. In order to create a quite tolerable composition, it is necessary that something of that which precedes is passed on to what follows, and it is this succession, more or less pleasant, which forms more or less a good harmony and a good melody.

One of the most ingenious discoveries of Rameau is his principle of the perfect minor chord, the truth of which is disputed by Rousseau (article *Harmonie*) without his providing another reason for it than to say "the experiment is wrong."[92] We are able to say with more of [the] truth: "the refutation is not true."[93]

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[91] Laborde bestows accolades upon d'Alembert for making the more speculative aspects of —meaning all the mathematics and geometry associated with—the theories of Rameau, who was influenced by the work of Mersenne and Sauveur, more accessible to a wider audience. As discussed in Chapter 4, d'Alembert's distillation of Rameau's ideas loses some of the finesse with which Rameau endowed his theories, due to his experience as a musician; but Laborde views d'Alembert's achievement of disseminating Rameau's ideas to a larger audience as far greater than the disservice he might have caused by jettisoning some of the more nuanced aspects of Rameau's theories.

[92] Rousseau, *Dictionnaire*, 237.

[93] Laborde returns to the subject of the derivation of the minor mode, after having endorsed d'Alembert's means of obtaining the minor mode by considering it to be co-generated by its relative major. See Laborde,

Rameau has said that a resonant string was causing two lower strings to vibrate without causing them to resound, one at its twelfth and the other at its major seventeenth. He has deduced from them, through a process too long to reproduce here, that the minor third was in nature, and that the low register caused it, as the high register causes the major third. Rousseau claims that "it is recognized that the strings tuned below the fundamental sound do not tremble in their entirety to this fundamental sound, but that they are divided in order to produce only the unison from them, which consequently does not have any harmonics underneath. Moreover it is recognized that the property that has divided the strings is not particular to the ones which are tuned to the twelfth and to the seventeenth underneath the principal sound, but that it is common in all its multiples; from this it follows that the intervals of the twelfth and the seventeenth below the fundamental sound are not unique in their manner [so] we are able to conclude nothing in favor of the perfect minor chord that they represent."[94]

This is Rousseau's opinion, but since when is an opinion a proof? What is "a string that does not tremble in its entirety, but which is divided in order to produce only the unison?" If it does not resonate, and consequently if it may not be heard, how do you know that it produces the unison? If "it is a strange theory to derive the principles of harmony from that which does not resonate;"[95] then it is a strange reason that assures us with all certainty that "a string that does not resonate yields the unison." Even if [35] Rameau would have established a false principle, Rousseau could not have said a more absurd thing about it, but several experiments done with great care, have caused us to believe that Rameau is not deceived in this occasion.

II, 27. The reason for addressing the subject again appears to be solely in order to contradict Rousseau, as Laborde's arguments are not based on empirical fact. Rameau suggested in the *Génération harmonique* (*Expérimente* 2, 8-10) that if two strings are tuned a twelfth apart and the upper string is bowed, the lower string will vibrate, although it may not be visible to the eye. Rameau states that the string vibrates as a whole and in three equal parts (*Génération harmonique*, 9). The lower string does vibrate in equal parts, but it does not vibrate as a whole. Rameau eventually concedes this point in the *Démonstration* to propose the topic of co-generation that d'Alembert would come to adopt (*Démonstration*, 72). With this fact in mind, Rousseau's comments are not the intellectual fallacies that Laborde conveys, rather Laborde's statements are revealed to display his personal animosity toward Rousseau. As to whether or not Laborde knew that Rousseau was actually correct in his statements regarding the vibrations in the lower string, it is reasonable to assume that he did, as he was familiar with the idea of sympathetic vibrations to account for the minor mode from the *Génération harmonique* and with the ideas of d'Alembert's and Rameau's use of a co-generative theory for the minor mode that were offered when the vibration theories proved to be false.

[94] Rousseau, *Dictionnaire*, 239.

[95] Ibid.

Very distinctly have we seen the strings lower than the principal string vibrating, and we have, none of us, been able to distinguish sound from them. As sound is no other thing than air that has been shaken through vibrations, it seems possible to us that sometimes the vibrations may not have enough force in order to have the air that they agitate resonate distinctly. If that is [so, then] Rameau is right; if that is not, it is not proof that he may be wrong, since then he would be able to be right by another means, and that certainly, by causing a string to sound, the lowest register string is never heard resonating in order to form the unison, as Rousseau claims.

Another of his errors is that "in addition to the principal sound, the *corps sonore* does not only produce the sounds that compose the perfect chord, but an infinity of other sounds formed by all the *aliquots* [fractional] divisions of the *corps sonore*, which are not a part of this perfect chord."[96]

We do not know through which experiment he has understood or believed to hear sounds other than the third and the fifth, but we formally declare that we have never heard others from it. It is only necessary to read what we are going to report of Rousseau in order not to doubt his mistake more.

"All sound produces a truly perfect chord, since it is formed by its harmonics, and it is through them that it is a sound. However, these harmonics are not heard, and unless it is extremely strong, only a simple sound is distinguished. Hence it follows that the only good harmony is the unison, and as soon as the consonances are distinguished, the natural proportion is being distorted, and the harmony has lost its perfection."[97]

First of all, it is not true that a sound may only exist through its harmonics, because in as much as when a string that forms a sound resonates, three [harmonics] are heard. It is necessary to conclude from this that the sound that is heard is the union of three sounds, two of which are so weak that they can only be distinguished with difficultly, but it is no less true that each of these sounds is a particular [distinct] sound. Therefore, we do not need three of them in order to make one sound. Because if it was necessary for the essence of the sound that it was one composed of three, each one of these three principles would be nothing separately and [36] would not become something,

[96] Ibid.
[97] Rousseau, *Dictionnaire*, 239-40.

other than through its reunion with the two others, unless Rousseau may have wanted us to believe that each of these harmonics is composed of three sounds and that this holds true unto infinity. Rameau, who the depth of his ideas has sometimes misled, has also quite wanted to prove the Trinity through sound;[98] certainly we did not need so singular a proof, but this proof is as clear in its type, as the one that Rousseau gives to us about the formation of the sound.

But if it were true that sound only exists through its harmonics, would it be necessary to conclude from this that "the only good harmony is the unison?"

Are we able to define harmony at the unison and at the octave as the same? And because the *corps sonore* does not give us either the seventh or all of the chords which derive from it, can we deny that this may not be the most successful synthesis of the chords that create good harmony or even harmony that is properly produced?

It seems that Rousseau may have undertaken to say the opposite of what Rameau had said solely in order to contradict him, for he does not even support his feeling with a plausible reason. Rameau has said that a soprano part of certain simplicity will naturally suggest its "bass" and that a man having a fair, although untrained ear, will strike up this bass naturally. Rameau has spoken correctly, and we see each day some striking examples of this. Nevertheless, Rousseau does not fear to respond that "there is a prejudice of musicians, [that is] refuted by all experience," and that "not only will the man who never has heard of either bass or harmony, not be able to find them for himself, but if he hears them, they also will displease him," and that "he will like this simple unison a lot better."[99] We acknowledge this fact, but we do so by restricting it to the persons who are born with a false ear, or with a total insensitivity to the charms of music.

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[98] Rameau, *Vérités intéressantes*, reproduced in *Complete Theoretical Writings of Jean-Philippe Rameau (1683-1764)*, ed. Erwin R. Jacobi, vol. VI, (American Institute of Musicology, 1967-72), 516-33. This is Rameau's incomplete last work. In this work, Rameau explores God and the *corps sonore*, but not to draw a comparison between it and the Holy Trinity. Christensen explains that "Rameau is not attempting to equate—as a number of critics and historians to this day continue to maintain—the resonating partials of the *corps sonore* with the Holy Trinity. His idea is much more subtle than that. He is making an unambiguous reference to another doctrine that had wide currency in the eighteenth century: occasionalist philosophy" (Christensen, *Rameau and Musical Thought*, 298). He adds that occassionalist philosophy states that God is the foundation of all existence, and he is "the agent by which non-material thoughts can be transferred into actions. In much this manner, Rameau thought the *corps sonore* could be the primary "cause" of music and the other arts and sciences dependent upon proportions" (Ibid., 298).

[99] Ibid, 241.

Rameau also has had reason to say that "harmony is the source of the greatest beauties of music,"[100] the scholarly and ignorant are not able to judge music equally, as well as Rousseau claims, no more than they are able to equally be judges of a painting, of a statue, or of a monument. The ignorant are able to say this pleases me or displeases me, but, in no genre will he have the right to pronounce, after his feelings, that a thing is beautiful or it is not. It is quite fair as this does concern the right of those who have spent their life learning to distinguish true [37] beauty, which in all genres, consists only of proportions; it is necessary then to know these proportions in order to be able to formulate judgments based upon them.

Rousseau says at the end of the article on "harmony" that "the physics of the sounds are very limited in the pleasure that they give us and are only able to have very little effect over the human heart."[101] We abandon this assertion to the judgment of those who experience the sensations the most intensely when they hear the instrumental music perfectly executed by an orchestra similar to the ones of the *Opéra*, the *Concert Spirituel*, or the *Messieurs les Amateur*.[102]

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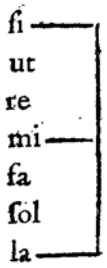
[100] Laborde is quoting Rousseau's *Dictionnaire* here, and neither man offers any citation of the particular passage where Rameau said these specific words, and it may well be more of a statement of Rameau's general position on harmony than an actual quotation (Rousseau, *Dictionnaire*, 242).
[101] Rousseau, *Dictionnaire*, 242.
[102] The *Concert Spirituel*, founded in 1725, by Anne-Danican Philodor "was initially intended to provide inspirational music to Parisians on the days the Opéra was closed," James H. Johnson, *Listening in Paris: A Cultural History* (Berkeley: University of California Press, 1995), 71. See Johnson, 71-74. The *Messieurs les Amateurs*—most likely Laborde is referring to the *Concert des Amateurs* here—was a popular subscription concert series founded in 1769 by François-Joseph Gossec. See Johnson, 74-75.

CHAPTER 12

On the scales of the Greeks and ours

In music, a scale is the diatonic succession of notes.

The scale of the ancient Greeks was composed of two joined tetrachords,



which, as M. d'Alembert has ingeniously proven,[103] was simpler than ours, since it was formed from the single mode of C:

B, C, D, E, F, G, A

Fundamental bass:

G, C, G, C, F, C, F

Instead of that, our scale, C, D, E, F, G, A, B, C, is formed from the modes C and G:

C, D, E, F, G, A, B, C

Fundamental bass:

C, G, C, F, C, D, G, C

In the bass of the first scale, we find only C, G, F which [38] belong to the mode C, and in the bass of the second we find C, G, F which belong to the mode of C, and G and D, which belong in the mode G. The scale of the Ancients, then, was simpler than ours. They also performed it in succession, without resting and without the ear requesting some. In contrast, when we sing C, D, E, F, G, A, B, C there is not an ear with some training which will not be aware of a forced rest after having pronounced [the note] F. The reason for this is that up to that point, we have been in the mode of C, but then it is

[103] d'Alembert, *Élémens* (1762), 30-44.

completed, and the scale enters into the mode of G, where it finishes off the scale, G, A, B, C.

It was Saint-Gregory who changed the tetrachords of the Ancients into a heptachord, or system of seven notes, and expressed these notes with the first seven letters of the alphabet. Guido d'Arezzo gave names to them, except to the seventh note, which has only taken the name of *si* since the end of the last century. We do not conceive that the Ancients may have had the same scales as ours; we are able to see in M. Sauveur the ingenious reason that he gives for it, and which is only able to be sensed by geometricians. [104] Rousseau criticizes it, but it seems to us that he only then himself comes to be deceived by his own arithmetic [after] having accused M. Sauveur; [his claim] would have more value [if he had] produced a more accurate calculation than the one he did. But he did not.

CHAPTER 13
On the Chromatic

The chromatic is a melody composed of a succession of sounds, either ascending or descending by half-steps.

Athenaeus credits the invention of it to Epigonus,[105] and Boethius credits it to Timotheus of Miletus.[106]

It is used in the sad type of music in order to express pain. By rising, it is heart-breaking when it is used well, and by descending, it is gloomier, although a little less expressive.

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[104] Sauveur, *Principes d'acoustique*, 28-30. Rousseau criticizes Sauveur for relying on the mathematical foundations of acoustics to prove his point that the ancient's version of the diatonic scale and ours are not the same. Rousseau's criticisms are countered by his own faulty mathematics, such as in his association with the modern tuning of the major third and the ditone of the ancient Greeks, yet they are actually different by the interval of a syntonic comma, 80:81.

[105] Athenaeus, *Deipnosophistae*, 4, 183c-d, trans. Gulick, II, 307. Epigonus of Sicyon (6th century BC) is also credited with the creation of the forty-stringed epigoneion, a lyre that bore his name, which made the playing of chromatic melodies possible. Barker believes, however, that he may have been credited with the invention of this lyre mistakenly (Barker, *Greek Musical Writings*, II, 128, n. 11).

[106] Boethius, *De musica*, 184, translated as *Fundamentals of Music*, trans. Calvin M. Bower, 5, see n. 19.

We will soon see that the fundamental movement by fifths produces the diatonic type of scale, and the motion [of the fundamental bass] by major thirds produces the chromatic type.

CHAPTER 14
On The Enharmonic

[39] Aristoxenus and several other ancients have called this type of music harmony.[107]

It consists of the difference that exists between B# and C, E# and F, etc.

In general, it [the enharmonic] is a melody where quarter-tones are allowed. These quarter-tones are hardly distinguishable by the ear, and it is necessary to be well trained in order to be aware of them. These intervals are called quarter-tones with reason, the calculations proving, for example, that the difference from B# (major third of G#) to C is 3/128 or about 1/43.[108]

Now we know that four different kinds of quarter-tones are distinguished:

Difference from the unison
according to M. d'Alembert[109]

The major quarter tone……..1/32
The minor quarter tone……1/36
The half of the major half-tone…….....1/30
The half of the minor half-tone…….....1/48

[107] Aristoxenus of Tarentum (c.354-c.300 BC), Greek musician, theorist, and student of Aristotle, said of the enharmonic "it turns out that those who have previously taken up the study of harmonics were concerned to be truly "harmonicists," and no more, since they dealt only with the enharmonic, and never gave a thought to the other genera" (Aristoxenus, *Elementa Harmonica*, I, 2.8-2.10, in Barker, *Greek Musical Writings,* II, 126).
[108] d'Alembert, *Élémens* (1762), 107, n. ll.
[109] Ibid., 108, n. ll.

That is why the interval between B# and C is called a quarter-tone. Its difference with the unison being about 1/43, it differs less than the largest of the quarter tones and more than the smallest.

Aristides Quintilianus assures us that this type was the sweetest of the three kinds of music among the Greeks. Nevertheless, the Ancients did not retain it for a long time, because they no longer calculated the pleasure that it provided,[110] and these fractional divisions were only producing pleasure in their minds and never in their hearts. Plutarch reproaches the musicians of his time for having lost this most beautiful of the three types of music, and for daring to say that the intervals are not sensitive enough by themselves, as if, adds this philosopher, all who escape their coarser senses stopped being in nature.

[40] Today what we call enharmonic does not resemble that of the Ancients at all. Sometimes we use enharmonics in order to pass from one key into another by changing the name of a chord. For example, the sounds F#, A, C, E-flat form a chord that we call a diminished-seventh, and this chord ordinarily should lead to the perfect minor chord of G: G, B-flat, D.

If, instead of going to G, we want to pass into the key of E, we only change the name of E-flat; we call it D#. In performance, this change is not noticed at all, or if it is noticed, it is very little. Although there may be a difference of an enharmonic quarter-tone between these sounds, this is an interval which is almost imperceptible to the ear. Then the F#, A, C, D# becomes a major sixth with a diminished fifth, which leads to the perfect chord on E: E, G, B, or to the one of sixth [a first-inversion chord] on G: G, B, E; one or the other of these chords demonstrates that we have entered into the key of E.

With the same chord F#, A, C, E-flat, we are able to pass into the key of B-flat similarly by changing the F# into G-flat: G-flat, A, C, E-flat. Then this diminished-seventh chord becomes an augmented second which leads to the six-four [second-inversion triad]: F, B-flat, D-flat, and which proves that we are in the key of B-flat.

Also we are always able to pass into the key of C# with the same chord, F#, A, C, E-flat: then the C becomes B#, and the E-flat becomes D#, and the diminished-seventh

[110] [L] In his response to a letter of M. Rameau, which may be read at the end of his *Élémens*, M. d'Alembert says expressly "that the consideration of the connections [provided by numeric ratios] is illusory in order to offer a reason for the pleasure that music causes us." [d'Alembert, *Élémens* (1762), 215.]

chord changes into a tritone chord (or augmented fourth) with minor third, F#, A, B#, D#, and must be followed by the sixth-chord on the E: E, G#, C#, which demonstrates that we have entered into the key of C#.

Therefore there are four different enharmonic paths which proceed from the diminished-seventh chord in which each one of the four notes of the chord in turn becomes the leading tone of the key into which we pass. This example will suffice in order to set forth the ideas on what, today, we call enharmonic, and we will not report the eight other ways to change the four paths about which we have been speaking by using the major or minor third.

Although the ear may hardly appreciate this enharmonic quarter-tone, when it is isolated, the abruptness that it causes in the different passages is quite unmistakable. One is soon forced to admire the way which [41] the music is obviously transported into a key from which it was obviously quite distant.

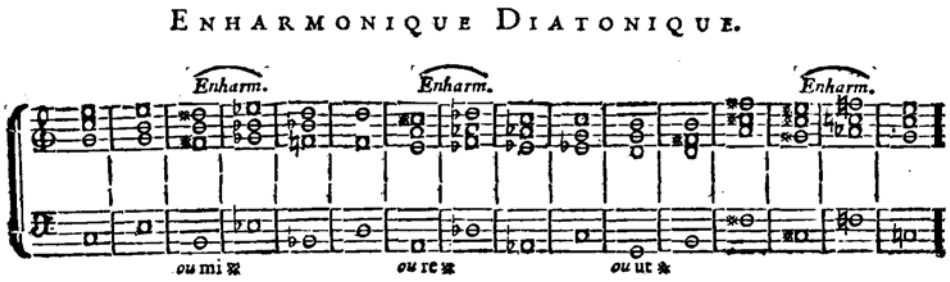
It is the chord following the diminished seventh that shows if you have conformed to the chromatic genre or if you have used the enharmonic.

Rameau has divided the enharmonic into two types, the diatonic enharmonic and the chromatic enharmonic; he has even tried to compose almost entire pieces in both of these types. His famous trio of the "Fates" from *Hippolyte and Aricie* is largely in the diatonic enharmonic genre, which consists in having the bass descend by a fourth and rise by a major third, alternately.[111] In the act of the Incas, from the *Indes galantes*, he was trying to represent an earthquake in the chromatic enharmonic genre, which consists in causing the fundamental bass, alternately, to descend by a minor third and go up by a major third.[112] These two passages have never been able to be played. When they would be played, we dare to assure that the effect from them would be harsh and evil sounding. We urge young composers to use the enharmonic [genre] rarely and with the greatest moderation, and never to use it other than in parts where you must only surprise the ear of

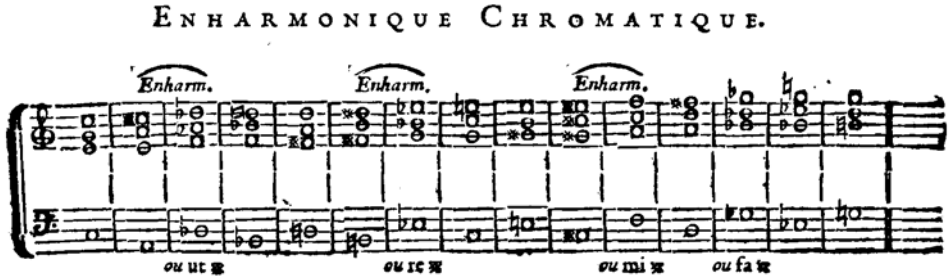
[111] Rameau, *Hippolyte et Aricie* (1733), Act II, scene 3. For Rameau's description of this passage, see *Génération harmonique*, 154-55. See also Rousseau, *Dictionnaire*, 195.
[112] Rameau, *Les Indes galantes* (1735), Act II, scene 5. See also, Rameau, *Démonstration du principe de l'harmonie* (Paris : Durant, 1750), 94-95.

the listener. This enharmonic [usage] would not damage the melody that should be the basis of the composition only very rarely.[113]

This is an example of the two sorts of enharmonic [writing]:



Diatonic Enharmonic [Bass motion: alternately descend by fourth, ascend by major third]



Chromatic Enharmonic [Bass motion: alternately descend by minor third, ascend by major third]

[42] It is Rousseau's luminous observation in his dictionary (article *Enharmonic*) that Rameau is himself too busy with calculations, and that the natural fire of this clever artist had produced some wonders, the germ of which was in his genius, but then his prejudices have always suffocated them.[114] Without doubt, all the times that one will want to subjugate all the effects of music that are found to the proof of the arithmetic—by [way of] introduction—and which follow one another rapidly in a composer of genius—it might be possible that the eloquence of the music may get colder through the separation

[113] Laborde's statement that the melody should be the basis of the composition should not be taken literally here, as he has demonstrated throughout the treatise that he believes harmony to be the foundation of musical expression. A good melody results from a well-constructed harmony, thus the melody reflects the stability of the true harmonic basis of the music. See Laborde's explanation of the "melody of the harmony" (Laborde, II, 14).

[114] Rousseau, *Dictionnaire*, 196. Rousseau believes that Rameau is driven by a need to account for the speculative foundations of harmony at the expensive of what is musically satisfying. Laborde would state the opposite; he understands that Rameau's work as a composer allows him to use his ear as the final judge for whether music is satisfying and tasteful; even if it breaks the rules he worked so hard to establish.

that is put between the ideas by calculating them. Besides, he is able to conclude that for a mistake of calculation, that which does not make anything less than an excellent effect is rejected in the judgment of the ear. It is to taste alone to keep or to reject the productions of genius, and we have an immutable principle that everything which pleases the ear is good, but that all that displeases it is bad. The true calculation in music is founded only on the feeling of the ear.

