Lost in Translation:
Exoticism as Transculturation in Saint-Saëns's *Africa*

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Abstract

The late-nineteenth century was a particularly ripe period for musical exoticism, the Western representation of a foreign locale as a culturally remote and unfamiliar "Elsewhere." While the majority of studies on musical exoticism have centered on the identification of musical devices that signify the representation of an exotic milieu and discussions framed by Orientalist ideologies, Shay Loya (2011) has challenged the notion of viewing exoticism through the lens of representation, which risks treating exotic materials as ornamental *topoi* based on cultural stereotypes. Instead, Loya proposes a transcultural approach to analysis, a method that complements our traditional understanding of exoticism as a phenomenon based on an opposition between the "West" and the "non-West." This thesis presents a transcultural analysis of Saint-Saëns's *Africa,* Op. 89 (1891) for piano and orchestra to demonstrate alternative possibilities of analyzing exoticism through the use of music-theoretical tools.

A transcultural understanding of exoticism balances cultural and structural analysis, an approach originally pursued by Kofi Agawu in his discussion of West African rhythms (2006). The former identifies musical devices in *Africa* that are influenced or borrowed from Arabo-Andalusian music, the art music tradition of the Maghreb, and evaluates the extent to which the elements of *Africa* adhere to this tradition, the latter addresses cultural syncretism from a music-theoretical standpoint, assessing the interaction between the Arabo-Andalusian elements and the melodic, harmonic and metrical parameters of *Africa*.

The analysis focuses predominantly on pitch collections and rhythm. To illustrate the ways in which Arabo-Andalusian modes have impacted the melodic material of *Africa*, I synthesize Dmitri Tymoczko's (2011) theory of scalar transpositions and neo-Riemannian transformational theory and demonstrate how the use of non-major-minor modes allow for smooth modulations between key areas that are distantly related in the context of major and minor modes. Furthermore, to examine how uneven rhythmic patterns are incorporated into the metrical structure, I employ Harald Krebs's (1999) theories on metrical dissonance and Justin London's theories on metrical ambiguity (2004), showing how Saint-Saëns has disrupted the normative state of metrical consonance to achieve a state of instability and unfamiliarity.

Résumé

La fin du XIX[e] siècle fut une période particulièrement propice pour l'exotisme musical – phénomène où l'Occident représente un lieu étranger en tant qu' « ailleurs » inconnu et culturellement distant. La majorité des études sur l'exotisme musical porte sur l'identification de procédés musicaux qui symbolisent un milieu exotique, et par des discussions caractérisées par des idéologies orientalistes. Shay Loya (2011) a contesté l'étude de l'exotisme en tant que représentation, puisque cette optique risque de traiter le matériel exotique comme un *topoi* ornemental basé sur des stéréotypes culturels. Afin de raffermir la compréhension de l'exotisme comme un phénomène fondé sur une opposition entre l' « Occident » et le « non-Occident, » je présente une analyse transculturelle de la fantaisie pour piano et orchestre, *Africa,* Op. 89, de Camille Saint-Saëns.

Mon analyse d'*Africa* combine des analyses culturelles et structurelles, une approche initialement développée par Kofi Agawu dans sa discussion des rythmes de l'Afrique de l'Ouest (2006). L'analyse culturelle évalue la mesure dans laquelle les éléments d'*Africa* adhèrent aux pratiques de la tradition arabo-andalouse et de la musique savante du Maghreb. L'analyse culturelle examine quant à elle le syncrétisme culturel du point de vue de la théorie musicale, observant l'interaction entre les éléments de la tradition arabo-andalouse et les paramètres mélodiques, harmoniques et rythmiques d'*Africa.*

Mon analyse se concentre principalement sur le mode et le rythme. Afin d'illustrer l'influence des modes arabo-andalous sur le matériel mélodique d'*Africa,* je combine la théorie des transpositions scalaires de Dmitri Tymoczko (2011) avec des théories néo-riemanniennes. Je vise à démontrer comment l'emploi de modes non majeurs ou mineurs permet des modulations non-diatoniques entre des tonalités qui seraient éloignées dans un contexte majeur ou mineur. De plus, dans le but d'examiner l'ajout de motifs rythmiques inégaux dans la structure métrique, je me sers des théories d'Harald Krebs (1999) sur la dissonance métrique et des travaux de Justin London (2004) sur l'ambiguïté métrique. Je démontre comment Saint-Saëns perturbe la consonance métrique pour atteindre un état d'instabilité et de méconnaissance. Une analyse transculturelle de l'exotisme crée un dialogue entre l' « Occident » et le « non-Occident », et enrichit notre compréhension sur l'impact que les éléments non-occidentaux peuvent avoir sur la pensée compositionnelle occidentale au niveau structurel.

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Introduction

> This music, whose character was so novel for its time, transported its French listeners into an unknown world that was full of attractions and charms–but, most of all, a world that was alive.
>
> —Julien Tiersot, *Histoire de la chanson populaire en France*, 1889.

The opening epigraph captures the fascination of French musicologist Julien Tiersot after attending a performance of Félicien David's *Le désert* (1844), a symphonic poem inspired by the composer's visit to Egypt in the mid-nineteenth century. French composers, enthusiastic and curious about the world that lay outside of Europe, were highly interested in incorporating foreign borrowings into their works in order to portray exotic locales and cultures. Given that France was a major colonial power in North Africa and in the Middle East from the mid-nineteenth century onwards, it comes as no surprise that the "most familiar and historically significant instances of Orientalism" in music and the visual arts are in fact French: David, Saint-Saëns, Georges Bizet, Eugène Delacroix, Jean-Auguste-Dominique Ingres and Jean-Léon Gérôme, to name a few.[1]

The expansion of the French empire in Africa (Algeria in 1830, Somaliland in 1862, Tunisia in 1881, Madagascar in 1885 and Côte d'ivoire in 1889) resulted in a spike in the number of musical works produced with exotic influences.[2] Living through the height of French colonialism, Saint-Saëns was one of many French composers who was captivated by exoticism—Western representations of a foreign culture or milieu through musical means.

[1] Locke 1991, 264.

[2] Cooper 2004, 115.

While Saint-Saëns traveled extensively throughout the globe—a rare feat for someone from the late-nineteenth and early-twentieth centuries—Algeria seemed to have been his favourite destination, as the composer spent a total of four to five years of his life between his first visit in 1873 and his death in 1921.[3]

One of Saint-Saëns's most frequently performed exotic pieces is *Africa*, Op. 89 (1891) for piano and orchestra, which was composed with the intention of portraying the region of North Africa and giving French listeners a taste of the sounds that one might encounter in the French colony.[4] Both the composer and various listeners have acknowledged the presence of exotic-sounding elements in the piece. In a 1913 article appearing in the *L'Écho de Paris* daily newspaper, Saint-Saëns wrote that *Africa*, Op. 89 (1891) is composed of "African themes collected here and there across several years."[5] Reviews of *Africa* from the late-nineteenth and early-twentieth centuries provide sufficient evidence that the foreign influences were successfully conveyed to contemporary audiences. In reviewing a performance of Saint-Saëns's *Africa* in 1899, Otto Neitzel, a German music critic and composer, recognized the "Eastern themes" used throughout the work and stated that the work was a "sort of African banter," while Emile Baumann, writing in 1900, observed the "harsh and dark timbres of the Arab instruments and the rumble of the tympani."[6] One century later, modern audiences continue to perceive *Africa* as an exotic fantasy. In a *New York Times* review of a concert by pianist Olegna

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3 Leteuré 2012, 138.

4 Other works that depict North Africa include *Suite algérienne*, Op. 60 (1880, *Samson et Dalila* (1892) and the Fifth Piano Concerto, Op. 103 (1896). Saint-Saëns made multiple trips to Algeria around the time *Africa* was being composed: November 1887 to the summer of 1888; June 1890; March 1891; Fall 1892 (Studd 1999, 171; 182; 187; 191).

5 Saint-Saëns 2012, 864, translation my own. Original text reads as follows: "*La Fantaisie pour piano et orchestra Africa* est faite de themes africains recueillis çà et là pendant plusieurs années."

6 Barbacane 2012, 199–203.

Fuschi in 1984, Tim Page commented that *Africa* was an "exquisitely daffy confection, full of naive orientalism,"[7] and more recently an overview of the 2012 Bard Music Festival in the *New York Arts* introduces *Africa* as a work characterized by a "handling of rhythmic gestures, chromaticism, and other melodic devices, to conjure up the color and mystery of Africa."[8] Such reviews have helped cement the reputation of Saint-Saëns as a composer of "exotic" works with non-European influences, and have highlighted the wide extent to which the exotic characteristics of the piece continue to be conveyed to audiences even 120 years after its premiere.

While many reviewers have acknowledged the association between *Africa* and the Maghreb culture of North Africa, a number of critics, including Algerian critic Raoul d'Artenac in 1892, have interpreted the work as "quintessentially French."[9] D'Artenac's observation has been echoed in 2015: upon reviewing pianist Ben Schoeman's performance with the KwaZulu-Natal Philharmonic Orchestra in Durban, South Africa, Michael Green noted that *Africa* employs "some exotic themes and rhythms, but Paris seems always to be on the horizon."[10] At first glance, these reviews seem conflicting: how can a work be perceived as African *and* French at the same time? These seemingly contradicting observations provide valuable insight into the complex nature of exoticism in Saint-Saëns's *Africa*. The piece is not just an assortment of North African melodies and rhythms stringed together or a Western musical work garnished with exotic color, but a Western art composition in which North

7 Page 1984.
8 Miller 2012.
9 Pasler 2012, 251.
10 Green 2015.

African elements have been integrated into the syntax of Western tonality.

What exactly do we mean by the term "exotic?" What makes *Africa* an "exotic" work, and how does Saint-Saëns's deployment of "African themes collected here and there" contribute to the perception of *Africa* as an exotic work representing North Africa, as Michael Stegemann (1984) and Jann Pasler (2012b) have suggested?[11] How can we apply existing music-theoretical mechanisms to interpret the "compositional impact" of cross-cultural transmission?[12] The main objective of this thesis is to address exoticism on its own terms and transcend our traditional understanding of exoticism as a phenomenon based on an opposition between the "West" and the "non-West." The general analytical approach will be modeled after Kofi Agawu's analysis of West African rhythmic practices, in which he proposes a dialogue between cultural and structural analysis. According to Agawu, cultural analysis considers "cultural relevance of a number of ostensibly objective features" that listeners have attributed to North African music, whereas structural analysis "describe the pattern in ways that might be acceptable to music theory" and analyzes "patterns in terms of their morphology."[13] Our analysis will utilize both cultural and structural analysis to produce a more comprehensive analysis of musical exoticism and transculturation.

The thesis is divided into three main sections: an overview of musical exoticism, cultural analysis, and structural analysis. The first chapter defines the phenomenon of exoticism—both as a compositional practice and as a subject of musicological inquiry—and

11 Saint-Saëns 2012, 864.
12 Loya 2011, 9.
13 Agawu 2006, 6, 41.

explores the various lenses through which scholars have discussed and evaluated the cultural representation of non-Western cultures in Western art music. I outline how the terms exoticism, Orientalism, and transculturation has been applied to discussions of exotic music, and how each of the terms prescribes a specific analytical ideology and methodology. I suggest in this chapter that transculturation allows us to engage musical exoticism on its own terms and synthesize the discourse of Arabo-Andalusian music and of Western music theory, analyzing the interactions between influences from Arabo-Andalusian music and Western musical practices within *Africa*.

The second chapter, which engages in cultural analysis, evaluates the authenticity of the borrowings by comparing modes and rhythms of *Africa* with those of North African music, explaining why certain musical devices signify a representation of North Africa. I suggest that a cultural analysis will help us identify North African influences in the melodic and rhythmic content of *Africa* and allow us to understand why certain North African musical characteristics were perceived as exotic when integrated into a Western musical context.

The third chapter, which engages in structural analysis, complements the cultural analysis by analyzing *Africa* through a transcultural lens. By adopting a transcultural analytical approach, we develop an understanding of how musical features influenced by North African music can create disruptions in the norms of Western tonality. In particular, I focus on mode and meter as the two most significant parameters to which Arabo-Andalusian influences had a major impact at the compositional level. The use of non-major-minor modes enables modulations between key areas that would otherwise be unconventional in the context of major and minor modes, and uneven rhythms coincide with instances of grouping dissonance and

metrical ambiguity, both of which disrupt the normative state of metrical consonance. Through a structural analysis, I show that the non-Western elements that have been integrated into the melodies and rhythms of *Africa* function as integral aspects of the musical structure, rather than as mere ornamental color added for exotic effect.

Chapter 1: Re-evaluating Exoticism

History of the Discipline

While the compositional practice of representing foreign locales long predates the nineteenth century, academic studies in musical exoticism emerged relatively recently, primarily due to the continued dominance of formalist scholarship in the field of music research until the emergence of New Musicology in the 1970s and 1980s.[1] Discourse in musical exoticism also derives from postcolonial criticism, inspired by the work of Edward Said, who published his seminal work *Orientalism* in 1978. Musical exoticism remained relatively marginal in the 1980s, with few publications dedicated entirely to the topic. In fact, in the early stages of the subdiscipline, Joseph Kerman heavily dismissed Verdi's exotic representation of Egypt in *Aida*, asserting that no "organic reason" exists for the "bogus orientalism" and that exoticism is merely an ornamental surface phenomenon with little structural significance.[2] Musical exoticism gradually gained its foothold as a subdiscipline of musicology in the 1990s as scholars such as Jonathan Bellman (1993; 1998), Ralph Locke (1991; 1993; 1998), and Derek Scott (1998) began identifying the musical lexicons through which composers of Western art music have historically depicted distant and unfamiliar peoples and cultures in their works: melodic augmented seconds, triplets in duple meter, drones, and ostinati rhythms, to name a few.[3]

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[1] Locke (2009) suggests that the notion of using musical signifiers as markers of Otherness emerged with the *alla turca* and *style hongrois* styles in the eighteenth century. Leach (2006) argues that the concept of exoticism itself can be traced to the antiquity, when the Greeks' characterization the Phrygians' use of the semitone as irrational and feminine.

[2] Kerman 1988, 206–7.

[3] Scholars have used a variety of phrases to refer to musical devices used by composers to signify foreign cultures and locales: stylistic quotation (Dahlhaus 1989), musical code (Bellman 1998), stylistic aberration (Locke 2000), stylistic code (Locke 2007), cultural code (Christiansen 2008), coded style (Locke 2009), exotic cliché (Locke 2009), representational device (Sheppard 2013), and

Since the 1990s, most discourse on musical exoticism has followed Locke's *Exotic Style Only* Paradigm—identification of musical signifiers used in representing foreign locales—but more recently Locke has challenged the assumption that exoticism is reflected onto the score in the form of salient musical signifiers. As an alternative, Locke proposes the *All the Music in Full Context* Paradigm, which suggests that musical works can be perceived as "exotic" even without the use of overt exotic signifiers, especially in operas and other programmatic works.[4] For purely instrumental works like Saint-Saëns's *Africa*, op. 89 (1891) in which there are no extramusical or theatrical components, Locke maintains that the Exotic Style Only Paradigm is most effective for analysis.[5]

Musical signifiers used by nineteenth-century composers for exotic representation were not officially written down, and there are no known treatises that have formally codified these gestures. Nevertheless, Locke posits that composers were well aware of the effectiveness of these codified signifiers in portraying foreign locales, and listeners were equally aware of the symbolic meanings of these gestures.[6] In other words, these gestures functioned as *topoi* for composers and listeners alike, carrying associations with the exotic and, depending on the gesture, regional associations.[7] Several contemporary scholars have compiled a list of common exotic musical signifiers used by nineteenth-century composers. Locke, for example, identifies features such as non-major-minor modes with chromatic inflections, bare textures, repeated

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stereotypical sign (Sheppard 2013). For consistency, I will employ the term "musical signifier" in this paper.

4 Locke 2009, 106.

5 Ibid., 55-6.

6 Ibid., 106.

7 Ratner 1980.

rhythmic patterns, and static harmonies.[8] Locke's classification of exotic musical signifiers can be broadly divided into four categories: 1) new modes and harmonic practices that depart from major-minor tonality; 2) simplicity of form, texture, and harmony; 3) unusual instrumentation or timbre; and 4) melodic ornamentation. Scott's classification of exotic gestures, which is specified according to the geographical region being represented, is consistent with that of Locke's, identifying non-major-minor modes, augmented second intervals, and instrumentation as key signifiers for exoticism.[9] I will refer to both authors' classification of signifiers in the identification and analysis of exotic musical gestures in *Africa*.[10]

Defining Exoticism, Orientalism, and Transculturation

Before contextualizing Saint-Saëns's work within the current discourse of musical exoticism and postcolonial criticism, we must first sort through the multitude of terminologies that have been put forth by scholars for explaining the phenomenon of musical exoticism in the nineteenth century. In this chapter, I will define three terms that have been used most often by scholars to discuss the influence of non-Western cultures on Western art music: *exoticism*, *Orientalism*, and *transculturation*.[11] While to a certain extent all three terms address the same phenomenon—Western representation of a non-Western culture—we must unpack each of the terms in order to understand their respective political and cultural implications, their effect on the ways scholars have analyzed nineteenth-century music with non-Western influences, and

8 Locke 2009, 51–4.

9 Scott 1998, 313-16.

10 Scott 1998; Locke 2009.

11 Bellman 2011 similarly lists the three elements as central to exotic representations of the "Other."

how each approach—whether exoticist, Orientalist, or transcultural—will inform my analysis of Saint-Saëns's *Africa*. After distinguishing between the three terms, I propose that a transcultural approach offers the most suitable methodology for analyzing the exoticism of *Africa* on its own terms, rather than as a by-product of representation. Transculturation allows us to synthesize a cultural and structural analysis of musical exoticism, producing an analytical narrative that draws upon Stegemann's and Pasler's identification of Arab and North African influences while addressing the ways in which these non-Western elements are integrated into the Western musical parameters of mode, harmony and meter.[12]

It is worth mentioning here that the analysis in this thesis will be utilizing twentieth- and twenty-first-century music theory, rather than relying on nineteenth-century reception history. The main impetus for this is that the number of concert reviews from and analyses of the work dating from the late nineteenth century remains quite limited. Given that *Africa* continues to be regarded as a piece with "exotic themes and rhythms"[13] and a "naïve interpretation of an exotic locale"[14] by modern critics, an analysis of the structural mechanisms of *Africa* based on contemporary theories allows us to explore the ontological premise of exoticism for modern listeners. Therefore, the analysis will be framed by a contemporary perception of the work, which will be used to speculate possible reasons for why we find certain elements of the work "exotic" over others.

12 Stegemann 1984, Pasler 2012b.
13 Green 2015.
14 Iisaka 2014.

Analyzing Exoticism: The Exotic Style Only Paradigm

We have established that "exoticism" in this paper is defined as a composer's integration of exotic musical signifiers within the confines of a Western musical idiom and how they are deployed throughout the work to portray a locale other than their own.[15] In analyzing exotic works of the nineteenth century, scholars such as Locke (1991), Bellman (1993) and Myriam Ladjili (1995) have primarily adopted Locke's Exotic Style Only Paradigm, focusing on the identification of musical devices that are used to signify the exotic. How is the representation of the "Other" carried out through salient musical parameters such as melody, rhythm and timbre? In developing this approach further, scholars such as Richard James (1990), Eric Rice (1999) and Jeremy Day-O'Connell (2007) have also turned their attention to the verisimilitude of the appropriation—how accurately the "exotic" materials in Western compositions reflect those of the culture(s) being portrayed. With respect to *Africa,* are the musical signifiers in *Africa* taken from authentic transcriptions of North African music, or imaginative constructs based on what Saint-Saëns has perceived as genuine?

While the Exotic Style Only paradigm is suitable for identifying the mechanisms through which specific musical parameters can communicate the representation of an unfamiliar culture, there are some limitations to applying this approach to analysis. Firstly, analyses of exotic works have tended to embody the "safari mentality," a term coined by

[15] While the use of the term "exoticism" in this paper refers to the representation of cultures outside of one's own country—especially non-Western cultures—an exotic locale need not be geographically distant. An evocation of folk music within Europe or North America, which has historically been considered "alien" in relation to art music traditions, can be equally exotic in a Western context. French audiences, for example, perceived Saint-Saëns's *Africa*, Op. 89 and *Rhapsodie d'Auvergne*, Op. 73 (1884), a work in which Saint-Saëns borrowed folk melodies from the Auvergne region, as exotic since both works incorporated music that was unfamiliar to them (Pasler 2013, 542). See also Gelbart 2007.

Matthew Head to describe scholarship that engages in the classification of exotic signifiers without interpretation or critical evaluation.[16] Secondly, Shay Loya has warned that exoticism "tends to exaggerate difference" by perpetuating stereotypes.[17] According to Loya's view, an analysis that focuses on the identification of musical signifiers can therefore minimize the exotic influences to mere ornamentations within a Western musical idiom. In sum, adopting the Exotic Style Only Paradigm risks limiting our analysis to classification rather than critical assessment. In order to attain a more nuanced view of exoticism in *Africa* without marginalizing non-Western influences under a Western framework, the Exotic Style Only Paradigm must be complemented by other methodologies that evaluate the effects of Arab and North African influences in a more critical manner.

Analyzing Exoticism: Authenticity of Representation

The majority of scholars have agreed that exoticism is not equitable with ethnographic study and have dismissed the possibility that exotic musical signifiers accurately reflect the features of the musical tradition or culture being depicted. Carl Dahlhaus, for example, has stated that exoticism should not be judged by the "criteria of descriptive anthropology."[18] Bellman echoes Dahlhaus, noting that exoticism is not about "the earnest study of foreign cultures."[19] Instead, Dahlhaus suggests that analysts of exotic works should focus on the "function it serves as a legitimate departure from the aesthetic and compositional norms" of

16 Head 2003.
17 Loya 2008, 257.
18 Dahlhaus 1989, 302.
19 Bellman 1998, xii–xiii.

Western art music.[20] In applying these claims to the Middle East, Locke argues that European representations of the region are often fictitious, whose goal is to "provide entertainment" or "invite aesthetic contemplation."[21] Since composers for the most part lacked primary sources of non-Western music, the aesthetic goal of musical exoticism was merely to convey difference—a sense of "exoticness" that makes the musical signifiers sound "foreign" within the confines of Western art music.[22] According to this ideal, composers were in no way trying to write music in a non-Western manner, but rather, to borrow Loya's terminology, translating the *alien exotic* (i.e. the unadulterated non-Western source in its original form) into a *familiar exotic* that can be inserted into a Western musical idiom without disruption.[23] In other words, many European composers were incorporating non-Western—or what they perceived to be non-Western—elements only to convey a sense of Otherness within the parameters of Western art music.

Arguments in favor of the cultural inaccuracy of exotic borrowings are historically justifiable, as the majority of nineteenth-century composers had little exposure to non-Western music, let alone the opportunity to collect and study the music as a primary source.[24] In fact, few Europeans were exposed to non-Western music until the 1889 *Exposition Universelle* in Paris, which showcased foreign music in Europe the first time, including Algerian ensembles, a

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20 Dahlhaus 1989, 302.

21 Locke 1998, 22.

22 One major exception is French composer Francisco Salvador-Daniel (1831–1871), who published several writings on Arab music, most notably *La Musique arabe: Ses Rapports avec la musique Grecque et le chant Grégorien* (1863). Salvador-Daniel's work on Arab music is discussed at length in Barbacane 2012, 81–160.

23 Loya 2011, 69.

24 Félicien David (1810–1876) was one of the first major European composers to travel to the Middle East and gain exposure to the local music. David's symphonic poem, *Le desert* (1844), helped popularize the Middle East as an object of representation, "defining the basis for a codified musical exoticism" (Wenderoth 2004, 100).

Javanese Gamalan orchestra, and Hungarian gypsy bands.[25]

I propose, however, that an analysis of Saint-Saëns's exotic works requires us to distinguish clearly between composers who had little knowledge of non-Western music and composers who had the means to access non-Western music directly through travel. Jean-Pierre Bartoli has suggested that exotic borrowings are often constructed along a continuum, from the "most realistic possible borrowing of actual Figures" to the "totally fantastic construction of imaginary exotic Figures."[26] I argue that Saint-Saëns's *Africa* resides closer to the former category than the latter.[27] Saint-Saëns stands in a unique position among nineteenth-century composers as one of the few who had the privilege of traveling to various parts of the world, including Algeria, Egypt, the Canary Islands, Ceylon, Indochina, South America, and the United States. Saint-Saëns spent an extended amount of time in Algeria, where he composed *Africa* during one of his winter visits to the French colony. According to Stegemann, Saint-Saëns engaged in the study and collection of North African folk music while he resided in Algeria, transcribing melodies and rhythms he had heard in the streets, markets, and in cafés. Because of these experiences, Stegemann places Saint-Saëns in a special category among composers who engaged in exoticism, as one of the few French Romantic composers "who could refer to authentic sources for the Oriental elements."[28] Accordingly, Saint-Saëns's *Africa* can be construed as an extension of David's *Le désert* (1844), basing a portion of its exotic material on

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25 Stegemann 1984, 148. For a more detailed discussion of the influence of the 1889 *Exposition* on French views of exoticism, refer to Revuluri 2007.

26 Bartoli 2000, 65; quoted in Locke 2009, 49.

27 Valeria Wenderoth (2004) identifies three other French composers who had direct contact with North African music: Félicien David (1810–76), Ernest Reyer (1823–1909) and Francisco Salvador-Daniel (1831–1871).

28 Stegemann 1984, 151.

authentic musical sources from North Africa rather than from gestures derived entirely from the composer's imagination.

The idea of tracing musical parameters in *Africa* to North African music is not new. Pasler, for example, has observed timbral similarities between the oboe and the wind instruments used in the music of the Chaoui, who live by the Aurès Mountains in eastern Algeria.[29] I will build upon Pasler's approach to further develop our understanding of the mechanisms of cross-cultural transmission in *Africa*, considering why some elements of North African music were chosen over others for representation, and why some North African elements have been perceived as more exotic than others. An investigation into the authenticity of the exotic gestures in *Africa* therefore helps validate the exoticism of the work through cultural analysis and complements the classification process of the Exotic Style Only Paradigm presented in the previous paragraphs. Moreover, by integrating North African music into the discourse on exoticism in Western art music, we are able to avoid a Western-centric approach to analysis that overemphasizes a "composer's search for inspiration and challenge in the musical products and procedures of distant cultures."[30] The authenticity of cultural appropriation in *Africa* will be discussed in detail in Chapter 2.

In sum, analyses of musical exoticism have revolved primarily around two approaches. First, the Exotic Style Only Paradigm allows for analysts to identify specific musical devices that signify an unfamiliar region or culture. While this method is effective for empirically codifying common exotic signifiers across a specific composer's oeuvre or time

[29] Pasler 2012b, 238.
[30] Locke 2009, 26.

period, the paradigm on its own offers no interpretation or critical evaluation of the musical devices, leaving analysts at risk for embodying the "safari mentality." The second approach assesses the authenticity of exotic borrowings. While effective for evaluating the transmission of musical parameters between the Western and non-Western cultures, this method is valid only if the composer has had direct contact with the culture in question and has appropriated from authentic sources rather than from the composer's imagination.

Orientalism vs. Exoticism

In musicological literature on exoticism, the terms "exoticism" and "Orientalism" have been used almost interchangeably. In fact, one could argue that it is nearly impossible to discuss nineteenth-century exoticism without invoking ideologies of Orientalism. Several scholars, including Scott and W. Anthony Sheppard, have noted the similarities in their definitions.[31] Scott, for example, has commented on the "interchangeability of *exotic* signifiers" but has also referred to these signifiers in a different passage as "*Orientalist* musical code" (emphasis mine).[32] Moreover, Scott introduces the *alla turca* and *style hongrois* as first and second "type[s] of musical Orientalism," respectively, and avoids referring to them as "exotic" styles, whereas Locke describes the *alla turca* style as an "exotic 'dialect'" in Western music.[33]

What exactly are the differences between exoticism and Orientalism? The usages of the two terms vary from a chronological, geographical, and ideological point of view. Firstly,

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31 Scott 1998, Sheppard 2013.