Rousseau also advises, with the greatest reason to use the enharmonic ordinarily in the *récit obligé*.[115]

Without ceasing, the soul experiences in these expressive passages some opposite feelings, one after another. The impact of the passions and the ideas are best depicted through this kind of music, which is incoherent and which shatters the sense of the musical phrase, as one idea comes to ruin another.

A proof that the enharmonic [genus], such as the calculations give it, cannot be used in our type of composition is that several of our stringed and wind instruments cannot play the difference between E# and F, F# and G-flat, etc. This is what is played on the harpsichord; for example, as these two can sounds only be expressed by the same key, the enharmonic passages appear harder. However, on the violin, the cello, etc., the finger, being able to slide a little more or a little less, plays these different sounds, and thus decreases the severity which results in the movement from one to the other. There are, nevertheless, some harpsichords where the keys of the sharps and of the flats cut in two, or where, consequently, the F# and the G-flat, the E-flat and the D#, etc., are not the same thing. But apart from the fact that this division of the keys greatly increases the difficulty of playing this instrument, there are very few ears capable of distinguishing the difference, and delicate enough to know taste in the person who is playing, and [aware of] what it has cost the player in trouble from it to reach a certain level of competency in his execution of it. [43] We then settled for tuning the harpsichord by forcing [augmenting] the major thirds and also by reducing the size of the minor thirds a little. What we play [in this case] is hardly the perfectly tuned octave; because if the thirds were tuned as they must, three major thirds or four minor thirds should span the range of an

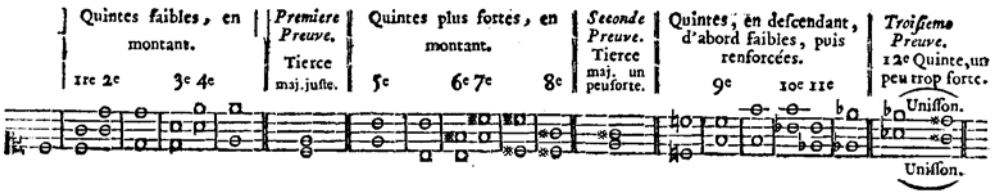
[115] Rousseau, *Dictionnaire,* 197. See also Rousseau *recit obligé*, *Dictionnaire*, 404-05; Charles Dill, "Eighteenth-Century Models of French Recitative," *Journal of the Royal Music Association* 120 (1995), 233-39.

octave. It would happen [however] that the four minor thirds being justly tuned would pass the octave from near 1/73;[116] and that the three major thirds would only come up short to the tuned octave approximately less than 1/43. It is this method in which we force an interval to increase and another interval to diminish that is named temperament. Pythagoras, who first established the intervals, wanted the calculations to be followed in all exactness. Aristoxenus, who realized how much this exactness postponed the progress of the art, wished with reason that one only consulted his ear. Such was the origin of the sects of Pythagoras and of Aristoxenus. The first taught only theory and the second, practice. Antiquity has been divided into these two factions for a long time.[117]

In Rousseau's article *Temperament*, he furnishes the following [system] as the best manner in which to tune the harpsichord:

First, you begin on the C in the middle of the keyboard, and you diminish the first four fifths by going up until the fourth E plays the major third quite in tune with the first sound C; this is called the first proof. Second, by continuing to tune by fifths, as soon as you have arrived at the sharps, you reinforce [enlarge] the fifths a little, although the thirds suffer from doing this, and when you arrive on G#, stop. This G# should play, with the E, a tuned major third, or at least one less sufferable; this is the second proof. Third, you resume at the C and you tune the fifths in the low register below middle C, namely: F, B-flat, E-flat, A-flat, weak [low], at first, then, strengthening [enlarging] them by degrees, that is to say, by weakening the sounds until you may have reached the D-flat, which, taken as C#, must be from the chord and also must play a fifth with the G#, which was arrived at previously in the second proof. This is the third proof.[118]

[44] Here is the table for this manner of tuning:

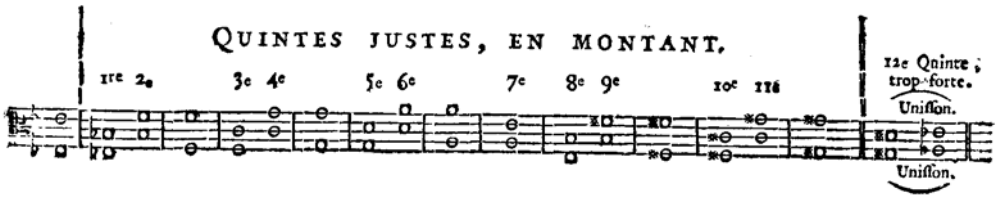


We believed that there is a simpler method, and we present it here in a few words.

[116] [L] It is this difference that Pythagoras called the [ditonic] *comma* [524,288:531,441].
[117] See Chapter 4 for a comparison of the Pythagoreans and the Aristoxenians.
[118] Rousseau, *Dictionnaire*, 502.

Start on E-flat, and then tune with justly tuned fifths and octaves, as in the following table.

JUST FIFTHS, BY RISING



Then, sound it at the octave above G#, along with the E-flat that you have started with, and you will find that this G# becomes A-flat. It will not produce a fifth that is in tune with the E-flat, but it will be left such that it will be heard as a justly tuned fifth, because it is not possible for it to be [heard] otherwise. In this manner there will only be one out of tune fifth on the entire keyboard, and the others will be correct. So if by chance you have some delicacy in the instruments, it will only be necessary to avoid playing pieces in the key of A-flat, because its fifth, not being in tune in every octave, only results in an unpleasant effect. It may quite possibly occur that this way may not appear to be the best method [of tuning] to several musicians, but as they will only be able to prove that the method that they prefer may be better [in their opinion], it has allowed us, as them, to give the preference to ours; at least they will not be able to deny that this method may seem the simplest.

CHAPTER 15
On the Fundamental Bass

[45] This famous system was invented and worked out by the great Rameau, which one ought to read for oneself in the excellent *Élémens de musique* of M. d'Alembert,[119] who has perfected it. We will be content to give an overview of it here.

The fundamental bass cannot exist, if it does not always prevail beneath the other parts.[120]

[119] d'Alembert, *Élémens* (1762), 134-148.
[120] This is a direct quote from Rameau's *Traité*, 134.

All the notes of the fundamental bass are only able to support notes from the perfect chord, the seventh chord, or sixth and fifth chords [first inversion seventh chords].[121]

In every succession of perfect chords, it is necessary that at least one of the notes in the chord that you depart from is in the chord where you want to proceed to. Thus, when you want to pass from the perfect chord on C, for example, another perfect chord, it is necessary that one of the sounds of the C chord, that is to say, C, or E, or G, is in the following chord.

In all sixth and fifth chords, or subdominant chords, at least one of the consonances of the chord must be in the preceding chord, that is to say, the fourth which will go to the tonic. Thus, in the chord F—A—C—D, F, or A, or C must be present in the preceding chord; D, which is a dissonance, may to be found there or not.

- Every dominant, simple or tonic, should descend by a fifth.
- Every subdominant should go up by a fifth.

The transition from a dominant-tonic [dominant seventh] to a tonic is called an absolute repose, or perfect cadence, as we have already seen, and the passage of a subdominant to a tonic is called an imperfect, or irregular, cadence.

[46] Using suspensions in the fundamental bass is a license in which you must only rarely indulge. The soprano is a higher melody than the fundamental bass, and it produces the notes from this bass which responds to it. The other parts are collected in the rest of the notes of the chords, when the soprano and the bass are removed from it.

The fundamental bass can only work regularly in three ways:

- 1st – ascend or to descend by a third or a sixth.
- 2nd – ascend by fourth or fifth.
- 3rd – ascend diatonically on a perfect chord.

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[121] [L] M. d'Alembert says that the fundamental bass is the principle of harmony and of melody, as the system of gravitation is the principle of physical astronomy, that is to say, that these two systems do not express an explanation for all which is seen in music or in astronomy [d'Alembert, *Élémens* (1762), 222].

It is a quite astonishing thing that we may have been able to continue the practice of music to the point that it had achieved, without knowing the foundation of it, and that we may have found all the rules before having discovered the principle which causes them.

[The sixth and fifth chord is a seventh chord in first inversion. The chord Laborde describes here is most likely a first inversion supertonic chord that functions as a subdominant. A fist inversion dominant seventh chord would have been referred to as a sixth chord with a diminished fifth.]

The fundamental bass is not a part of the music which can be played. It is only the proof of the composition, as, in arithmetic, addition is the proof of subtraction.

Harmony cannot be good if it is not subjugated to the fundamental bass.

These are, more or less, the principal rules of this system, which has created so much controversy in its origin. We cannot overly recommend studying the system of fundamental bass with the greatest care, and to get used to its rules and their exceptions to the best of your ability. You must manage to know the rules well-enough that you no longer are occupied with them [they become second nature] when you compose.

This has the air of a paradox; nevertheless, it is not one.

A composer who would enjoy himself by learning the fundamental bass in everything he does, besides losing a considerable amount of time, by this constraint, he would strengthen the boundaries of his genius. But when he then has attained a certain level of knowledge of the fundamental bass, he picks up a habit that he is no longer able to lose. He composes according to the rules of this bass and does not depend upon himself more to create anything which may be submitted to his course.

CHAPTER 16
The Basso Continuo

This name has been given to continuous bass because it lasts throughout the entire piece as it is played.

It is only a fundamental bass in which the chords are turned upside down [47] in order to make it tuneful. Thus it is only, so to speak, an intermediate melody between the soprano, or principal melody, and the fundamental bass.[122]

In order to play a good basso continuo, there are a few principal rules such as avoid playing two octaves or two fifths in succession within the melody; but these rules have a few exceptions, and to us, the ear alone learns to perfect the continuous bass.

[122] Rameau provides a simple explanation of the difference between the fundamental bass and the basso continuo, *Traité*, 206.

The continuous bass was placed in use in 1600 by an Italian named Ludovico Viadana.[123] Dumont, Master of the King's Chapel, who died in 1682, had established the use of it in France.[124] Before him, it was the alto-tenor and the tenor which constituted the bass.

So that it may be good, an invariable rule of this bass is that it may play the lowest part of the passages where it is found, and in the rests and the cadences, it presents the same notes as the fundamental bass.

CHAPTER 17

The Ground Bass

Formerly, composers considered it as an amazing feat to play passacaglias, chaconnes, etc., over four or eight measures of bass which were repeated without stopping, such as this one:

Modern composers have acknowledged the abuse of such trifling things and no longer look to produce obstruction in an Art which by itself has enough difficulties without bringing new ones to it.

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[123] Ludovico Viadana (c.1560-1627), *maestro di capella* at numerous cathedrals throughout his life including Mantua from 1594-1597, was the first composer to publish sacred music that included a basso continuo, the *Cento concerti ecclesiastici* (1602), Frederico Mompellio, "Viadana, [Grossi da Viadan], Ludovico," in *The New Grove Dictionary of Music and Musicians*, 2nd ed. See also Laborde, IV, 462-63.

[124] Henri Dumont (1610-1674), organist at St. Paul's and Master of the King's Chapel, was the first to publish music in France that included a figured basso continuo in a separate part, in his *Cantica sacre* (1652). Laurence Decobert indicates that Constantijn Huygens (1596-1687) was the first to have music with an unfigured bass published in France, some five years earlier in his *Pathodia sacra* (1647), Laurence Decobert, "DuMont [de Their], Henry," in *The New Grove Dictionary of Music and Musicians*, 2nd ed. See also Laborde, III, 414-15.

CHAPTER 18

The Upper Parts

[48] The upper parts, each one in particular, must observe the rules of harmony with regard to the bass, as if it were the only part. It is necessary that they proceed, as much as possible, with contrary motion to the bass voice.

As the chords are composed of three, four, or five sounds, several voices or instruments are therefore necessary in order to produce them. These are the various ways to have these different parts sung, which constitute good or bad harmony.

The simplest way to compose is in four parts: soprano, alto, tenor, and bass. Nevertheless, as all the chords do not have four notes, and as many only have three of them, it is hardly possible, when composing in three parts, that there may ever be a note in one part that is the same as a note in one of the other two other parts.

The first rule of the Trio, or of music in three parts, is that it is necessary that the third is heard at all times in the measure, because it is like the soul of harmony. The sixth, being precisely an inverted third, is able to stand in very well for the third. Thus, it suffices that one of the parts may play the sixth against the bass, or the upper parts may have it between them.

It is necessary that the three parts of the Trio be as near as possible to each other, and especially to the bass, because the tighter the harmony, the more the ear is satisfied by it.

When, in one of the parts, several dissonances pass in supposition[125] against a single note of the bass, the other part also can step [49] by supposition, or can hold against the bass. All parts which are suspended must always descend by a step. You must almost never have the three parts suspended simultaneously, but the two upper parts are able to do so quite successfully.

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[125] [L] In the upper parts, notes of supposition (non-chord tones) or passing tones are those that do not have harmonic support and which are proper only for leading from a note of harmony, or a chord tone, to another note of harmony. If you have, for example, the three chord tones *C*, *E*, and *C*, and that, in order to fill in the cracks from *C* to *E* and from *E* to *G*, you form the melody *C*, *D*, *E*, *F*, *G*, in notes of the least rhythmic value, the *D* and the *F* will be notes of supposition or passing tones.

In general, the better rules of composition that you will be able to administer are found in the scores of the grand masters.[126]

CHAPTER 19
On the Design

The subject is a melody that we want to keep in the forefront of the piece that we compose and that we take care to recall in the various parts and in the different modulations through which it passes. Rousseau defines it as "the invention and the driving of the subject, the disposition of each part, and the general prescription of the entire work."[127]

The moderns removed this name [design] in order to give it the name of "motive," taken from the Italians who call it *motivo* and who cultivate it with care in their music.

The great art of the composer consists of designing his motive first in its entirety to establish it well, and to then present it again from time to time to his listeners in such a way that it may always be heard with a new pleasure when it return.

Rousseau says, quite correctly, that it is a lack of design which allows its subject to be forgotten, but it is a greater error to continue with it until boredom sets in for the listener. [128]

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[126] Laborde's statement speaks to the idea of a class of compositions that can be described as masterworks. This concept emerges at this point in the eighteenth century as the contemporaneity of music is on the wane. For a general description of this musical culture of the "now" in the eighteenth century, see William Weber, "The Contemporaneity of Musical Taste in Eighteenth-Century France," *Musical Quarterly*, 70, no. 2 (1984), 175-194.

[127] Rousseau, *Dictionnaire*, 142.

[128] Ibid, 143. Aside from Rousseau's entry in the *Dictionnaire*, Rameau offers his view on the topic, *Traité*, 322, and d'Alembert in his *Élémens* (1762), 206-208. Rameau, d'Alembert, and Rousseau each provide a similar dual designation for the term *dessein*. The first more specific definition is the explanation of design as motive. The second addresses the general plan of a piece of music. In the *Traité*, Rameau says "in music, design is the general term encompassing everything we put forth, that is: movement, key and mode, melody, and harmony suitable to the subject, all of which a skillful musician will envisage form the start," *Traité*, 332; trans. Gossett, 348. Laborde has chosen to focus on the definition of design as motive rather than the aspect of design that speaks to more formal matters, although that sense of the definition is still present. One reason for this may be that the following chapters in Laborde's treatise deal with imitative textures and counterpoint, subjects that rely on a well-composed motivic idea to foster a tasteful and pleasing imitative composition.

CHAPTER 20
On Imitation

Imitation consists of repeating a melody of one or several measures in a single part, or in all parts, in [any of] the different modes we want to use.[129]

We do not require of imitation the strictness that we require of fugue. [50] We take off from the initial statement; we use it, [and] we abandon it at will. This is what makes the great masters despise imitation, but we believe it to be a lot more likely than fugue to be pleasant.

CHAPTER 21
On Canon

The canon is a perpetual fugue, or an imitation in all the parts, which repeats the same melody absolutely.

The Emperor Charles VI,[130] who was a great musician, often composed canons, and has had some of them played by the most skillful Italian and German musicians.

We will furnish several of them, composed in France, in order to have the different manners of composing them known.

The simplest canons are at the unison or at the octave, that is to say, that each part repeats the melody of the one which precedes it on the same note.

Such is the style more or less of composing canons of this genre.

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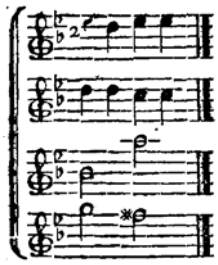
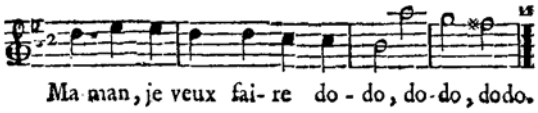
[129] The fact that a chapter on imitation follows the chapter on design has precedent, both in Rameau's *Traité* and d'Alembert's *Élémens*. Both men include chapters entitled "on design, imitation, and fugue," in Rameau's case there are two chapters bearing this title, Rameau, *Traité,* II, Chapter 28, 162-3; III, Chapter 44, 332-362; d'Alembert, *Élémens* (1762), II, Chapter 15. From the title given these chapters, it should not be surprising to find Laborde's chapter on fugue to be placed one chapter after the one dealing with imitation. Laborde has enhanced the discussion of imitative forms by interpolating a chapter on canon between those on imitation and fugue.

[130] Charles VI of Austria, Holy Roman Emperor (1685-1740), was the father of Maria Teresa who became Archduchess at her father's death. Charles VI was involved with music from an early age; under the tutelage of Fux, he composed and played the keyboard.

Write a melody of one or several measures, as long as you like. Under this melody, put as many parts as you want. Then make a single melody of all the parts, and the canon is made by having the different parts begin in a measure in turn one after the other.



Singing these four parts in succession forms this melody:



[51] At the end of this book you will find several canons, some of which are very complicated.[131] We have only published them in order to demonstrate how pointless it is to waste time in such searches.

CHAPTER 22
On Fugue

Fugue is composed by having a subject repeated alternately in the upper part, in the bass, and in the other parts.

All fugue has its response [answer] in the part which enters immediately following the voice which starts the fugue. This answer begins on the fifth or the fourth, depending on the whim of our composers.

[131] See Appendix D. The canons are found in two locations in Laborde's treatise. The first is on a plate facing page 51 of the composition treatise. The second is at the end of the text of the composition treatise, Laborde, II, 63-74.

The fugue is authentic when the notes of the subject proceed by rising, and it is plagal when they occur by descending. There are fugues of one, of two, and of three subjects; others are called inverted in which the response takes place by an opposite movement to that of the subject.

As this is the most difficult genre in which to compose a piece, and as it varies from all the other styles, we refer you to the treatises of composition so that you may learn to know them.[132]

CHAPTER 23
On Counterpoint

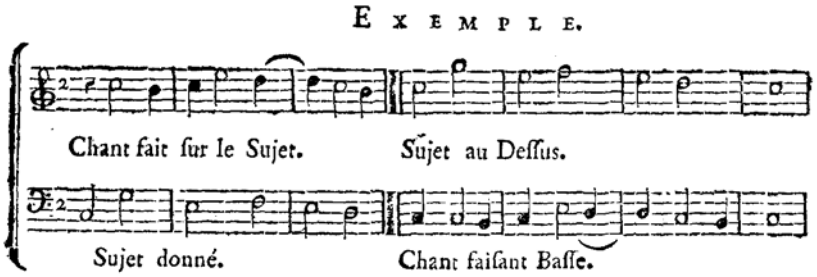
Formerly composition was called the invention of melodies, and counterpoint was called the composition of harmony. But today, we give the name of counterpoint to the parts which are added to a given subject, and what was at the time only a part of plainchant has now become that which is the most difficult to compose in music, as in the fugues of several subjects in which we utilize counterpoint.

Counterpoint is also defined as "the simultaneous harmony of different parts."

The origin of this name comes from the fact that the notes were formerly, [literally], points and that while composing, it was necessary to place these points one against the other.

[52] Strictly speaking, double counterpoint is a melody composed on some given subject in which the subject at first serves as the bass or as the foundation in the composition of this melody, in such a way, however, that this melody is put underneath the subject, and serving as the bass to it in its turn. The reversal of these two parts does not prevent the harmony between them from not possibly being as good and correct as when they were in their first position**.** See to it that they are good and correct, each in their turn as subject and counterpoint, and the name of double counterpoint may be given to this type of composition.

[132] Here Laborde one again indicates that he is aware that his treatise is not a pedagogical guide to be used by s student of music in any capacity beyond that of a reference work.



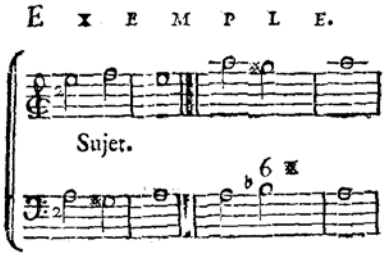
The subject can be taken from plainchant or invented, but it is necessary to observe that it must not be too long. The best subject is one which does not exceed four measures, and the first note must be the final or the dominant, or at least the mediant.

We can see in the treatises of composition that there is counterpoint at the third or tenth….at the fourth or eleventh…at the fifth or twelfth…at the sixth or the thirteenth…at the seventh or fourteenth…at the octave or fifteenth.

The major, or raised, seventh, preserved and prepared by the octave, makes a good impression when the reply is on the fifth below.

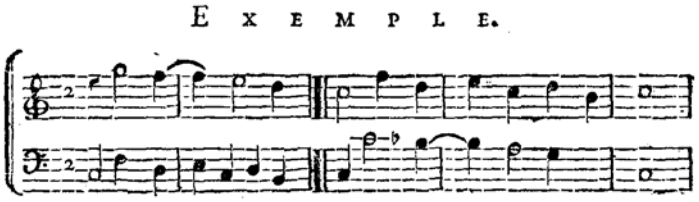
"Reply a fifth below"

[53] We are persuaded that the reply [answer] to counterpoint has given birth to the augmented sixth.

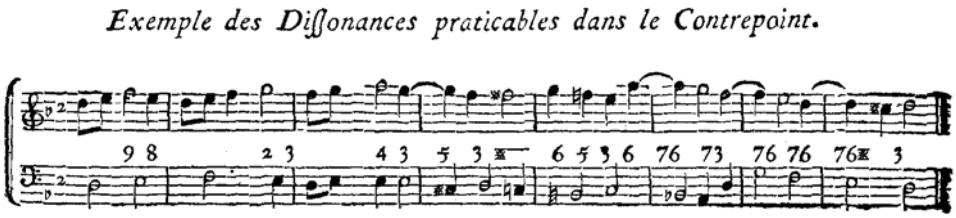


Music example - "Subject"

We can suspend the second or ninth in the top part, and the fourth in the bass, provided that they will resolve to the third.



Music example



"Example of the feasible dissonances in counterpoint"

A. Suspended 9th in the upper voice and resolved to the octave [m.1]

B. Suspended 2nd in the bass and resolved to the third [m.2]

C. Suspended 4th in the upper voice and resolved to the third [m.3]

D. Suspended diminished fifth in the upper voice and resolved to the third [m.4]

E. Tritone resolved to the sixth [mm.4-5]

F. Non-syncopated diminished fifth [m.5]

G. Suspended seventh in the upper voice and resolved to the third [m.6]

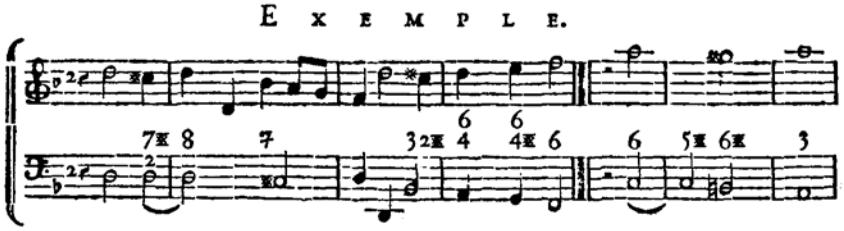
H. Preserved resolved to the third [m.6]

I. Seventh resolved to the sixth [7-6 suspension, m.7]

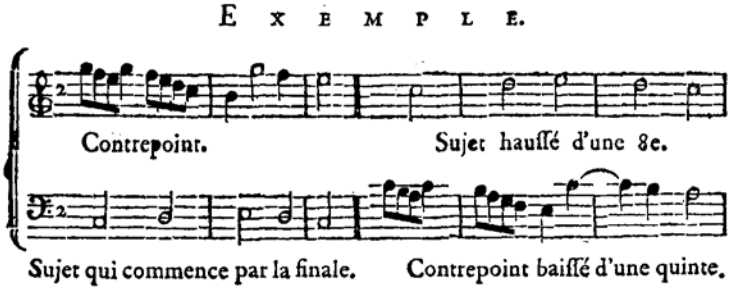
J. Seventh resolved to the sixth [7-6 suspension, m. 7]

K. Seventh resolved to the sixth [7-6 suspension, m. 8]

[54] We can also use the augmented second [mm.3-4], the major, or raised, seventh [mm.1-2], and the augmented fifth [mm. 5-7] in this way:



Counterpoint at the fifth should begin on the fifth in the upper part and the bass answers a fifth underneath.



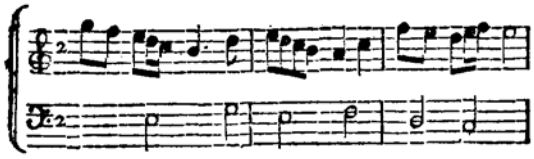
"Counterpoint"

"Subject raised by an octave"

"Subject which starts on the final"

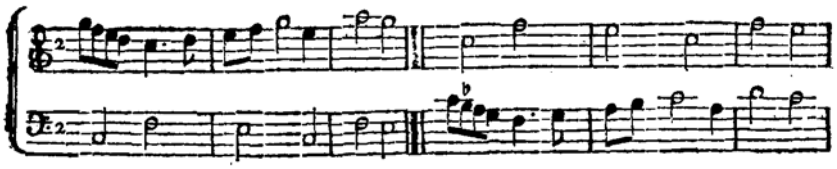
"Subject lowered by a fifth"

Exemple d'un Contrepoint dont le ſujet commence par la Médiante.

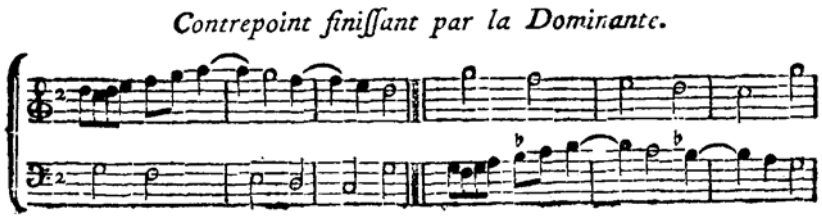


Example of a counterpoint of which the subject begins on the mediant

Contrepoint finiſſant par la Médiante.

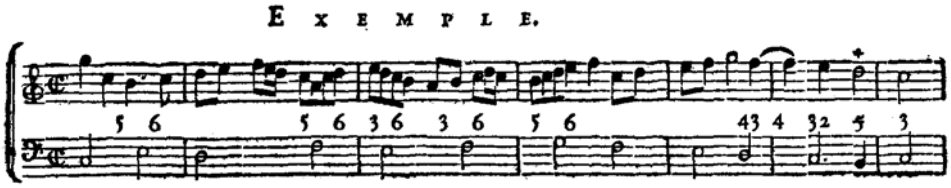


Counterpoint finishing on the mediant



Counterpoint finishing on the dominant

[55] In a measure in quarter time, you must never use the major or minor sixth on the first or the third beat, which are the good beats from this measure. You can only sound them in supposition,[133] for the ornament of the melody—in the second or fourth beats, or after a dotted note—and all that in conjunct motion.



Counterpoint, composed on the spot, and played without any preparation on a given subject, is called chant on the book, or *Chant sur le livre*.[134]

CHAPTER 24

On the *Chant sur le Livre*

This is taking a complete subject or melody and composing or singing over this subject, at the same instant, a melody that is different, and which creates good harmony with the first melody.

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[133] It appears that Laborde is using the term "supposition" here in the sense of a passing tone. See the note in Chapter 18 above, Laborde, II, 48-49.

[134] [L] Rousseau has reason to say (article *Counterpoint*) "that for a long time we have striven to know if the Ancients had known counterpoint, but that out of all of what remains to us of their music and especially through the rules of practice of Aristoxenus, we see clearly that they never had the slightest notion of it." How had they known it, since they had no experience of what we call chords, that is to say, the collection of several different sounds? [Rousseau, *Dictionnaire*, 123. Rousseau specifically mentions the third book of Aristoxenus which contains the practical rules for performing ancient music. Aristoxenus's rules describe the melodic motion of a single melody, not the rules to write one melody against another. See Aristoxenus, *Elementa Harmonica*, III, in Barker, *Greek Musical Writings*, II, 170-189.]

Ordinarily the subjects that we use are from the hymns, proses, responses, anthems, and introits. The prose is a rhymed melody that is recited before the Gospel on solemn Holy Days only. There are four principal types of them:

- For Passover; *Victimæ Paschali*: We are unaware of the author of it[135]
- For the Pentecost; *Veni Sancte Spiritus*: by King Robert[136]
- For the Corpus Christi; *Lauda Sion*: by Saint Thomas Aquinas[137]
- For the Dead; *Dies Irae*: by Cardinal Frangipani, says Malabranca[138]

It was Saint Ignatius, Bishop of Antioch and disciple of Saint John the Evangelist, who instituted the chant alternation of psalms and hymns.[139] Saint Hilary, Bishop of Poitiers, composed several hymns that were sung at that time in the West.[140] It is from this simple melody that Saint Ignatius has taken on a comparison, when, in his letter to the Ephesians, he advised the priests to join in concord. He claims that it will be similar to the symphony [harmony] and that it will be so in tune that they all will only make one voice.[141]

When Horace said "*ut gratas inter mensas symphonia discors offendit, etc*." ("The badly tuned symphony [harmony] offends the ears, etc.") in the *Ars poetica* [*The Art of*

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[135] Passover is the Jewish festival day that celebrates the liberation of the Jewish people from captivity in Egypt. Today, the *Victimæ Paschali* is often attributed to Wipo of Burgundy (d. c. 1050), a priest at the courts of Conrad II and Henry II.

[136] King Robert II of France (c. 970-1031), also known as Robert the Pious, was briefly excommunicated by Pope Gregory V when sought to marry his second wife, Bertha Princess of Burgundy, after having divorced his first wife. Politically Robert II was very antagonistic, even among his own family, as he eventually went to war with his own sons. Robert was also a musician of some talent. He wrote this hymn, *Veni, sancta spiritus*, and many others are attributed to him also, Laborde, III, 473. Laborde also points out that Robert was king at the time Guido d'Arezzo provided names to the notes of the diatonic scale, Laborde, III, 472. Pentecost, literally meaning "fiftieth day," occurs seven Sundays after Easter Sunday.

[137] The feast of Corpus Christi occurs on the first Thursday after Trinity Sunday, which is always the first Sunday after Pentecost. The feast of Corpus Christi celebrates the institution of the Holy Eucharist. Saint Thomas Aquinas (c.1225-1274) wrote the *Summa theologica* that contains the basic tenets of Christian doctrine. He left the work unfinished in 1273 when he stopped writing after having a profound spiritual experience.

[138] Thomas of Celano (d. c. 1250), a Menortie friar, is often credited for the *Dies irae*. Authorship has also been attributed to numerous other authors throughout history, including Cardinal Latino Orsini, or Frangipani (d.1296).

[139] Saint Ignatius of Antioch was the third bishop of Antioch. He died a martyr's death in a Roman arena near the end of the first century CE. Ignatius was a disciple of Saint John the Evangelist, one of the twelve apostles.

[140] Saint Hilary of Poitiers (d. 368)

[141] [L] This is new proof that harmony at this time was only the unison, and that the ancients have never known some other definition of it, unless it was at the octave. [Laborde is referencing Saint Ignatius's *Epistle to the Ephisians*, Chapter 4.]

Poetry], v.373, he simply hears the voices in the sung unison which are not sung correctly. Here is the proof that the word "symphony," or the word "harmony,"[142] is only used to mean the unison or the octave. It is in what Aristotle said, in his problem 16, section 19. He said that "in the symphony,[143] one voice being exactly similar to another, it absolutely happens that there is one voice that is confused for another," that is to say, that it seems that there may only be one voice, "instead of in antiphony, in which the voices singing at the octave are distinguished pleasantly."[144] If this passage is not conclusive, [then] we know nothing of what the nature of the proofs must be [and what they] required from us.[145]

CHAPTER 25
On Plainchant

Plainchant has only taken the form which it has today since Guido d'Arezzo invented the notes and placed them on four lines. Before this time, plainchant was only fragments of Greek music that [57] have probably preserved some of their melodies for

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[142] Horace [Quintus Horatius Flaccus], Roman poet and satirist, lived in the first century BC (65-8 BC). Laborde references Horace incorrectly. He cites the line of the *Ars poetica* as 373, but it is actually 374. Laborde also misquotes this passage. It should read "*ut gratas inter mensas symphonia discourse et crassum umguentum et Sardo cum melle papauer offendunt*" ["As, at a pleasant, one is offended by an orchestra that is out of harmony and gross ointment and poppy seeds mixed with Sardinian honey."] (Horace, *Ars Poetica*, (18 BC) 374-76, trans. Burton Raffel as *The Art of Poetry*, (Albany: State University of New York Press, 1974), 40, prose trans. James Hynd, 58). Most likely, Laborde truncated the quote to eliminate the culinary reference as he felt it was superfluous. However the overall point of this passage in its original context is to unfavorably compare both music and cooking as unnecessary art forms, especially in comparison with poetry, as the next passage of the *Ars poetica* reads "*poterat duci quia cena sine istis*" ["because the dinner could be conducted without them."] (Horace, *Ars poetica*, 376, Raffel, *Art of Poetry*, 40, prose trans. Hynd, 58). This statement implies that Horace is referring to music performed in unison or at the octave, the performance practice at the time, but it is hardly proof to an eighteenth century reader in the sense of documented evidence, as Horace offers no more information on the performance of this music that identifies the out of tune notes.

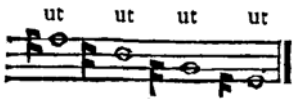
[143] Here Laborde defines "symphony" as two parts, often a voice and an accompanying instrument, performing on the unison with a third part, also in the accompaniment, a fourth or a fifth above the unison. The two notes in unison overpower the third note making it difficult to here. Aristotle clarifies, "For one of the notes (played) must be in unison (with the note sung), so that the two played against one voice make the other note imperceptible" (Aristotle, *Problems*, trans. W. S. Hett, 389).

[144] Aristotle, *Problems* I, 19, 16, trans. W. S. Hett, 389. See n. 86 of this translation.

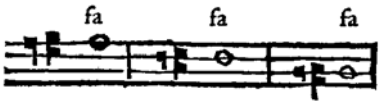
[145] [L] Plutarch, in his treatise, *From the Inscription at the Temple at Delphi*, distinguishes the strings two ways. First, several strings playing only one tone (as well as the strings of the lute or guitar tuned to the unison or the octave), he calls them *polychordia*. Second, playing a different tone on every string, he calls this *poecilia*.

us, which we now possess without knowing it. Before the eleventh century, among the Greeks as among the Romans, each sound had a name and a particular character. At that time they were content to put up above each syllable of text, the symbol of the sounds that were suitable for these syllables; thus the characters were written with the text on the same line. The number of Greek characters that were necessary for one to memorize, however, went up to 1,620, which was [a] fantastic [number] and [the characters were] quite difficult to remember by heart.[146] Guido greatly simplified the art of writing music by devising the lines and by placing marks there, but as these dots were all equal, they could only be used in plainchant in which the notes were of equal duration. It was in 1330, that Jean de Muris, Doctor and Canon of Paris, gave rhythmic values to the notes and invented signs which indicated their values, and consequently their movements.[147] Several of these signs no longer remain, and we have substituted other symbols there instead. This art improves everyday.

One only has to know two clefs in plainchant: the first, which is named the *C* clef and the second, the *F* clef. The *C* clef rests on the four lines in this manner:



The *F* clef is used in low-register chant, since it is a fifth lower than the *C* clef; it rarely rests on the second line, sometimes on the fourth, and almost always on the third in this way:



Here are some principal rules in order to *chant sur le livre*.[148] We have extended ourselves in this area because it is less well-known than the other parts of composition.[149]

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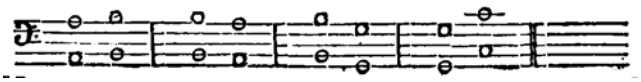
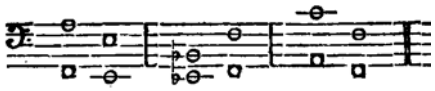
[146] Alypius, *Introduction to Music*. This work was most likely known to Laborde through its inclusion in Meibom, *Antiquæ musicæ*, I (1652).
[147] Jean de Muris (c.1290-1351), *Notitia artis musicæ*, 1321.
[148] *Chant sur le livre*, or "singing on the book," is an improvisatory performance practice of eighteenth-century France, as discussed in Chapter 5. As this practice is associated with eighteenth-century France, I have chosen to leave the phrase in French when it appears in the text.
[149] Laborde acknowledges the scarcity of texts available that present *chant sur le livre* as a topic, strengthening the argument that Laborde has some cognizance of his methodological choices.

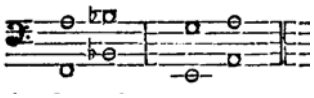
You must never play two octaves in succession; this is as true for descending as it is for ascending, as much so for conjunct steps as for disjunct steps.



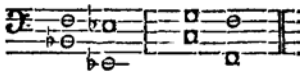
[58] You must not ascend or descend with the bass to land on the octave.



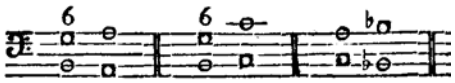
When the bass ascends by a fourth, you must not put the octave over the second note.



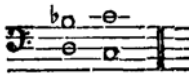
When the bass descends by a fifth, you must not put the octave over the second note.



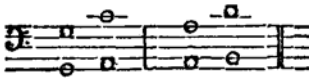
You must not put the octave after the sixth, unless the bass does not go down by a tone in conjunct steps and the sixth will not be major.



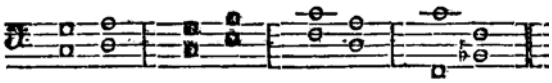
You must never place the octave after the minor sixth.



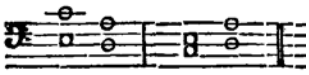
When it ascends from the octave, you must not ascend by a fourth.



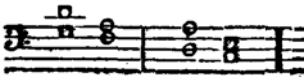
You must never play two fifths in succession, except by contrary motion.



You should not descend or ascend with the bass to arrive on the fifth.

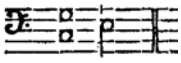


When you are on the fifth, you must never descend by fourth to arrive on the third.

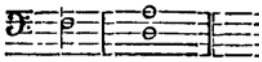


[59] You must never finish on a minor third, but always on the major third, and before the octave, the third should always be major.

When the bass ascends by a third, you must not descend by a major or minor third.

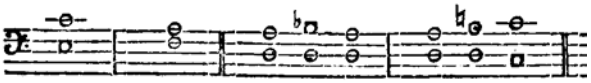


When the bass descends by a third, you must not ascend by a third.



You must never begin or finish on the major or minor sixth, and in front of the octave, the sixth should be always major.

After the minor sixth, you must descend, and after the major sixth, you must ascend.



Plainchant was formerly so valued that several popes and sovereigns made a particular study of it. In the churches of the West, Charlemagne reinstates the Gregorian chant that the passage of time had corrupted. The king, Robert [II], son of Hugues Capet,[150] composed chant for several responses and anthems which are still today the most beautiful pieces of church music.

There were even rules, statutes, and laws, in order to oblige those who would enjoy foundations, made to maintain chant in religious ceremonies, to cultivate this precious talent. Beyond that, one comes to the practice of the chant in the churches, far from devaluing those who made a profession of it, they honored them.

In 1431, shortly after the eradication of the schism of the West, a commissioner of the Pope had been sent as a representative in order to sort out a number of points which

[150] Hugues Capet (938-996), king of France, was the father of King Robert II, the Pious.

were concerning the discipline of the Church of Sisteron, this church being at that time considerably strong. He was indignant that most of those who were serving this church might not have a smattering of the art of music "without which," he said in a letter, "it is impossible that the divine office may take place with decency."

The church ordained, by article 69 of its statutes, that those who would not know the rules of this art, would be sure to instruct themselves in the rules in a [60] timely manner, under such a penalty that the Bishop of the place would want [to administer] to compel them if to do so if they were not doing it. In 1661, the rectors of this church noticed and protested this obligation by saying that the statutes were not speaking of music practiced in several parts, but only of what one calls plainchant, or Gregorian chant. On this dispute, which went by means of well-measured justice, it played a part in two Decrees of the Parliament of Aix, the first one on 5 March, 1664, and the second decree on the first of January 1667, which did not permit the parsons to resign their parsonages, unless "the resigned will be in no fit state to practice the art of music in the year of their reception." And as this decree was pronounced in order to organize the execution of what had been the practice in France for several centuries, it helps to prove that, before 1481, we composed in several parts, and that plainchant was not the only music in use. [This is evident] as the Beneficiaries of Sisteron, who subjected themselves to know plainchant, were avowed by the decree of the Parliament in the responsibility to know music.

This digression has appeared curious and necessary to us in order to establish the seniority of the music practiced in France.

There is even one kind of plainchant that we name *faux-bourdon*. It is syllabic, non-measured music. We are able to define it as a psalmody in several parts of our hymns, psalms, and canticles.

CHAPTER 26

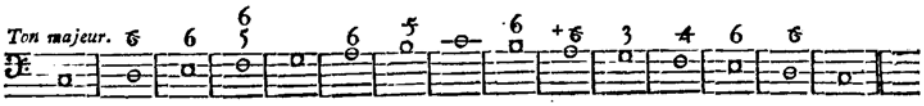
On the Accompaniment and the Chords

Accompaniment is the action of playing, along with each note of the bass, the chords which it should carry.

In order to learn to accompany in a short time, you must study the fourth book of the *Treatise on Harmony* by Rameau.[151] It has seemed to us that his way is the simplest. There are nevertheless several other ways which are also good; and, in general, accompaniment has become something so simple that in three or four months you can pride yourself (when you study it seriously) to be in a state to manage without a teacher.

Earlier, accompaniment was blended into a single rule that we called [61] the rule of the octave, which had been published, it is said, in 1700 by the Monsieur Delaire.[152]

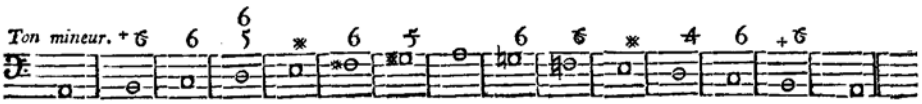
Here it is in major and minor.



Major scale

[151] The fourth book of Rameau's *Traité* is entitled "Principes d'Accompagnement," ["Principles of Accompaniment"] a practical guide for the keyboard player that addresses fingering, realizing a figured bass, and basic theoretical concepts introduced elsewhere in the *Traité*, but from a more practical perspective. For example he offers a chapter in Book IV on the modes and keys that begins "it is difficult to accompany well without a full knowledge of keys and modes. It is indispensable to read our discussion of these matters in Book III, Chapters 8 and 12 [Rameau, *Traité*, III, 198-200, 215-216]. After which, we should try to gain facility in playing the following octaves" (Rameau, *Traité*, 381, Gossett, 395). The earlier chapters offer a more thorough explanation of what a key is and how it is defined, while the chapter on keys in Book IV presents the actual manner in which the chords are to be played on each scale degree of the diatonic scale.