32 Scott 1998, 309-10.

33 Scott 1998, 310; Locke 2009, 118.

the latter is applied specifically to refer to music, visual art, and literature of the late nineteenth and early twentieth centuries, whereas the former can refer broadly to Western works of art from any time period.[34] Secondly, Orientalism is specific to "the Orient," a word that refers to the Arab Peninsula, North Africa, Persia, Turkey, Indian subcontinent, East Asia, and Southeast Asia, whereas exoticism can encompass any region outside of one's homeland or folk and popular music within one's own country. Most importantly, Orientalism inherently implies a hierarchy between Western and non-Western cultures and provides political and colonialist explanations for exotic representations, whereas the term exoticism, while itself embodying a Self/Other dichotomy, remains distant from political motivations. Notwithstanding this distinction, it is possible that political or colonialist views of exoticism can be rooted in an Orientalist ideology.

Our current understanding of Orientalism derives from Said's seminal text on postcolonial criticism, *Orientalism* (1978). Said defines Orientalism as a "corporate institution for dealing with the Orient—dealing with it by making statements about it, authorizing views of it, describing it, by teaching it, settling it, ruling over it…a Western style for dominating, restructuring, and having authority over the Orient."[35] Inherent in this definition is the existence of a power relation between the West and "the Orient." While Said does not discuss at length the implications of his Orientalist theories on musical composition, his definitions can certainly be applied to the movement of musical exoticism that emerged in the nineteenth

[34] Sheppard 2013, 168.
[35] Said 1978, 3-4.

century.[36] Although both "exoticism" and "Orientalism" are undeniably constructed upon a Eurocentric view, based on the premise that the West is objectifying a culture or geographic region other than its own, there are subtle differences in nuance between the two terms that affect our discussion and analysis of music with non-Western influences. On the one hand, when using the term "exoticism," we primarily focus our attention on the composers' ingenuity and the ways in which they have employed musical signifiers to represent a culture or geographic region other than their own. In other words, the main focus is on the compositional process (output) and on the characteristics of the musical work that contribute to its reception as "exotic" (input). On the other hand, an Orientalist discussion of musical exoticism centers on the interpretation of the exoticism at hand—the various cultural and political implications pertaining to the act of representation or appropriation.[37] For example, an Orientalist analysis of the third movement of Mozart's Piano Sonata in A major, K. 331 (*alla turca*) may address how Turkey serves as a "mirror image of what is inferior, bizarre, and alien," treating the Turkish musical tradition not as its self-standing cultural entity, but more as a generalized "Orient" that reifies the superiority of European culture.[38] According to Nasser Al-Taee, an Orientalist view assumes that non-Western borrowings have been "intentionally distorted…in order to establish a deficient East and to justify Western superiority."[39] Accordingly, an Orientalist approach is not primarily concerned with the authenticity of the borrowing but instead focuses on how an appropriation of North African music conveys a sense of "Otherness" through the juxtaposition

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36 Works that extend and apply Said's theories on Orientalism to musicology include Locke 1991, Locke 1993, Said 1993, MacKenzie 1995, Scott 1998, Head 2000, Gramit 2003, Head 2003, Christiansen 2008, Mabilat 2008, and Bellman 2011.

37 Locke 1998, 7.

38 Al-Taee 2010, 7.

39 Ibid., 18–19.

of European culture and non-Western music.

The Western domination of a non-Western culture is therefore one of the main agendas of Orientalism.[40] By appropriating elements from non-Western cultures and artistic traditions, Said has argued, a binary opposition between the "Self" and "Other" inevitably emerges.[41] Juxtapositions between the "Self" and "Other," "East" and "West," and "Colonizer" and "Colonized" are one of the most defining oppositions invoked in Orientalism. The codification of exotic musical signifiers in nineteenth-century works therefore exemplifies how Western composers have managed to position Eastern cultures ("the Orient") as a generic "Other." By following Locke's Exotic Style Only Paradigm, we potentially reduce "the Other" to modal harmonies, non-major-minor scales, borrowed melodies, and ostinato rhythms that are "distorted or freely reimagined in a Western context."[42] Appropriation as according to this paradigm further perpetuates the power imbalance between the "Self" and "Other," situating Western tonality as a symbol of sophistication and non-Western musical traditions as an object of backwardness.[43]

For Western composers in the nineteenth century, therefore, the act of borrowing has been strictly unidirectional: the Western composer has the discretion and authority to decide which musical materials to "take" or "leave out" from the foreign culture and incorporate into

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40 The idea that Western art music is "superior" to other traditions of music is not original to Orientalism, as the idea has also been inherent in the relationship between "folk" and "art" music in the eighteenth and nineteenth centuries. Gelbart (2007) suggests that folk music, exotic music and music of the antiquity were perceived as more primitive than Western art music because all three traditions were considered to be an antithesis to art music: simple, pure and derived from nature, as opposed to the more modern and civilized art music tradition. Similar ideas were also put forth by François-Joseph Fétis and Charles Burney (Burney 1789; Fétis [1844] 1875).

41 Said 1978.

42 Locke 2009, 20.

43 Recently, Orientalist operas (e.g. Verdi's *Aida*, Puccini's *Turandot*) have been criticized by music critics for allegations of racism and fetishization of non-Western cultures. See Chan 2014 and Guilford 2014.

the musical work as an exotic gesture. The culture being depicted has no voice in the representation; the Western composer has complete freedom to assimilate the idioms into their compositional toolkit and use the idiom for an exotic representation, regardless of the original context or meaning of the borrowed gesture. When a Western composer appropriates a melody from another culture, the melody is often integrated into a Western musical context, thus stripping away its original meaning and disregarding its original tuning system, instrumentation, meter, and harmonic accompaniment.[44] For example, the augmented second interval, considered one of the most defining melodic markers of exoticism in Western art music, functions as an ornamental, coloristic effect for several reasons. First, the interval, omitted from four-part chorale settings and Figured bass indications, is too wide to function as a scale step as it is enharmonically equivalent to a leap of a minor third.[45] Second, because the augmented second occurs naturally between the sixth and seventh scale degrees in a harmonic minor scale, the interval thwarts the expected resolutions of tendency tones. On the one hand, an ascending augmented second implies a motion from the sixth scale degree to the leading tone rather than to the fifth scale degree. On the other hand, a descending augmented second creates a motion from the leading tone to the sixth scale degree rather than to the tonic.[46]

Several scholars have argued that Saint-Saëns's music follows an Orientalist ideology. In his analysis of the *Bacchanale* from *Samson et Dalila*, for instance, Locke views the augmented second interval in the opening oboe solo, shown in Figure 1.1, as an "instance of standard

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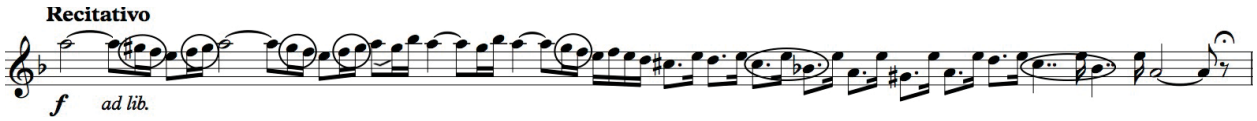
[44] Scott 1998 and Locke 2009 provide a comprehensive list of musical codes used by nineteenth-century composers to evoke foreign cultures and locales as exotic. Bellman 1991, Rice 2008, Locke 2009, and Loya 2011 provide a similarly comprehensive list specific to the *style hongrois* idiom.

[45] Aldwell and Schachter 2003, 71.

[46] Laitz 2012, 8.

Figure 1.1: Opening of the *Bacchanale*, Act III, *Samson et Dalila*.



Orientalist practice…emphasizing the…'residues of what differs most' from Western practice."[47] The use of the augmented second—including not only the consecutive augmented second between F and G♯ but also the non-consecutive intervals between B♭ and C♯—displays Saint-Saëns's awareness of musical signifiers for exoticism, originally codified by Western composers as a compositional technique to represent the "otherness" of the Middle East within a Western musical context. Saint-Saëns's compositional approach is summarized succinctly by Stegemann, who suggests that Saint-Saëns "had a clever way of working Oriental elements into European systems *without changing the latter*" (emphasis mine).[48] Similarly, Kristy Barbacane has argued that Saint-Saëns maintained a tourist mentality and collected musical snippets as "souvenirs" to use for exotic musical signifiers in his works, having no interest in carrying out ethnographic studies of Algerian music, as was later done by Bartók in 1913.[49] In other words, Saint-Saëns was more invested in how North African music could serve his [Western] compositional needs and was less curious about the study and dissemination of North African music itself. For Saint-Saëns, non-Western elements were therefore always subordinate to the larger Western framework of tonality. An Orientalist view therefore reveals Saint-Saëns's

47 Locke 1991, 267.
48 Stegemann 1984, 155.
49 Barbacane 2012, 202.

Eurocentric mode of representation in which his acts of cultural appropriation highlight the differences between Western and non-Western practice to situate North Africa as "the Other," a culture in which the West is free to critique, comment upon, and colonize without any dialogue between the two cultures.

Transculturation

So far, I have discussed the definitions of exoticism and Orientalism, their implications for the analysis of Western art music with non-Western influences, and the importance of understanding the difference between an "exoticist" and "Orientalist" mode of analysis. These terms, according to Loya, prescribe a specific type of interpretation even before the start of the analytical process.[50] An exoticist approach to an analysis of *Africa*, for example, might focus on identifying audible musical signifiers that contribute to the exoticism of the work and evaluating the authenticity of the appropriation, whereas an Orientalist approach might explore the political and colonialist undertones of Saint-Saëns's appropriation of North African music in *Africa*, evaluating the ideological process through which Saint-Saëns's cultural appropriation allows him to assimilate North African music into the Western art music idiom. For nineteenth-century repertoires that integrate non-Western European elements, however, an alternative methodology is required in order to address how cultural syncretism can impact both a musical work beyond a composer's use of audible musical signifiers and the ways through which an importation of non-Western idioms influence Western compositional

[50] Loya 2011, 9.

thinking.[51] Such an approach should 1) evaluate how the use of musical signifiers produces a more subtle exoticism embedded within the harmonic or metrical structures—features that may not be as immediately perceptible as exotic musical signifiers; and 2) highlight instances of cultural influence that would otherwise be undetected by conventional music-theoretical modes of analyzing tonal harmonic practices. As a result, this analytical methodology would complement the exoticist and Orientalist perspectives and, in Bellman's words, "seek to view each variety of musical exoticism on its own terms, rather than as another in a series of oppressive colonialisms."[52] What would such an analytical method look like? How can we analyze exoticism on its own terms?

To address this analytical gap and produce a more nuanced understanding of musical exoticism and cross-cultural transmission, I draw upon the concept of *transculturation*. Transculturation describes a process of cultural interaction in which the social dynamic within a hegemonic structure is re-examined, placing "greater emphasis on the potential of dominated cultures to affect dominant ones in situations of contact," such that the hegemony and the periphery interact with one another to produce a "hybrid offspring."[53] While the term was originally coined by Cuban sociologist Fernando Ortiz in 1940 to describe Cuba's complex processes of cultural exchange during its colonial history, [54] the idea of a transcultural approach to musical analysis first emerged in Loya's critical examination of Liszt's Hungarian-influenced

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51 Ibid., 9.

52 Bellman 1998, xiii.

53 Arnedo-Gómez 2008, 189, 197.

54 Ortiz [1940] 1995. "I am of the opinion that the word transculturation better expresses the different phases of the process of transition from one culture to another because this does not consist merely in acquiring another culture, which is what the English word acculturation really implies, but the process also necessarily involves the loss or uprooting of a previous culture, which could be defined as a deculturation. In addition it carries the idea of the consequent creation of new cultural phenomena, which could be called neoculturation" (Ortiz 1995, 102–103). The term was later incorporated into Latin American literary studies by Angel Rama.

works.[55]

A transcultural analysis of music enables us to situate our analysis outside of a dichotomy between "the West" and "the non-West," allowing for a critical examination of the interplay of Western and non-Western elements within the musical structure. Loya explains that an analytical methodology more responsive to cultural influence is necessary in order to address the various challenges of analyzing a repertoire that draws heavily from the Hungarian-Gypsy *verbunkos* practice.[56] On the one hand, Liszt's repertoire invites a formalist approach to explain the ways in which Liszt pushed the boundaries of common-practice tonality.[57] On the other hand, the analysis must also take into account the interplay between the conventions of Western art music and the Hungarian *verbunkos* idiom he employed.[58] Loya admits that the prospect of achieving a balanced analysis has been complicated by the historical schism between musicology and music analysis: music analysts were "obsessed with abstract theories and impervious to cultural input," whereas proponents of traditional musicology rejected the formalist and organicist aesthetics of music analysis.[59] This divide between the two disciplines, Loya suggests, segmented the literature into two categories: research that has specialized in issues of nationalism, cultural criticism, and exoticism but included little analytical content, or vice versa. Therefore, conventional analytical methods commonly associated with Liszt—Schenkerian analysis and transformational theory, for example—tend to

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55 Loya 2011.

56 Loya distinguishes between the *verbunkos*, the Hungarian-Gypsy musical tradition, and the *verbunkos* idiom, which refers to representations and appropriations of the *verbunkos* in Western art music. For an extended discussion on the latter, see Bellman 1993.

57 For example, see Cinnamon 1986, Forte 1987, Skoumal 1994, Popovic 1996, Satyendra 1997, Kopp 2002, and Cohn 2012.

58 See Bellman 1993.

59 Loya 2011, 4.

overlook processes of cultural interaction within the work.[60] Loya proposes that a transcultural approach allows us to combine a music-theoretical analysis of *structural* parameters such as harmony, mode and meter while also engaging in an analysis of the *cultural* aspects surrounding the music, thereby forcing a "confrontation between these modes of knowledge" and preventing the marginalization of cultural criticism in musical analysis.[61] Unlike an exoticist or Orientalist approach to analysis, embracing a transcultural perspective allows the analyst to find points of similarity and intercultural exchange rather than highlighting differences.[62]

How can we apply a transcultural analysis to Saint-Saëns's *Africa?* Which types of music-theoretical tools can be applied to our analysis? With respect to mode, a transcultural approach demonstrates how the use of North African modes in *Africa* allows for unconventional modulations between tonal areas that would otherwise be difficult in a diatonic context. Because of the use of non-major-minor modes, pitch relationships in *Africa* reveal an "alternative tonal directionality and logic"[63] to the conventional major and minor modes, which I argue is one of the major structural features that contribute to the signification of an geographical and culturally distant "Other." With respect to rhythm, a transcultural analysis enables us to explore how North African-inspired rhythms create opportunities for metrical dissonance and metrical ambiguity. By adopting a transcultural approach, we need not limit ourselves to searching for musical signifiers or extramusical elements that convey a sense of

60 Ibid., 4.

61 Ibid., 154. While the term "transculturation" was not used directly, a balanced methodology between cultural and structural analysis has also been proposed in Agawu 2006.

62 Loya 2011, 7.

63 Ibid., 40.

exoticism; exotic signifiers are no longer ornamental effects that add a "touch of color to the tonal-harmonic setting without seriously affecting its structure."[64] Rather, we can shift our focus to the idiosyncrasies in harmonic and rhythmic practice in *Africa* that result from the importation of Arabo-Andalusian influences.

64 Dahlhaus 1989, 309.

Chapter 2: Cultural Analysis: North African Influences in *Africa*

In the previous chapter, I suggested that Saint-Saëns's ability and willingness to travel outside of Europe set him apart from other European composers in the nineteenth century who engaged in the exotic representation of foreign locales. While most composers could only rely on second-hand accounts of non-Western music—or worse, their imagination—Saint-Saëns had the privilege of accessing North African music performed by local musicians, transcribing melodies he had heard in markets and cafés, and incorporating them into his exotically-themed works. While much of the "exotic" material employed by nineteenth-century composers was based on a loose understanding of non-Western music without much regard to authenticity, Saint-Saëns used musical material he had collected directly in North Africa. Therefore, an investigation into the exoticism of *Africa*—a piece that incorporates North African melodies rather than mere Arab-sounding melodies concocted out of a composer's superficial imagination—requires more than identifying audible musical signifiers, according to Locke's Exotic Style Only paradigm.

To develop a more sophisticated understanding of the mechanisms of exoticism in *Africa*, we must ask ourselves the following question: what is the extent to which the "exotic" material of the work accurately reflects the music of Algeria, to which Saint-Saëns traveled 19 times between 1873 and his death in 1921, and of Egypt, where Saint-Saëns visited 16 times between 1890 and 1914?[65] Applying Bartoli's spectrum of exotic borrowings by European

[65] Leteuré 2012, 138.

composers, I make a distinction between composers whose quotation of non-Western music was based on their perception of what non-Western music sounded like, and composers who had the means to access non-Western music directly through travel. Saint-Saëns clearly belongs in the latter category. Investigating the authenticity of the appropriation—while irrelevant for composers who have never traveled outside of Europe—is valid for Saint-Saëns's musical oeuvre, as there has been ample musicological evidence that has traced various musical elements of *Africa* to North African materials.[66] Unfortunately, there have been few inquiries into how closely the material in *Africa* resembles that of North African music. In undertaking such a task, I do not intend to suggest that Saint-Saëns composed the work equipped with a theoretical knowledge of melodic and rhythmic modes in North African music. Rather, I suggest that comparing the musical language of *Africa* and North African music will shed light on possible North African influences that have made its way into the melodic and rhythmic content of *Africa*, and help us understand the reasons for why certain North African musical characteristics were perceived as exotic and thus chosen over others for cultural appropriation.

To compare aspects of North African music with the musical language of *Africa*, we must first outline the fundamental features of the music of North Africa. How was North African music documented and theorized in the late-nineteenth century, and by whom? Was musical practice more or less consistent with the theory? What did North African music sound like in the late nineteenth century? Which characteristics of North African music would have seemed "exotic" for Saint-Saëns?[67] After establishing the basic features of North African music,

66 Kárpáti 1964, 181; Stegemann 1984, 151; Barbacane 2012, 191–94; Pasler 2012b, 238–41.

67 These questions are similar to those raised by Richard S. James, who has investigated possible similarities between Ravel's

I will identify and discuss various melodic, rhythmic, metrical and formal aspects of *Africa* through which we can cite North African influences and borrowings.

Figure 2.0: Summary of cultural and geographical terminology.

<table>
<tr><td colspan="7">The Arab World</td></tr>
<tr><td colspan="5">The Mashriq</td><td colspan="2">The Maghreb</td></tr>
<tr><td rowspan="2">Iraq</td><td rowspan="2">Arabian peninsula</td><td colspan="2">The Levant</td><td colspan="3">North Africa</td></tr>
<tr><td>Syria
Jordan</td><td>Palestine
Lebanon</td><td>Egypt</td><td>Algeria
Tunisia</td><td>Morocco
Libya</td></tr>
</table>

Before beginning the discussion of North African music, however, the usages of the terms "Arab," "Maghreb," "North African," and "Algerian" must be clarified. From a musical perspective, the term "Arab" refers broadly to Arabic-speaking regions: the Mashriq, which refers to the Eastern Arab world (Arabian peninsula, Iraq, Egypt, and the Levant) and the Maghreb, which refers to the Western Arab world (Morocco, Algeria, Tunisia, and Libya).[68] These relationships are summarized in Figure 2.0: the Maghreb is a subset of the Arab world, and Algeria—along with Morocco, Tunisia, and Libya—is a sub-region of the Maghreb. The term "North Africa" is potentially ambiguous, as it carries both a geographical meaning (i.e. the northern African regions of Morocco, Algeria, Tunisia, Libya, and Egypt) and a cultural meaning (i.e. the Maghrebi regions of Morocco, Algeria, Tunisia, and Libya). While geographically located in North Africa, the musical traditions of Egypt are more aligned with those of the Mashriq, and thus the term "Maghreb" typically does not include Egypt. To ensure

chanson madécasses and Malagasy music (James 1990).

68 The term "Middle East" includes, in addition to the Mashriq and the Maghreb, Turkey and Persia.

consistency in my terminology, I propose the following: firstly, I use "North Africa" only in the geographical sense when discussing, for example, how a certain theme may represent the region of North Africa without reference to any specific culture; secondly, I use "Maghreb" in the cultural sense, to refer to the regions of Morocco, Algeria, Tunisia, and Libya; thirdly, I refer to each region when discussing specific musical traditions from which Saint-Saëns may have borrowed. A controlled use of terminology will prevent Eurocentric generalizations that fail to account for the wide diversity of musical traditions within the Arab world. As I will explain in the following sections, my discussion of "North African" music and its relation to Saint-Saëns will predominantly focus on the Arabo-Andalusian art music tradition in Algeria.

Why Arabo-Andalusian Music?

Between the first time Saint-Saëns set foot in Algeria in 1873 and his death in 1921, Saint-Saëns made nineteen trips to Algeria and spent approximately a total of four to five years of his life in the French colony.[69] Developing a personal interest in the melodies of North Africa, Saint-Saëns collected melodies that he had heard in Algerian streets and cafés to incorporate into his works.[70] Stephen Studd notes that his fascination for non-European cultures is especially evident in his orchestral works from the 1880s and onwards, during which Saint-Saëns began to "collect and study Eastern and North African folk melody at first hand on a regular basis."[71] In acknowledging the appropriation of Algerian music in Saint-Saëns's

69 Leteuré 2012, 138.
70 Barbacane 2012, 191.
71 Studd 1999, 77.

works, however, scholars have tended to use the terms "Arab" and "North African" loosely without specifying the region and tradition from which the borrowings originated, whether it be urban art music, urban folk music, or rural music. Brian Rees, for example, notes that Saint-Saëns was studying "North African folk music,"[72] whereas Pasler speaks of the influence of "Arabic music" on Saint-Saëns's music and identifies "Arabic-sounding" themes in *Africa*.[73] "North African folk music" and "Arabic music," however, are not identical. As I will demonstrate in the following paragraphs, the regional dialects of the Arab subregions are distinct traditions that are rooted in the same Arab musical lineage.[74] Any scholarship that engages in an overgeneralization of "Arab" music in context of European music therefore risks situating Arab music as a generic "Other," and thus an inquiry into Saint-Saëns's cultural appropriation of Arab music must be more specific about the musical traditions from which he may have borrowed. Understanding the distinctions between the regional dialects allows us to pinpoint Saint-Saëns's North African influences with a more clearly defined scope and thus develop a more nuanced understanding of exoticism in *Africa*.

Amongst the wealth of diverse music traditions in Algeria, which ones are most relevant to a discussion of cultural appropriation in Saint-Saëns's works? I focus predominantly on the urban art music of Algeria—the *al-mūsīqā andalūsiyya*, also known as the Arabo-Andalusian tradition—which I will compare with Saint-Saëns's exotic borrowings in *Africa*. There are three reasons for why the Arabo-Andalusian tradition offers a suitable

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72 Rees 1999, 151.

73 Pasler 2012a, xiv; Pasler 2012b, 249.

74 The Arabo-Andalusian tradition is known by a different name in each region: the *san'a* ("work of art") in Algiers, *al-ala* in northern Morocco, *gharnati* in Western Algeria and Morocco, and *maluf* in Constantine and Tunisia (Davis 2004, 2–3).

reference point for the music that Saint-Saëns may have heard in Algeria in the late nineteenth century. Firstly, Arabo-Andalusian music was most active in urban areas of the Maghreb, where Saint-Saëns spent most of his time while residing in Algeria. Saint-Saëns resided primarily in the cities of Algiers, Biskra, Oran, and Philippeville (present-day Skikda), as well as in the mineral baths at in Hamman-Righa and Blida, which suggests that the composer was active in areas in which Arabo-Andalusian music was flourishing. Moreover, Arabo-Andalusian music was performed in public festivities and at local cafés, which were some of the few settings through which Saint-Saëns came into contact with local music. Secondly, a number of ethnographic studies and theoretical treatises have been written on the tradition, including transcriptions of melodic modes, rhythmic patterns, and formal structures.[75] Lastly, the fact that the fundamentals of Arabo-Andalusian music—tone systems and melodic modes, for example—are rooted in Eastern Arab music can explain why musicians and critics have perceived *Africa* as a work inspired by "Arab" elements. In sum, the Arabo-Andalusian tradition serves as the connection between Saint-Saëns's appropriation of Algerian music and his ongoing interest in Arab music during his time in Algeria.

Brief History of Arabo-Andalusian Music in North Africa

As the name indicates, Arabo-Andalusian music originated in *al-andalus*, which was the Arabic name given to Islamic Spain under the rule of the Umayyad Caliphate. The

[75] d'Erlanger 1949, 1959; el-Mahdī 1972; Guettat 1980, 2002; Schuyler 1984; Reynolds 2000; Jones 2002, Davis 2004; Ciantar 2012. Whereas little information is available on the theory and practice of folk and Berber musical traditions, scholars have found that the melodic and rhythmic modes of Arabo-Andalusian music are in use by Berber folk traditions as well. See also Salvador-Daniel [1867] 1914.

emergence of the Andalusian musical tradition in Spain is strongly credited to the work of Persian singer and '*ûd* player Abū'l-Hasan 'Alī ibn Nāfi', or more commonly known as Ziryāb. Ousted from the court of Abbasid Caliph Harun al-Rashid in Baghdad following a quarrel with his teacher, Ziryāb emigrated to Córdoba in the Iberian Peninsula in 822 A.D., where he landed a position in the court of Sultan 'Abd al-Rahmān of the Umayyad Caliphate. Ziryāb's career flourished in Córdoba, reviving and reforming the Arab musical tradition in al-andalus, creating music schools across Islamic Spain and establishing the fundamentals of what is now considered the Maghrebi *nūba* form.[76] Tweaking and building upon the Arab musical tradition he had brought from Baghdad, Ziryāb established an Andalusian musical tradition that was distinct from that of the Mashriq.

As the Christian *reconquista* of Spain accelerated in the tenth century and onwards, Muslims and Jews began fleeing the peninsula into North Africa.[77] The migration of Muslims into the Maghreb occurred in three primary stages: firstly, from Seville to Tunis (present-day Tunisia) in the tenth to twelfth centuries; secondly, from Córdoba to Tlemcen (present-day Algeria) and Valencia to Fez (present-day Morocco) in the twelfth century; thirdly, from Granada to Fez and Tétouan (present-day Morocco) following the fall of Granada to the Christians in 1492.[78] Muslims continued to emigrate to North African cities well after the end of Islamic rule in Spain, as the expulsion order of the Moriscos—descendants of the Muslim Spaniards who had converted to Christianity—in 1609 further accelerated the movement. This

76 Reynolds 2000, 65.
77 Ciantar 2012, 31.
78 Davis 2004, 2–3.

exodus, according to L. JaFran Jones, stimulated the rejuvenation of the art music tradition in the Maghreb and allowed for the fusion of Andalusian and Arab music to create a "uniquely North African idiom."[79] While Arabo-Andalusian music was most widespread amongst the Muslim aristocrats in Spain, the tradition gradually spread to Sufi brotherhoods and the urban bourgeoisie in North Africa. The music permeated many aspects of daily life and was performed—and continues to be performed—frequently at weddings, festivals, and cafés. Arabo-Andalusian music does not equate to a mere transplant of Andalusian music; rather, the Maghrebi musical tradition is an amalgam of musical influences from a variety of cultures: Berbers, Arabs, Egyptians, Turks, Spanish Muslims, Africans, and Jews, accumulated over centuries of cultural exchange.[80] In other words, Arabo-Andalusian music itself is a transcultural phenomenon, a point to which I will return in Chapter 3.