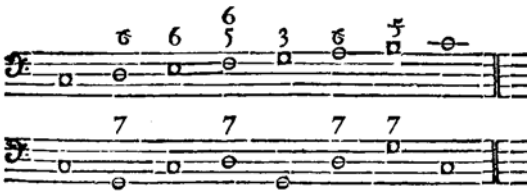
[152] [L] Campion [Laborde, III, 602] has said to have published it first in 1716. Rameau and Rousseau, [who came] after him, maintain that it is Delaire. [See Rousseau, *Dictionnaire*, 405.] Little is known of the life of Etienne Denis Delair other than he published his *Traité d'accompagnement pour le théorbe et le clavessin* (Paris, 1690) at the end of the seventeenth century. There was a second edition published in 1724, the *Nouveau traité d'accompagnement pour le théorbe et le clavecin* (Paris, 1724). According to David Fuller, it is confusion between the two editions that led Rameau and Rousseau to assign the creation of the *règle de l'octave* to Delair. The information Delair supplies regarding the rule of the octave is to be found in the new pages added to the second edition of his accompaniment treatise, thus his contribution occurs after Campion's, David Fuller, "Delaire, Etienne Denis," in *New Grove Dictionary of Music and Musicians*, 2nd ed. Therefore, Campion, a French composer and theorist, does provide an earlier presentation of the rule of the octave, François Campion, *Traité d'accompagnement et de composition selon la règle des octaves de musique* (Paris, 1716).



minor scale

This rule was sufficient to accompany, as long as you did not go out of the same key and its dominant key, but from the moment that you left them, the rule of the octave did not furnish the means of accompanying [in the new keys]. It was necessary therefore to perfect this method, which Rameau has done with success.

In his article *règle de l' octave*, Rousseau claims that it is unfortunate that a method intended for the practice of the elementary rules of harmony may contain a mistake against these same rules, because there is not a connection between the chord of the fifth note and the one of the sixth note.[153] We do not understand what he means, or where the error is that he claims is on the sixth note of the octave because of this way of figuring the octave.



The third marked on the fifth note, being *G, B, D*, [forms the] perfect chord of the fundamental *G*, and the minor sixth marked[154] on the sixth note, played as *A, C, D, F*, forms the seventh chord of the fundamental *D*. *D* is therefore common to the chords and serves consequently as the link.

But when this common tone may not exist, where has Rousseau found that it [62] is necessary that it always exists? As soon as we have arrived on the fifth note of a scale,[155] are we not master to go where we want?

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[153] Rousseau, *Dictionnaire*, 406.
[154] [L] Rousseau's error is to have considered as a simple sixth the chord of the minor sixth.
[155] [L] The fifth note of the scale is thus called, only when it supports the notes of the perfect chord. It is called dominant, as soon as the seventh is added there. We will see in our third volume, in the article *Blainville* [Charles Henri de Blaineville (1711-1769) was a French composer, theorist, and cellist. See Laborde, III, 577-585], what the errors are that we find in the rule of the octave, and how in one place Rousseau has assumed one of them which is not there, while in this same location, he has not seen the one which is there, no more than the others of which we speak in the same article.

Another of Rousseau's errors, in his article *accompaniment*, is to oppose with derision those who claim that it is easier to learn to accompany when you begin by learning composition; "it is," he adds, "as if one suggested beginning to learn [how] to read by [first] making oneself a speaker;"[156] but he would have had to consider that one learns two things by learning accompaniment, science and style A pupil is already perplexed enough from this long series of chords that he must put in his head in order to read the music that perhaps he only reads with difficulty. [Perhaps he is also confused] by the changes of key that are not marked by figures, without having to consider the mechanism of the fingers and in the style of turning the chords upside down in the fingers. This plays a large part of the science of the accompanist. It is not such an absurd thing to propose to the young people to begin with learning composition, which must be a matter of four or five months at the most for them. Then they will be entirely engaged in the mechanism of accompaniment, which will only then appear as playing to them, as they will no longer be confused by the different combinations which get muddled in their heads when they learn the accompaniment and to accompany at the same time. We persist then to believe that it is better to learn composition to begin with, and we recommend [this course] to all those who would be stopped [from doing it] by this article in the *Dictionary of Music*.

We advise them again, when they will be in a state to do without their teachers, not to use all the notes of harmony in their accompaniment. [63] There is an abundance of notes which you must use in moderation. You must have the chords sound the best that you can, which is impossible when the harmony is always complete. The Italians have superiorly mastered this pleasant style, only using the necessary notes in their accompaniment without sounding the others; it is because the custom of listening to skillful people and natural taste teaches quite better than all the rules that we could possibly give.

[156] [L] On the same page Rousseau says that "an accompanist must be a great musician, that he must know the harmony thoroughly, that he must know his clavier well, etc." See page 6 of his *Dictionary* [article "Accompanist"]. How will this accompanist be a great harmonist if he has not learned composition? So Rousseau must be wrong at the beginning of his passage or at the end.

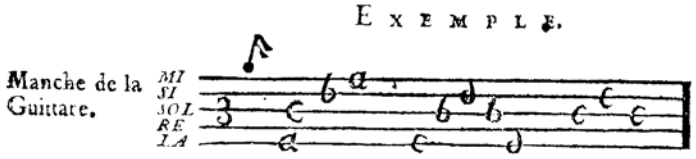
We can read in Rousseau's *Dictionary*, in the article *chords*,[157] the detail that he gives of them after the *Treatise on Harmony* by Rameau as well as the article *figures*[158] where we will see the way in which he writes the chords.

CHAPTER 27
On Tablature

Thus we call the manner in which we notate the music for certain instruments like the guitar, the lute, the theorbo, etc.

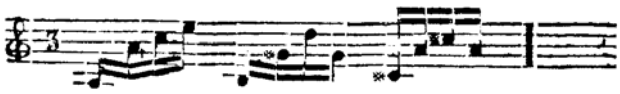
We use the first letters of the alphabet for this. This method is all the more convenient since we play the music at the same time that we read it.

Draw as many parallel lines as there are strings on the instrument; since the necks are divided into frets, then *a* signifies the open, or unfretted, string; *b*, the first fret; *c*, the second, etc.



"Neck of the guitar"

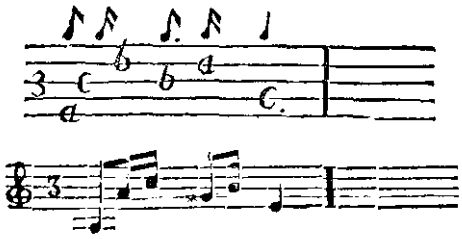
Thus this example, notated in the ordinary manner, could be read in this way:



The small sixteenth-note, which is above the line of the example, shows that all the letters of this measure are sixteenth-notes. Write the [64] values of all of the notes on this line, and we are only obliged to insert a [new] note when the rhythmic values of the letters change. When the entire measure is comprised of quarter notes, eighth-notes, or

[157] Rousseau, *Dictionnaire*, 15-23.
[158] Ibid., 88-9.

sixteenth-notes, a quarter note, eighth-note, or sixteenth-note suffices [respectively], but when the values are mixed up, they are labeled in this way:



In this example we have been compelled to assign the value of almost all the letters on the line at the top, except one on the first *b* because its value is the same as the *c* which precedes it. Thus, if there were 100 letters in succession that had the same [rhythmic] value, we would only mark this value on the first.

We see how this method simplifies the action of reading the music. We no longer need sharps or flats, and all the tones are equal. Therefore the result of this is that we do two operations at the same time, since the moment when we read the music is the moment that we play it. However, as the tablature changes according to the different instruments, [as they] have more or less strings and different tunings, these different tablatures cannot be memorized very easily in a manner that provides the means for reading the music without playing the instruments that they represented, thus allowing us to sing it as we would do with notes. We have only seen Mademoiselle Genti master the tablatures to the point of using of them as the music.[159] This famous virtuoso is well-known enough that she does not need our praises, but with pleasure we will take the occasion to thank her for her desire to give us instructions to teach us how to play the guitar, the lute, and the theorbo—three instruments which she plays equally well, and for which she has composed several accompaniments of the most attractive songs.

[159] Mademoiselle Genti, a famous guitar player, had lived in Paris for a longtime by 1778, Choron and Foyelle, 267. As discussed in Chapter 5, Genti's fame in eighteenth-century Paris may have led Laborde to assume that his audience needed no further explanation regarding her. It does present a challenge to the modern scholar and provides an interesting topic for further research.

The Greeks also had a double tablature, one for the instruments and the other for the voice. It is Philochorus who tells us this, in the third book of his *Atthis*, but he does not provide us with their way of writing it.[160]

End of the Third Book

[160] Philochorus (3rd century BC) wrote a 17 volume history of Athens from the earliest times to 262 BC, of which several considerable passages have survived in the works of other writers such as Athenaeus.

APPENDIX B

LABORDE'S CHART OF THE GREEK MODES AND MODERN KEYS

This appendix presents the information found in the chart found between pages 28 and 29 of Laborde's composition treatise in which he compares the ancient Greek modes with the modern keys. This is followed by a reproduction of the chart. Laborde categorizes the modes into three groups of five, based upon their ranges. The low-range modes are the Hypo-Dorian, the Hypo-Ionain, the Hypo-Phyrgian, the Hypo-Aeolian, and the Hypo-Lydian. The intermediate-range modes are the Dorian, Ionian, Phrygian, Aeolian, and Lydian. The high-range modes are the Hyper-Ionian, Hyper-Ionian, Hyper-Phrygian, Hyper-Aeolian, and the Hyper-Lydian. On the chart, for each of the modes, Laborde provides the following information that has been extracted from the chart and labeled according to the following model. For each mode Laborde explains: 1) The mode's equivalent in modern keys, 2) Musical examples that exemplify the character of the mode, 3) The respective position of the fundamental string of each of the ancient Greek modes [Laborde uses the term fundamental string in this chart in a manner that reflects the modern meaning of tonic in a key], 4) The character of the mode according to the writings of the ancients [Laborde claims that the character also corresponds to the equivalent modern key], and 5) What the ancient authors said about the mode. In addition, any alternate name that Laborde indicates for the mode is offered along with the accepted name. Following Laborde's model, the modes are presented in three groups of five, starting with the low-range modes.

Low Range Modes

I. Lydian (or Common, or Locrian):
   1. Modern Key: G
   2. Musical Examples:

      G Major—*Air* "*Forêts pasiables*" from *Les Indes Galantes* (1752) by Rameau, Act IV, scene 6.

G minor—*Monologue* from *Eglé* in *Les fragments nouveaux* (1751) by N. de Lagarde (Pitou, II, 316).

3. "This mode, the first and the lowest of the fifteen from the music of the Greeks, has its fundamental string tuned at the fourth below the fundamental string of the Dorian mode, and an octave below the fundamental string of the Hyper-Phyrigian. It is also the lowest mode of the thirteen known to Aristoxenus and of the seven acknowledged by Ptolemy."

4. Character of the Mode: affectionate, but light-hearted; often gentle and majestic

5. Aristotle prescribes the same use for this mode as for the Hyper-Phyrigian; Lucian calls it the "majestic." (On Lucian of Samosata, see Laborde, III, 145-46.)

II. Hypo-Ionian (or Hypo-Iastian, or low-pitched Hypo-Phyrigian)

1. Modern Keys: G# or A-flat
2. Musical Examples: "The keys of A-flat Major and G# minor are not used often. The keys of A-flat minor and G# major are not used at all."

3. "Its fundamental string is tuned to the fourth below the fundamental of the Ionian mode, and an octave below the fundamental of the Hyper-Aeolian mode."

4. Character of the Mode: serious and majestic, sometimes very sad

5. Lucian says that he uses it in amorous serenades, in order to obtain sweet awakenings.

III. Hypo-Phyrigian

1. Modern Key: A

2. Musical Examples:

A Major—*Air* "*Claire flambeau*" from *Les Indes Galantes*, Act II, scene 5.

A minor—*Monologue* from *Ismène* (1747) by François Rebel, with a libretto by François-Augustin Paradis de Moncrif (Pitou, II, 291-92); Laborde wrote an opera with a similar title, *Ismène et Isménas* (1763), with a libretto by Pierre Laujon (Pitou, II, 292-93).

3. "Its fundamental string is tuned to the fourth below the fundamental string of the Phrygian mode and the octave below the fundamental of the Hyper-Lydian. It is the second of seven modes acknowledged by Ptolemy."

4. Character of the Mode: bright or vivid, sometimes calm and tranquil

5. Aristotle in Book 9 of his Problems teaches us that the Greeks sing on this mode in the impassioned monologues of their tragedies, and they call it a canticle; Athenaeus says that sometimes it is calm or mellow.

IV. Hypo-Aeolian (or low-pitched Hypo-Lydian)

1. Modern Keys: B-flat or A#

2. Musical Examples:

   B-flat Major—*March of the French Guards*; "B-flat minor is used very little."

   "A# major is never used; A# minor is almost never used."

3. "Its fundamental string is tuned a fourth below the fundamental of the Aeolian mode."

4. Character of the Mode: imposing, although sad

5. Aristotle has said it has a sweet seriousness; Athenaeus has called it imposing.

V. Hypo-Lydian

1. Modern Key: B

2. Musical Examples:

   B Major—*Duo* from *Titon at l'Aurore* (1753) by Jean-Joseph Cassanéa de Mondonville, with a libretto by Houdard de La Motte and the abbé de La Mare.

   B minor—*Prayer of Theseus to Neptune* in *Hippolyte et Aricie* (1733), Act III, scene 7 [Laborde has it listed as scene 9].

3. "Its fundamental string is tuned a fourth below that of the Lydian mode. It is the third of the seven modes acknowledged by Ptolemy."

4. Character of the Mode: animated and bright: sometimes pleasant and sweet, at other times sacred for funeral chants and sublime meditations.

5. Plato calls it bright. Aristotle desires it to sanctify slow and sad pieces. Athenaeus establishes it for use in funeral chants and sublime meditations.

Intermediate-Range Modes

VI. Dorian (or Hypo-Mixo-Lydian)

1. Modern Key: C

2. Musical Examples:

   C Major—*Marche* from *Castor et Pollux* (1737) by Rameau, with a libretto by Pierre Joseph Bernard.

   C minor—*Venite, exultimus* by Mondonoville.

3. "This mode, the fourth of the seven acknowledged by Ptolemy, is the first and the lowest of the five principal modes of the oldest in Greek music, called also the intermediate because they are in the middle between the ten modes added since. The ten newer modes are situated at the interval of a fourth above and below each of the original five modes. The five higher modes are distinguished from the five intermediate modes by the preposition *hyper*, and five lower modes are distinguished by the preposition *hypo*."

4. Character of the Mode: serious, solemn, majestic, proper for use in war; sometimes it is appropriate for religious subjects

5. Plato regards it as proper to preserve good morals. Plutarch says that it is distinguished by its seriousness. Athenaeus says that sometimes it is tender.

VII. Ionian (or Iastian, or low-pitched Phrygian)

1. Modern Key: D-flat or C#

2. Musical Examples: "The keys of D-flat Major and C# minor are not used often. The keys of C# Major and D-flat minor are not used at all."

3. "It occupies the middle between the Phyrigian and Dorian modes, and its fundamental string is tuned a half-step above the fundamental of the Dorian."

4. Character of the Mode: wimpy and dedicated to compassion, as well as what is considered effeminate

5. Plato forbids it in his *Republic* as it makes one soft and effeminate. Plutarch calls it limp, and Athenaeus says it is voluptuous.

VIII. Phyrigian

1. Modern Key: D

2. Musical Examples:

   D Major—"The Chase" from *Eglé*

   D minor—"*La Général*"

3. "This mode, the fifth of the seven acknowledged by Ptolemy is located mid-way between the Lydian and Dorian modes and has its fundamental string tuned a tone above the Dorian's fundamental string and a tone below the Lydian's."

4. Character of the Mode: passionate, proud, impetuous, vehement, terrible; sometimes it is sweeter.

5. Athenaeus says that this is the mode in which one sounds the trumpets and the military instruments. Plato says that it is the proudest and most impetuous of all the modes. Plutarch calls it vehement or violent.

IX. Aeolian (or low-pitched Lydian)

1. Modern Keys: E-flat or D#

2. Musical Examples:

   E-flat Major—*Monologue* "*Tristes apprêts*" from *Castor et Pollux*, Act II, Scene 2; "the key of E-flat minor is not used very often."

   "The key of D# Major is never used. The key of D# minor is not used very often."

3. "This mode is located in between the Lydian and Phrygian modes, and its fundamental string is tuned a half-step higher than the Phyrigian."

4. Character of the Mode: sober and very somber

5. Lasus speaks of it as a serious and somber mode. Athenaeus says that it is simple and mysterious. Athenaeus reports that Pratinas said that the Aeolian mode [Laborde has it listed as the Ionain] suits the eager young men of sad songs and he give it the first rank. [Lasus of Hermione was a Greek Lyric poet of the 6th century BC; see Laborde, III, 94-95. Pratinas was a Greek lyric poet of the late 6th early 5th centuries BC; see Laborde, III, 29-30.]

X. Lydian (or "barbarous mode because it carries the name of an Asiatic people.")

1. Modern Key: E

2. Musical Examples:

   E Major—*Air gai* from Act III of *Castor et Pollux*

   E minor—*Sarabande* from *Castor et Pollux*

3. "This mode, the highest of the intermediate modes, is found between the Hyper-Dorian and the Aeolian, and its fundamental string is a tone above that of the Phrygian mode. It is the sixth of the seven modes acknowledged by Ptolemy."

4. Character of the Mode: animated, radiant or resounding; sometimes touching and appropriate for softness

5. Plato makes the case that it is proper for weak and effeminate music. Athenaeus says that sometimes it is proper for laments. Aristotle calls it mournful.

High-Range Modes

XI. Hyper-Dorian (or Mixo-lydian)

1. Modern Key: F

2. Musical Examples:

   F Major—*Chase* from *Zaïde* (1739), Act II, scene 5, by Joseph-Nicolas-Pancrace Royer, libretto by the abbé de La Mare (Pitou, II, 552-53).

   F minor—*Monologue* from *Dardanus* (1739) by Rameau, with a Libretto by Le Clerc de La Bruère (Pitou, II, 140-42).

3. "This mode, the highest and the last of the seven acknowledged by Ptolemy, is also called Mixo-Lydian and has a fundamental string that is tuned a fourth above that of the mode Dorian."

4. Character of the Mode: loud, but sometimes melancholy and touching

5. Plutarch says that it is proper for tragedies, Aristotle for sad hearts, Plato for weeping. Athenaeus says that sometimes it is used to disturb, and at other times to calm, the passions.

XII. Hyper-Ionian (or Hyper-Iastian, or high-pitched Mixo-Lydian)

1. Modern Keys: F# or G-flat

2. Musical Examples: "These keys, F# Major, F# minor, and G-flat Major, are hardly ever used. The key of G-flat minor is never used."

3. "The fundamental string of this mode is tuned a fourth above the fundamental string of the Ionian mode."

4. Character of the Mode: sullen and tranquil

5. Lucian calls it sad and says it is proper for use in religious ceremonies.

XIII. Hyper-Phrygian (or called Hyper-Mixo-Lydian by Euclid, etc. It seems that this last name better suits a mode that would be a half-step above the Hyper-Ionain [Laborde mistakenly says a half-step above the Hyper-Lydian, which does not exist on the chart he provides], a fourth above the Phrygian [Laborde mistakenly says that this mode is a fourth above the Hyper-Dorian, a note that it is a step above], and an octave above the hypo-Dorian.)

1. Modern Key: G

2. Musical Examples:

   G Major—*Ouverture* from *Pigmalion* by Rameau

   G minor—*Air des Prétesses* from *Hippolyte et Aricie*, Act I, scene 3

3. "This mode, the highest of the thirteen known to Aristoxenus has its fundamental string tuned to a fourth above that of the Phrygian mode and forms an octave with the lowest of all the modes, the Hypo-Dorian."

4. Character of the Mode: This mode probably had the same character as the Hypo-Dorian mode, only more brilliant

5. We have not been able to discover the manner in which the Ancients thought about this mode.

XIV. Hyper-Aeolian

1. Modern Keys: A-flat or G#

2. Musical Examples: "These keys are hardly ever used in either the major or the minor forms."

3. "This mode, which was truly unknown to Aristoxenus, has its fundamental string tuned a fourth above the Aeolian mode and an octave above the Hypo-Ionian mode."

4. Character of the mode: This probably has the same character as the Hypo-Ionian mode, only more brilliant

5. We have not been able to discover the manner in which the Ancients thought about this mode.

XV. Hyper-Lydian

1. Modern Key: A

2. Musical Examples:
   A Major—*Overture* to *Carnaval du Parnasse* (1749) by Mondonoville, with a libretto by Louis Fuzelier (Pitou, 96-97).

   A minor—*Air* "*Les oiseaux de ces bocages*" from *Armide* (1777) by Christoph Willibald Gluck, with a libretto by Phillipe Quinault (Pitou, 51-52).

3. "This mode, the highest of the fifteen of Greek music, has its fundamental string tuned a fourth above that of the Lydian mode, and creates a *diapason*, or an octave, with Mode III, the Hypo-Phrygian. It was probably unknown to Aristoxenus as he did not speak of it.

4. Character of the mode: this mode probably has the same character as the Hypo-Phyrigian, only more brilliant

5. We have not been able to discover the manner in which the Ancients thought about this mode.

TABLEAU des *Modes* de la Musique des Grecs, comparés avec les *Tons* de la Musique Moderne.

Noms des Tons *Modernes.*	*Genre des* Tons.	*Caracteres des* Tons *prouvés par des Exemples.*	*Nombre des* Modes *Anciens.*	*Noms des* Modes *Anciens.*	*Situation respective de la* Corde fondamentale *de chaque* Mode, *d'après les Anciens.*	*Caracteres des* Modes, *selon les Écrits des Anciens : ils correspondent aux Caracteres de nos* Tons.	*Ce qu'en disent les Auteurs Anciens.*
La	Majeur Mineur	*Ouverture du* Carnaval du Parnasse. *Air d'*Armide. Les Oi-seaux de ces bo-ca-ges N'y res-pirent que l'A-mour.	XVe.	Hyper-Lydien.	Ce *Mode*, le plus *aigu* des Quinze de la Musique des Grecs, avait sa *Corde fondamentale* une Quarte au-dessus de celle du Mode *Lydien*; & faisait le Diapason, ou l'Octave avec le Mode III *Hypo-Phrygien*. Il était probablement inconu à *Aristoxène*, qui n'en parle pas.	Ce *Mode* avait probablement le même caractère, mais plus brillant, que l'*Hypo-Phrygien*.	*Nous n'avons pu découvrir la façon de penser des Anciens sur ces trois* Modes.
La♭ *ou* Sol♯	Majeur Mineur	*ou* *ou* Ces Tons ne sont guère employé, tant au Majeur qu'au Mineur.	XIV.	Hyper-Éolien.	Ce Mode, qui n'était vraisemblablement pas conu d'*Aristoxène*, avait sa Corde fondamentale à la Quarte au-dessus de celle du Mode *Éolien*, & à l'octave de celle de l'*Hypo-Ionien*.	Il avait probablement le même caractere, mais plus brillant, que le Mode *Hypo-Ionien*.	
Sol	Majeur Mineur	*Ouverture de* Pigmalion. *Air des Prêtresses d'*Hippolyte & Aricie. *Acte I, Scène 3.*	XIII.	Hyper-Phrygien, appelé par *Euclide*, &c. Hyper-Mixo-Lydien. Il semble que ce dernier nom conviendrait mieux à un Mode qui serait à un demi-ton au-dessus de l'*Hyper-Lydien*, à la Quarte au-dessus de l'*Hyper-Dorien*, & à l'Octave de l'*Hypo-Dorien*.	Ce Mode, le plus aigu des Treize conus d'*Aristoxène* avait sa Corde fondamentale une Quarte au-dessus de celle du Mode *Phrygien*, & faisait l'octave avec l'*Hypo-Dorien*, le plus grave de tous.	Il avait probablement le même caractere, mais plus brillant, que le Mode *Hypo-Dorien*.	
Sol♭ *ou* Fa♯	Majeur Mineur	*ou* *ou* Ces deux Tons ne sont guère en usage, Le Ton de *Sol♭* Mineur n'est jamais employé.	XII.	Hyper-Ionien, *ou* Hyper-Iastien, *ou* Mixo-Lydien *aigu*.	Sa Corde fondamentale était à la Quarte au-dessus de celle du Mode *Ionien*.	Sombre & Tranquille.	*Lucien* le dit Triste, & propre aux Cérémonies Religieuses.
Fa	Majeur Mineur	*Chasse de Zaïde, Acte II, Scène 5.* *Monologue de* Dardanus. Lieux funestes, où tout res-pire	XI.	Hyper-Dorien, *ou* Mixo-Lydien.	Ce Mode, le plus aigu & le dernier des Sept reconus par *Ptolémée*, qui l'appele *Mixo-Lydien*, avait sa Corde fondamentale à la Quarte au-dessus de celle du Mode *Dorien*.	Bruyant; mais quelfois, Melancolique & Pathétique.	*Plutarque* le dit propre aux Tragédies; *Aristote*, aux cœurs Tristes; *Platon*, aux Larmes; *Athénée*, tantôt à émouvoir, tantôt à calmer les Passions.

MODES MOYENS.

MI	Majeur Mineur	*Air gai, du 3e Acte de* Castor & Pollux. *Sarabande de* Castor.	X.	LYDIEN, *ou* Mode *Barbare*, parcequ'il portait le nom d'un Peuple de l'Asie.	Ce Mode, le plus aigu des cinq *Moyens*, occupait le milieu entre l'*Hyper-Dorien* & l'*Eolien*; & sa Corde fondamentale était à un ton au-dessus de celle du Mode *Phrygien*. Il est le Sixieme des Sept reconus par *Ptolémée*.	Animé, Éclatant; quelquefois Pathétique, & propre à la Mollesse.	*Platon* le défend, comme propre à rendre Mou & Efféminé. *Athénée*, dit que quelquefois il est propre aux Plaintes. *Aristote*, l'appele *Plaintif*.
MI♭ *ou* RE♯	Majeur Mineur	*Monologue de* Castor. Tristes a-prêts, pâles flambeaux. Ces Tons Mineurs de *Mi♭* & de *Re♯* sont peu usités. Ce Ton Majeur de *Re♯* n'est jamais employé.	IX.	ÉOLIEN, *ou* Lydien *grave*.	Il occupait le milieu entre le Mode *Lydien* & le *Phrygien*; & avait sa Corde fondamentale à un demi-ton au-dessus de ce dernier.	Grave & très-Sombre.	*Lassus* en parle comme d'un Mode Grave & Sombre. *Athénée* dit qu'il était Simple & Mystérieux. *Pratinas*, raporté par *Athénée*, dit que l'Harmonie Ionienne convenait aux Jeunes Gens avides de Chansons Tristes; & il lui donne le premier rang.
RE	Majeur Mineur	*Chasse d'Égé.* *La Géométrale.*	VIII.	PHRYGIEN.	Ce Mode, le Cinquieme des Sept reconus par *Ptolémée*, occupait le milieu entre le *Lydien* & le *Dorien*; & avait sa Corde fondamentale à un ton de distance de celles de l'un & de l'autre.	Ardent, Fier, Impétueux, Véhément, Terrible; quelquefois plus Doux.	*Athénée* dit, que c'est le Mode sur lequel on sonoit des Trompetes & des Instrumens Militaires. *Platon* dit, que c'est le plus Fier & le plus Impétueux de tous les Modes. *Plutarque* l'appele *le Véhément*.
RE♭ *ou* UT♯	Majeur Mineur	Les Tons de *Re♭* Majeur & d'*Ut♯* Mineur sont peu usités. Les Tons d'*Ut♯* Majeur, & sur-tout de *Re♭* Mineur, ne le sont point du tout.	VII.	IONIEN, *ou* Iaslien, *ou* Phrygien *grave*.	Il occupait le milieu entre le Mode *Phrygien* & le *Dorien*; & avait sa Corde fondamentale à un demi-ton au-dessus de ce dernier.	Mou & consacré à la Compassion, ainsi qu'à ce qui rendait Efféminé.	*Platon* le défend, dans sa *République*, comme propre à rendre Mou & Efféminé. *Plutarque* le dit Mou, & *Athénée*, Voluptueux.
UT	Majeur Mineur	*Marche de* Castor. Venite, exultemus, *par Mondonville*. Ve-ni-te, ve-ni-te, ado-re-mus.	VI.	DORIEN, *ou* Hypo-Mixo-Lydien.	Ce Mode, le Quatrieme des Sept reconus par *Ptolémée*, était le premier & le plus grave des cinq principaux & plus anciens de la Musique Grecque; appelés aussi *Moyens*, parcequ'ils tenaient le milieu entre les dix ajoutés depuis, & placés à la Quarte de chacun d'eux; savoir, cinq à l'aigu, distingués des cinq *Moyens* par l'addition de la préposition *hyper*, & cinq au grave, distingués par l'addition de la préposition *hypo*.	Sérieux, Grave, Majestueux, propre pour la Guerre; quelquefois propreaux Sujets Religieux.	*Platon* le regarde comme propre à conserver les Bonnes Mœurs. *Plutarque* dit qu'il est distingué par sa Gravité. *Athénée* dit que quelquefois il est Tendre.

MODES GRAVES.

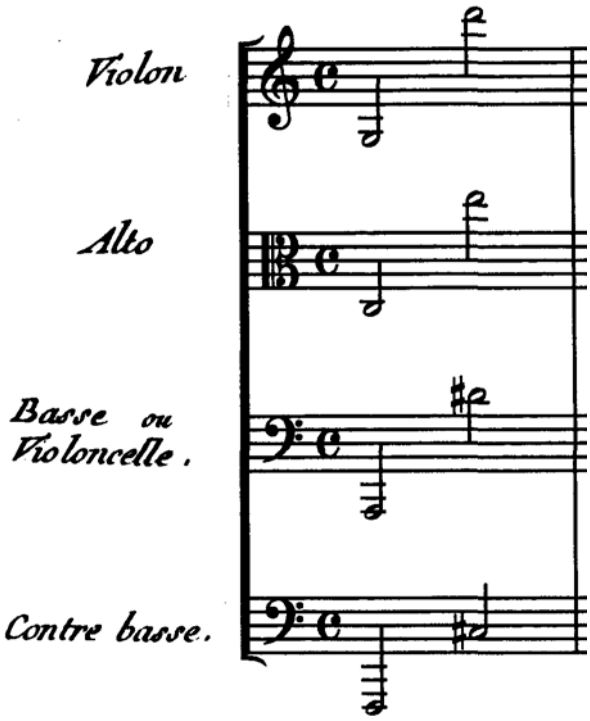
SI	Majeur Mineur	*Duo de* Titon & l'Aurore. Rè - - - - - - - - - - - - - gne, règne, Amour. *Prière de Thésée à Neptune dans* Hippolyte & Aricie. *Acte III, Scène 9.*	V.	HYPO-LYDIEN.	Sa Corde fondamentale était à une Quarte au-dessous de celle du Mode *Lydien*. Il est le Troisieme des Sept reconus par *Ptolémée*.	Animé & Brillant : quelquefois Agréable & Doux, d'autres fois consacré aux Chants Funebres & aux Méditations sublimes.	*Platon* le dit Brillant. *Aristote* veut qu'il soit consacré aux choses Tristes & Lentes. *Athénée* le consacre aux Chants Funebres, & aux Méditations sublimes.
SI♭ *ou* LA♯	Majeur Mineur	*Marche des* Gardes Françaises. Le Ton de *Si ♭* Mineur est peu usité. ou Le Ton de *La ♯* Majeur n'est jamais employé. ou Le Ton de *La ♯* Mineur n'est presque jamais employé.	IV.	HYPO-ÉOLIEN, ou Hypo-Lydien *grave*.	Sa Corde fondamentale était à une Quarte au-dessous de celle du Mode *Éolien*.	Imposant, quoique Triste.	*Aristote* le dit d'une douce Gravité. *Athénée* dit qu'il est Imposant.
LA	Majeur Mineur	*Air des* Indes Galantes, *Acte des* Sauvages. Clair flambeau du monde, L'air, la terre & l'onde. *Monologue d'*Ismène. Zé-phirs, aimables fleurs, & vous, claires fon-taines.	III.	HYPO-PHRYGIEN.	Sa Corde fondamentale était à la Quarte au-dessous de celle du Mode *Phrygien*, & à l'Octave au-dessous de celle de l'*Hyper-Lydien*. Il est le Second des Sept reconus par *Ptolémée*.	Brillant; & quelquefois Calme & Paisible.	*Aristote*, au IXe Livre de ses *Problêmes*, nous apprend que les Grecs chanterent sur ce Mode des Monologues passionés de leurs Tragédies, & les appelaient *Cantiques*. *Athénée* dit, que quelquefois il est Calme.
LA♭ *ou* SOL♯	Majeur Mineur	ou ou Les Tons de *La ♭* Majeur & de *Sol ♯* Mineur sont peu usités. Les Tons de *La ♭* Mineur & de *Sol ♯* Majeur ne le sont point du tout.	II.	HYPO-IONIEN, *ou* Hypo-Iastien, *ou* Hypo-Phrygien *grave*.	Sa Corde fondamentale était à la Quarte au-dessous de celle du Mode *Ionien*, & à l'Octave au-dessous de celle de l'*Hyper-Éolien*.	Grave & Majestueux; quelquefois très Triste.	*Lucien* dit qu'on l'employait aux Sérénades amoureuses, pour procurer de doux réveils.
SOL	Majeur Mineur	*Monologue d'*Égié. Paisibles bois, ver-gers dé-li-cieux. *Air des* Indes Galantes, *Acte des* Sauvages. Forêts pai - sibles, forêts pai - sibles.	Ier.	HYPO-DORIEN. Commun. Locrien.	Ce *Mode*, le premier & le plus *grave* des Quinze de la Musique des Grecs, avait sa Corde fondamentale à la Quarte au-dessous de celle du Mode *Dorien*, & à l'Octave au-dessous de celle de l'*Hyper-Phrygien*. Il est aussi le plus grave des Treize conus d'*Aristoxéne*, & des Sept reconus par *Ptolémée*.	Affectueux, mais Gai; souvent Doux & Majestueux.	*Aristote* lui donne le même usage qu'à l'*Hyper-Phrygien*. *Lucien* l'appele *le Majestueux*.

APPENDIX C

LABORDE'S RANGES OF MUSICAL INSTRUMENTS

Laborde has provided a plate between pages 24 and 25 of his *Abrégé d'un Traité de Composition* that charts the ranges of the instruments found in the eighteenth century. He has also indicates the ranges of the human voices in this chart, but as that material is also covered by Laborde in Chapter 8 of the composition treatise, it will not be repeated here. The instruments are grouped into two large categories, the strings and the winds.

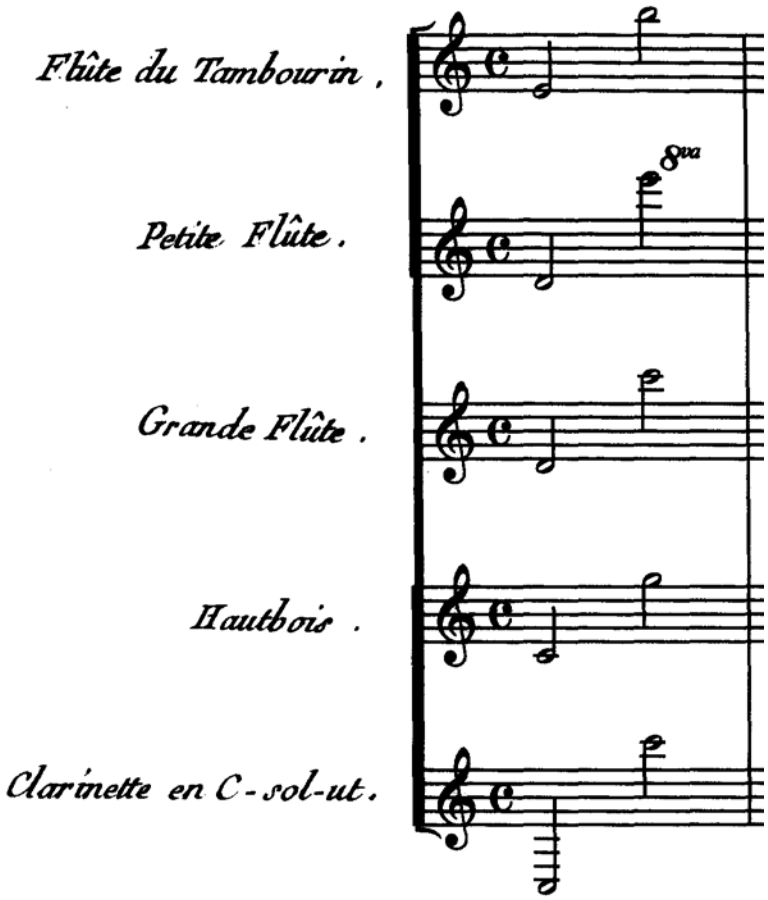
The Ranges of the String Instruments[1]



- The Double Bass is played two octaves lower than indicated on the staff.

[1] Laborde discusses the modern string instruments in Volume I of the *Essai*, in which he has also included a pedagogical guide for playing the cello, Laborde, I, 322.

The Ranges of the High-Pitches Wind Instruments[2]



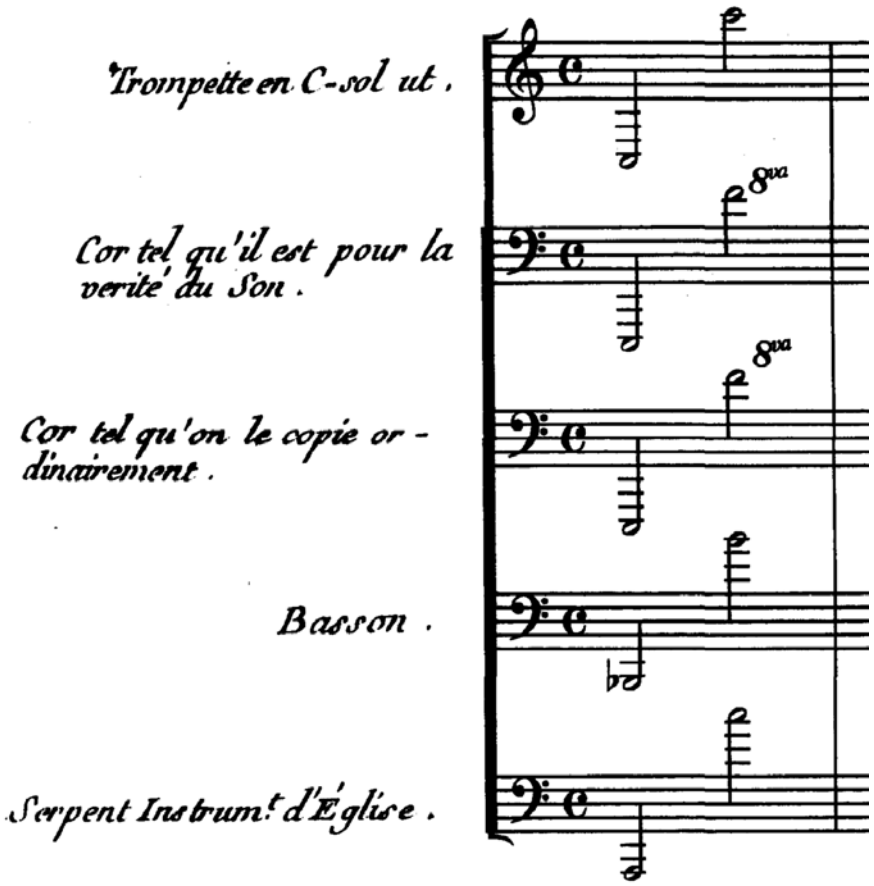
- The *flute du tambourin*, a small recorder style instrument, sounds two octaves higher than notated. Laborde also calls it the *galoubet*.

- The *petite flûte* sounds an octave higher than is notated.

- The clarinet is in C, although Laborde discusses the transposed clarinets in A, B-flat, and B on Laborde, I, 251.

[2] Laborde discusses the woodwinds on the following pages: *flute du tambourin*, Laborde, I, 264; *petite flute* (piccolo), Laborde, I, 261-62; *grande flute*, Laborde, I, 259-61; *hautbois* (oboe), Laborde, I, 265-66; and *clarinette*, Laborde, I, 250-52.

The Ranges of the Low-Pitched Wind Instruments[3]

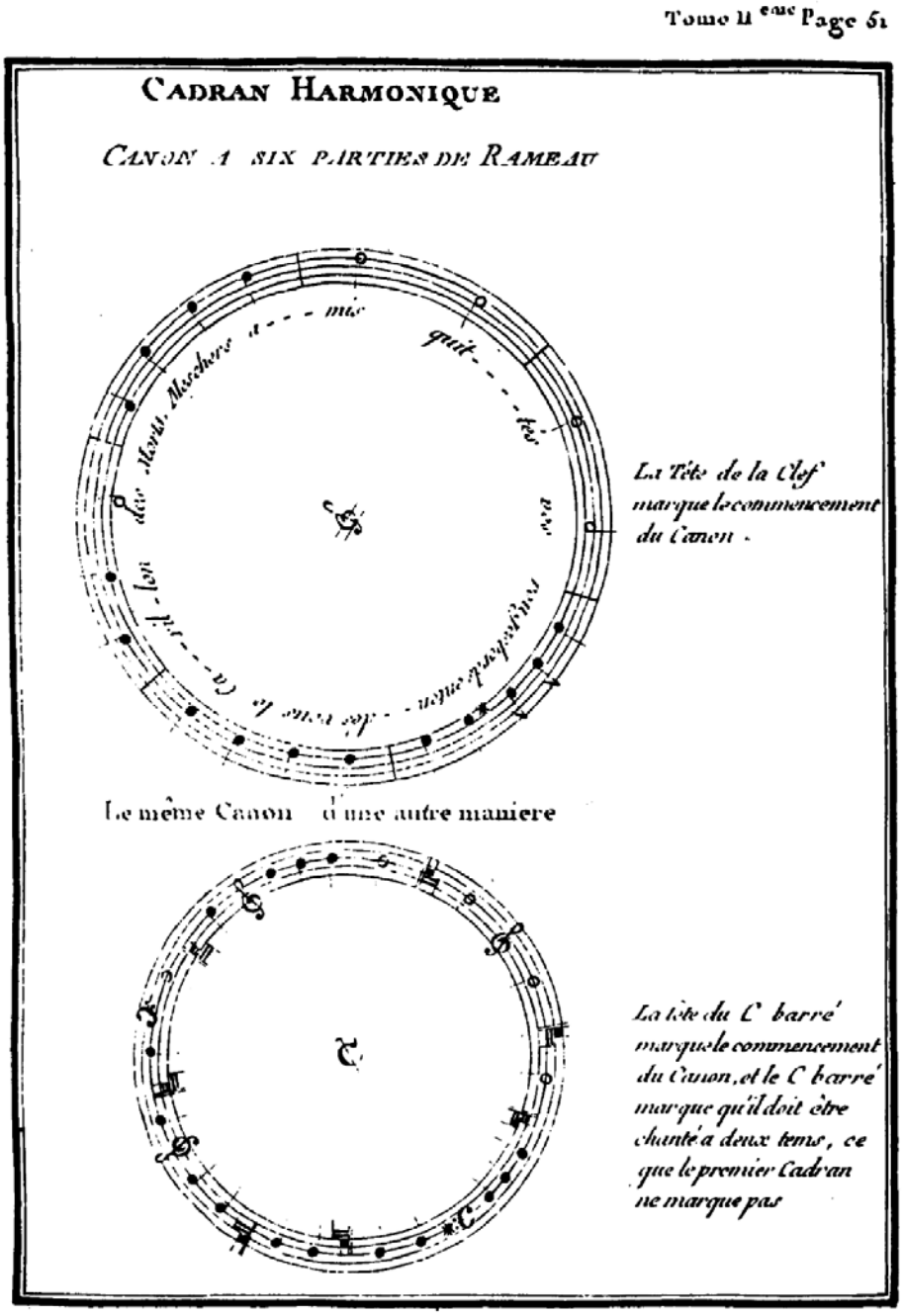


- The *serpent instrument d'église* is a low-pitched wind instrument, similar to the range of the bassoon, that is named for its shape. The horn curves in a double "S" shape reminiscent of a snake. During the eighteenth century it was used in military bands and, as the name suggests, church music.
- The ranges of the trumpet and the horns are all given for instruments in the key of C, he discusses the manner in which to play the two horns simultaneously, Laborde, I, 252-53.