Basic Features of the Arabo-Andalusian Tradition

Maghrebi music shares several basic features with that of the Mashriq, including the tone system, musical forms, rhythmic modes, improvisatory practices, and instrumentation.[81] However, the Maghreb and the Mashriq employ different melodic modes and terminologies. For example, the Maghrebi *Zidân* mode is called the *Hijaz* mode in the Mashriq. While both the Maghreb and the Mashriq are part of the Arab world, we must be careful not to overgeneralize and equate the musical traditions of the two subcultures. Maghrebi modes, for example, carry

79 Jones 2002, 433.
80 Ibid., 431–435.
81 Touma 1996, xviii.

special ethos and meanings that vary from those of the Mashriq, and some instruments, such as the '*ûd*, have different methods of tuning the strings. While a discussion of the differences between the art music traditions of the Maghreb and the Mashriq are outside the scope of this paper, the unique and subtle regional deviations between the two musical traditions must not be ignored.[82] Given that the term "Arab music" encompasses an extremely wide variety of musical traditions and geographical locations, being aware of these distinctions allows us to speculate and identify the music from which Saint-Saëns appropriated during his time in Algeria, and create a more nuanced and rigorous assessment of the nature of exoticism in *Africa*.

In order to compare Saint-Saëns's *Africa* against the music of the Maghreb, we must first understand the basic features of the Arabo-Andalusian tradition. Although an abundance of literature on Eastern Arab music theory is currently available—ranging from treatises written by Arab music theorists[83] to ethnographic studies compiled by European ethnomusicologists[84] and contemporary monographs on Arab music[85]—scholarly studies devoted to the music of the Maghreb have unfortunately been scarce, especially in English.[86] Perhaps there was no high demand for theoretical treatises since the melodic and rhythmic modes were often orally transmitted from teacher to student. Whatever the reason, Algerian classical music has been, according to Jürgen Elsner, "incompletely transmitted and is only partly understood

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82 Ibid., xviii.

83 al-Fārābī, *Kitāb al-mūsīqī al-kabīr* (10th century); Safi al-Din al-Urmawi, *Kitāb al-Adwār* (13th century); Mīkhā'īl Mishāqā, *al-Risāla al-shihābiyya fi 'l-ṣinā'a al-mūsīqiyya* (19th century).

84 Kiesewetter 1842; Tiersot 1903; Collangettes 1904; Rouanet 1922; d'Erlanger 1930–1959.

85 el-Mahdī 1972; al-Faruqi 1974; Wright 1978; Guettat 1980; Marcus 1989; Touma 1996; Maalouf 2002.

86 European documentation of Maghrebi music began after French colonization of the region, which explains why the majority of the early treatises have been written in French.

theoretically."[87] Mahmoud Guettat identifies just two Arabic treatises dedicated to the theoretical study of Maghrebi music: Muhammad al-Siyâla al-Çafâqusî's "Traite de 'ûd," which outlines how to tune the 'ûd and the 24 *ṭubū'* modes, and al-Shaykh Ghawthî's *Kitâb kashf al-qinâ an âlât al-samâ* (1904), a collection of *nûbat* texts.[88] While no single text gives a comprehensive overview of the theories of melody and rhythm in Maghrebi music, I have consulted French texts from the twentieth century—the fifth and sixth volumes of Rodolphe d'Erlanger's *La musique arabe*, Salah el-Mahdī's *La musique arabe*, and Guettat's *La musique classique du Maghreb*—to piece together a comprehensive overview of the tone system, melodic modes, and rhythmic patterns.[89] I have chosen these sources as their contents complement one another nicely: el-Mahdī's treatise provides an introductory overview of the musical parameters of Arabo-Andalusian music, Guettat's work offers a historical overview as well as detailed research on tuning systems, aesthetics, and the theory behind the melodic and rhythmic modes, and d'Erlanger's treatises contain empirically derived transcriptions of melodic and rhythmic modes. These treatises are most appropriate for a study of Maghrebi art music as they contain sections dedicated entirely to theoretical parameters of Maghrebi music, rather than an overview of general characteristics that are common across Maghrebi and Mashriqi music.[90]

Relying on contemporary sources, however, requires us to acknowledge the limitations of constructing a listening experience specific to the nineteenth century. While Arabo-Andalusian music has been documented and studied by ethnomusicologists extensively,

87 Elsner 2002, 470.

88 Guettat 1980, 116, 202. Unfortunately, neither of these texts are available in English.

89 d'Erlanger 1949, 1959; el-Mahdi 1972, Guettat 1980.

90 For the majority of secondary sources, "Arab music" refers predominantly to music of the Mashriq, and thus studies focusing on music of the Maghreb are less common.

including inquiries into reconstructing medieval performance practice,[91] contemporary secondary sources alone cannot fully uncover what Arabo-Andalusian music would have sounded like in the last decades of the nineteenth century. Other factors such as regional variation, lack of recordings, and orality of the tradition further augments the ambiguity surrounding the musical tradition. Loya echoes a similar concern in comparative cross-examinations of the *verbunkos* and Liszt's Hungarian Rhapsodies, acknowledging a lack of "any reliable record of what preformed *verbunkos*…sound[ed] like in the eighteenth or nineteenth centuries."[92] Our description of Arabo-Andalusian music, therefore, must involve a healthy dose of speculation as we must base our understanding of the tradition on twentieth-century sources rather than on sources preceding or contemporary to Saint-Saëns's composition of *Africa*.

Because the notion of harmony does not exist in the Arabo-Andalusian tradition, the musical structure is governed solely by melody and rhythm.[93] The lack of harmony creates an entirely different texture from that of Western art music. Like other types of Arab music, the texture of Arabo-Andalusian music is heterophonic rather than monophonic, meaning that multiple voices perform the melody simultaneously but with each instrument playing a unique interpretation of the melody based on the performer's taste and on the conventional phrasings for the instrument. The melody is largely improvisatory, which may explain why

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91 Pacholcyk 1993; Reynolds 2009.

92 Loya 2011, 66.

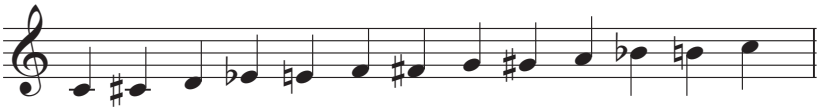
93 The *ṭab'* and the *mīzān* are analogous to the *maqāmat* and the *īqā'at* in Eastern Arab music, respectively. The *ṭab'* and the *mīzān* are not only specific to Arabo-Andalusian music but are also adopted in folk, religious, and other secular genres within the Maghreb.

Arabo-Andalusian music was never notated until the arrival of the Europeans.[94] Because the rhythmic modes provide the temporal organization and guidance for the melody, the melody is aligned not the rhythmic pattern, as opposed to a metrical framework as in Western music.[95]

Melodic Modes of Arabo-Andalusian Music

The Arabo-Andalusian tradition is thus governed by two features: the *ṭab'* (pl. *ṭubū'*), or melodic mode, and the *mīzān* (pl. *mawazin*), or rhythmic mode. The *ṭab'*, meaning "character, nature, and temperament," refers to the melodic mode which forms the basis of pitch organization in Arabo-Andalusian music.[96] Conceptually, the *ṭab'* is very similar to the Eastern Arab *maqām* in the following two ways: firstly, the *ṭab'* refers to the mode and its pitches that are contained within; secondly, each *ṭab'* evokes a specific character or emotion that represents psychophysiological relationships between humans or between humans and objects.[97] The *ṭab'* is not merely an abstract collection of pitches, but a metaphysical and poetic concept that takes into account the affect of the mode onto the listener.

Figure 2.1: Guettat's generalized scale for Arabo-Andalusian music.[98]



94 For inquiries into issues of notating Arab music, see el-Mallah 1997.
95 el-Mallah 1997, 27.
96 Guettat 2002, 446.
97 Guettat 1980, 114–115.
98 Guettat 1980, 274.

Moreover, the *ṭab'* should not be equated with a scale as we understand it in Western music theory. Although Guettat has proposed a generalized scale for Arabo-Andalusian music, as shown in Figure 2.1, such a scale is not an effective indicator of the music's melodic framework for several reasons. Firstly, it is highly unlikely that more than one mode would appear in a single performance.[99] Each *nūba*, for example, is always based on a single *ṭab'*, and thus would only utilize up to seven pitches in the mode. Secondly each mode in Arabo-Andalusian music carries specific rules about the progression of notes and which degrees are allowed to follow one another. Harold Powers has hence suggested that Arab melodic modes occupy the "grey area between a comparatively undifferentiated scale-type 'mode' and a comparatively precisely determined 'tune.'"[100] In other words, each *ṭab'* not only contains a specific collection of pitches, but also embodies a more or less rigid structure for the melody to follow; the *ṭab'* is not only a mode but also a melody. Thirdly, unlike the Western conception of a scale, the first note of the *ṭab'* mode is not necessarily the tonic degree to which the melody returns upon the conclusion of the melody.[101] In fact, in a *ṭab'* the lowest note is not necessarily the most important. For some modes, the fourth or fifth note of the mode can be the most important note of the melody and the pitch to which the melody returns upon its conclusion.[102] For our purposes, the Maghrebi scale is therefore a total collection of pitches that are theoretically available for use in Maghrebi music, whereas a mode indicates the actual notes

99 I use the term "performance" in lieu of "musical work" as there were no fixed notated pieces as in Western art music. Each performance used one melodic mode as a base from which the performer would embellish and improvise.

100 Powers, n.d.

101 Ibid.

102 Reynolds 2007, 134–135.

used in a specific melody or performance.[103]

Another difference between the *ṭab'* and the Western scale is the effect of register on musical expression. While a melody will be recognized as the same melody regardless of the register in which it is played in Western music, the *ṭab'* can evoke different expressions when performed in different registers.[104] According to Guettat, this quality makes "direct contact…indispensable" when learning the *ṭab'* modes: functions of each sound within a mode depend on the intervals between two adjacent pitches and on the register in which the sound is being played, rather than on absolute pitch classes as in Western music.[105] Therefore, the aesthetical purpose of the *ṭab'* mode is not to present each of the pitches with precision in intervals standardized across musical practice, but to evoke a specific ethos associated with the mode. In fact, because the *maqām* tradition has been orally transmitted, Sami Abu Shumays posits, there are slight discrepancies between some of the pitches: the third degree of *maqām rast* in Syria is E-half-flat, whereas the same degree in Egypt is played as a slightly higher pitch. Similar to how speakers of dialects from different regions (e.g. Français québécois vs. Français ivoirien) are able to comprehend one another despite the differences in pronunciation or word choice, the listener recognizes both modes as *maqām rast* when played by a performer.[106] As a result, the ethos associated with the *ṭab'* is still communicated to listeners since they are trained to perceive these affects even when there are small variations in pitch between different

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103 In his ethnographic study of Algerian music in 1913, Bartók observed that local musicians were comfortable with playing melodic phrases, but had difficulty presenting them as an ordered scale. He thus concluded that the concept of the scale was "foreign to Arab musicians" (Parker 208, 416). Moreover, Ruth Davis refers to the Arab musical scale as a "hypothetical general scale," implying that Arab musicians did not conceive their music making in terms of scales (Davis 2004, 12).

104 Guettat 2002, 447.

105 Ibid., 447.

106 Shumays 2009.

performances. We must remain aware of the fact that an investigation into Maghrebi music requires an understanding of melodic modes specific to the traditions of the Maghreb (i.e. *ṭubū'*), rather than an application of *maqām* theories of Eastern Arab theorists.[107]

Tone System of Arabo-Andalusian Music

An overview of a musical tradition's tuning system is indispensable for any discussion of mode. Uncovering the tone system of Arabo-Andalusian music, however, requires some detective work. Guettat notes that Maghrebi sources provide very few clues regarding the types of tuning systems and musical scales employed by Maghrebi musicians. This observation supports Philip Schuyler's claim that theorizing a modal system has "never been of great concern" to musicians and music theorists in the Maghreb.[108] Guettat, however, also argues that there is enough evidence to suggest that the Maghrebi system is similar to that of the tone system employed by Eastern Arab theorists, such as Safi al-Din al-Urmawi (1216–94).[109] Similar to other Arab musical traditions, the construction of the Maghrebi tone system is rooted in the tuning of the strings of the *'ûd*—the primary instrument of Arabo-Andalusian music.[110] While it can be tempting to conclude that the tone system of the Mashriq was subsequently adopted by Maghrebi musicians, we must also take into account the influence of Islamic Spain on Maghrebi musical traditions. To fill this gap, Guettat informs us that the tuning of the *'ûd* in the Maghreb

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107 Jones posits that while the Maghrebi melodic modes "correspond roughly" to their counterparts in the Mashriq, they nevertheless "vary from region to region and have different names" (Jones 2002, 436).

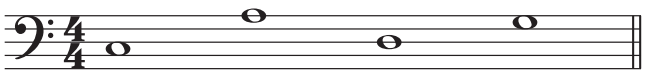
108 Schuyler 1984, 14.

109 Guettat 1980, 120. al-Urmawi's theories on mode are discussed in Wright 1978.

110 The *'ûd* is a short-necked lute with four or five strings that is played with a plectrum and is commonly regarded as the primary instrument in Arab music.

is identical to that of Andalusian music in medieval Islamic Spain.[111] Because the Andalusian tone system is also based on the Pythagorean tuning of the tone system utilized by al-Urmawi, we can speculate that the *'ûd* in the Maghreb has traditionally been tuned according to the Pythagorean system.

Figure 2.2: Tunings of strings on an Algerian *'ûd*.



Dhîl	*Hsîn*	*Mâya*	*Ramal*
1:1	27:16	9:8	3:2

Unlike the *'ûd* of the Mashriq, the strings of Algerian *'ûds*, called the *kwitra*, are tuned not in fourths—as seen in the treatises of al-Fārābī and al-Urmawi—but in interlocking fifths, as shown in Figure 2.2. There are four strings in total: *dhîl*, *hsîn*, *mâya,* and *ramal*. The first string, *dhîl*, is tuned to C3; the second string, *hsîn*, is tuned to A3; the third string, *mâya*, is tuned to D3; and the fourth string, *ramal*, is tuned to G3.[112] In taking the open string of *dhîl* as 1:1, the ratio of the *ramal* string is 3:2. What do we make of the second and third strings? Since the tone system is strictly Pythagorean, we can deduce that the system, in principle, uses the Pythagorean whole-tone (9:8), limma (256:243), and apotome (2187:2048), dividing the octave into twelve unequal semitones. Based on the Pythagorean system, the *mâya* would be tuned at 9:8, and the

111 Ibid., 118. The term "Andalusian music" refers to art music of Islamic Spain, whereas "Arabo-Andalusian music" refers to art music of the Maghreb.

112 The tunings of the strings are not fixed at pitches C, A, D, and G. Guettat notes that the strings can be lowered or raised by a semitone, while keeping the intervals between each of the strings constant (Guettat 2000, 335). Moreover, the tuning of the *'ûd* can vary according to the singer's vocal range. (Guettat 1980, 259).

hsîn at 27:16. The tunings of the four strings are summarized in Figure 2.2.

How are the modes derived from these tunings? d'Erlanger has observed that Arab modes can be produced from octaves, fifths, and fourths as per the Pythagorean system,[113] which is consistent with Guettat's observation that the tuning of the *'ûd* in the Maghreb is based on Pythagorean intervals. Moreover, Guettat suggests that Maghrebi modes resemble Arab heptatonic scales, dividing the octave into five whole tones and two semitones to create a diatonic scale.[114] However, scholars have pointed out the difficulties in expressing the exact pitch values of Maghrebi modes for several reasons. Firstly, Maghrebi musicians are trained to learn the modes through repetition and listening without any reference to a notated scale exercise; thus certain pitches can vary amongst different performances.[115] Secondly, according to d'Erlanger's observations, the Arabo-Andalusian traditions in Tunisia and Morocco lack modal theories that are as mechnical as those of Eastern Arab music and were not aware of the notion of scales and scale degrees.[116] Thirdly, a large discrepancy exists between theory and practice in the performance of the modes due to the largely improvisatory nature of the music.[117] The flexible nature of pitch is exacerbated by the lack of frets on the *'ûd*. These performance practices suggest that the mode was all but a basic framework for improvisation. In fact, listeners were likely to hear an embellished version of the mode to the extent that the

113 d'Erlanger 1949, 3.

114 Guettat 1980, 121.

115 Shumays has argued that deviations in pitch cannot be expressed as ratios, and that ratios provide little information for determining the reasons for why specific intonations are adopted by musicians (Shumays 2009).

116 d'Erlanger 1949. 338.

117 Schuyler 1984, 14.

"actual melody disappears."[118] The resulting inconsistency in pitch has made it difficult for the modes to be notated with complete accuracy. To account for these differences, Guettat adopts additional accidentals for deviations in pitch, shown in Figure 2.3. According to Guettat's system, a given pitch in a mode can deviate from its written form by 20, 30, or 40 percent, reflecting the incompatibility of a twenty-four-tone equal temperament system in musical practice, proposed most famously by Lebanese music theorist Mīkhāʾīl Mishāqā in the nineteenth century.

Figure 2.3: Guettat's accidental markings for pitch deviations in Maghrebi modes.[119]

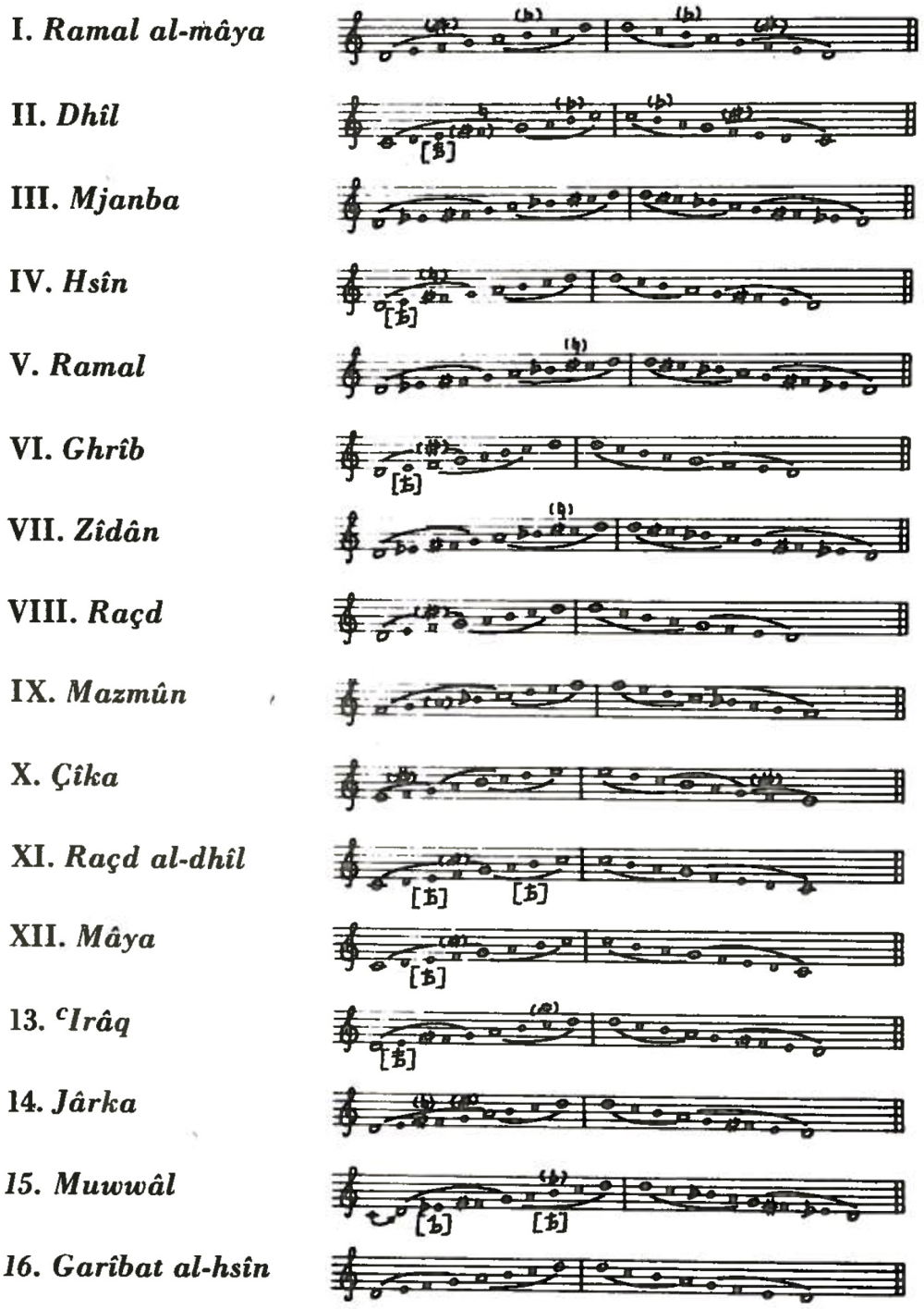
pour abaisser de 20 %	Pitch lowered by 20%
pour abaisser de 30 %	Pitch lowered by 30%
pour abaisser de 40 %	Pitch lowered by 40%
pour élever de 20 %	Pitch raised by 20%
pour élever de 30 %	Pitch raised by 30%
pour élever de 40 %	Pitch raised by 40%

While there is evidence to suggest that the Arabo-Andalusian modes are constructed from the Pythagorean system, we must also keep in mind that they were never notated precisely and meticulously until Europeans began studying the tradition in the nineteenth century. Therefore, the modes notated in the Figures should be interpreted as skeletal frameworks with room for individual variations and discrepancies.

In the tenth century, there were 24 modes in the Arabo-Andalusian tradition, one for

118 el-Mallah 1997, 23.
119 Guettat 1980, 263.

Figure 2.4: Guettat's 16 Algerian modes in *La musique classique du Maghreb*.[120]



120 Guettat 1980, 268–269.

each hour of the day and each associated with a specific seasonal or emotional characteristic.[121] The number of modes used by musicians fell below 24 by the nineteenth and twentieth centuries, however, so all modes have not been preserved. Guettat, for instance, provides a list of 16 Algerian modes in his monograph, shown in Figure 2.4.[122] The accidentals in parentheses indicate an optional accidental, whereas an accidental in brackets indicates that the written note is adjusted by an interval less than a semitone. Pitches that can be omitted in performance are enclosed in parentheses. The majority of the modes in Arabo-Andalusian music—as well as in Arab music in general—are heptatonic and can be divided into two segments: a tetrachord spanning a perfect fourth and a pentachord spanning a perfect fifth, as shown in Figure 2.5.[123] As indicated by the slurs in Figure 2.4, the tetrachord can either form the bottom of the mode, as in the *Ramal al-mâya* mode, or the top of the scale, as in the *Zidân* mode. Moreover, many of the modes resemble a diatonic scale, composed of seven distinct tones whose intervals divide into five whole-tones and two semitones, a characteristic that undoubtedly derives from Eastern Arab music. In fact, some of the modes are quite similar to those of Western music. For example, in its most basic form, the intervallic structure of the *Raml al-mâya* mode, shown in Figure 2.6, is similar to the natural minor scale in Western music, whereas the *Mazmûn* mode, shown in Figure 2.7, is structured similarly to the major scale. The intervals of the *Garîbat al-hsîn* and *Hsîn* modes, shown in Figures 2.8 and 2.9 respectively, are also similar to those of the Dorian and Mixolydian modes, respectively. We will return to the intervallic structure and heptatonic

121 Schuyler 1984, 14.

122 Guettat 1980, 268–269.

123 Guettat notes that modes in Maghrebi music were not commonly conceived as a combination of two *jins* (genres) spanning a fourth or a fifth, as in the Mashriq (Guettat 1980, 339).

construction of the Algerian modes at a later point to discuss how these characteristics determine which modes were appropriated by Saint-Saëns in *Africa*.

Figure 2.5: Structure of Arab and Arabo-Andalusian modes.

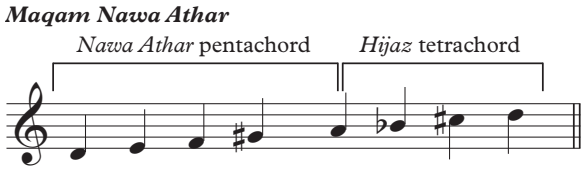


Figure 2.6: *Raml al-mâya* mode.

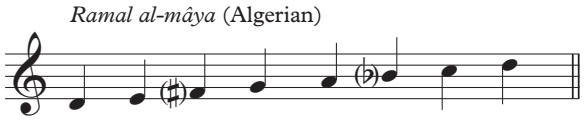


Figure 2.7: *Mazmûn* mode.

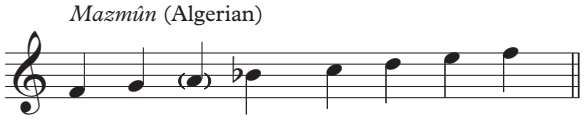


Figure 2.8: *Garîbat al-hsîn* mode.

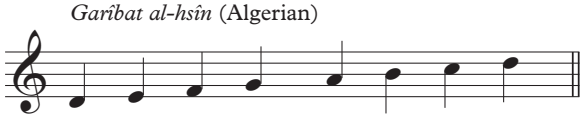
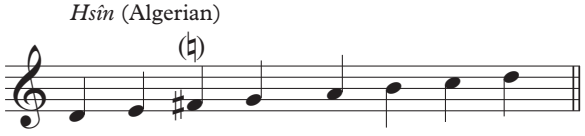


Figure 2.9: *Hsîn* mode.[124]



While it is possible to identify a distinct repertoire of modes used in

[124] According to Guettat, the E is lowered by 30 percent.

Arabo-Andalusian music, we must keep in mind that scholars have not always agreed on the number of modes that are used in Arab music. This is due not only to a lack of notation, but also to a disagreement of whether to count modes that are not commonly used in performance.[125] Therefore, it is possible that there are other modes that have not been included in Guettat's list. For our purposes, Guettat's 16 Algerian modes, shown in Figure 2.4, will be used to assess the similarities between Saint-Saëns's representation of North Africa and Arabo-Andalusian music in the late-nineteenth century.

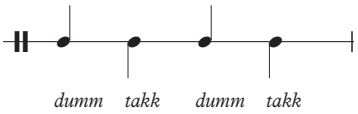
Rhythms of Arabo-Andalusian Music

The next phase of cultural analysis will examine the degree to which the rhythms in *Africa* are consistent with those of Arabo-Andalusian music. Rhythms in Arabo-Andalusian music are organized into rhythmic modes called *mīzān* (pl. *mawazin*)—which are analogous to the *īqā'at* in Eastern Arab music—and performed on *darbukka* (goblet drum) and *tar* (tambourine). In a *nūba* performance, each of its five movements employs a separate *mīzān* mode. As in Arab music, the *mawazin* modes are based on metrical units used in poetry—the *sabab*, *watad* and *fâçila*—and all combinations of rhythms can be derived from these three basic types.[126] Musicians learn rhythms by categorizing all beats into two mnemonic syllables taken from the sounds of the *darbukka* drum: the *dumm*, a low sound produced by striking the center of the drum, and the *takk*, a high sound produced by striking the rim of the drum.[127] To

125 Marcus 1989, 331.
126 Guettat 1980, 82–83.
127 Ciantar 2012, 35.

differentiate between the beats, musicians must also learn the accentuation patterns in each of the rhythmic modes.[128] In Western notation, a note with the stem pointing upward represents the *dumm*, whereas a note with the stem pointing down shows a *takk*, as shown in Figure 2.10.

Figure 2.10: *Dumm* and *Takk* rhythms.



As with melodic modes, there exists a discrepancy between the basic forms of the *mawazin* in theory and in practice. Given the improvisatory and ornamental nature of Arabo-Andalusian music, the performer will often add embellishments to the basic *mīzān* pattern, adding additional beats and subdividing existing beats but still maintaining the original accentuation patterns. Similar to a performance to the melodic modes, ornamentation was permitted to the extent that listeners could perceive the underlying rhythmic mode. Therefore, the modes notated by scholars such as d'Erlanger, el-Mahdi, and Guettat would not have been heard in their skeleton forms in practice; the *mīzān* is merely an "approximate framework."[129]

Sylvia Parker suggests that rhythms in Arab music are often *additive*, whereas Western rhythmic patterns are *divisive*.[130] An additive rhythm consists of unequal rhythmic patterns that

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128 The concept of differentiating between identically spaced beats through accentuation was first proposed by al-Fārābī in the tenth century. Al-Fārābī also adopted the beat as the most fundamental unit of rhythm, taking a Newtonian approach to rhythm that predates Kirnberger's *akzenttheorie* by at least eight centuries.