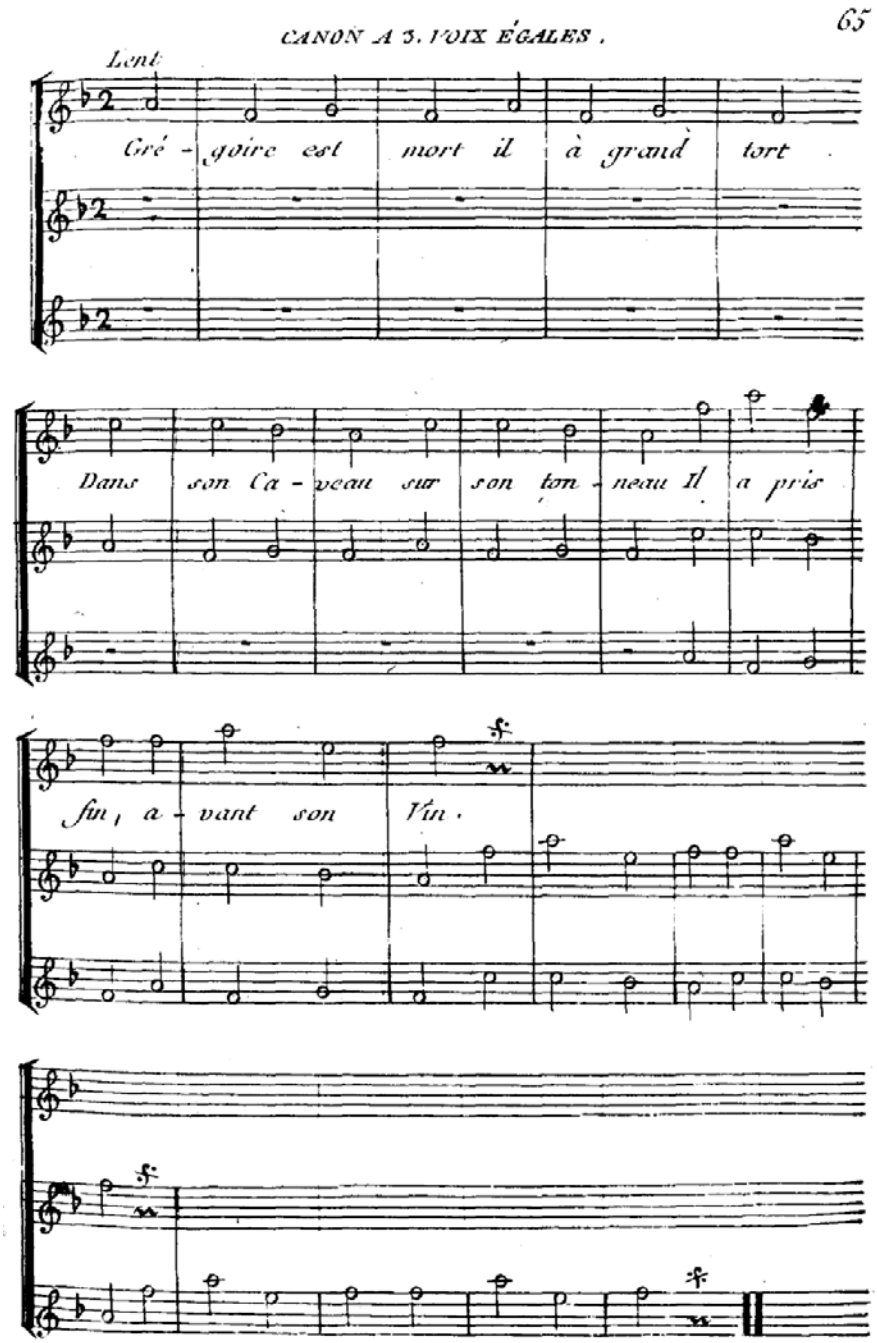
[3] Laborde discusses the wind instruments on the following pages: *trompette* (trumpet), Laborde, I, 276-78; *cors* (horns), Laborde, I, 252-254; Serpent, Laborde, I, 273-74; Laborde does not provide an entry on the bassoon.

APPENDIX D

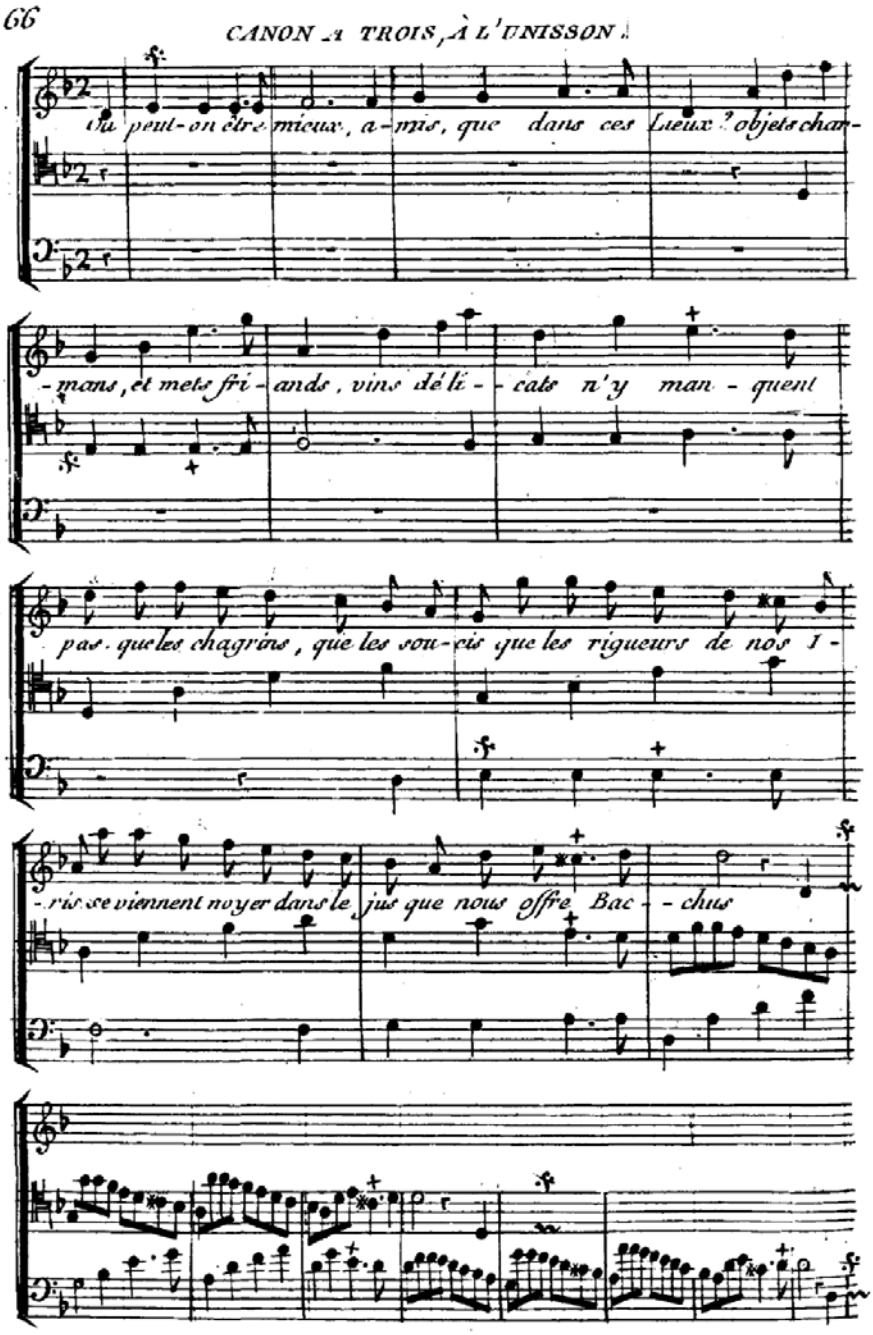
MUSICAL CANONS IN LABORDE'S COMPOSITION TREATISE



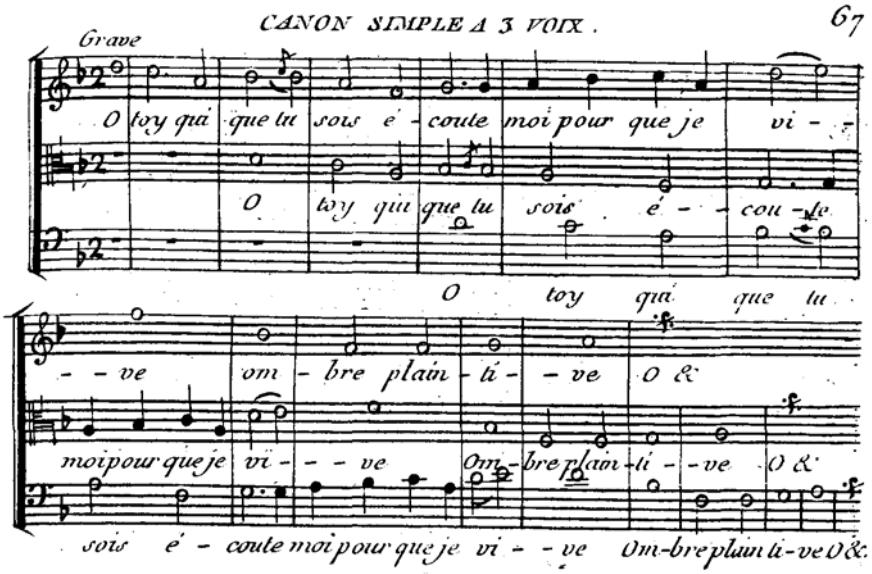
1. Harmonic Dial: Six part canon by Rameau-Plate opposite page 51.
"The head of the clef marks the beginning of the canon."- first dial
"The head of the crossed-out C marks the start of the canon; it also marks that it must be sung twice, which the first dial does not mark." – second dial



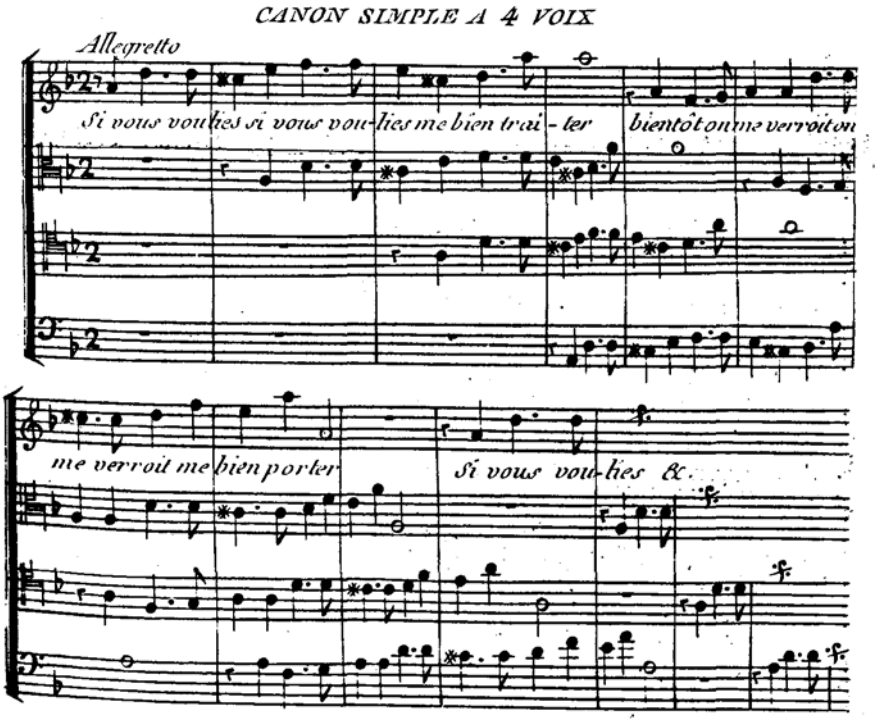
2. "Canon in 3 Equal Voices"– p. 65



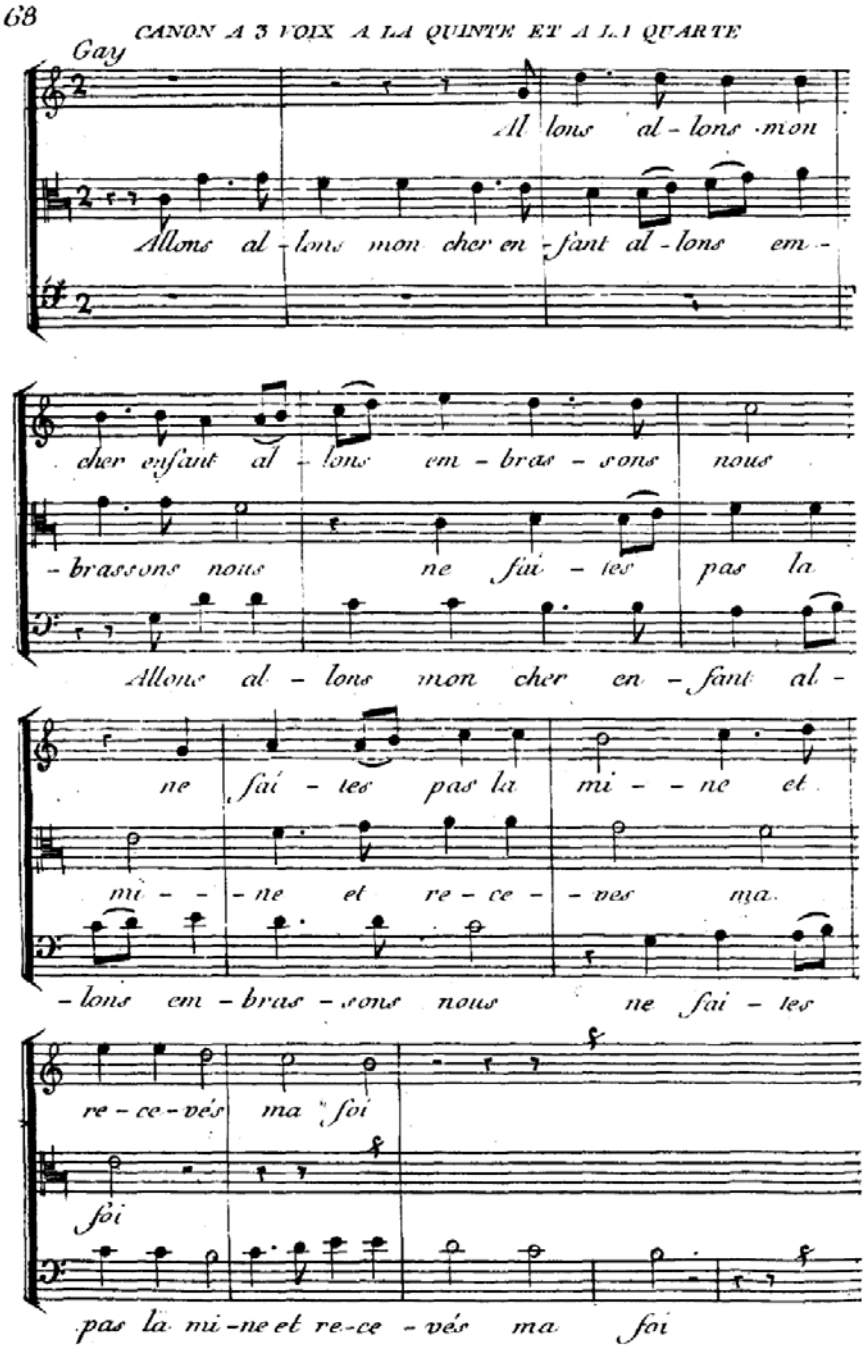
3. "Canon in 3 Voices at the Unison" – p. 66



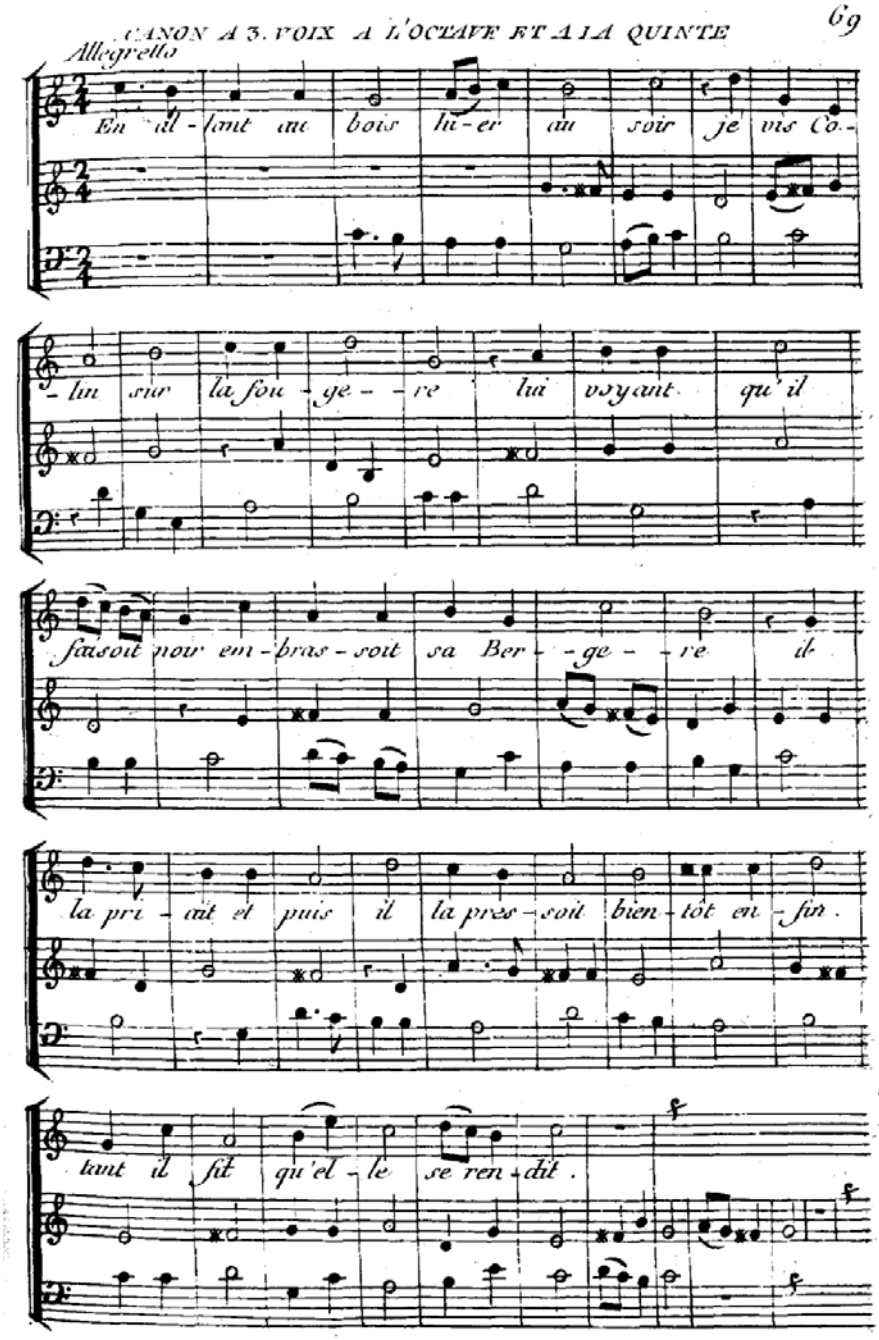
4. "Simple Canon in 3 Voices" – p. 67



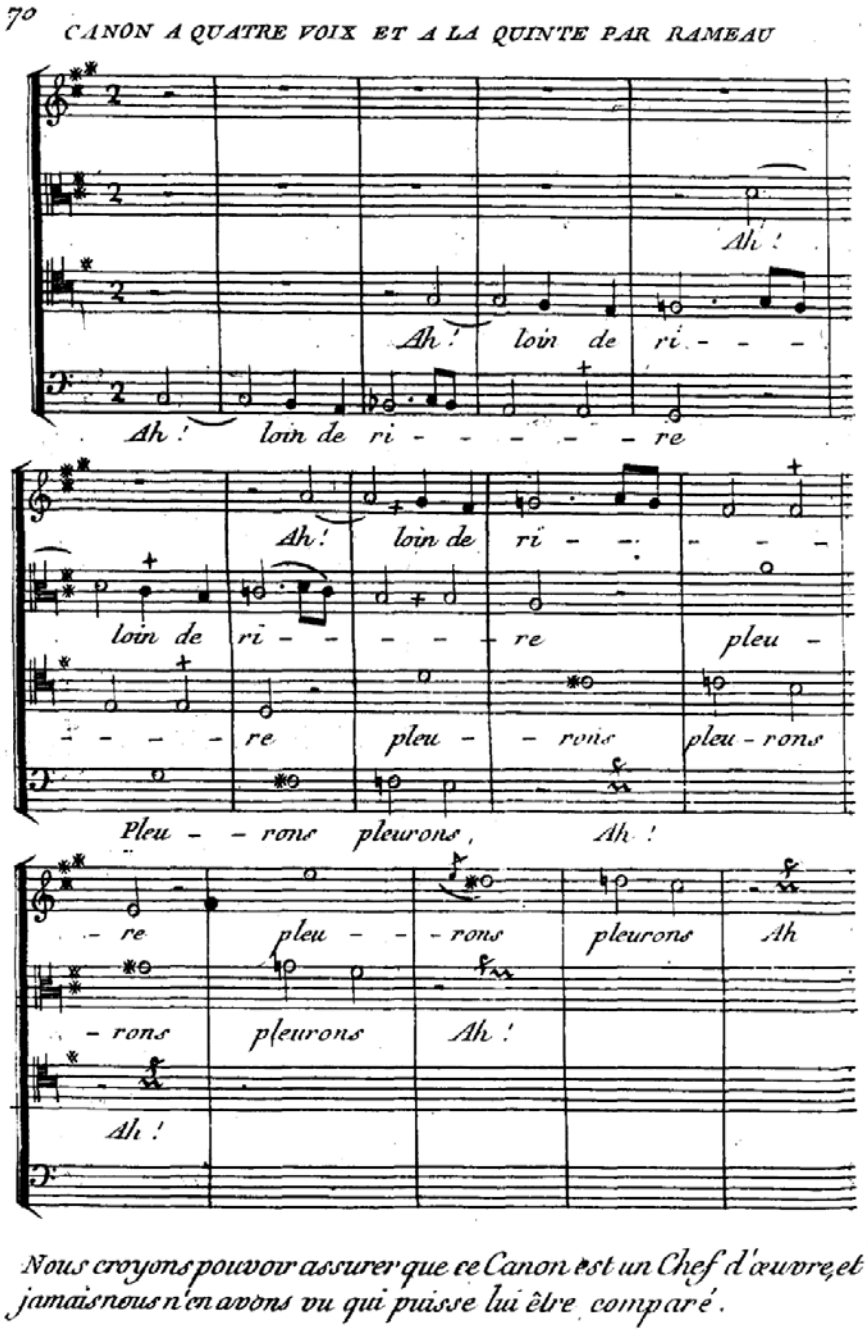
5. "Simple Canon in 4 Voices" – p. 67



6. "Canon in 3 Voices at the Fifth and at the Fourth" – p.68

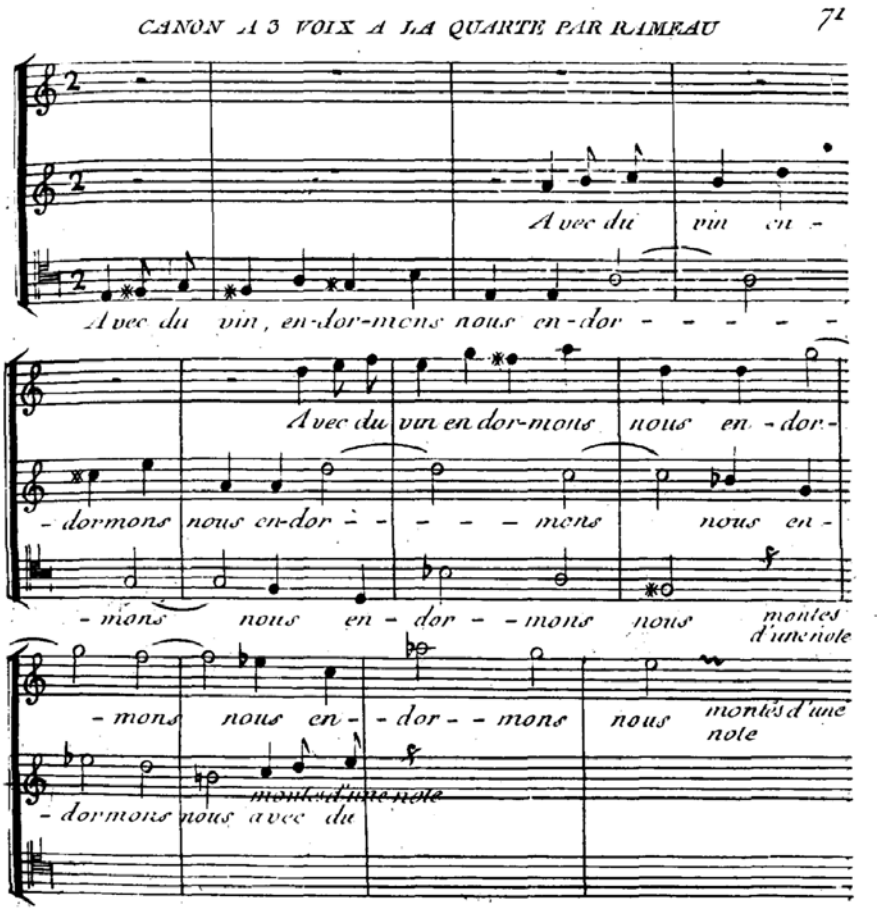


7. "Canon in 3 Voices at the Octave and at the Fifth" – p. 69

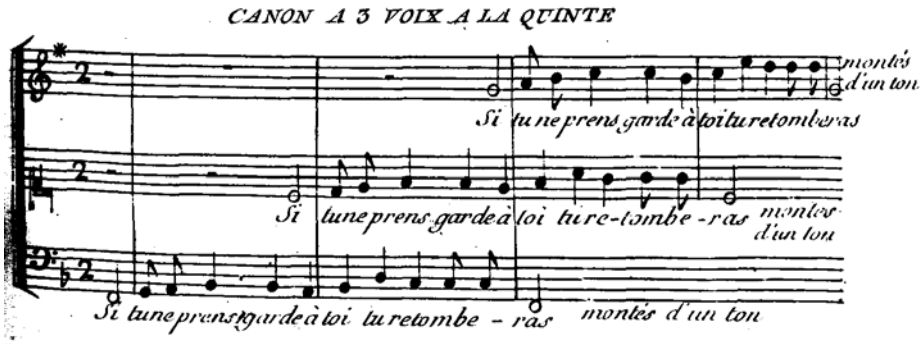


8. "Canon in 4 Voices and at the Fifth by Rameau" – p. 70

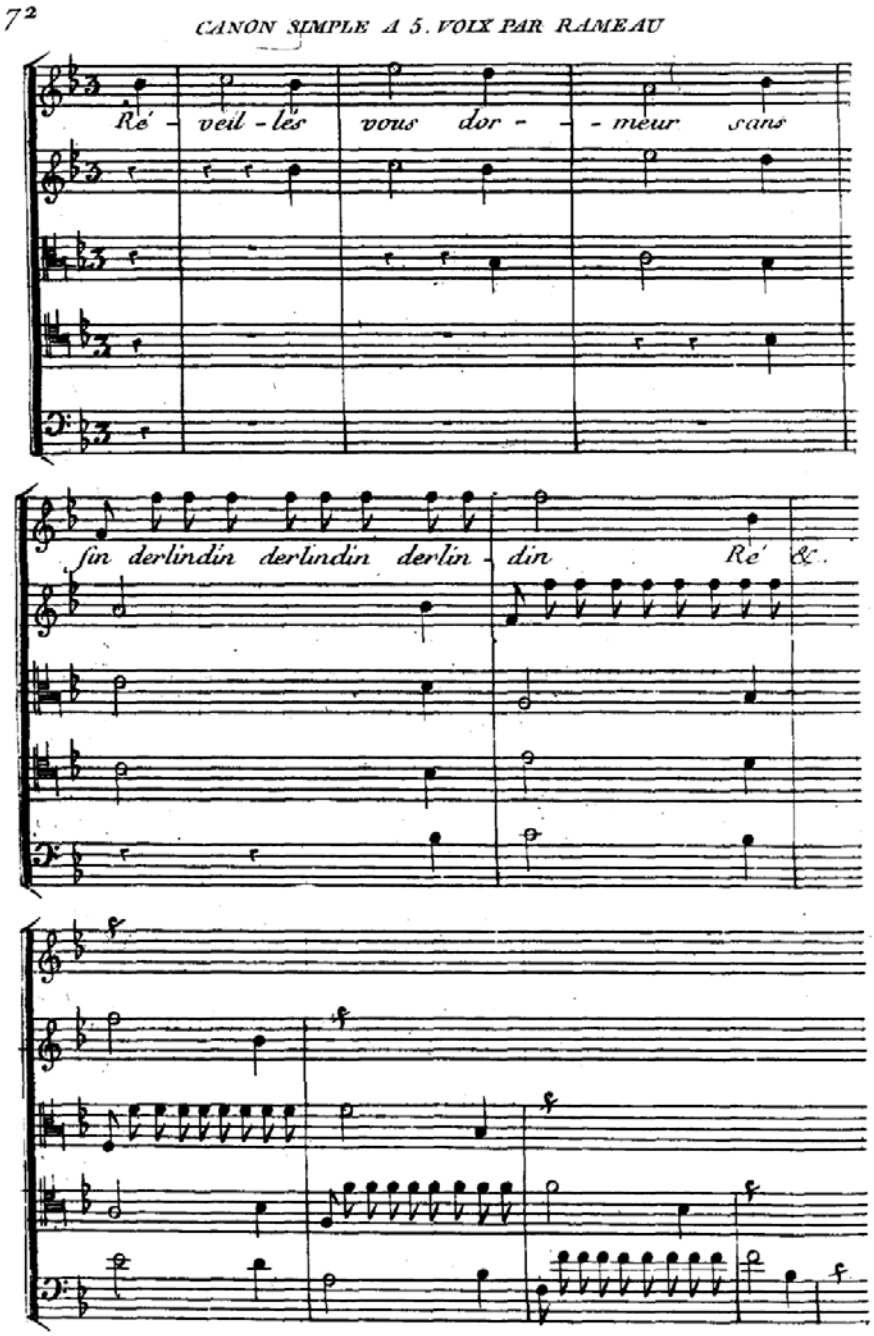
"We believe we can guarantee that this canon is a masterpiece, and we have never seen anything that may be compared to it."



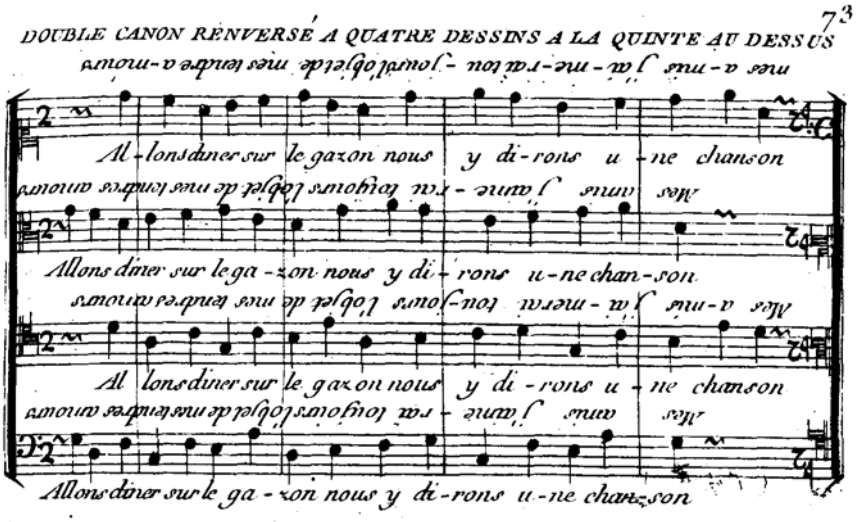
9. "Canon in 3 Voices at the Fifth by Rameau" – p. 71



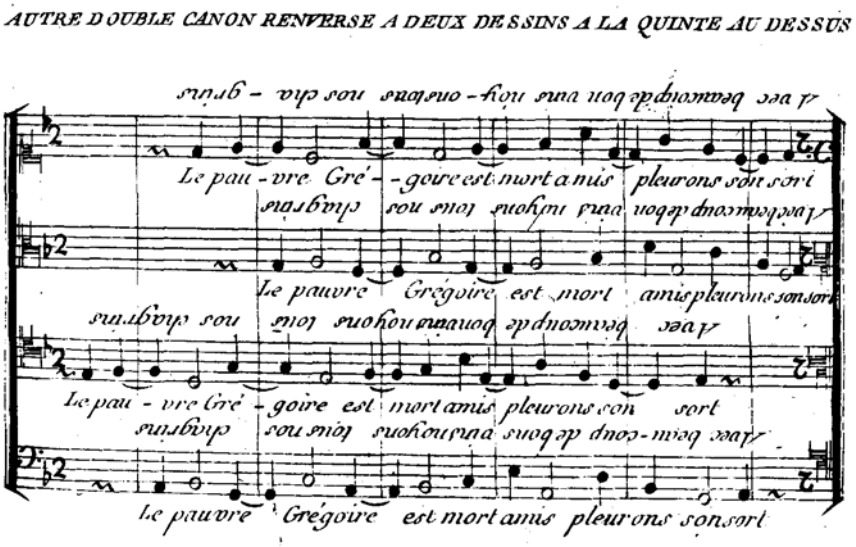
10. "Canon in 3 Voices at the Fifth" – p. 71



11. Simple Canon in 5 Voices by Rameau - p. 72



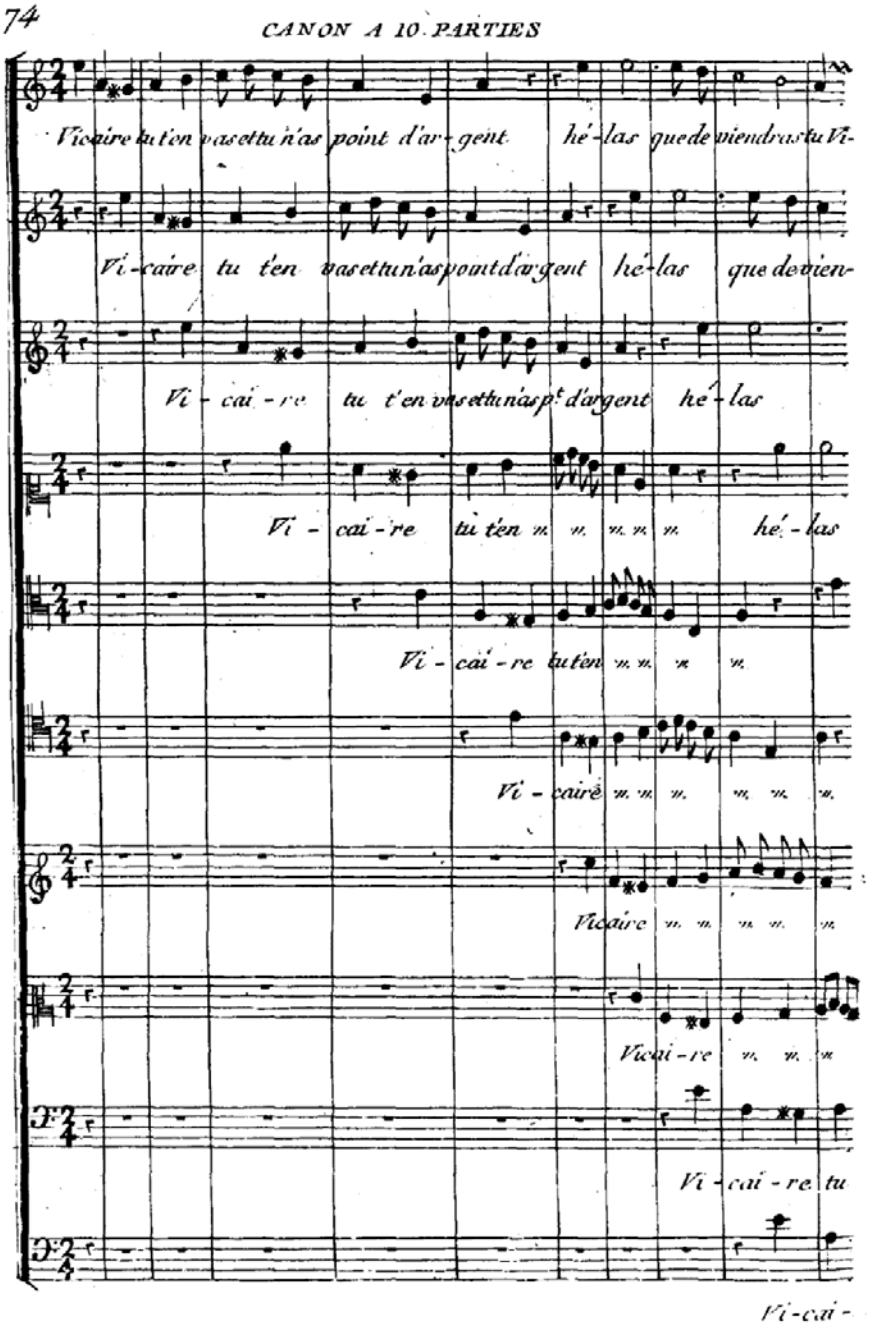
12. Inverted Double Canon for 4 Voices, Designed at the Fifth Above – p. 73



13. Another Inverted Double Canon in Two, Designed at the Fifth Above – p. 73

Nous ne raportons ces derniers Canons, que pour montrer l'abus que l'on peut faire du talent et du calcul : nous ne saurions trop engager les jeunes Compositeurs à mieux employer leur tems.

"We only denounce these last canons to demonstrate the abuse that can be made of one's talent and of calculations. We could not encourage enough the young composers to engage in a better use of their time."



14. Canon in 10 Parts – p.74

REFERENCES

Primary Sources

Alembert, Jean le Rond d'. *Élémens de musique, théorique et pratique, suivant le principes de M. Rameau*. Paris: David, LeBreton, Durand, 1752. Reprint, 1762.

_____. *Discours préliminaire des editeurs*, in *Encyclopedie, ou Dictionnaire raisonné des sciences, des arts, et des métiers*, Vol. 1, i-xvl. Paris: 1751.

Algarotti, Count Francesco. *Saggio sopra l'opera in muisca*. 1755.

Amiot, Joseph Marie. *Mémoire sur la musique des Chinois*. Paris, 1778.

Aristotle. *Problems* I. Translated by W. S. Hett. Aristotle in Twenty-Three Volumes, ed. E. H. Warmington, no. 15. Cambridge: Harvard University Press, 1936.

Athenaeus. *Deipnosophistae*. 7 vols. Translated by and ed. Charles Burton Gulick. Loeb Classical Library, ed. T. E. Page. London: William Heinemann Ltd., 1930.

Bach, Carl Philipp Emanuel. *Versuch über wanhre Art des Clavier zu spielen*, 2 vols. Berlin: G. L. Winter, 1753-62.

Barker, Andrew, editor. *Greek Musical Writings, Volume II: Harmonic and Acoustic Theory*. Cambridge: Cambridge University Press, 1989.

Bermetzrieder. *Leçons de clavecin et Principes de l'harmonie*. Paris: 1771.

Blaineville. *Histoire général, critique & philologique de la Musique*. Paris: 1765.

Boethius, Anicius Tortuatus Severinus. *De institutione musicæ*. Translated by Calvin M. Bower. Music Theory Tranlastion Series, ed. Claude V. Palisca. New Haven: Yale University Press, 1989.

Bonnet, Jacques. *Histoire de la musique & de ses effets, depuis son origine jusque'à present*. 1715.

Brossard, Abbé Sébastian de. *Dictionnaire de musique*. Paris: Christophe Ballard, 1703. Translated by and ed. Albion Gruber. Musical Theorists in Translation, vol. 12. Henryville: Institute of Medieval Music, Ltd., 1982.

_____. *Catalogue des livres de musique, théorique et prattique, vocalle et instrumentalle*. 1724.

Burney, Charles. *A General History of Music*. London: 1789. Reprint, New York:

Harcourt, Brace and Company, 1935.

_____. *The Present State of Music in France and Italy*. London: 1773.

Catel, Charles-Simon. *Traité d'harmonie par Catel member du Conservatoire de Musique, adopté par le Conservatoire pour server à l'étude dans cet établissement.* Paris: Imprimerie du Conservatoire, an X [1801].

Choron, Alexandre Etienne and François Joseph Fayolle. *Dictionnaire historique des Musiciens*, 1810 ed. Reprint, Hildesheim, Germany: Georg Olms Verlag, 1971.

Cicero, Marcus Tullius. *Academica*. Translated by James S. Reid. London: Reprografisher Nachdruk der Ausgabe, 1885. Reprint, Hildesheim: Georg Olms Verlagsbuchhandlung, 1966.

_____. *Tusculan Disputatons I*. Translated by and ed. A. E. Douglas. Chicago: Bolchazy-Carducci Publishers, 1985.

_____. *Tusculan Disputations III and IV*. Translated by Margaret Graver. Chicago: University of Chicago Press, 2002.

Delair, Etienne Denis. *Traité d'accompagnement pour le théorbe et le clavessin*. Paris, 1690.

Elien, Claud. *Histoires diveres*. Paris: Moutard, 1772.

Euler, Leohnard. *Tentamen nouvæ theoriæ msuicæ ex certissimis harmoniæ principiis dilucide expositæ*. 1739.

Fétis, François-Joseph. *Biographie universelle des musiciens*, second edition. Paris, 1875.

Forkel, Johann Nikolaus. *Über die Theorie der Musik*. Göttingen, 1777.

_____. *Allgemeine Geschichte der Musik*. Göttingen : Schwickert, 1788.

Francoeur, Louis-Joseph. *Diapason de tous les instrumes à vent*. Paris, 1772.

Fux, Johann-Joseph. *Gradus ad parnassum, sive manuductio ad compositionem musicae Regularem*. Vienna : Van Ghelen, 1725.

Gibbon, Edward. *The Rise and Fall of the Roman Empire*. 1776-88.

Guido d'Arezzo. *Micrologos*. c. 1030.

Heinichen, Johann David. *Der General-bass in der Composition.* Dresden: Heinichen, 1728.

Horace. *Ars poetica*. 18 BC. Translated by Burton Raffel; prose translation by James Hynd. Albany: State University of New York Press, 1974.

Kircher, Athanasius. *Musurgia universalis*. Rome: F. Corbelletti, 1650.

Kirnberger, Johann Philipp. *Die Kunst des reinen Satzes*, 2 vols. Decker und Hartung, 1771-79.

Koch, Heinrich Christoph. *Versuch einer Anleitung zur Composition*, 3 vols. Leipzig : A. F. Böhme, 1782-93.

Lebeuf, Abbé Jean. "Réponses aux questions proposes dans le Mercure du mois de novembre dernier, à l'occasion de quelques contestations musicales formées à Troyes, en Champagne." *Mercure de France*, May 1729, 844-855.

Laborde, Jean-Baptiste de. *Le clavecin électrique avec une nouvelle théorie de Mechanisme et des phénomènes de l'électricité*. Paris, 1761.

Laborde, Jean-Benjamin de. *Essai sur la musique ancienne et moderne,* 4 vols. Paris: P.-D. Pierres, 1780. Reprint, New York: American Musicological Society Press, Inc., 1978.

_____. *Tableaux de la Suisse, ou Voyage pittoresque fait dans les trieze cantons du corps helvétique*, *Vol. 1: Tableaux topographiques, pittoresques, historiques, moraux, politiques, littéraires de la Suisse*. Paris: Imprimiere de Clousier, 1780.

_____. *Mémoires sur les proportions musicales, le genre énharmonique des Grecs et celui des modernes*. Paris: Imprimerie de Philippe-Denys Pierres, 1781.

Madin, M. H. *Traité du counterpoint simple ou du chant sur le livre*. Paris, 1742.

Marpurg, Friedrich Wilhelm. *Hanbuch bey dim Generalbasse und der Composition*, 3 vols. Berlin: Johann Jacob Schützens Witwe, 1755-58.

Martini, Giovanni Battista. *Storia delia musica*. Bologna, 1757-1781.

_____. *Saggio del contrapunto*. Bologna: 1774-75.

Mattheson, Johann. *Der vollkommene Capellmeister*. Hamburg: C. Herold, 1739.