129 el-Mallah 1997, 26.

130 Parker 2008, 439.

are combined to form a cohesive metric pattern. An additive 4/4 pattern would, for example, be comprised of uneven patterns of 3 + 2 + 3 eighth-note beats, whereas a divisive 4/4 pattern would divide evenly into four equal parts of two eighth-note beats. This is not to say that the majority of Arabo-Andalusian rhythms are additive; rather, the prevalence of additive rhythms relative to Western music must have made an impression on Western musicians. Some *mawazin* modes, such as the *Al-Draj* mode shown in Figure 2.11a, are evenly divided into an equal number of beats with no trace of "limping" patterns and with accents placed consistently on every two beats. Other modes such as *Murassa'* and *Nusf nim dawr*, shown in Figures 2.11b and 2.11c respectively, feature additive rhythms that alternate between groupings of two and three beats.

Figure 2.11a: *Al-Draj* rhythmic mode.[131]

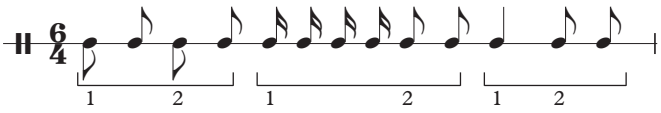


Figure 2.11b: *Murassa'* rhythmic mode.[132]

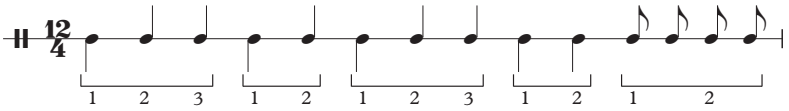
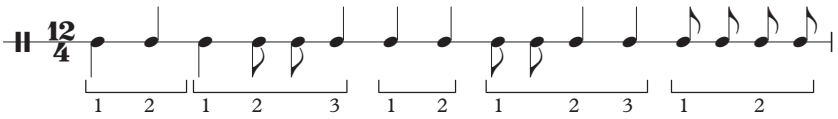


Figure 2.11c: *Nusf nim dawr* rhythmic mode.[133]



131 d'Erlanger 1959, 151. The number of rhythmic modes documented in d'Erlanger's sixth volume of *La musique arabe* is extensive and thus a full list cannot be provided in this paper. See Chapter 3 of Book 1 in d'Erlanger 1959.

132 Ibid., 69.

133 Ibid., 68.

One of the defining characteristics of Arabo-Andalusian rhythm is its lack of a regular meter. While twentieth-century European sources by d'Erlanger, el-Mahdi, and Guettat use Western time signatures to interpret each mode (e.g. 4/4, 6/8, etc.), Maghrebi musicians do not conceptualize rhythm in relation to a metrical structure. Instead, the metrical structure is governed by the *mawazin* pattern, which is repeated cyclically by the percussion instruments to accompany a melodic line performed by the voice or stringed instruments. Occasionally, the interaction between the melody and rhythmic accompaniment results in a "misalignment" between the melodic phrase and the rhythmic pattern, a phenomenon identified by both Francesco Salvador-Daniel's 1867 treatise on Maghrebi music and Bartók's 1913 study of Algerian folk music. Salvador-Daniel observes a "spirit of independence…was shown in the instruments of percussion, and so it often happens that the song is accompanied by a rhythm which appears entirely opposed to that necessitated by the melody…sometimes while the melodic rhythm is *three and three*, the rhythm of the drums is *two and four*, or again, *two, two* and *two*" (emphasis in original),[134] whereas Bartók identifies additive rhythms that do not align with divisive patterns as well as a simultaneity between a two-bar rhythmic pattern and seven- and four-bar melodic phrases.[135] These observations draw attention to the irregularity between the phrase structures of melody and rhythm, a feature more common in Maghrebi music than in Western art music. Salvador-Daniel's and Bartók's accounts suggest the possibility that Western listeners perceived the "misalignment" as one of the most salient features of the music, based on

134 Salvador-Daniel [1867] 1914, 138–139.

135 Parker 2008, 441.

their expectation of four-bar phrase groupings and divisive rhythms that align with the formal structure of the melody. We must keep in mind, however, that these reports are based on the perceptions of Europeans who had no training in Maghrebi music, and thus they are only capable of illustrating how the metrical structure was interpreted by Europeans, not how meter was conceptualized by Maghrebi musicians.

Problems of Translation

Before tracing the melodies and rhythms of *Africa* to Arabo-Andalusian music, we must first foreground our discussion by establishing possible limitations of transmitting musical elements from one tradition to another—a major issue that arises in any discussion of cultural appropriation in Western music. In her discussion of the *alla turca* style, Mary Hunter suggests that intercultural musical borrowing amounts to a *translation*, and hence involves a certain degree of interpretation. To invoke an analogy from writing, intercultural musical borrowing is akin to paraphrasing rather than copy-and-pasting. Moreover, the interpretation of the borrowing depends largely on the "nature of the perceptions on which the translation is based."[136] In other words, the *alla turca* style is not a meticulous imitation of Turkish janissary music, but is a "translation of a perception of Turkish music."[137] Loya brings a similar idea to his definition of transculturation, suggesting that a transcultural analysis must inquire "what was lost, retained, or changed, and to interpret the contexts for such omissions and

136 Hunter 1998, 48.
137 Ibid., 48.

modifications."[138] To apply this to *Africa*, we can similarly claim that the use of exotic signifiers and themes based on Maghrebi modes amounts to a *translation* and recontextualization of the actual modes, rather than a non-mediated transmission from one musical tradition to another. Despite the efforts of Saint-Saëns to collect Maghrebi music and incorporate them into his music, *Africa* is a European work, as opposed to a North African work, given that the instrumentation, notation, and tone system adhere to the practices of Western art music. Despite incorporating Arabo-Andalusian modes and additive rhythms, these parameters are ultimately situated under a Western tone system, instrumentation, and notation. Similarly to a Parisian visiting the Exposition Universelle, Saint-Saëns is looking outward from France to North Africa, rather than looking within from North Africa.

What problems of translation arise in the composition of *Africa*? There are two main issues that stand in the way of composers attempting to borrow Maghrebi elements into Western pieces: differences in tuning systems and the opposition between fixed and improvisatory music. Each of these issues poses challenges for the composer to imitate Arabo-Andalusian music without compromising its essential features when adapting them to the Western musical language.

The first problem lies in the discrepancy between the tuning systems of Western art music and Arabo-Andalusian music. To borrow an Arabo-Andalusian mode for use in Western music, the Pythagorean intervals must first be converted into equal-tempered intervals. As indicated by the three microtonal accidentals in Guettat's and d'Erlanger's list of modes,

[138] Loya 2011, 66.

theorists and ethnographers have attempted to notate Arabo-Andalusian modes as accurately as possible using Western notation, even though there are some pitches that simply do not exist in the Western system. Therefore, borrowing an Arabo-Andalusian melody requires the Western composer to approximate some of the pitches. For example, the second degree of the *Hsîn* mode, which is notated as an E lowered by 40 percent according to Guettat,[139] is approximately 122 cents.[140] In equal temperament, this pitch is neither an E (200 cents in equal temperament) nor an E♭ (100 cents in equal temperament) and thus the composer must make a decision as to which Western pitch will approximate for its "real" pitch in the Arabo-Andalusian tone system. In other words, when scholars identify *ṭab'* or *maqām* modes that have been appropriated in Western art music, they are automatically assuming that the mode has been translated for use in Western music and its subsequent pitches have been converted into equal tempered tones.[141] An Arabo-Andalusian mode cannot be integrated into a Western work without going through a process of translation. To invoke an analogy from the culinary arts, it is similar to how chefs would find it difficult to replicate authentic sushi in Europe by relying on European ingredients (medium-grain rice and wine vinegar) rather than Japanese ingredients (sticky short-grain rice and rice vinegar); no matter how hard the chefs try, they will only be able to create a European adaptation of a Japanese dish. When identifying similarities between certain melodies and Arab modes, we are only searching for a "curve of best fit," as the differences in tuning make it impossible to use the modes within the Western

139 Guettat 1980, 268.

140 9:8 whole tone (203.9 cents) lowered by 40% is approximately 122.3 cents.

141 Rice (1999) has observed a similar phenomenon in the *alla turca* style, as Western composers represented Turkish music with "quick alterations of the major and minor modes" rather than appropriating the Turkish tonal system in its entirety (48).

tone system. In sum, we are limited to talking about a translated version that has been adapted and incorporated into the Western musical language.[142]

Differences in performance practice can also be a major issue in appropriating Arabo-Andalusian music for use in Western art music. In particular, the opposition between the fixed notation of Western art music and the improvisatory and orally transmitted Arabo-Andalusian music can make the two traditions incompatible with one another. While most Western art music is notated with little room for improvisation, the Arabo-Andalusian tradition is mostly improvisatory and was not notated until the arrival of the Europeans in the nineteenth century. Every performance of a work of Western art music will contain the same notes, but every performance of Arabo-Andalusian music will consist of a different melodic line. From an Arabo-Andalusian perspective, therefore, it would be quite unnatural for an Algerian melody to be transcribed and notated note-for-note and replicated as written for every performance. Moreover, the improvisatory nature of Arabo-Andalusian music and the intricacy of melodic ornamentation make the tradition quite unresponsive to Western notation, as the melody is not structured according to a consistent metrical pattern.[143] The fact that Arabo-Andalusian and Egyptian melodies are notated and imbedded in the score diminishes the authenticity of the borrowing, as the melody is reduced to a Western adaptation that fails to import essences of the melody that cannot be expressed through notation: the ethos of the mode,

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142 Because the adaptation of Arab and Arabo-Andalusian modes "corrects" any microtones to fit the 12-tone equal temperament system, some appropriated modes end up being quite similar to those representing other parts of the world. For example, the melody in *Africa* resembling the *nawa âthar* mode contains the same intervallic structure as the Hungarian-Gypsy scale (D-E-F-G♯-A-B♭-C♯-D). Adapting non-Western modes to Western music can therefore conflate inter-regional differences in modal structure.

143 In his discussion of Arab music, Erich von Hornbostel notes that notation is "incapable of faithfully reproducing musical practice." (el-Mallah 1997, 18). The same argument can be made for Arabo-Andalusian music. For a more detailed discussion of the politics of notation, refer to Ellingson 1992.

timbre of the instruments, and the ephemerality of the melody. Because the pedagogy of the Arabo-Andalusian musical tradition is largely dependent on listening and repetition, the use of fixed notation would be, to quote el-Mallah, "contradictory to its very nature."[144]

While many qualities associated with expressivity and timbre are lost during the translation process, there are several passages in *Africa* that feature improvisatory melodies and rhythmically free sections that are analogous to those of the Andalusian *nūba* form. For example, the short piano solo section in measures 39–41 contains no fixed meter and the melody comprised of scalar passages and arpeggiations draws comparisons to an improvised cadenza often used in piano concertos. Similarly, the chromatic piano solo in measures 260–267 evokes a free-form, improvisatory melody that connects one theme to another. There are other times when the piano solo improvises over a statement of a theme in another voice. For example, in bars 139–156, the strings continuously repeat theme C while the piano enters with a rhythmically uneven and highly ornamented scalar passage. The repetition of the two-measure theme by the strings functions as a rhythmic ostinato, juxtaposing against vigintuplet (i.e. twenty notes) and tredecuplet (i.e. thirteen notes) Figures played by the piano in measures 144–150. The wide range of both the piano melody and the rhythmic indivisibility of the tuplets evokes the style of a rhapsody or of virtuosic improvisation. These unevenly divided tuplets, combined with the underlying two-bar melodic ostinato in triple meter, creates a texture that is analogous to that of *nūba* performances: the rhythmic ostinato in the strings functions as a *mawazin* whereas the piano melody imitates an improvised *nūba* melody in free rhythm. Both

144 el-Mallah 1997, 74.

the strings and the piano solo remain in the *Hsîn* mode until measure 156 without borrowing any notes from other modes, which is another essential feature of a *nūba* suite.[145] While scholars have compared the improvisatory nature of *Africa* to that of a rhapsody,[146] one can also draw parallels with the Arabo-Andalusian *nūba*: both genres are characterized by the lack of a definite form in their performances and by their focus on improvisatory solo parts.

Arabo-Andalusian Modes in *Africa*

I will now explore how melodic parameters of Arabo-Andalusian music manifest themselves in Saint-Saëns's *Africa*. In the nineteenth century, composers have relied on a variety of ways to represent the exotic in their works, both musical and non-musical.[147] As discussed earlier, a useful paradigm to consider for a purely instrumental work such as *Africa* is Locke's Exotic Style Only Paradigm.[148] In invoking this paradigm, previous scholarship has sought to explain how and why certain musical signifiers have been successful in portraying a non-Western locale as exotic. However, these inquiries alone cannot fully answer the question of why certain exotic motives were preferred over others. Why, for example, did Saint-Saëns opt to highlight the augmented second interval as opposed to other intervals prevalent in North African music? To answer this question, we must compare *Africa* against the specific musical tradition that Saint-Saëns has appropriated. Unfortunately, there have only been a handful of scholars who have identified specific elements of North African music within Saint-Saëns's

145 While each movement of a *nūba* uses a different *mawazin*, the *ṭab'* remains constant throughout the entire performance.

146 Rees 1999, 289; Pasler 2012b, 247.

147 For a more detailed discussion on the methods through which nineteenth-century composers have portrayed non-Western cultures as an exotic Other, consult Locke 2009.

148 Locke 2009.

works.[149] For example, Locke notes the similarity between the oboe melody in the beginning of the Bacchanale of *Samson et Dalila* and the Eastern Arab *Hijaz kar* mode (Figure 2.12),[150] and Ladjili argues that mm. 9–12 in the second movement of Saint-Saëns's Piano Concerto No. 5, Op. 103, shown in Figure 2.13a, is constructed upon the Egyptian *Madmî* mode (Figure 2.13b).[151] According to these authors, such overlaps between Western and Arab music add legitimacy to the claim that an active borrowing exists in Saint-Saëns's music, rather than a mere passive influence.[152]

Figure 2.12: Mashriqi *Hijaz kar* mode, beginning on A.

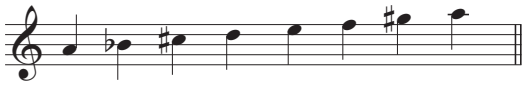
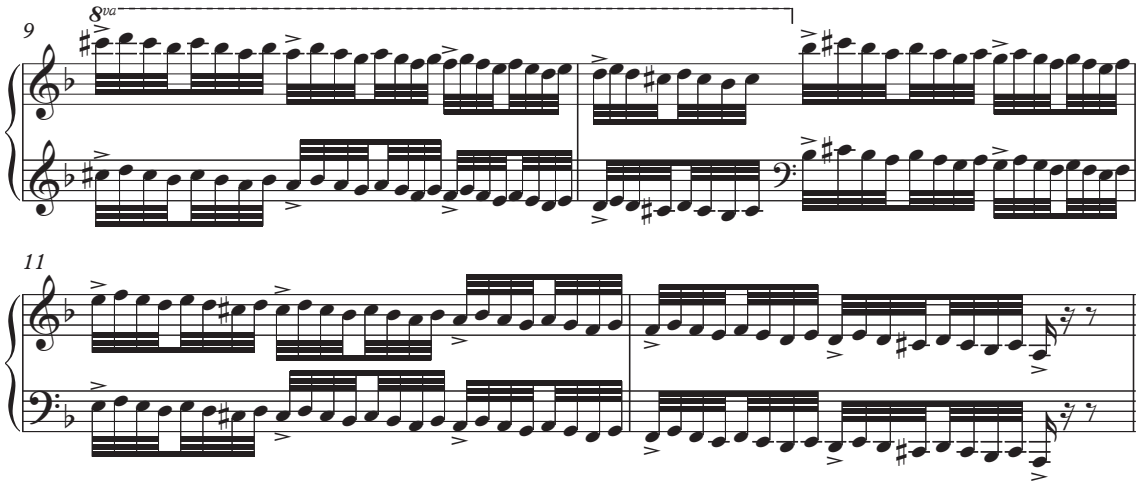


Figure 2.13a: Saint-Saëns, Piano Concerto No. 5, Op. 103, ii, mm. 9–12.



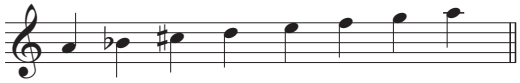
149 James (1990) has identified Malagasy borrowings in Ravel, whereas Rice (1999) has identified traces of Turkish janissary music in eighteenth-century music.

150 Locke 1991, 267.

151 Ladjili 1995, 28.

152 Ibid., 24.

Figure 2.13b: Egyptian *Madmî* mode, as seen in Piano Concerto No. 5, Op. 103, ii.



In addition to identifying traces of Arabo-Andalusian music in Saint-Saëns's *Africa*, I will also explore the accuracy of the cultural representation and discuss which elements of Arabo-Andalusian music were integrated into the work and which were left out. In undertaking this approach, we must keep in mind that any comparison between Western and Maghrebi music is based on speculation, and I am in no way suggesting that *Africa* is a Maghrebi work or that Saint-Saëns intended to quote specific modes from the Arabo-Andalusian repertoire. Instead, what I would like to propose is that Saint-Saëns imbeds elements of Arabo-Andalusian music within the language of Western harmony. Metaphorically, this method of appropriation allows Saint-Saëns to experience the exotic while observing the Maghreb from afar, similar to how French citizens were able to witness performances of the Algerian *nūba* at the 1889 Exposition Universelle and still return to the "comfort of Paris by dinner time."[153] When engaging in a cultural analysis of a Western work, we must not hasten ourselves into making forceful conclusions about the nature of appropriation. Why is such an undertaking necessary? The cultural component of musical analysis—certainly indispensable for a discussion of *Africa*—complements a Western music theoretical analysis, which "tends to conceal non-Western elements." [154] In order to engage in a fruitful discussion of non-Western

153 Revuluri 2007, 36.

154 Loya 2011, 5.

influences on Western art music, we must, as Agawu has suggested, balance a theoretical analysis with a cultural one.[155]

Because any influence from Arabo-Andalusian music is ultimately integrated into a Western musical idiom, the language used in the analysis will primarily employ Western terminology. In discussing the resemblance between Arabo-Andalusian modes and the Western Western notation, for example, the label "augmented second" pertaining to the *Zidân* mode represents the interval as perceived by European composers, and does not apply to the original intervallic conceptualization amongst Algerian musicians. The interval should also be interpreted not as an absolute value (i.e. 300 cents) but as a distance between two adjacent pitches of a mode. Because the Arabo-Andalusian tone system is—for reasons discussed previously—more fluid compared to that of Western art music, the modes and intervals will be discussed under the assumption that they have been transplanted into the Western tone system.

My discussion of Arabo-Andalusian melodic modes in *Africa* will focus on the pitch content of its themes, all of which are shown in Figure 2.14. Pasler suggests the form of the work is "rhapsodic" and strongly tied to its thematic content, with each section containing a separate theme.[156] Each theme is pronounced by either a heavy doubling of the melody (e.g. melody of theme D held by the flute, oboe, cornet, violins and cello) or by a sparse accompanimental texture (e.g. theme B). Pasler's formal division is further supported by clearly demarcated and abrupt transitions between each thematic section, the mechanisms of which I will discuss in Chapter 3. Table 2.1 compares the pitch content of five of the ten themes in *Africa*—summarized

155 Agawu 2006.

156 Pasler 2012b, 289.

in Figure 2.14—with their analogous *ṭab'* modes in Arabo-Andalusian music. Themes C and G, characterized by a deviation from the standard major or minor modality, can be linked to *ṭab'* modes in Arabo-Andalusian musical practice. Firstly, theme C and its piano accompaniment, shown in Figure 2.15, contain a similar intervallic structure to that of the *Muwwâl* mode. Secondly, theme G, shown in Figure 2.14, is analogous to the *Zidân* mode, one of the core *ṭab'* modes used in the *nūba* repertoire. These similarities show that some themes in *Africa* indeed show a strong resemblance to melodic modes in Arabo-Andalusian music.

Themes A and G both utilize the augmented second interval, which is undoubtedly the most common signifier for the Arab world: between B♭ and C♯ in theme A and between E♭ and F♯ and B♭ and C♯ in theme G. While scholars have suggested that the augmented second interval was a European invention based on a widely held stereotype, Ladjili questions this assertion, arguing that the Western interval is a "legitimate" signifier for Arab music as the *sound* of the interval is fairly common in Arab modes.[157] For example, Bartók, in his 1913 ethnographic study of Arab music in Biskra, has recorded and transcribed a number of vocal pieces that utilize intervals evoking a Western augmented second. Bartók's findings suggest that the sonority of augmented second intervals was quite ubiquitous in Maghrebi music.[158] Tracing the pitch content of themes A and G to authentic Maghrebi modes provides support to Ladjili's idea that the augmented second can indeed be derived from the music being represented, and will help us understand why Saint-Saëns and other European composers opted to use the interval as a go-to signifier for Arab music.

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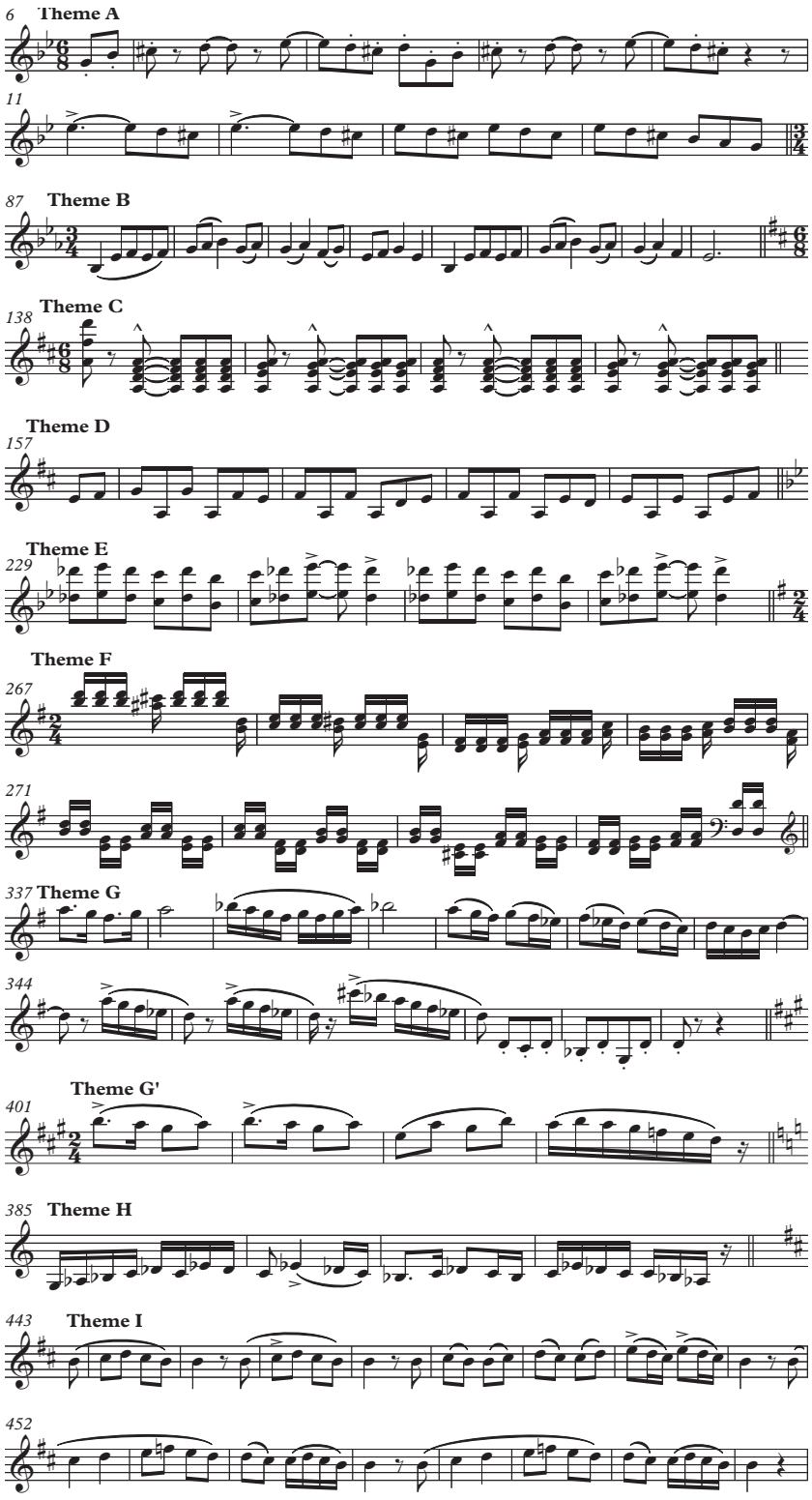
157 Ladjili 1995, 14.

158 Bartók 1997, 45–76.

Figure 2.14: Overview of themes in *Africa*.[159]



159 Table adapted from Pasler 2012b, 240.

Table 2.1: Comparison between Maghrebi and Arab modes and themes in *Africa*.

Theme A	G	A	B♭	C#	D	E♭	
G *Nawa athar*	G	A	B♭	C#	D	E♭	F#
Theme C	D	E♭	F#	G	A	B♭	C
D *Muwwâl*	D	E♭	F#	G	A	B♭	C
Theme G	D	E♭	F#	G	A	B♭	C#
D *Zidân*	D	E♭	F#	G	A	B♭	C#
Theme G'	A	B		D	E	F	G#
A *Saba*	A	B	C#	D	E	F	G#

Figure 2.15: Theme C, mm. 142–146.

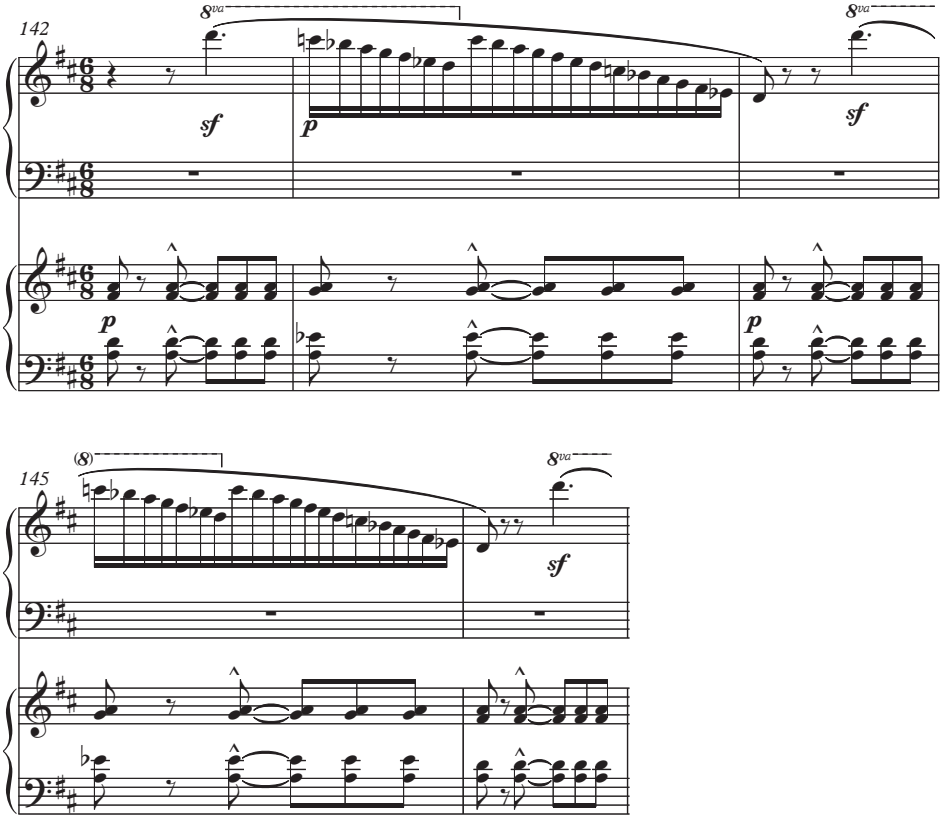
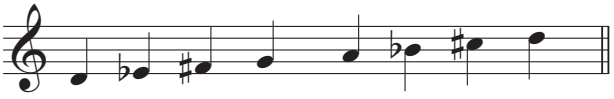


Figure 2.16: *Zidân* mode.



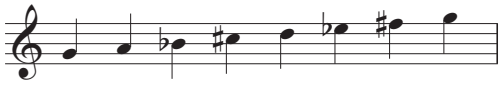
The augmented second is not merely a faux signifier of Arab music for European audiences, but the interval can in fact be directly traced to the melodic modes in Arabo-Andalusian music and thus function as an accurate representation of Maghrebi music. In theme G, the augmented second interval is repeated six times, as shown in Figure 2.14. The strong emphasis on the augmented second interval ensured that European audiences would recognize the theme as one that represents the music and culture of North Africa. While this melody in particular is Saint-Saëns's original creation, the intervallic content can certainly be traced to that of the *Zidân* mode (D-E♭-F♯-G-A-B♭-C♯-D), shown in Figure 2.16. The *Zidân* mode is one of three modes to contain two augmented second intervals: between the second and third degrees and between the sixth and seventh degrees.[160] While Locke has dismissed the interval of the augmented second as an all-purpose musical signifier that could be used to signify a Jewish, Middle Eastern or Eastern European music, the similarity between the intervallic structure of the *Zidân* mode and that of theme G establishes a link between Western and Arabo-Andalusian music and provides an explanation as to why a repetition of the augmented second can signify the representation of the Maghreb.

Not all melodies that utilize the augmented second, however, are traceable to Arabo-Andalusian modes. For example, there are no Arabo-Andalusian modes that contain an analogous intervallic structure to that of theme A, despite the fact that the melody is based on a tune that Saint-Saëns had heard while in Biskra, Algeria.[161] When rearranged in ascending

[160] The other modes are *Mdjanba* and *Ramal*. The *Mdjanba*, *Ramal*, and *Zidân* modes are all variations of the Eastern Arab *Hijaz* mode.
[161] Pasler 2012, 238.

order, the pitches of theme A are G-A-B♭-C♯-D-E♭.[162] This melody is characterized by the augmented second interval between B♭ and C♯, which are the third and fourth degrees of the mode. According to Guettat's list of Algerian modes, the augmented second appears most often between the second and third scale degrees, rather than between the third and fourth scale degrees, as in theme A.[163] Does this mean that there is no discernible link between theme A and Maghrebi music, and thus the mode is a collection of notes imagined by Saint-Saëns to be authentically Maghrebi? Temporarily shifting his focus away from Algeria, Ladjili has proposed an alternative analysis based on the fact that sections of *Africa* were composed in Cairo, Egypt. Specifically, Ladjili suggests that the intervallic structure of theme A bears a close resemblance to the *Nawa âthar* mode, shown in Figure 2.17, which originates in eastern Arab music theory and is commonly used in Egyptian art music.[164] Similar to the Algerian *Zidân* mode, the intervallic structure of the Eastern Arab *Nawa âthar* mode—G-A-B♭-C♯-D-E♭-F♯-G—contains two instances of augmented second intervals, albeit between different scale degrees. Ladjili's analysis therefore implies that the melody of the theme appropriates from music of the Mashriq, rather than of the Maghreb.

Figure 2.17: *Nawa âthar* mode.



[162] In theme A, there are no pitches given between E♭ and G.

[163] Although the *muwwâl* mode appears as though the augmented second interval lies between the third and fourth scale degrees, the mode actually begins on D, with the first pitch C acting as an anacrusis.

[164] Ladjili 1995, 27.

What does the use of an Eastern Arab mode—in a piece about North Africa—tell us about the nature of cultural appropriation in *Africa?* The resemblance between the opening of *Africa* and the *Nawa âthar* mode does not change the premise that there exists a link between *Africa* and Maghrebi music. The inadvertent appropriation of an Egyptian mode in a musical work about the Maghreb, while seemingly out of place under contemporary standards, can be contextualized and explained given the technological circumstances and European stereotypes of Arab music in the late nineteenth century. Based on this anomaly, we can speculate several reasons for why the opening theme of Africa is more Egyptian than Algerian. Firstly, this particular type of appropriation suggests that Saint-Saëns was first and foremost not concerned with or unable to distinguish between the subtle nuances of Arabo-Andalusian and Egyptian art music.[165] It is quite plausible that to an untrained ear, the distinction between Egyptian and Arabo-Andalusian music was less obvious. Secondly, this mismatch highlights the oft-cited incompatibility between performance practice and theory, and raises the possibility that the melody perceived by Saint-Saëns in Biskra deviated from the theoretical mode as notated by Guettat. Moreover, given that modal practices in the Maghrebi and Eastern Arab music were orally transmitted, it is possible that the improvised melody contained pitches that are not part of the original mode. Thirdly, the original melody may have come from a folk tradition performed by Berber musicians that does not follow the modal practices of Arabo-Andalusian music. Given that Maghrebi folk music has not been documented and theorized to the full extent of Arabo-Andalusian music or Eastern Arab music, it is difficult to claim with certainty

[165] Bartók's ethnographic study in 1913 was one of the first to take advantage of recording technology to record and transcribe Algerian songs and melodies.

whether the melody of theme A closely matches the musical practice of Berber folk traditions. If we assume that the melody was accurately transcribed by Saint-Saëns, we can speculate that perhaps folk traditions had adopted both the Maghrebi and Eastern Arab modes in their performances, which is not unlikely given that both traditions are rooted deeply in the Eastern Arab tradition and thus share many common traits—among them the sonority of the augmented second interval. Lastly, another possible reason for the mismatch is simply human error. Before the standardization of ethnomusicological research methodologies and development in recording technology, composers and musicians did not have the option of playback and thus relied solely on their ear to transcribe unfamiliar melodies. Therefore, it is plausible that Saint-Saëns may have misunderstood the melody, notated the tune incorrectly, or even altered the melody either to his own liking or to accommodate an underlying harmonic progression.

Moreover, the appropriation of both Algerian and Egyptian modes into the piece raises the possibility that Saint-Saëns was not too concerned about the subtle regional differences that exist within the various musical traditions of the Maghreb. A telling example is the naming of *Africa*: rather than concentrating on a specific region or culture within North Africa—the Berbers, Nubians, or Egyptians, for example—Saint-Saëns "conflates all regional variation" by using the name of the continent as the title of the piece.[166] In fact, after completing *Africa*, Saint-Saëns penned to his publisher that the piece aimed to "put on display an Africa that is original."[167] Saint-Saëns was therefore projecting his perception of North Africa onto the

166 Revuluri 2015, 244-45.
167 Pasler 2012, 232.

work, creating an amalgam of North African tunes he had collected during his time in the French colonies. For Saint-Saëns, it did not matter that an Algerian and a Tunisian melody were both used in the same piece to represent "Africa." Through an overgeneralized naming of the piece, the identity of North Africa as interpreted by Saint-Saëns is compressed into a variety of musical gestures from the region.

While overlaps in the intervallic structure between Saint-Saëns's themes and Arabo-Andalusian modes establish a link between Western and Maghrebi music and provide an explanation for why certain themes in *Africa* are perceived as "exotic," other factors contribute to the evocation of an exotic "Other" in *Africa*. For example, instrumentation is another effect through which a theme can acquire its indexical meaning as a signifier for North Africa. For example, theme G is always accompanied either by the cymbals (mm. 338 and 340) or the triangle (mm. 350 and 352). In fact, the use of these two percussion instruments for exotic effect had already been a familiar technique for eighteenth-century composers, and thus did not have a direct link to Algerian music nor signify the representation of Algerian or Arab music. Hunter notes that the use of the cymbals was one of the most common methods for imitating Turkish janissary music: the cymbals were invented in Turkey, played by Turkish *mehter* ensembles, and later introduced into Western music.[168] The triangle, which was a "Western addition" but adopted by Western composers nonetheless to imitate the timbre of the Turkish crescent, was used equally frequently to allude to Turkish janissary music.[169] Therefore, the cymbal and the triangle inherited their semiotic meanings as exotic signifiers from

168 Hunter 1998, 45.
169 Ibid., 45; 318fn8.

eighteenth-century imitations of Turkish janissary music, rather than from a borrowing of Arabo-Andalusian musical practices or other types of Maghrebi music. Although the cymbal and triangle function as exotic signifiers in *Africa*, the instrumentation is more a European construct rather than an accurate borrowing from Maghrebi music. While few scholars have examined the authenticity of secondary parameters, we must not forget that exoticism is a multidimensional phenomenon, and thus various factors contribute to the perception of a musical passage as foreign and non-Western.

Arabo-Andalusian Rhythms in *Africa*

A comparison between *Africa* and Arabo-Andalusian modes reveals that Saint-Saëns integrated additive rhythms into his themes. My approach expands on the work of Stegemann and Pasler, who have both identified additive rhythms in *Africa*, and d'Erlanger, who has consolidated a detailed annotated list of Arabo-Andalusian and other Maghrebi rhythmic modes, to establish a connection between the unevenly divided rhythmic patterns in *Africa* and the Arabo-Andalusian rhythmic modes.[170] The alternation between groupings of two and three eighth-note beats can be found in several *mīzān* modes. For example, the *Nusf nim dawr* mode, shown in Figure 2.11c, accentuates the first, third, sixth, eighth, and eleventh beats, creating a sequence of 2 + 3 + 2 + 3 + 2 quarter-note beats. The mirror image of this sequence is the *Murassa'* mode, shown in Figure 2.11b, with a chain of 3 + 2 + 3 + 2 + 2 quarter-note beats. This mode is most similar to the rhythmic sequence of theme E, shown in Figure 2.18. Theme A,

[170] d'Erlanger 1959; Stegemann 1984; Pasler 2012b.

shown in Figure 2.19, is constructed of syncopated rhythms, making it difficult for the listener to perceive a regular pulse.[171] The resulting rhythm is divided into an uneven sequence of 2 + 2 + 3 + 2 + 3 eighth notes.[172] The perceptibility of the additive rhythms is heightened by the continuous stream of eighth notes played by the violin in staccato, shown in Figure 2.20, which shifts the listener's attention to the additive rhythms by cutting out any rhythmic distraction that could weaken the salience of the additive rhythms. While there are no rhythmic modes in

Figure 2.18: Additive rhythms in Theme E.

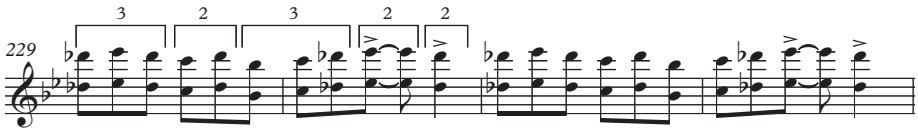


Figure 2.19: Additive rhythms in Theme A.

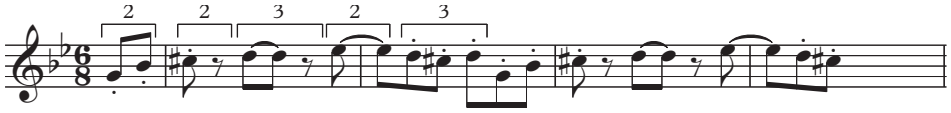
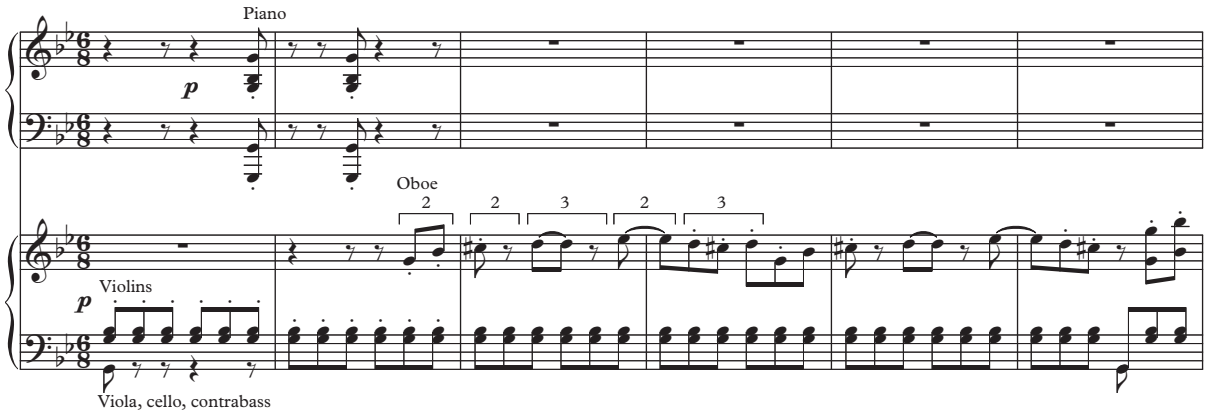


Figure 2.20: Accompaniment to Theme A, mm. 1–6.



171 Stegemann 1984 and Pasler 2012b make similar observations.

172 Stegemann proposes another interpretation, suggesting that the rhythms divide into 2 + 3 + 2 + 2 + 3 eighth notes. While I interpret the anacrusis (G-B♭)of measure 3 as the start of the melody, Stegemann perceives the beginning of the melody as the downbeat of measure 3 (C♯).

d'Erlanger's anthology of an additive pattern analogous to that of theme A, the rhythmic pattern of theme A is the fourth rotation of the *Nusf nim dawr* mode, which suggests a structural similarity with the pattern of theme E. While the rhythmic division of theme A is demarcated by the rests and accentuation markings, the uneven division of theme E is marked by the melodic contour. The melody of theme E, which hovers around D♭ as the tonal center, consists mainly of stepwise motion, with an upper neighbor E♭ and lower neighbor C in measure 230. The upper-neighbor Figure forms the first group of three beats, and the lower-neighbor Figure forms the second group of two beats. The melody then abandons the stepwise motion pattern and drops a third to B♭ before ascending stepwise to D♭. The third group therefore spans both measures 230 and 231 to form a grouping of three beats. The final beats are clearly marked by an accentuation marking, rounding out the melody with two groups of two beats. Examples of unevenly divided rhythmic modes in *Africa* suggest that Saint-Saëns had an interest in incorporating additive rhythms as a compositional tool to further enhance the "exotic" and unfamiliar quality of the piece. Upon exposure to the local music of the Maghreb, perhaps Saint-Saëns became drawn to the compositional possibilities offered by the additive rhythms of Arabo-Andalusian music. Not only do additive rhythms deviate from the Western norms of divisive rhythms, but they also establish a link with Arabo-Andalusian music, which in turn offers an explanation as to why additive rhythms in *Africa* resemble rhythmic patterns of the Maghreb.

Perceptions of Exoticism

Earlier in the chapter, I have discussed how the intervallic structure of Arabo-Andalusian modes is analogous to that of some themes in *Africa*. However, reception history—both in the nineteenth century and in modern times—suggests that not all themes in the work have been perceived as exotic. Pasler, for example, notes that *Africa* is "dominated by the aggressive, assertive themes A, E, and G," through which the "aggressive aspects of North Africa" are manifested.[173] Pasler's theme designations are the same as those labeled in Figure 2.14. Why are these three themes perceived as more "exotic" compared to the other themes in the piece, and furthermore, why does the *Zidân* mode sound more exotic compared to the other modes? To answer these questions, we must first understand why modality itself is perceived as exotic. In *Harmonielehre*, Schenker posits that the major and minor modes are "two antipodes…that [allow] many modal combinations in between them." Consequently, Phrygian and Lydian modes sound unfamiliar and exotic because they cannot be formed through a "straightforward mixture of major and minor."[174] Such modes are created through a shifting of the tonal center, resulting in unconventional intervals between scale degrees that do not occur in major and minor modes. The Phrygian mode, for example, creates a semitone between the first and second scale degrees in lieu of a whole tone. We can therefore infer that a mode sounds more exotic the more its pitch content deviates from that of the major or natural minor mode. This reasoning assumes that the major and natural minor modes are the most ubiquitous and standard modes in Western music. I therefore assign the Ionian and Aeolian modes to the

173 Pasler 2012b, 246.

174 Quoted in Loya 2011, 157.

primary mode group in exotic music. Melodies with intervallic structures akin to those of Western church modes (e.g. Dorian, Phrygian, etc.), in which the mode can be constructed by shifting the tonal center from the Ionian or Aeolian forms, will be assigned to the *secondary mode group*. Modes in the secondary mode group use the same pitches as major and minor modes but contain a different intervallic structure. Similarly to Schenker's categorization of modes in *Harmonielehre*, I also categorize the secondary modes into those that are perceived as mixtures of major and minor (Dorian and Mixloydian) and those that cannot be perceived as such (Locrian, Lydian and Phrygian). The Dorian and Mixoloydian modes are frequently used in Western folk songs and can accommodate major or minor triads on the first (i in Dorian, I in Mixolydian), second (ii in both Dorian and Mixolydian), fourth (IV in both Dorian and Mixolydian) and fifth (v in both Dorian and Mixolydian) degrees of the mode. Because the Locrian, Lydian and Phrygian do not accommodate major or minor triads on all four aforementioned scale degrees, these three modes are perceived as more marked and more difficult to harmonize according to the harmonic syntax of common practice Western tonality. This categorization demonstrates that the Locrian, Lydian and Phrygian modes are more likely to be perceived as exotic compared to other members of the secondary mode group. Lastly, modes that require pitch alterations—raising or lowering scale degrees—will be categorized into the *tertiary mode group*. Hierarchically, I suggest that the tertiary modes sound most "exotic" to Western musicians and are marked as such, whereas primary modes sound unmarked. Secondary modes are more exotic than primary modes, but are less exotic than tertiary modes.

Based on this categorization, we can label each of the themes according to the type of

mode on which they are based. Themes B, D, F and H are built on the major mode, and thus are categorized as part of the primary mode group. Theme E is based on the *Mâya* mode, whose intervallic structure is analogous to that of the Mixolydian mode. Theme E therefore belongs in the secondary mode group. Themes A, C, G, and I are all based on modes in which one or more of the pitches are raised or lowered from the major or natural minor mode, thus belonging in the tertiary mode group. Themes C and G, shown in Figure 2.14, are based on the *Zidân* mode, outlined in Table 2.1 and notated in Figure 2.16. Obtaining the intervallic structure of the *Zidân* mode from the major scale requires not only shifting the tonal center to that of the Phrygian mode, creating a semitone interval between the first and second degrees, but also raising the third degree of the Phrygian mode. The intervallic structure is thus altered through a two-step process, making the mode more distant from the major and minor modes compared to those that belong to the secondary mode group. These manipulations create a mode that contain notes outside of the major and minor scales, which then makes the mode sound more exotic and unfamiliar to those who are accustomed to the intervallic structure of the major and minor modes.

From the perspective of scale theory, we can also argue that the modes of the tertiary mode group deviate from the standard conventions of *diatonicism*, introducing intervals and melodies that are not possible through a mere reshuffling of major and minor modes. I demonstrate that the modes in the tertiary mode group do not possess many of the properties common to the Western diatonic scales. Because the tertiary mode group lacks several structural and intervallic properties present in the primary and secondary mode groups, I argue

that the tertiary mode group sounds more exotic to Western listeners because the modes are not constructed according to the properties of the diatonic scale, and are thus structurally different from those of the primary and secondary mode groups. Modes in the primary and secondary theme share the following characteristics: maximal evenness, deep scale, and Myhill's property. These three properties, all of which will be explained shortly, are found in Western diatonic scales but not in any of the tertiary modes.

Maximal evenness, first iterated by John Clough and Jack Douthett, is the property by which a scale is spread out as evenly as possible across the twelve chromatic pitches.[175] A diatonic scale is considered maximally even because there is no other possible way to distribute the pitches more evenly.[176] The *Zidân* mode in the tertiary group, on the other hand, is not maximally even because the interval between the second and third degrees—an augmented second—is larger than all the others, and thus not as evenly distributed as possible. How does maximal evenness affect the way listeners perceive scales? Because intervals are spaced out evenly, maximal evenness enables smooth melodic motion and consistent voice leading. The even distribution makes a clear distinction between a step and a leap, a line blurred by the augmented second between adjacent scalar tones in the *Zidân* and *Nawa âthar* modes.

Figure 2.21a: Interval vector for the diatonic scale.

< 2 5 4 3 6 1 >

175 Clough and Douthett, 1991, 96.

176 All primary and secondary modes, the pentatonic scale, whole-tone scale and octatonic scale are maximally even.

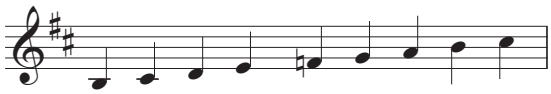
Figure 2.21b: Interval vector for the *Zidân* mode.

< 4 2 4 5 4 3 >

Figure 2.21c: Interval vector for the *Nawa âthar* mode.

< 4 2 4 5 4 3 >

Figure 2.22: Altered B minor scale (Theme I) and its interval vector.



< 2 5 4 4 4 2 >

In addition to maximal evenness, we can identify two other properties that are present in diatonic scales but are absent in tertiary modes: the property of the deep scale and Myhill's property. The deep scale, first introduced by Terry Winograd and defined further by Carlton Gamer, is a scale in which each interval class appears a different number of times, assuming equal temperament.[177] The interval vector for the diatonic scale is shown in Figure 2.21a. Each interval class shows the number of times the interval appears in the scale: the minor second appears twice, the major second five times, and so forth. The interval vectors for the *Zidân* mode, *Nawa âthar* mode, and the altered B minor scale for theme I, shown in Figure 2.21b, 2.21c and 2.22 respectively, reveal that multiple interval classes appear the same number of times. An analysis of the interval vectors therefore demonstrates that these three modes do not share one of the basic features of the diatonic scale. The property of deepness establishes some scalar intervals as more common than others, which creates a hierarchy between close and distant modulations based on the number of tones in common between different keys.

177 Winograd, n.d.; Gamer 1967.

Myhill's Property, originally introduced by John Clough and Gerald Myerson and named after mathematician John Myhill, describes a scale in which "every generic interval appears in exactly two specific sizes."[178] For example, a third in the diatonic scale has exactly two variations: the minor third and major third, whereas a fourth can either be a perfect or an augmented interval. For modes with an augmented second (i.e. the *Zidân* mode and *Nawa âthar* mode), there are three possible intervals of a second: the minor second, major second, and augmented second.[179] However, the mode on which theme I is based does have Myhill's Property, despite not meeting the properties of maximal evenness, well-formed scale, or the deep scale. Based on these properties, one can make the claim that the altered form of the B minor scale is more similar to the diatonic scale compared to the *Zidân* and *Nawa âthar* modes.[180]

Using scale theory to make observations about the properties of primary, secondary and tertiary mode groups, we can speculate that tertiary modes sound "more exotic" to Western listeners as the properties of tertiary modes deviate from those of diatonic modes. In other words, because of the structural differences between the tertiary mode group and the primary and secondary mode groups, one could speculate that Saint-Saëns was more keen to appropriate non-Western modes whose properties deviated from those of diatonic modes in order to achieve an exotic effect.

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178 Clough and Myerson 1985, 250.

179 The harmonic minor scale also has three possible intervals of a second, and thus does not possess Myhill's Property. Johnson invokes the concept of maximal evenness as the reason for why Western music avoids the augmented second as a melodic interval, despite the fact that it occurs naturally in the scale between the sixth and seventh degrees. Moreover, if a scale possesses the property of Myhill's Property, it also has the properties of "cardinality equals variety" and "structure implies multiplicity."

180 The tertiary modes also differ from the diatonic scale in that the latter meets the conditions of a well-formed scale, whereas the former do not. A well-formed scale, originally presented by Erv Wilson as a Moment of Symmetry and developed further by Norman Carey and David Clampitt, denotes a scale that can be generated by stacking a single interval (Wilson 1975; Carey and Clampitt, 1989).

Chapter 3: Structural Analysis: Transcultural Thinking in Practice

In Chapter 1, I argued that a transcultural approach has two advantages for analyzing a nineteenth-century Western work with non-Western influences. Firstly, such a methodology offers an alternative perspective to the exoticist and Orientalist approaches that have permeated analyses of musical works influenced by non-Western genres, allowing the analyst to address cultural syncretism on its own terms outside of a representational lens. Rather than placing the analytical focus on how the Western composer colonizes the non-Western culture by appropriating non-Western elements and integrating them into a Western musical idiom as decorative features on the musical surface, transculturation departs from these dichotomies and highlights instances of cultural interaction that may be "unconscious, uncontrolled, and have unforeseen and unacknowledged circumstances for the dominant borrowers."[1] Secondly, transculturation presents an interpretation of cultural syncretism that cannot be offered by our current methodologies for analyzing Western tonality, which tends to maintain a "monocultural view of how tonality developed."[2] Some passages that can be explained through "conventional theory," for example, require a more culturally sensitive analytical method to assess how

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[1] Loya 2011, 7. While a transcultural analysis aims to step outside of a representational discourse, it nevertheless "recognizes the asymmetry of political power" and acknowledges that "cultural dissemination and evolution often work despite and against these power structures" (Loya 2011, 6).

[2] Ibid., 160. The idea of musical meaning being determined by notions of opposition is also inherent in the idea of markedness, which is defined by Robert Hatten as "the valuation given to difference…the marked term specifies phonological, grammatical, or conceptual information which is not made specific by the more general, unmarked term" (Hatten 1994, 34). In an exotic work, the unmarked "normative" style of Western tonal music is juxtaposed against the existence of marked exotic signifiers that deviate from Western musical norms. According to the concept of markedness, the Western "norm" is therefore defined through the opposition between passages that appropriate non-Western features and passages that exclude such elements. While both markedness and transculturation rely on the notion of opposition, the main difference is that the musical meaning is determined by the *difference* between the unmarked (Western) and marked (non-Western) elements according to markedness, whereas transculturation is concerned with *points of contact* between the Western and non-Western musical elements, and how they interact with one another.

distorting the original meanings and contexts of non-Western musical materials have resulted in "subtle divergences from the common practice" of the Western art music idiom.[3] A transcultural approach therefore allows us to take into account both the Western and non-Western aspects of the work without focusing solely on the power imbalance between the two—something that neither an Orientalist nor purely theoretical approach can fully accommodate.[4]

A transcultural approach is concerned with investigating the ways in which the appropriation of Maghrebi elements in *Africa* interacts with or, in some cases, disrupts the conventions of Western tonal repertoire at the structural level. Firstly, my discussion of transculturation will explore how the use of non-major-minor modes, born out of the transmission of Arabo-Andalusian *ṭubū'* modes into a Western framework, allows for an alternative tonal logic that undermines the teleology of diatonicism. Secondly, I will investigate how Maghrebi-inspired additive rhythms interact with the metrical structure of *Africa*, opening up the possibilities for metrical dissonance and metric ambiguity.[5] Through these discussions, I argue that the Maghrebi elements identified in Chapter 2 are not mere ornamental additions appropriated into a Western framework, but integral aspects of the musical structure that interact with the melodic, harmonic and metrical layers of the work on a more compositional level.

In his discussion of the *verbunkos* idiom, Loya notes that the modal nature of the

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3 Ibid., 159.

4 Susan McClary has noted that a "purely musical" approach to analysis assumes the supremacy of the "autonomous bedrock" of Western art music: "chords, forms, and pitch-class sets" (McClary 2001, 2). According to McClary, such an approach excludes discussions of extramusical contexts such as gender, culture, narrative and politics (McClary 2001, 3).