Meibom [Meibomius], Marcus. *Antiquæ musicæ auctores septem*. Amsterdam, 1652.

Mersenne, Marin. *Harmonicorum libri, in quibus agitur de sonorum natura*. Paris: 1635-36.

_____. *Harmonie universelle contentant la théorie et la pratique de la musique*. Paris: S. Cramoisy, 1636-7.

Mostart, David. *Korte onderwysinghe van de musyk-konste*. Amstredam, 1598.

Muris, Jean de. *Notitia artis musicæ et compendium musicæ praticæ*. 1321.

Musica enchiriadis. Translated by Raymond Erickson. Music Theory in Translation Series, ed. Claude V. Palisca. New Haven: Yale University Press, 1995.

Perrault, Charles. *Paralelle des anciens et des modernes: en ce qui regard les arts et les sciences*, 4vols. Paris: Chez Jean Baptiste Coignard, 1688-96.

Pliny (Caius Plinius Secundus). *Naturalis Historiæ*. 77 CE.

Praetorius, Michael. *Syntagma Musicum*, 3 vols. 1615-19.

Prasperg, Balthasar. *Clarissima planeatque choralis musice interpretatio Domini Balthasser Prasbergii, cum acutissimis regulis atque exemplorum annotationibusque et figuris*. Basel: Michael Furter, 1501.

Rameau, Jean-Philippe. *The Complete Theoretical Writings of Jean-Philippe Rameau*, 6 vols. Edited by Erwin R. Jacobi. Dallas: American Institute of Musicology, 1967–1972.

_____. *Traité de l'harmonie réduite à ses principes naturels*. Paris : Ballard, 1722. Tranlated by Philip Gossett as *Treatise on Harmony*. New York: Dover Publications, Inc., 1972.

_____. *Nouveau système de musique théorique et pratique*. Paris: Ballard, 1726.

_____. *Génération harmonique ou traité de musique théorique et pratique*. Paris: Prault fils, 1737.

_____. *Démonstration du principe de l'harmonie servant de base à tout l'art musicale théorique et pratique*. Paris: Durand, 1752.

_____. *Observations sur notre instinct pour la musique et sur son principe*. Paris: Prault fils, 1754.

_____. *Code de musique pratique ou méthodes pour apprendre la musique…avec les nouvelles réflexions sur le principe sonore*. Paris: Imprimerie royale, 1760.

_____. *Lettre à M. d'Alembert sur ses opinions en musique insérées dans les articles "Fondamental" et "Gamme" de l'Encyclopédie*. Paris, 1760.

Rousseau, Jean. *Méthode claire, certaine et facile pour apprendre à chanter la musique*. Paris, 1683.

Rousseau, Jean-Jacques. *Dictionnaire de musique*. Paris: Veuve Dechesne, 1768; reprint, Hildesheim: Georg Olm, 1969.

_____. *Œuvres complètes.* Vol. 5, *Écrits sur la musique, la langue et le théâtre*. Paris: Éditions Gallimard, 1995.

_____. *Essay on the Origin of Languages and Writings Related to Music*. Translated by and ed. John T. Scott, in *The Collected Writings of Rousseau*, eds. Roger D. Masters and Christopher Kelly, vol. 7. Hanover: University Press of New England, 1998.

Roussier, Pierre-Jospeh. *Traité des accords et de leur succession*. Paris: Bailleux, 1764.

_____. *Observations sur différens points d'harmonie*, Geneva: 1765.

_____. *Mémoire sur la musique des anciens*. Paris: Lacombe, 1770; reprint, New York: Broude Brothers, 1966.

Sauveur, Joseph. *Principes d'acoustique et de musique: ou Systême général des intervalles des sons, & son application à tous les systêmes & à tous les instrumens de Musique*. Paris: 1701; reprint, Geneva: Minkoff, 1973.

Scheibe, Johann. *Der critische Musicus*. Leipzig: B. C. Breitkopf, 1745.

Serre, Jean-Adam. *Essais sur les principes de l'harmonie*. Paris, 1753.

Speer, Daniel. *Grund-richtiger Kurtz-Leicht und Nöthiger jetzt Wol-vermehrter Unterricht der Musicalischen Kunst, oder Vierfaches Musicalishches Kleebatt*. Ulm, 1697.

Tartini, Giuseppe. *Trattato di musica seconda la vera scienzia dell'armonia*. Padua, 1754.

Türk, Daniel Gottlob. *Klavierschule, oder, Anweisung zum Klavierspielen für Lehrer und Lernende, mit kritischen Anmerkungen*. Leipzig: Schwickert, 1789.

Vandermonde, Alexandre-Théophile. *Système d'harmonie applicable à l'état actuel de la musique*. Paris, 1778.

_____. *Second Mémoire sur un nouveau système d'harmonie applicable à l'état actuel de la musique*. Paris, 1780.

Voltaire, Arouet de. *Essai sur les mœurs et l'esprit des nations et sur les principaux faits*

de l'histoire depuis Charlemagne jusqu'à Louis XIII. 1756.

Zarlino, Gioseffo. *Le istitutioni harmoniche*. Venice, 1558; reprint, New York: Broude Brothers, 1965.

Secondary Sources

Anderson, Gene Henry. "Musical Terminology in J.-P. Rameau's Traité de l'Harmonie: A Study and Glossary Based on an Index." Ph. D. diss., University of Iowa, 1981.

Barbour, J. Murray. *Tuning and Temperament: A Historical Survey*. East Lansing: Michigan State College Press, 1951.

Bent, Ian. "History of Music Theory: Margin or Center?" *Theoria* 6 (1992), 1-21.

Bentley, Michael. *Modern Historiography: An Introduction*. London: Routledge, 1999.

Bernier, Olivier. *Louis the Beloved: The Life of Louis XV*. Garden City, New York: Doubleday & Company, Inc., 1984.

Blasius, Leslie. "Mapping the Terrain." In *The Cambridge Dictionary of Western Music History*, ed. Thomas Christensen, 27-45. Cambridge: Cambridge University Press, 2002.

Blom, Philipp. *Enlightening the World: Encyclopédie, the Book that Changed the Course of History*. New York: Palgrave, Macmillan, 2005.

Bower, Calvin M. "The Role of Boethius's *De Institutione Musica* in the Speculative Tradition of Western Musical Thought." In *Boethius and the Liberal Arts: A Collection of Essays*, ed. by Michael Masi., 157-174. Utah Studies in Literature and Linguistics, vol. 18. Berne: Peter Lang, 1981.

Braunschweig, Karl David. "The Metaphor of Music as a Language in the Enlightenment: Towards a Cultural History of Eighteenth-Century Music Theory." Ph.D. diss., University of Michigan, 1997.

Burnham, Scott. "Musical and Intellectual Values: Interpreting the History of Tonal Theory." *Current Musicology* 53 (1993), 76-88.

_____. "Form." In *The Cambridge History of Western Music Theory*, ed. Thomas Christensen, 880-906.

Cannone, Belinda. *Philosophies de la musique: 1752-1789*. Paris: Aux Amateurs de Livres, 1990.

Christensen, Thomas. "Eighteenth-Century Science and the *Corps Sonore:* The Scientific Background to Rameau's Principle of Harmony." *Journal of Music Theory* 31 (1987), 23-50.

_____. "Rameau's *L'Art de la basse fondamentale*." *Music Theory Spectrum* 9 (1987): 18-41.

_____. "Music Theory as Scientific Propaganda: The Case of d'Alembert's *Elémens de musique*." *Journal of the History of Ideas* 50 (1989), 409-27.

_____. "Music Theory and Its Histories." In *Music Theory and the Exploration of the Past*, eds. Christopher Hatch and David W. Bernstein. Chicago: Chicago University Press, 1993, 9-40.

_____. *Rameau and Musical Thought in the Enlightenment*. Cambridge: Cambridge University Press, 1993.

_____. "Introduction." In *The Cambridge History of Western Music Theory*, ed. Thomas Christensen. Cambridge: Cambridge University Press, 2002, 1-23.

_____. "Music Theory in Clio's Mirror." In *Music in the Mirror: Reflections on the History of Music Theory fro the 21st Century*, eds. Andrew Giger and Thomas J. Mathhiesen. Lincoln: University of Nebraska Press, 2002, 1-19.

Closson, Ernest. "Les notes marginales de Grétry dans "*L'essay*[sic] *sur la musique*"de LaBorde." *Revue belge de musicologie*, ii (1947-48), 106-124.

Cohen, Albert. *Music in the French Royal Academy of Sciences: A Study in the Evolution of Musical Thought*. Princeton: Princeton University Press, 1981.

Dahlhaus, Carl. *Analyse und Werturteil*. *Muiskpädagogik, Forschung und* Lehre, vol. 8. Mainz: B. Schott's Söhne, 1970. Trans. Seigmund Levarie as *Analysis and Value Judgment*. Monographs in Musicology, no. 1. New York: Pendragon Press, 1983.

_____. *Grundlagen der Musikgeschichte* [Foundations of Music History]. Köln: Musikverlag Gerig, 1977. Trans. by J. B. Robinson. Cambridge: Cambridge University Press, 1983.

_____. *Die Musiktheorie im 18. und 19. Jahrhundert: Grundzüge einer Systematik*, *Geschichte der Musiktheorie*. Ed. Frieder Zaminer, vol. 10. Darmstadt: Wissenschaftliche Buchgesellschaft, 1984.

Delume, Caroline. *Guitare: Méthodes, dictionnaires et encyclopédies, ouvrages généraux, prefaces d'oeuvres* (Courlay: J. M. Fuzeau, 2003).

Dill, Charles. "Eighteenth-Century Models of French Recitative." *Journal of the Royal Music Association* 120 (1995), 232-250.

Duckles, Vincent. "Johann Nicolaus Forkel: The Beginning of Music Historiography." *Eighteenth-Century Studies* 1, no. 3 (1968), 277-290.

_____. "Patterns in the Historiography of 19th-Century Music." *Acta Musicologica* 42, no. 1 (1970), 75-82.

Ducros, Louis. *French Society in the Eighteenth Century*. Translated by W. de Geijer. New York: Lenox Hill, 1927. Reprint, 1971.

Elsberry, Kristie Beverly. "*Éléments de musique, théorique et pratique, suivant les Principes de M. Rameau by Jean Le Rond d'Alembert:* An Annotated New Translation and a Comparison to Rameau's Theoretical Writings." Ph. D. diss., Florida State University, 1984.

Fellerer, K. G. "The Problem of Heritage in the Musical Life of the Present." In *Studies In Eighteenth-Century Music: A Tribute to Karl Geiringer on His Seventieth Birthday*, ed. by H.C. Robbins Landon, in collaboration with Roger E. Chapman, 213- 233. New York: Oxford University Press, 1970.

Ferris, Joan. "The Evolution of Rameau's Harmonic Theories." *Journal of Music Theory* 3, no. 1(1959): 231-55.

Foster, Donald H. *Jean-Philippe Rameau: A Guide to Research*. New York: Garland Publishing, 1989.

Gessele, Cynthia. "The Institutionalization of Music Theory in France: 1764-1802." Ph.D. diss., Princeton University, 1989.

_____. "The Conservatoire de Musique and national music education in France, 1795-1801." In *Music and the French Revolution*. ed. Malcolm Boyd, 191-210. Cambridge: Cambridge University Press, 1992.

_____. "*Base d'harmonie*: A Scene from Eighteenth-Century French Music Theory." *Journal of the Royal Music Association* 119 (1994): 60 – 90.

Godwin, Joscelyn. *Music and the Occult: French Musical Philosophies, 1750 – 1950.* Rochester: University of Rochester Press, 1995.

Goehr, Lydia. *The Imaginary Museum of Musical Works: An Essay in the Philosophy of Music*. Oxford: Clarendon Press, 1992.

Goncourt, Edmond and Jules de. *Madame du Barry*. London: John Long, Limited, 1914.

Grant, Cecil Powell. "The Real Relationship Between Kirnberger's and Rameau's Concept of Fundamental Bass." *Journal of Music Theory* 21, no. 2 (1977), 324-38.

Hamilton, Paul. *Historicism*, 2nd edition. London: Routledge, 2003.

Haraszti, Emil. "Jean-Benjamin de LaBorde." *La revue musicale* 158 – 159 (1935), 109 - 116.

Hunt, Thomas Webb. "The *Dictionnaire de musique* of Jean-Jacques Rousseau." Ph.D. diss., North Texas State University, 1967.

Hyer, Brian. "Before Rameau and After." *Music Analysis* 15, no. 1 (1996), 75-100.

Isherwood, Robert M. "The Third War of the Musical Enlightenment." In *Studies in Eighteenth-Century Culture*, ed. Harold E. Paliaro, 223-245. Madison: University of Wisconsin Press, 1975. American Society for Eighteenth-Century Studies, vol. 4.

Johnson, Fredric Bolan. "Tartini's *Trattato di musica la vera scienza dell'armonia*: An Annotated Translation with Commentary." Ph.D. diss., Indiana University, 1985.

Johnson, James H. *Listening in Paris: A Cultural History*. Berkeley: University of California Press, 1995.

Jorgensen, Owen O. *Tuning: Containing The Perfection of Eighteenth-Century of Temperament, The Lost Art of Nineteenth-Century Temperament, and The Science of Equal Temperament*. East Lansing: Michigan State University Press, 1991.

Keiler, Allan R. "Music as Metalanguage: Rameau's Fundamental Bass." *Music Theory: Special Topics*, ed. Richmond Brown, 83–100. New York: Academic Press, 1981.

Kerman, Joseph. "How We Got into Analysis, and How to Get Out." *Critical Inquiry* 7, no. 2 (1980), 311-331.

Landels, John G. *Music in Ancient Greece and Rome*. London: Routledge, 1999.

Lang, Paul Henry. "The Enlightenment and Music." *Eighteenth-Century Studies* 1, no.1 (1967), 93-108.

Lessem, Alan. "Imitation and Expression: Opposing French and British Views in the 18th Century." *Journal of the American Musicological Society* 27, no. 2 (1974), 325-30.

Lester, Joel. "Rameau and Eighteenth-Century Harmonic Theory." In *The Cambridge*

History of Western Music Theory, ed. Thomas Christensen, 753-777. Cambridge: Cambridge University Press, 2002.

Liebel, Helen P. "The Enlightenment and the Rise of Historicism in German Thought." *Eighteenth-Century Studies* 4, no. 4 (1971), 359-385.

Lindley, Mark. "Zarlino's 2/7-Comma Meantone Temperament." In *Music in Performance and Society: Essays in Honor of Roland Jackson*, eds. Malcolm Cole and John Koegel, 179-194. Detroit Monographs in Musicology/Studies in Music, no. 20, ed. J. Bunker Clark. Warren, Michigan: Harmonie Park Press, 1997.

Lowinsky, Edward E. "Taste, Style, and Ideology in Eighteenth-Century Music." In *Aspects of the Eighteenth Century*, ed. Earl R. Wasserman, 163-205. Baltimore: The Johns Hopkins Press, 1965.

Maniates, Maria Rika. ""*Sonate, que me veux-tu?"* The Enigma of French Musical Aesthetics in the 18th Century." *Current Musicology* 9 (1969), 117-140.

Marwick, Arthur. *The Nature of History*, 3rd ed. London: Macmillan, 1989.

_____. *The New Nature of History: Knowledge, Evidence, Language*. Houndmills: Palgrave, 2001.

_____. "Knowledge and Language: History, the Humanities, the Sciences." *History* 87, no. 285 (2002), 3-17.

Mathiesen, Thomas J. "An Annotated Translation of Euclid's Division of the Monochord," *Journal of Music Theory* 19, no. 2 (1975), 236-58.

_____. *Apollo's Lyre: Greek Music and Music Theory in Antiquity and the Middle Ages*, Lincoln: University of Nebraska Press, 1999. Publications of the Center for the History of Music Theory and Literature, vol. 2.

_____. "Greek Music Theory." In *The Cambridge History of Western Music Theory*, ed. Thomas Christensen, 109-135. Cambridge: Cambridge University Press, 2002.

McCreless, Patrick. "Music and Rhetoric." In *The Cambridge History of Western Music Theory*, ed. Thomas Christensen, 847-879. Cambridge: Cambridge University Press, 2002.

Mitchell, William J. "Modulation in C.P.E. Bach's *Versuch*." In *Studies in Eighteenth-Century Music: A Tribute to Karl Geiringer on His Seventieth Birthday*, ed. H.C. Robbins Landon in collaboration with Roger E. Chapman, 333-342. New York: Oxford University Press, 1970.

Motagnier, Jean-Paul. "Le chant sur livre au 18e siècle: Les Traites de Loius-Joseph Marchand et Henry Maden." *Revue de musicologie* 81, no. 1 (1995).

Nadel, George H. "Philosophy of History Before Historicism." *History and Theory* 3, no. 3 (1964), 291- 315.

Neubauer, John. *The Emancipation of Music from Language: Departure from Mimesis in Eighteenth-Century Aesthetics*. New Haven: Yale University Press, 1986.

Nolan, Catherine. "Music Theory and Mathematics." In *The Cambridge History of Western Music Theory*, ed. Thomas Christensen, 272-304. Cambridge: Cambridge University Press, 2002.

Osborne, Richard Dale. "The Theoretical Writings of Abbé Pierre-Joseph Roussier." Ph.D. diss., Ohio State University, 1966.

Panofsky, Erwin. "Reflections on Historical Time." Translated by Johanna Bauman. *Critical Inquiry* 30, no. 4 (2004), 691-701.

Pflug, Günther. "Die Entwicklung der historischen Method im 18. Jahrhundert." *Deutsche Vierteljahrsschrift für Literaturwissenschaft und Geistesgeschichte* 28 (1954), 447-471. Translated as "The Development of Historical Method in the Eighteenth Century." *History and Theory*: *Beiheft* 11 (1971), 1-23.

Pichard du Page, René. "Un financier dilettante au XVIIIe siècle: Jean-Benjamin de Laborde (1734-1794)." *Revue de l'histoire de Versailles et de Seine-et-Oise*. 28 (1926), 106-127, 191-213.

Pitou, Spire. *The Paris Opéra: An Encyclopedia of Operas, Ballets, Composers, and Performers-Volume 2: Rococo and Romantic, 1715-1815*. Westport, CT: Greenwood Press, 1985.

Planchart, Alejandro Enrique, "A Study of the Theories of Giuseppe Tartini." *Journal of Music Theory* 4, no. 1 (1960), 32-61.

Prim, Abbé Jean. "*Chant sur le Livre* in French Churches in the 18th Century. *Journal of the American Musicological Society* 14, no. 1 (1961), 37-49.

Rasch, Rudolf. "Tuning and Temperament." In *The Cambridge History of Western Music Theory*, ed. Thomas Christensen, 193-222. Cambridge: Cambridge University Press, 2002.

Ray, William. "Thinking About Art: The French Royal Academy Salons and the Formation of the Discursive Citizen." *Eighteenth-Century Studies* 37, no. 4 (2004), 527-552.

Schueller, Herbert M. *The Idea of Music: An Introduction to Musical Aesthetics in Antiquity and the Middle Ages*. *Early Drama, Art, and Music, Monograph Series* 9. Kalamazoo: Medieval Institute Publications, 1988.

Scott, Allen. "Bobization and Bebization: Two Alternative Solmization Systems of the Early Seventeenth Century." *Theoria* 9 (2001), 25-47.

Stevens, Jane R. "The Meanings and Uses of *Caractere* in Eighteenth-Century France." In *French Musical Thought: 1600 – 1800*. ed. Georgia Cowart. Studies in Music, 105. Ann Arbor: UMI Research Press, 1989.

Telesco, Paula Jean. "Enharmonicism in Theory and Practice in Eighteenth-Century Music." Ph.D. diss., University of Ohio, 1993.

Tosh, John. *The Pursuit of History: Aims, Methods, and New Directions in the Study Of Modern History*, 3rd ed. Harlow: Pearson Education Limited, 2000.

Touliatos, Diane. "Nonsense Syllables in the Music of the Ancient Greek and Byzantine Traditions." *Journal of Musicology* 7, no. 2 (1989), 231-243.

Verba, E. Cynthia. "The Development of Rameau's Thoughts on Modulation and Chromatics." *Journal of the American Musicological Society* 26, no. 1 (1973), 69-97.

_____. "Rameau's Views on Modulation and Their Background in French Theory." *Journal of the American Musicological Society* 31, no. 3 (1978), 467-79.

_____. *Music and the French Enlightenment: Reconstruction of a Dialogue, 1750 – 1764*. Oxford: Clarendon Press, 1993.

Warmoes, Jean. "L'exemplaire de l'*Essai sur la musique ancienne et moderne* de Jean-Benjamin de Laborde annoté par Grétry." Ph. D. diss., University of Leuven, 1956.

Weber, William. "Mass Culture and the Reshaping of European Musical Taste, 1770-1870." *International Review of the Aesthetics and Sociology of Music* 8, no. 1 (1977), 1-52.

_____. "Learned and General Musical Taste in Eighteenth-Century France." *Past and Present* 89 (1980), 58-85.

_____. "The Contemporaneity of Eighteenth-Century Musical Taste." *Musical Quarterly* 70, no. 2 (1984), 175-194.

Williams, Hugh Noel. *Madame du Barry*. New York: Charles Scribner's Sons, 1904.

Witschi-Bernz, Astrid. “Main Trends in Historical-Method Literature: Sixteenth to Eighteenth Centuries.” *History and Theory: Beiheft 12* (1972), 51-90.

BIOGRAPHICAL SKETCH

Donald Craig Filar was born in Tampa, FL in 1970. He grew up in Tallahassee, FL, as his family moved shortly after his birth. He graduated from Lincoln High School in Tallahassee in1988. He then moved to Nashville, TN to attend Belmont University. He graduated from Belmont with two Bachelor's Degrees in Music in December 1993: one in Commercial Music-Voice Performance and a second in Music Theory. He returned to Florida to enter the graduate program in ethnomusicology at Florida State University in the fall of 1995. After a period of several years in the ethnomusicology department, he changed majors to music theory, after completing a Certificate in World Music. He graduated with a Master's Degree in Music Theory from Florida State in the fall of 2000. He has presented his research at a regional joint meeting of the Society for Music Theory, the Society for Ethnomusicology, and the American Musicological Society.