5 As opposed to second practice nineteenth-century tonality, a topic explored in detail in Kinderman and Krebs 1996.

verbunkos offers an "alternative tonal directionality and logic" and "unconventional pitch content" that deviates from those of the major and minor modes.[6] A similar case can be made for Saint-Saëns's *Africa*. In Chapter 2, I argued that some of the non-major-minor modes in the work are modeled after Arabo-Andalusian and Arab modes used in practice.[7] While most analyses of *Africa*—as well as other exotic works by Saint-Saëns—have been content with identifying traces of Arab and Maghrebi music in the melodic content of the work, such an approach does not provide an understanding of how the modal inflections of non-Western melodies affect the tonal relationships of the piece.[8] A transcultural approach allows us to probe further into how modes influenced by non-Western melodies can create alternative key relationships, voice leadings, and harmonic syntax.

According to Loya, neither Schenkerian nor post-tonal theories can adequately analyze harmonic practices that "lie in between cultures," since they were "never designed to interpret cultural liminality" in the first place.[9] How, then, can we theorize the compositional effect of importing Arabo-Andalusian modes into a Western musical idiom? Loya suggests that Dmitri Tymoczko's theory of voice leading and scalar and interscalar transpositions, as presented in *A Geometry of Music: Harmony and Counterpoint in the Extended Common Practice*, offers an appropriate methodology for approaching transcultural tonal practices from a theoretical angle.[10] Incorporating Tymoczko's theories to consider the various scalar

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6 Ibid., 40.

7 The term "non-major-minor mode" is a neologism coined by Loya (Loya 2011, 40).

8 Stegemann 1984; Locke 1991, 1998; Pasler 2006, 2012b.

9 Loya 2011, 161.

10 Ibid., 162.

relationships between modes in *Africa*, my discussion of non-major-minor modes will address the following points: 1) how certain non-major-minor modes preclude the use of pre-dominant triads and thus alters tonal syntax; and 2) how non-major-minor modes allow for smooth modulations between tonal centers and key areas that would otherwise be distant in a major or minor context.

To contextualize these interactions between modal practice and tonal harmony within broader nineteenth-century compositional trends, I then argue that Saint-Saëns's use of modality in *Africa* serves as a way to weaken the "force of traditional tonality" (i.e. Classical harmonic practice), much in the way that the chromaticism of Liszt, Wagner and Strauss dissolved the tonal hierarchy based on tonic-dominant relationships and monotonality in the mid to late nineteenth century.[11] Rey Longyear suggests that modal harmony, characterized by its use of "secondary triads" (e.g. triads other than those built on the tonic, subdominant and dominant scale degrees: ii, iii and vi in major keys and III, v, VI and VII in minor keys) in ways that depart from the syntax of Classical harmonic practice, put the structural prominence of the subdominant and dominant harmonies in question and thus paved the way for an alternative tonal directionality. In a similar fashion, nineteenth-century composers turned to chromaticism as a way to expand the tonal spectrum and experiment with harmonic behaviors that depart from a tonal syntax based on tonic-dominant hierarchies. Taking a step further, I suggest that the coexistence of modality and chromaticism—both nineteenth-century reactions against Classical diationicism—within *Africa* implies a dialectic opposition between the two within a

[11] Longyear 1973, 212. See also Hyer 2002.

nineteenth-century tonal syntax, a juxtaposition that has been proposed by Dahlhaus in *Studies on the Origin of Harmonic Tonality*.[12] While Tymoczko's theories help measure the scalar distance between different non-major-minor modes and between major/minor and non-major-minor modes in an abstract sense, they alone do not account for the process through which Saint-Saëns moves from one key area to another. I will use neo-Riemannian transformational theory to explain some of the transitions on the micro-level between different modal areas within *Africa*, as Saint-Saëns frequently takes advantage of third relations to move between tonal regions. This not only includes shifting the tonal center by a third (e.g. G to E♭), but also employing third relations to move from the dominant of the initial key area to the tonic triad of the new key area (e.g. B♭ (V in E♭) to D (I in D)). By analyzing chromatic modulations in *Africa* through a neo-Riemannian lens, I do not intend to suggest that these modulations constitute an example of transcultural tonal practice derived from the Arabo-Andalusian musical system. Rather, by treating Saint-Saëns's use of modality and chromaticism both as nineteenth-century tonal practices, I explore how Saint-Saëns took advantage of the harmonic possibilities offered by a coexistence of the two.

Harmonic Consequences of Non-major-minor Modes

Employing non-major-minor modes carries significant harmonic consequences that encourage us to re-evaluate the structural prominence of the tonic, pre-dominant, and dominant harmonies. While triads built on the first, fourth and fifth scale degrees are major triads in any

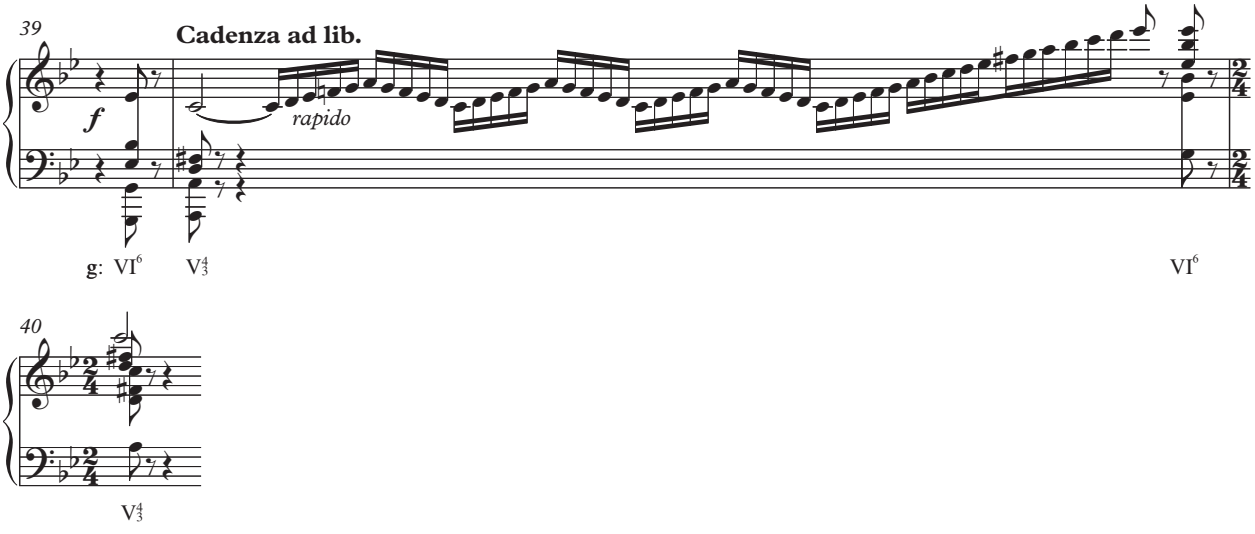
[12] Dahlhaus 1990, 164.

Table 3.1: Categories of modes in *Africa*.

Measures	Mode	Theme	Pitches
1–75	G *Nawa athar*	Theme A	G A B♭ C# D E♭ F#
76–131	E♭ major	Theme B	E♭ F G A♭ B♭ C D
132–156	D *Zidân*	Theme C	D E♭ F# G A B♭ C#
157–168	D major	Theme D	D E F# G A B C#
169–175	D Ionian	Theme D	D E F# G A B C#
176–189	F major	Theme D	F G A B♭ C D E
190–196	D melodic minor	(None)	D E F G A B C#
197–219	D major	Theme D	D E F# G A B C#
220–224	B♭ Acoustic	Theme A	B♭ C D E F G A♭
225–228	C Lydian minor	Theme A	C D E F# G A♭ B♭
229–240	D♭ major (D♭ *Mâya*)	Theme E	D♭ E♭ F G♭ A♭ B♭ C
241–244	B♭ melodic minor	Themes A, E	B♭ C D♭ E♭ F G A
245–252	G melodic minor	Theme E	G A B♭ C D E F#
253–336	G major	Theme F	G A B C D E F#
337–360	D *Zidân*	Theme G	D E♭ F# G A B♭ C#
361–384	G *Zidân*	Theme G	G A♭ B C D E♭ F#
385–400	A♭ major	Theme H	A♭ B♭ C D♭ E♭ F G
401–427	A *Saba*	Theme G'	A B C# D E F G#
428–442	B Aeolian	(None)	B C# D E F# G A
443–463	B Locrian #2	Theme I	B C# D E F G A
464–497	G major	Theme F	G A B C D E F#
498–509	D *Zidân*	Theme G	D E♭ F# G A B♭ C#
510–588	G major	Themes A, E, G	G A B C D E F#

major key, the same three harmonies are minor triads when built according to the natural minor scale (Aeolian mode), although in musical practice the leading tone is raised to create a major dominant chord.[13] Some non-major-minor modes, however, do not accommodate major and minor triads on the tonic, subdominant and dominant scale degrees, and thus we must explore how harmonic directionality and syntax are altered as a result. According to Loya, exploring the harmonic possibilities of non-major-minor modes is an example of transcultural analysis that focuses on "subtle divergences from the common practice despite the fact that the work as a whole can be explained so effortlessly through conventional theory."[14] This analytical method highlights how non-major-minor modes give way to not only new melodic but also harmonic possibilities.

Figure 3.1: Submediant chord and dominant seventh harmony, mm. 39–40.



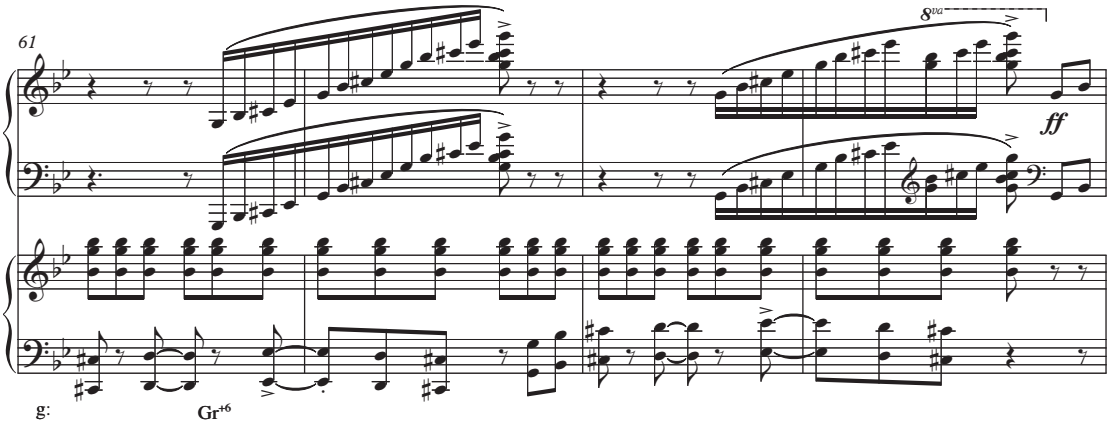
[13] Hugo Riemann grouped the tonic, subdominant, and dominant triads as "primary chords" that are necessary to invoke a sense of key.

[14] Loya 2011, 159.

In my discussion of modulations, I will refer to table 3.1, which provides a summary of all modes that are used in *Africa*. The pitch content of each of the modes is shown in the second column. The tonic of each mode is indicated by boxed text. The name of the mode is shown in the third column, categorized by the tonic pitch and the name of the mode (e.g. D major, G *Zidân*). I have identified 23 tonal areas in total (19 distinct modes) within the piece, with each theme stated in a different key. There are seven distinct non-major-minor modes—G *Nawa athar*, D *Zidân*, B♭ acoustic, C Lydian minor, G *Zidân*, A *Saba* and B Locrian ♯2—whereas there are twelve modes derived from diatonic modes, which include Ionian, Aeolian, melodic minor and Lydian modes.

The mode underlying theme A, the G *Nawa âthar* mode shown in Figure 2.17, accommodates a minor triad on the tonic (G-B♭-D) and major triads on the dominant (D-F♯-A) and submediant (E♭-G-B♭). Due to the raised fourth scale degree and lowered sixth scale degree in relation to a diatonic mode, neither a supertonic (ii) nor a subdominant (IV) triad is possible: a triad built on the second scale degree yields a chord with pitches A-C♯-E♭, and a triad built on the fourth scale degree yields a chord with C♯-E♭-G, neither of which are major or minor triads. Therefore, in a *Nawa âthar* mode, it is not possible to employ a pre-dominant function chord in the diatonic sense. However, because the submediant chord (VI) is one of the few harmonies in the *Nawa âthar* mode in which the sonority is a major triad, the VI chord is used as one of the main pre-dominant harmonies. In measure 39, for example, a VI chord is followed by a dominant seventh harmony in measure 40 as shown in Figure 3.1. In addition, the fourth and sixth scale degrees of the *Nawa âthar* mode allow for an augmented sixth chord to occur

Figure 3.2: German sixth chord in the *Nawa âthar* mode, mm. 61–65.



naturally in the mode, something that is not possible in a diatonic context. In measures 61 to 65, as shown in Figure 3.2, the piano solo arpeggiates a German sixth chord (C♯-E♭-G-B♭) in the key of G. Because translating the *Nawa âthar* mode into a Western musical context produces a mode that does not accommodate the commonly used pre-dominant triads on the supertonic and subdominant scale degrees, Saint-Saëns resorts to using the VI chord and German sixth chord instead as the default pre-dominant harmonies.

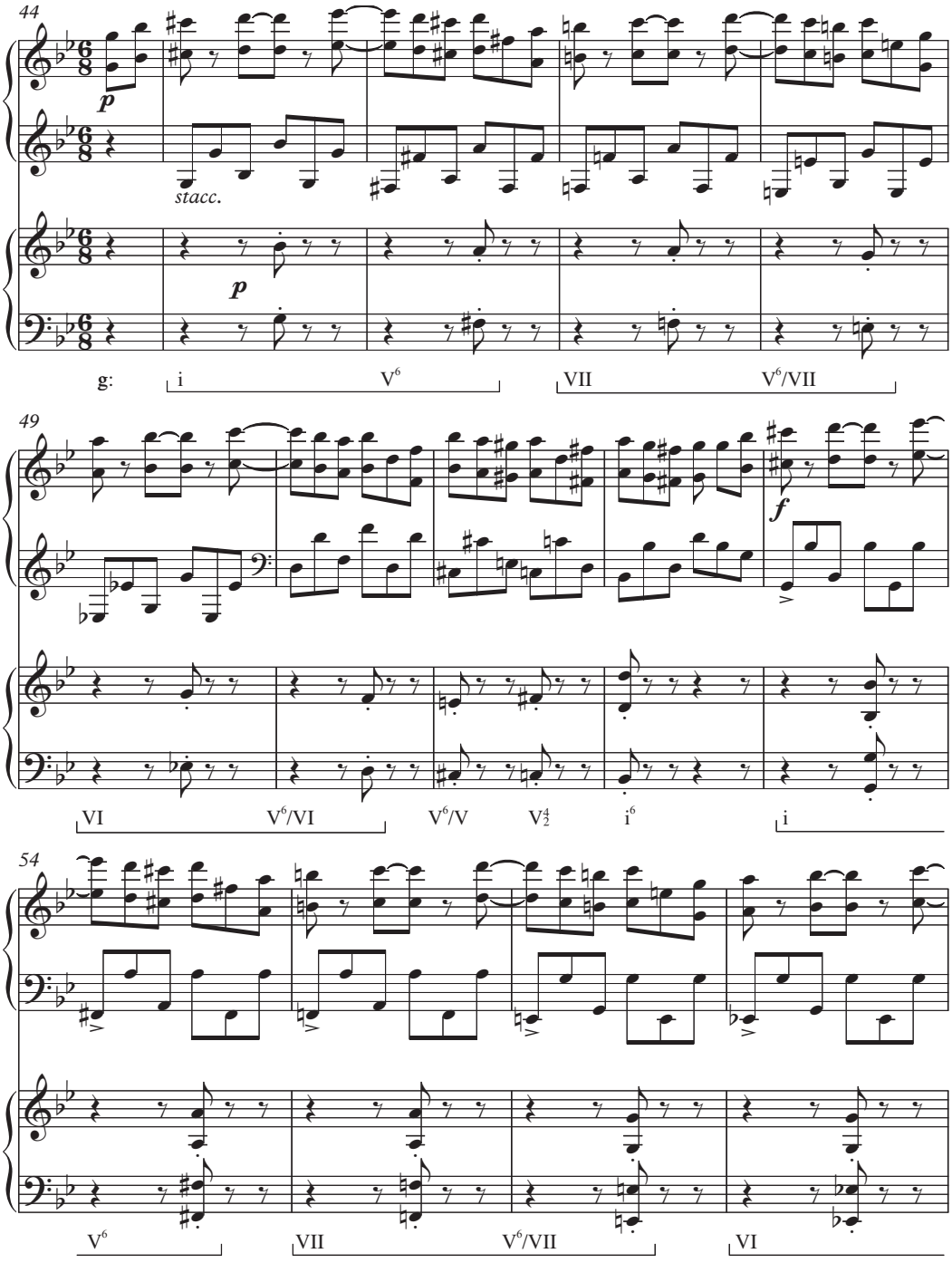
While the dominant harmony is perfectly compatible with the *Nawa âthar* mode, we do not see a dominant harmony in either theme A or in the accompaniment until measure 40, shown in Figure 3.1, when the piano begins a short cadenza. Up to this point in the piece, all pitches of the *Nawa âthar* mode have been used, except the leading tone to G, F♯. The cadenza functions as a prolongation of a dominant seventh chord in third inversion (V^4_3), which is the first time we hear a dominant harmony in the piece. According to Loya, the absence of a leading tone allows the composer to reinforce the non-major-minor mode and highlight "subtle

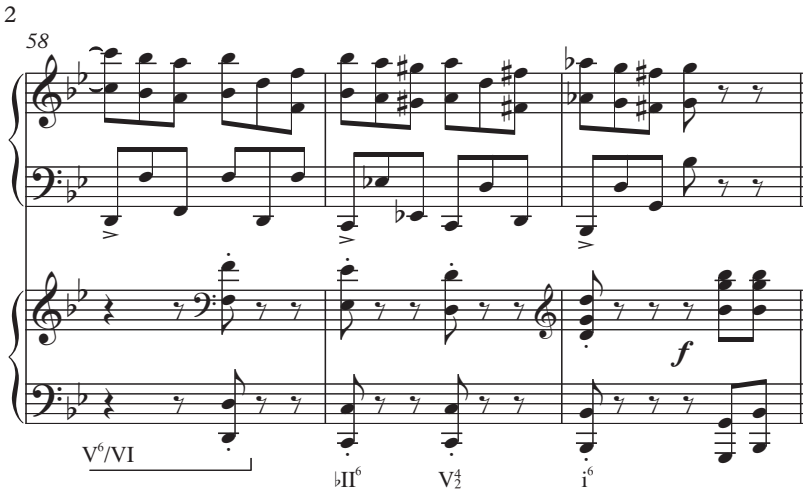
divergences from the common practice" that may be ignored in an analysis rooted in tonal theory.[15] Moreover, to accommodate the dominant seventh sonority, Saint-Saëns steps out of the *Nawa âthar* mode temporarily in measure 40 to borrow the chordal seventh (C) from G minor. In Western tonal theory, the dominant seventh chord in conjunction with the leading tone is a powerful tool for establishing the tonal center of a prevailing key area of the melody and thus the arrival of the dominant harmony in the cadenza officially confirms that the tonal center is G. While Saint-Saëns took various measures to instill the beginning of the piece with characteristics that are not common in Western tonal music—the non-diatonic *Nawa âthar* mode, avoidance of a leading tone, and absence of predominant chords—to convey a sense of exoticism, the use of the dominant seventh chord suggests Saint-Saëns's unwillingness to stray too far from the system of Western tonality and pose "any threat to its integrity and internal laws."[16] Rather than take full advantage of the alternative tonal relationships made possible by the *Nawa âthar* mode, Saint-Saëns, unlike composers such as Liszt and Bartók who have similarly incorporated non-Western influenced modes, generally elects to preserve the syntactical principles of Western tonality in *Africa*.

Saint-Saëns's adherence to conventions of first practice eighteenth-century tonality becomes more apparent in the section following the piano cadenza. In measures 44 to 46, the opening phrase of theme A is stated in its original form, as heard in the beginning of the piece. However, rather than repeating the phrase as one might expect, Saint-Saëns begins a sequential phrase and harmonizes it with a chromatically descending bass line, thus resulting in a

[15] Loya 2011, 158.
[16] Ibid., 159.

Figure 3.3: Descending sequence, mm. 44–60.





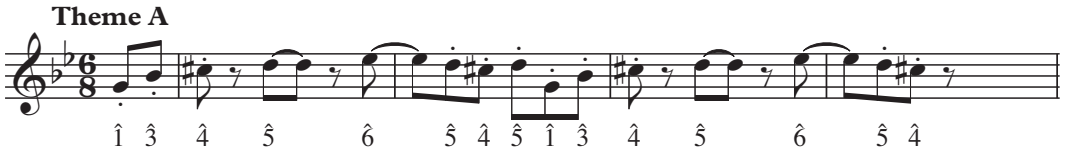
descending sequence, shown in Figure 3.3. The model of the sequence, in its original form starting on G, is harmonized by a i–V^6 progression, and each successive sequence is harmonized according to the chromatically descending bass line using backward-relating dominants: VII–V^6/VII and VI–V^6/VI. The sequence is therefore a descending second sequence in dominant-tonic chord pairs. To make this sequence possible, Saint-Saëns abandons the *Nawa âthar* mode and transposes the melody into that of G melodic minor.

In order to analyze how the melody is transferred between the two modes in more detail, I will refer to Tymoczko's theories of scalar and interscalar transposition. Tymoczko categorizes scalar shifts into three types: (1) *scalar* transposition—a modal shift in which there is no change in the pitch content but the motive is moved "along a single scale" (e.g. Aeolian to Phrygian); (2) *chromatic* transposition—an operation in which all pitches of the scale are shifted by the same number of semitones (e.g. D Ionian to A Ionian); and (3) *interscalar* transposition—an operation in which a motive is moved from "one scale to another" while preserving the

scalar intervals.[17] In other words, a melody transposed via interscalar transposition maps the scale degrees of the original melody onto those of the new scale. For example, the motive C-E-G in a C major scale (scale degrees $\hat{1}$, $\hat{3}$ and $\hat{5}$) transposed onto a C-D octatonic scale would yield the motive C-E♭-G♭, which corresponds to scale degrees $\hat{1}$, $\hat{3}$ and $\hat{5}$ in the new scale. Compared to a chromatic transposition, which preserves all chromatic intervals of the original melody (i.e. a minor third interval is transposed to another minor third interval), scalar and interscalar transpositions preserve the scalar intervals of the melody but allow for change in chromatic intervals.

The original melody of theme A in the *Nawa âthar* mode, shown in Figure 3.4, is repeated sequentially in measures 46–50 (Figure 3.3). Since the *Nawa âthar* mode is abandoned in each of the sequential repetitions, an interscalar transposition of the original

Figure 3.4: Scale degrees for theme A according to the *Nawa âthar* mode.



melody into G melodic minor need not preserve the semitone between the third and fourth notes of the melody. However, we notice that the semitone between the third and fourth notes of the melody is maintained in each of the two sequential repetitions, even if it means altering scale degrees to preserve this relationship. In the first sequence, shown in measures 46–48 in

[17] Tymoczko 2011, 141–142.

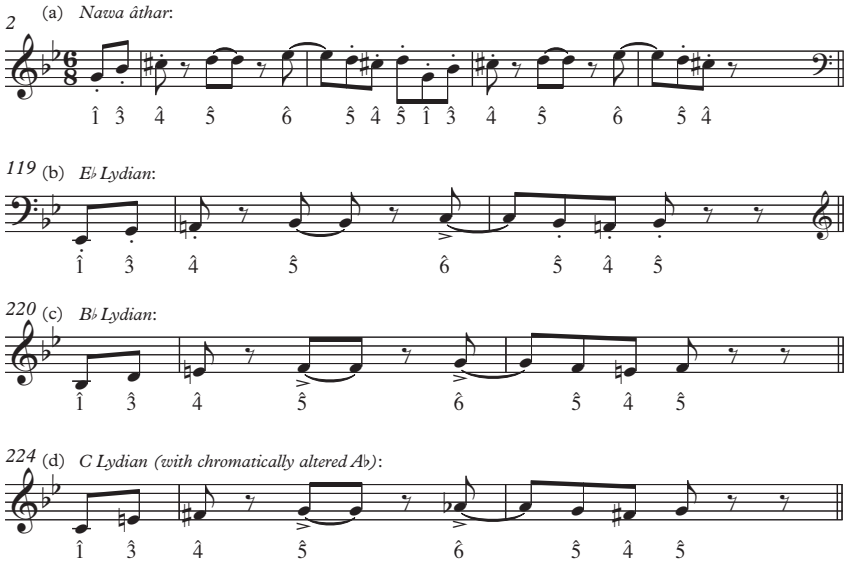
Figure 3.3, the B is a chromatic neighbor to the fourth scale degree, C. In this sequence, the model is first transferred onto G melodic minor via interscalar transposition, and then shifted sequentially downward via scalar transposition by one scale step, beginning the melody on ♯$\hat{7}$ rather than on $\hat{1}$. In the second sequence, shown in measures 48–50, both A and B♭ are contained within the scale and thus the semitone relationship between the two pitches can be maintained without any adjustment to the scale degrees. The second sequence is shifted downwards from the first sequence via scalar transposition by one scale step, with the melody beginning on ♮$\hat{6}$. While the descending seconds sequence demonstrates Saint-Saëns's adherence to a tonal harmonic syntax over alternative tonal possibilities that might arise from sticking purely to the *Nawa âthar* mode, the semitone between the third and fourth notes of the melody is unchanged in every sequential repetition. What is the significance of this semitone relationship between the two scale degrees?

Raising the fourth scale degree alludes to the Lydian mode, which according to Loya is "less structurally integrated within Western tonality than the more respectably ancient and church-like Mixolydian and Dorian modes" because the mode cannot be formed from a "straightforward mixture of major and minor."[18] In maintaining the semitone relationship between the third and fourth notes of the melody (C♯-D in measure 45, B-C in measure 47, A-B♭ in measure 49), the melody evokes a Lydian mode, which carries the ethos of unfamiliarity and instability. In fact, when not presented through the *Nawa âthar* mode, theme A is most frequently mapped onto the Lydian mode. When theme A is mapped onto different variants of

[18] Loya 2011, 157–9.

the Lydian mode in measures 119–121 (E♭ Lydian) and 220–228 (B♭ Lydian and C Lydian with a chromatically altered A♭), as shown in Figures 3.5b, 3.5c and 3.5d respectively, they are also related to the original melody in Figure 3.4 by zero-step interscalar transposition, suggesting a close relation despite being built on different scales. Through a transcultural analysis, I suggest that while Saint-Saëns does not fully take advantage of unconventional tonal relationships offered by non-major-minor modes, he finds a way to convey a sense of exoticism through the sense of "unfamiliarity" embodied in the Lydian $\sharp\hat{4}$ inflection.

Figure 3.5: Interscalar mappings of theme A.



The analyses in this chapter have demonstrated the compatibility of theme A with a variety of diatonic and non-diatonic scales. Why does theme A fit especially well within a number of modal contexts? The answer lies in the melodic structure of theme A and Saint-Saëns's choice of modes. First, the melodic structure of theme A, shown in Figure 3.5a,

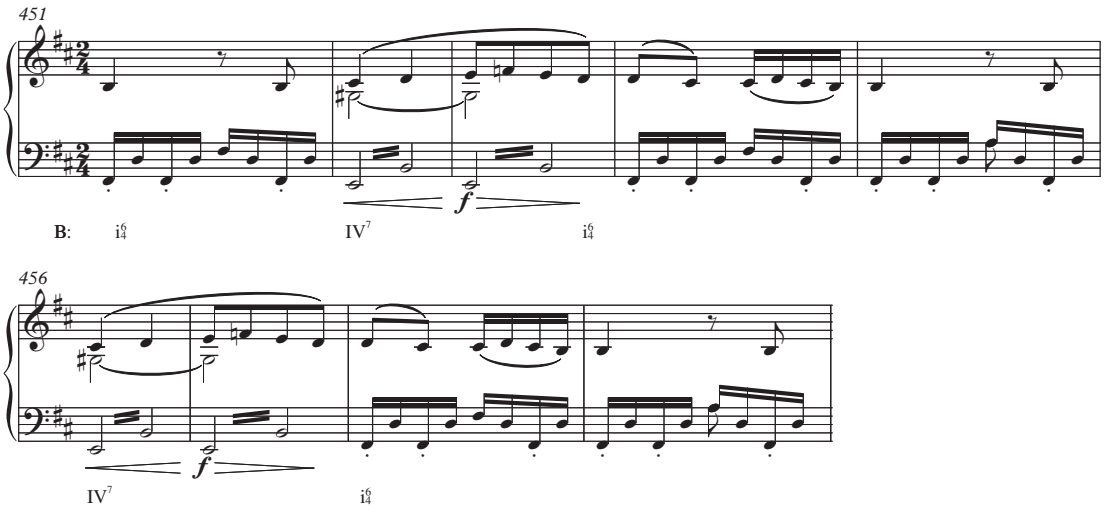
outlines the pitches of either a major or minor triad. If we assume that the theme begins on the tonic degree, we can generalize that the melody is comprised of scale degrees $\hat{1}$, $\hat{3}$, $\sharp\hat{4}$, $\hat{5}$ and $\hat{6}$ in any key or mode. Since scale degrees $\sharp\hat{4}$ and $\hat{6}$ function melodically as lower and upper neighbor tones to scale degree $\hat{5}$, respectively, we can interpret the contour of the melody as one that outlines a tonic major or minor triad: $\hat{1}$, $\hat{3}$, and $\hat{5}$. Subsequently, theme A is used in tandem with modes that contain the scale degrees necessary to form a major or minor triad on the tonic. G *Nawa âthar* and E♭ Lydian, for example, preserve the diatonic scale degrees of $\hat{1}$, $\hat{3}$, and $\hat{5}$ and thus both modes can accommodate theme A without having to alter any of their constituent pitches.[19] In other words, when the original melody in G *Nawa âthar* is transferred over to the E♭ Lydian scale via interscalar transposition, the basic melodic structure—the perfect fifth between $\hat{1}$ and $\hat{5}$ and the third between $\hat{3}$ and $\hat{5}$—remains unchanged and thus the melody is able to help establish the tonic harmony. While the raised fourth scale degree helps the melody embody an exotic character, Saint-Saëns maintains the essentials necessary for working within the teleology of Western tonal harmony.

This claim is supported by the observation that it is possible to generate a major or minor triad for both the tonic and dominant harmonies in all but two modes: the *Zidân* mode and the altered B Locrian scale. In the altered B Locrian scale, shown in Figure 2.21, neither the tonic nor the dominant can accommodate a major or minor scale due to the tritone between the first (B) and fifth (F) scale degrees. Rather than seizing the opportunity to explore new harmonic relationships provided by the non-diatonic mode, Saint-Saëns opts for the completely opposite,

[19] When the melody is moved along the same scale via scalar transposition, there are cases in which the melody no longer outlines a major or minor triad. See mm. 240–244.

harmonizing the melody in measures 451 to 459 by alternating between i (B-D-F♯) and IV (E-G♯-B) triads, shown in Figure 3.6. This harmonization requires a modal borrowing of F♯ to complete the tonic triad and a G♯ to create a major subdominant chord in lieu of a naturally occurring minor subdominant chord, which results in a polymodal situation in which the melody and accompaniment are set in different modes. In this context, the F♮, which gives the melody its distinct Locrian (and octatonic) flavor, is reduced to a chromatic inflection that is subsumed within the predominantly diatonic environment. Again, Saint-Saëns demonstrates his intention to adhere to the conventions of Western tonality and treat the modal inflections as melodic ornamentations rather than as structural tones with a potential to create alternative tonal relationships.

Figure 3.6: Harmonization of mm. 451–459.



Transcultural Modality

The use of non-major-minor modes allows for smooth modulations between tonal

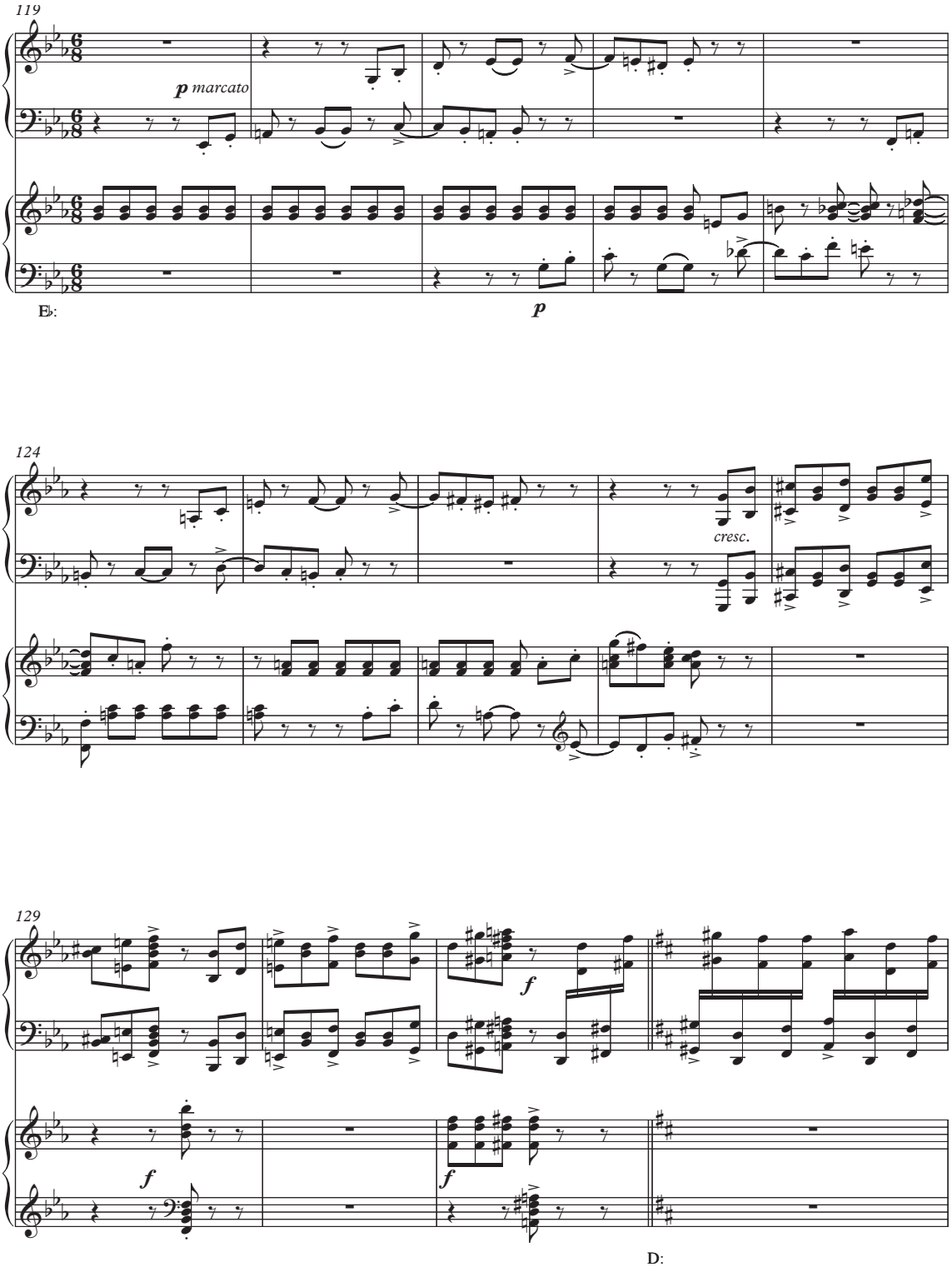
centers that would otherwise be unconventional in the context of major and minor modes. I draw upon Tymoczko's theories to conceptualize modulations in terms of semitone shifts. Subsequently, I argue that conventional rules for modulations do not necessarily apply when dealing with non-major-minor modes. For example, certain key areas and tonal centers that are distantly related in the framework of major and minor modes can be more closely related when dealing with non-major-minor modes. Whereas a key area in the major or minor sense is determined by the accidentals present in the scale, a tonal center, according to Murray Dineen, is the tonic of a given tonal region and a central "point of reference" to which other scale degrees can be related.[20] Therefore, shifts between tonal centers, which are usually accompanied by one or two changes in accidentals in traditional Western tonality (i.e. modulation from G Ionian to D Ionian requires one accidental change: C to C♯; modulating from C Ionian to B Aeolian requires two changes: F and C to F♯ and C♯, respectively), are better characterized by semitone shifts between two distinct scales, rather than by the traditional circle of fifths model that fits with the major and minor modes.

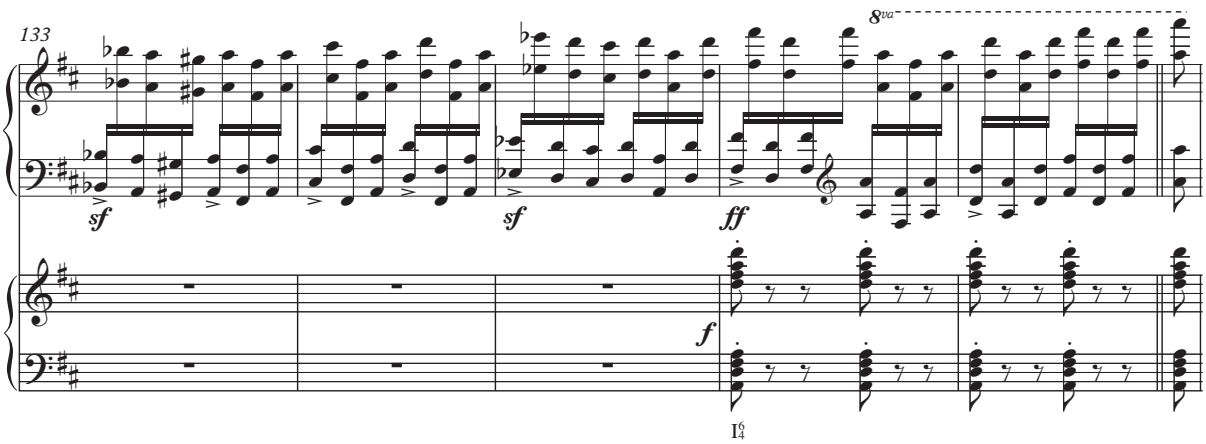
Non-major-minor modes are capable of smoothing out distant modulations involving many shifts of pitch class. In a diatonic context, modulating from one major key to another key whose tonic lies a semitone away results in a tonal area that is distantly related to the original key.[21] Tymoczko characterizes the relationship between two scales with regards to the number of semitone shifts required to obtain the pitch classes of the new scale from the original

[20] Dineen 2005, 72.

[21] Modulation upward by semitone (i.e. I to ♭II) is fairly common in the work of Schubert, reinterpreting a German or Italian augmented sixth chord as the dominant seventh chord of ♭II.

Figure 3.7: Modulation from E♭ Lydian to D *Zidân*, mm. 119–138.





scale.[22] For example, modulating directly from D major to E♭ major requires semitone shifts in five of the pitch classes: A, B, C♯, E and F♯, to A♭, B♭, C, E♭ and F, respectively.[23] The use of non-major-minor modes, however, allows Saint-Saëns to shift the tonic pitch from E♭ to D in measure 138, shown in Figure 3.7, with a fewer number of semitone shifts. What modal inflections make this smooth modulation possible? Comparing the E♭ Lydian scale and the D *Zidân* mode reveals that there are six pitches in common between the two modes: D, E♭, G, A, B♭ and C. A modulation from E♭ Lydian to D *Zidân* requires the pitch F to be raised by a semitone to F♯, which is analogous to modulating to a neighboring key in the diatonic sense. E♭ Lydian to D *Zidân* are therefore distantly related as the modulation between the two modes requires just one semitone shift, which indicates a very close relation. Similarly, in measure 385, as shown in Figure 3.8, Saint-Saëns modulates from G *Zidân* to A♭ major, which has five notes in common

22 This method measures diatonic distance as opposed to semitonal distance. According to Cohn, the former "evaluates triadic proximity in terms of mutual membership in diatonic collections" whereas the latter measures distance based on the number of common tones between two triads, and the number of semitonal displacements required to move from one triad to another (Cohn 2012, 8).

23 Not all modulations to keys that are a semitone apart require as many changes in pitch. Modulating from D major to C♯ minor, for example, only requires two changes: D and G to D♯ and G♯, respectively. Utilizing the leading tone would require a further change from B to B♯, and the melodic minor scale requires a change from A to A♯. The same rules would apply when modulating from D minor to E♭ major.

and thus requires two semitone shifts. In this case, B and D in G *Zidân* must each be lowered by a semitone to B♭ and D♭, respectively. While modulating from G major to A♭ major, which are also distantly related keys in the circle of fifths, requires five semitone shifts, we may recognize G *Zidân* and A♭ major as relatively close keys keys given that it only requires two semitone shifts to move from one to the other. According to Loya, "what would normally be taken to be a semitonal chromatic relationship…is decidedly diatonic" when modulating to or from a non-major-minor mode.[24] In examining the scalar distances between major-minor and non-major-minor modes, we see that we can modulate smoothly between tonal centers that would otherwise be distant according to the circle of fifths.

The examples that I have covered so far involve both a change in the final note and in the type of mode. In other instances, however, Saint-Saëns changes the type of mode while keeping the same tonic note. For example, between measures 139–220, the modes cycle through D *Zidân* (mm. 139–156), D major (mm. 157–168), D Aeolian (mm. 169–175), D melodic minor (mm. 190–196), and D major once again (mm. 197–219), with a brief foray into F major (mm. 176–189). Saint-Saëns also takes advantage of the closeness between the B Aeolian and B Locrian modes. The mode employed in measures 444–464 is an altered version of the Locrian mode, with a sharpened second scale degree (C♯) as shown in Figure 3.9.[25] Shifting from the Aeolian mode to the modified Locrian mode requires just one semitone shift, indicating that they are closely related modes.[26] By employing an arsenal of diatonic (Ionian, Aeolian, etc.) and

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[24] Loya 2011, 168.

[25] This scale is also the sixth rotation of the D melodic minor scale.

[26] The peculiarity of the modified Locrian mode lies in the fact that one can identify the octatonic, diatonic, and whole-tone scales within the mode, as shown in Figure 3.9. One segment of the scale (B-C♯-D-E-F-G) contains the intervals of an octatonic scale,

Figure 3.8: Modulation from G *Zidân* to A♭ major, mm. 373–388.

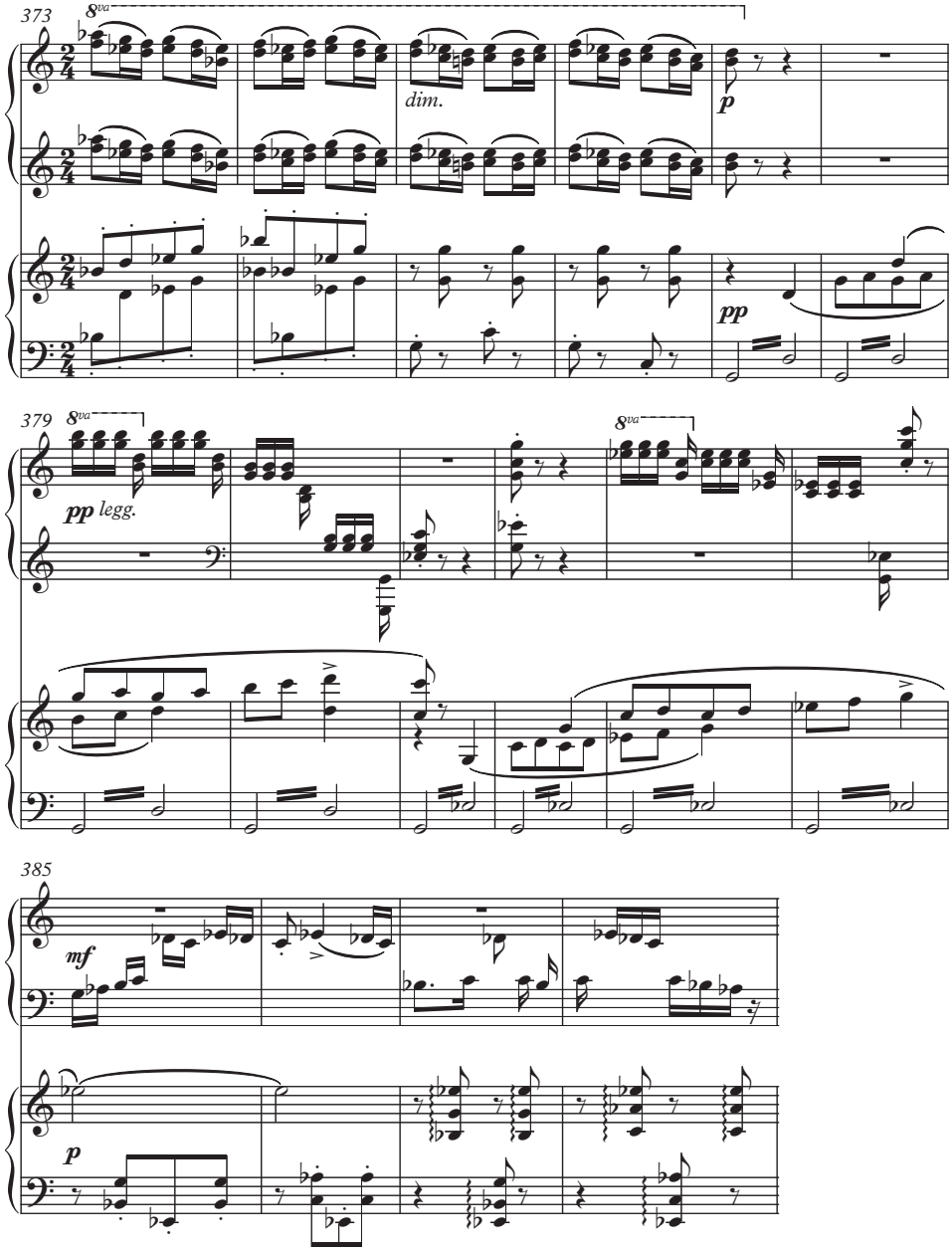
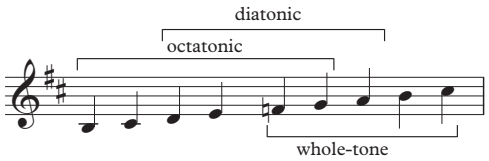


Figure 3.9: The altered Locrian mode, with a sharpened second scale degree.



whereas another (F-G-A-B-C♯) contains a whole-tone scale. Overlapping these two segments is a diatonic pentachord (D-E-F-G-A). The melody of theme I, which spans from B to F, is clearly octatonic.

non-diatonic (*Zidân*, etc.) modes, Saint-Saëns finds a way to add variety to the melodic content without having to change the tonic pitch.

Modality and Chromaticism

With new tonal relationships made possible through the use of Maghrebi-influenced non-major-minor modes, the next step is to investigate how Saint-Saëns shifts from one key area—or modal area—to another. While much of the melodic language of *Africa* is based on non-major-minor modes, an analysis of the modulations between the different tonal areas reveals Saint-Saëns's frequent use of third relations to move smoothly between keys as well as within harmonic progressions that diverge from the harmonic syntax of Western tonality. As I have argued earlier, the coexistence of modality and chromaticism in *Africa* can be contextualized within both part of a broader trend in nineteenth-century tonality of dissolving the forces of Classical monotonality based on diatonicism. I have already shown how modality has altered the harmonic syntax of pre-dominant harmonies and smoothed modulations that involve many pitch class shifts. Saint-Saëns similarly employs chromatic harmonies to move between key areas, suggesting that chromaticism works in tandem with modality to weaken the hierarchy of Classical tonality in favor of a nineteenth-century tonal syntax. In other words, Saint-Saëns's transcultural integration of non-major-minor modes has opened up a means for "widening tonal spectra" as according to nineteenth-century tonal syntax, allowing for the coexistence of a modal and chromatic tonal language within the same work.[27] Within these

[27] Longyear 1973, 32.

compositional contexts, third relations become a prominent feature of Saint-Saëns's use of modality.

The first instance in which Saint-Saëns employs thirds relations in a modulation occurs in measures 62 to 79, when the mode shifts from G *Nawa âthar* to E♭ major, as shown in Figure 3.10. While the fact that these two modes have only four tones in common (G, B♭, D and E♭) indicates that the two modes are distantly related with one another, they have two triads in common—the triad built on the tonic (i) of G *Nawa âthar* is identical to the median (iii) of E♭ major, and the submediant (VI) of G *Nawa âthar* is the same as the tonic (I) of E♭ major—which leaves open the possibility of using a pivot chord to modulate from one mode to another. However, Saint-Saëns opts for a sequential modulation by minor thirds instead. In measures 64 to 66, a variation of the melody starts on G, concluding on a B♭ minor chord in second inversion. In measure 66, the sequence of the melody is repeated a third higher, starting on B♭ and concluding on a D♭ minor chord in second inversion. Based on this pattern, we expect the second sequential repetition starting on measure 68 to lead to an F♭ minor triad in measure 70 with the chord fifth (C♭) in the solo piano. While we do hear the C♭ in the solo piano as expected, the second sequential repetition is varied from the previous phrases in two ways. Firstly, the melodic content is altered into a rising 5-6 motion followed by parallel 6/3 chords, and secondly, the expectation of an F♭ minor triad is thwarted with the entrance of a C♭ major chord in the winds and horns. Rather than treating the C♭ as a chord fifth as per our expectations, the pitch is now used as the chord root. Why does Saint-Saëns opt for the C♭ major triad in lieu of the expected F♭ minor triad? The C♭ major harmony allows Saint-Saëns to smoothly transition to an

Figure 3.10: Modulation from G *Nawa âthar* to E♭ major, mm. 62–79.

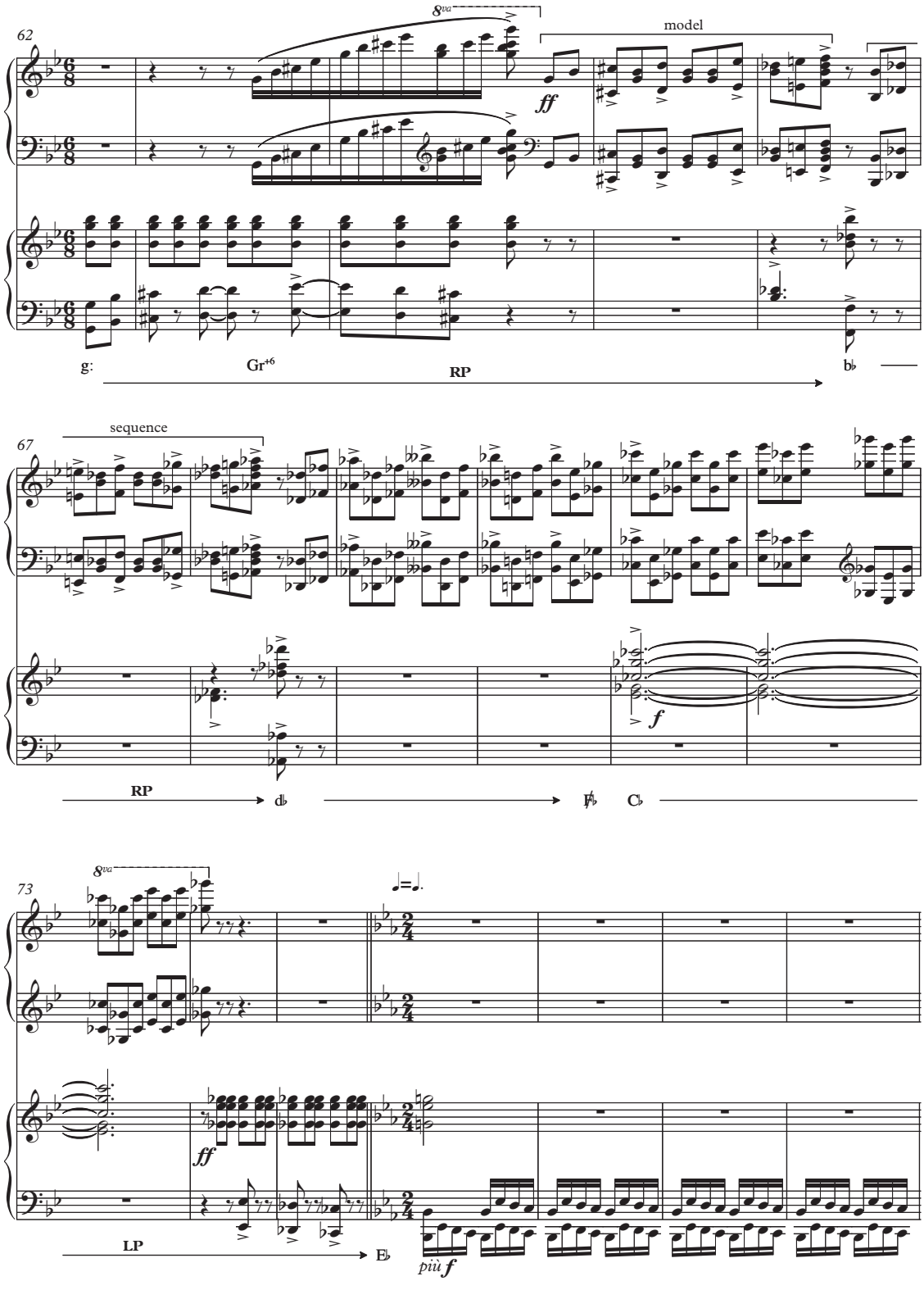
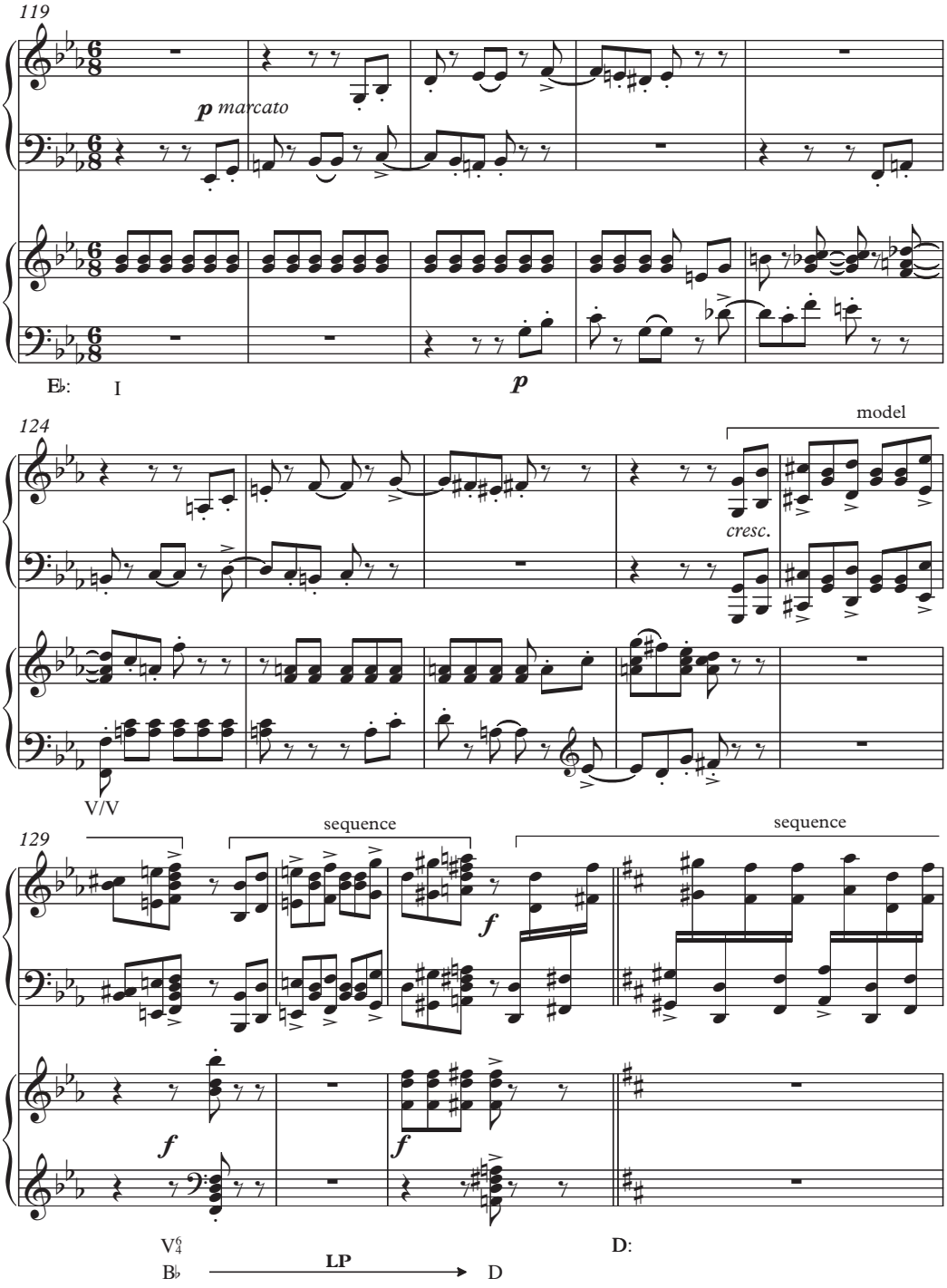
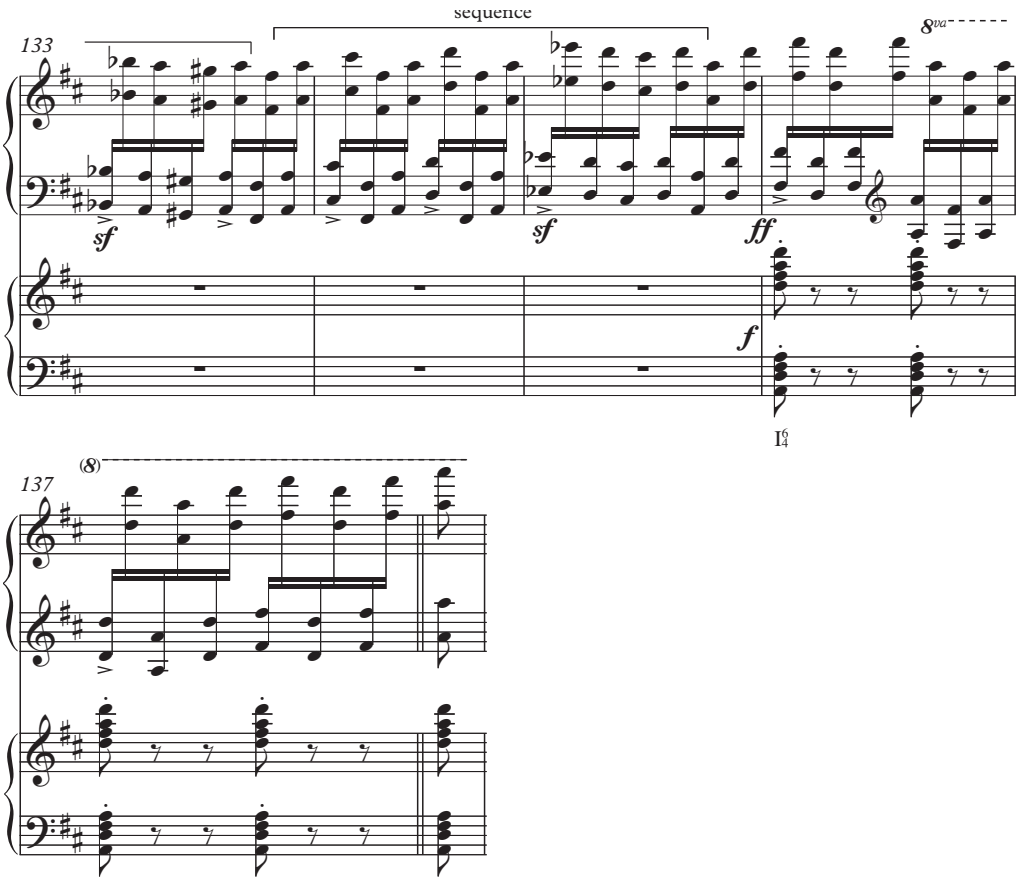


Figure 3.11: Modulation from E♭ Lydian to D *Zidân*, mm. 119–138.





E♭ major harmony through thirds relations, as Saint-Saëns had done to move from G minor to B♭ minor, and from B♭ minor to D♭ minor in measures 64 to 68. Using David Lewin's and Brian Hyer's labels for neo-Riemannian transformations, the shift from a C♭ major triad to an E♭ major triad can be understood as an "LP" operation, a combination of the *Leittonwechsel* (L) and Parallel (P) operations.[28]

The LP operation is also useful for explaining the modulation between E♭ Lydian and D *Zidân* in measures 127 to 138, shown in 3.11. Here, theme A returns once again in E♭ Lydian, first harmonized by the tonic harmony (I) in measure 119 and then by a V/V in measure 124.

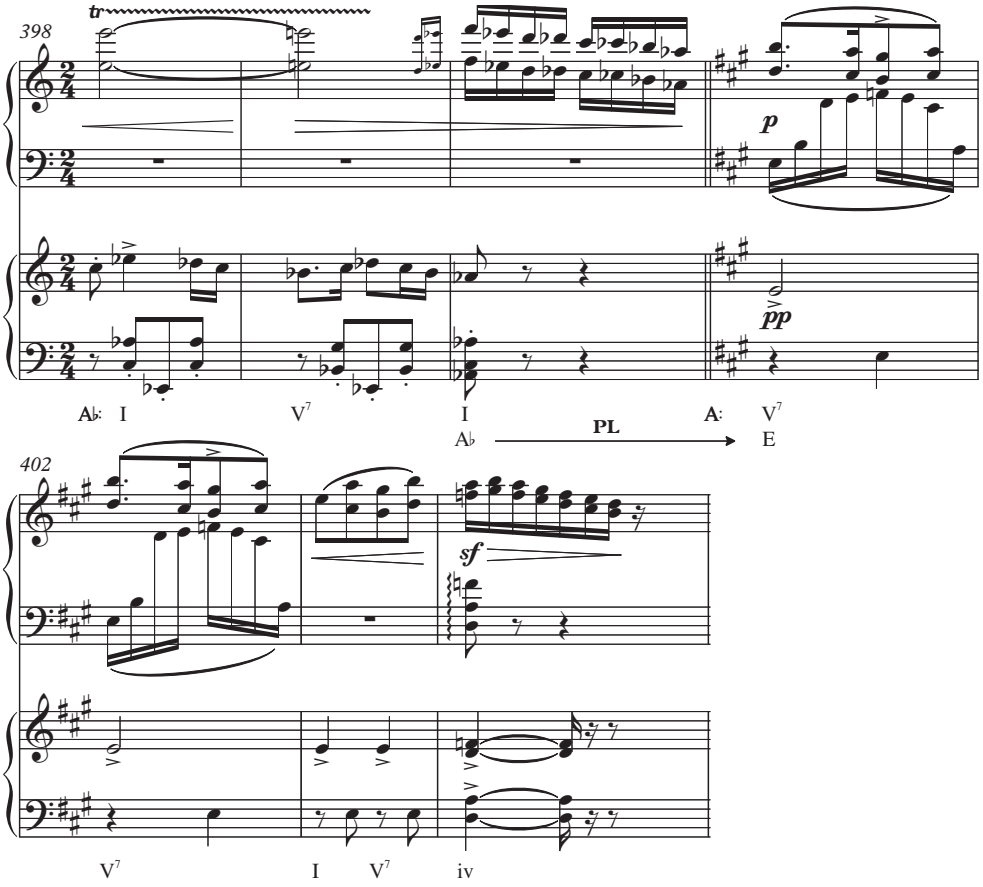
[28] Lewin 1987, Hyer 1995, Cohn 1996. Readers should note that the labels for the Parallel and Relative operations are based on the contemporary neo-Riemannian models, rather than on the *Variante* and *Parallele* operations as presented by Hugo Riemann.

Instead of leading to a dominant harmony in of E♭ in measure 127, a sequential modulation towards D *Zidân* commences. The first melodic phrase in measures 127 to 129 is identical to that of measures 59 to 61, and culminates in the a B♭ major chord in second inversion, or V in the key of E♭. The melody is then repeated a third above in measures 129 to 131, leading to a D major triad in second inversion. The melodic sequence continues in measures 131 to 137 with the melody transposed up a third per every repetition, beginning on D in measure 131 and on F♯ in measure 134. The underlying harmony in this phrase prolongs a D major chord through an arpeggiation, setting up the transition into D *Zidân* in measure 138. Again, Saint-Saëns employs thirds relations to modulate from E♭ Lydian to D *Zidân*: the relationship between the B♭ major triad (i.e. V of E♭) in measure 129 and the D major triad in measure 131 (i.e. I of D *Zidân*, prolonged until measure 138) are related through an LP operation.

Another transformation mechanism for explaining modulations between dissimilar modes is the PL operation, which transforms a major chord into another major chord a major third lower. In measures 399 to 401, shown in Figure 3.12, the key area shifts from A♭ major to A *Saba*, which only has one tone (F) in common with A♭ major and thus shares no common triads.[29] Employing thirds relations allows Saint-Saëns to make a direct modulation: the tonic chord of A♭ major (A♭-C-E♭) is a chromatic mediant of the dominant chord of A *Saba* (E-G♯-B). With A♭ and G♯ as the enharmonic common tone, E and B are each a semitone apart from E♭ and A♭, respectively. However, this relationship is more theoretical than practical; in measure 400, the voice leading does not follow that of closest distance, the third of the chord (G♯) is omitted

[29] Enharmonically, the two modes also share A♭/G♯ as well as D♭/C♯, but because they occur on different degrees of the mode they are not considered common tones. In addition, the intervals of the *Saba* mode are identical to those of the harmonic major scale.

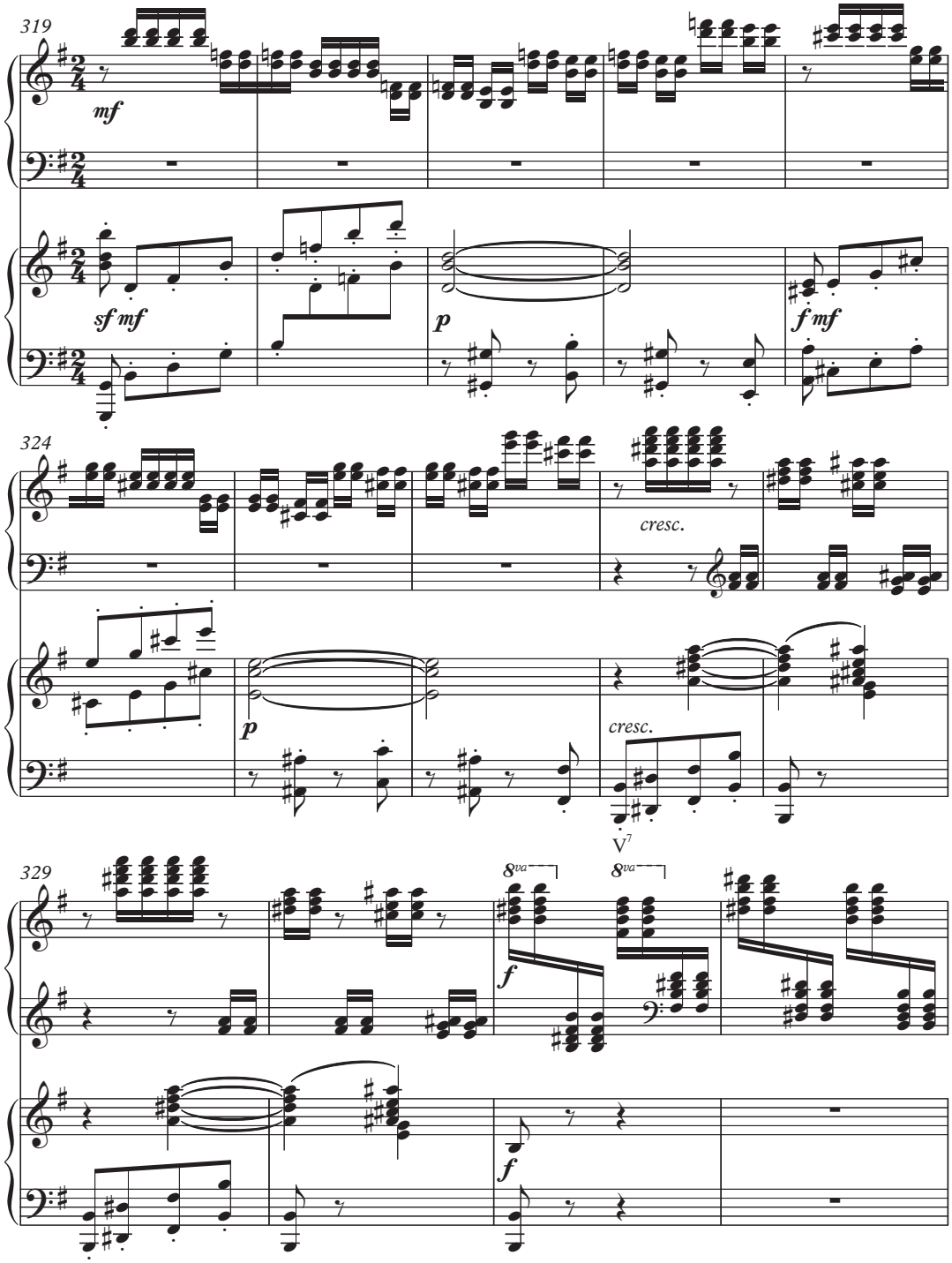
Figure 3.12: Modulation from A♭ major to A *Saba*, mm. 398–404.



from measure 401, and the E major harmony contains a chord seventh to form a dominant seventh chord. Nevertheless, the ear clearly senses a chromatic median relationship between measures 400 and 401, and this modulation serves as another potent example of Saint-Saëns's use of thirds relations to move as smoothly as possible between distantly related modes.

The transition from G major to D *Zidân* in measures 327 to 337, shown in Figure 3.13, similarly utilizes thirds relations, and thus responds effectively to a neo-Riemannian reading. The relationship between the B major and D major harmonies can be labeled with a PR

Figure 3.13: Modulation from G major to D *Zidân*, mm. 319–338.



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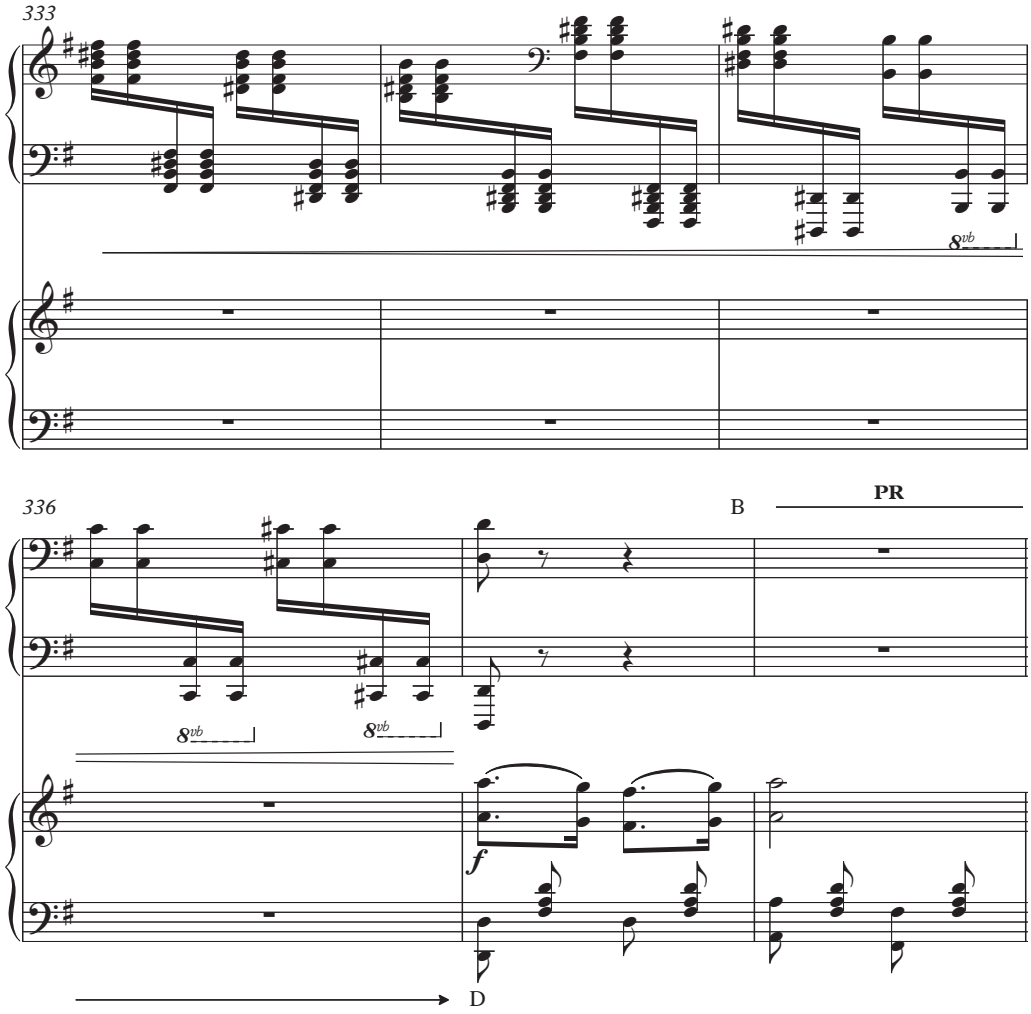
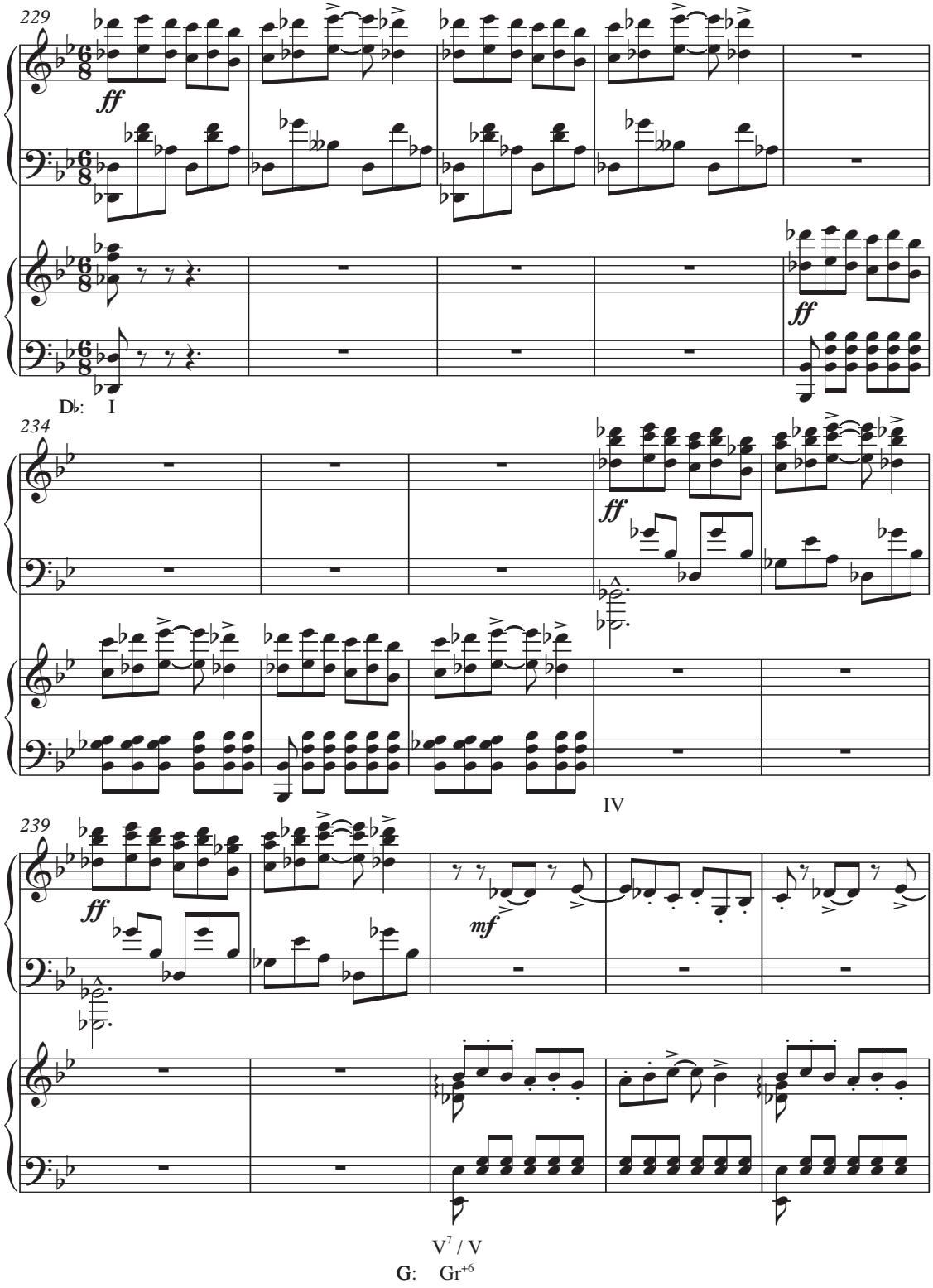


transformation, which is a combination of the Parallel and Relative operations. The section prior to the entrance of theme G, set unambiguously in G major, spirals into a chain of ascending pairs of dominant seventh chords in measure 319, as shown in Figure 3.13. Once the chain reaches a B dominant seventh chord in measure 327, the harmony is prolonged via an arpeggiation in the piano. The chord seventh is eventually omitted, resulting in a B major triad that leaves listeners with the expectation of a cadence in E major or E minor. However, Saint-Saëns surprises our ears with a melody in D major at measure 337, signaling a complete

transition to D *Zidân*. Once again, rather than making a conventional modulation from G major to D *Zidân* via a pivot chord modulation, Saint-Saëns opts for a more abrupt chromatic modulation using thirds relations as opposed to fifth relations. The abruptness and unexpectedness of chromatic modulations contribute to the rhapsodic nature of the work, and the flashy chromatic passages in the piano solo instill the piece with an improvisatory tinge. These modulations serve as an example of transcultural tonal practice that subverts the tonic-dominant relationships of Classical diatonicism, a practice that results from incorporating both major/minor and non-major-minor modes and freely transitioning between the two types of modes.

The use of thirds relations is not the only method through which *Africa* subverts the conventional tonic-dominant relationship in Western tonality. For example, Saint-Saëns takes advantage of enharmonic relationships to modulate from D♭ major to G major in measures 229 to 256, shown in Figure 3.14. A four-bar melodic motive is repeated six times across these measures, each of which is accompanied by a different harmony. The first motive (mm. 229–232) prolongs a D♭ major harmony (I), the second motive (mm. 233–236) a B♭ minor harmony (vi), and the third (mm. 237–240) a G♭ major harmony (IV). In the following measures (mm. 241–248), the melodic motive is transposed downward by a third and harmonized first by an E♭ dominant seventh chord (mm. 241–244) and then by a G minor chord in second inversion (mm. 245–248). Sandwiched between a G♭ major chord in root position and a G minor chord in second inversion, the E♭ dominant seventh chord can initially be read as a V^7/V in D♭ major, but retrospectively, the chord can be interpreted as an enharmonically spelled German sixth chord

Figure 3.14: Modulation from D♭ major to G major, mm. 229–256.



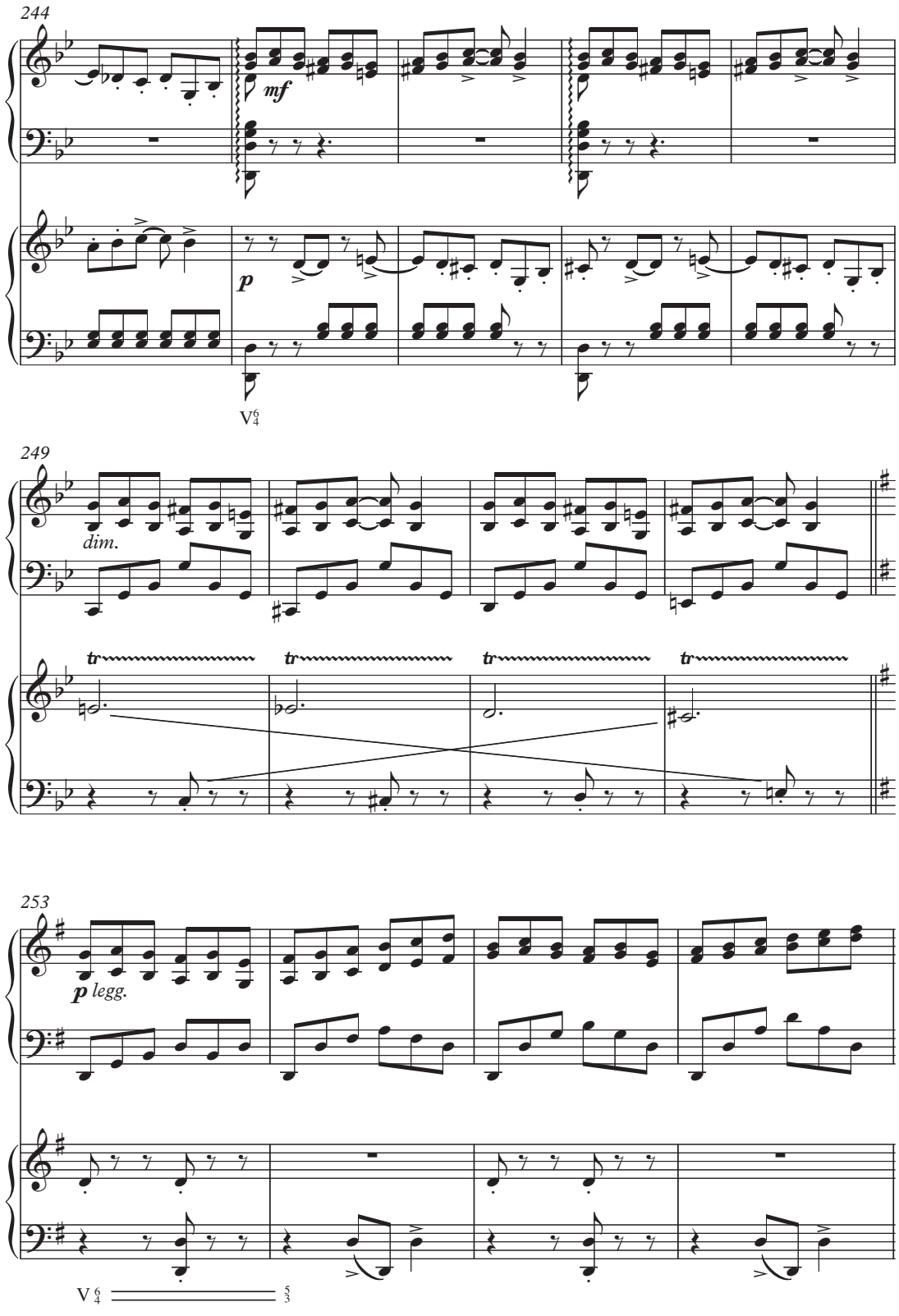

244
mf
p
V 6 4
249
dim.
tr
tr
tr
tr
253
p legg.
V 6 4
5 3

Figure 3.15a: Second inversion tonic chords in mm. 138–146.

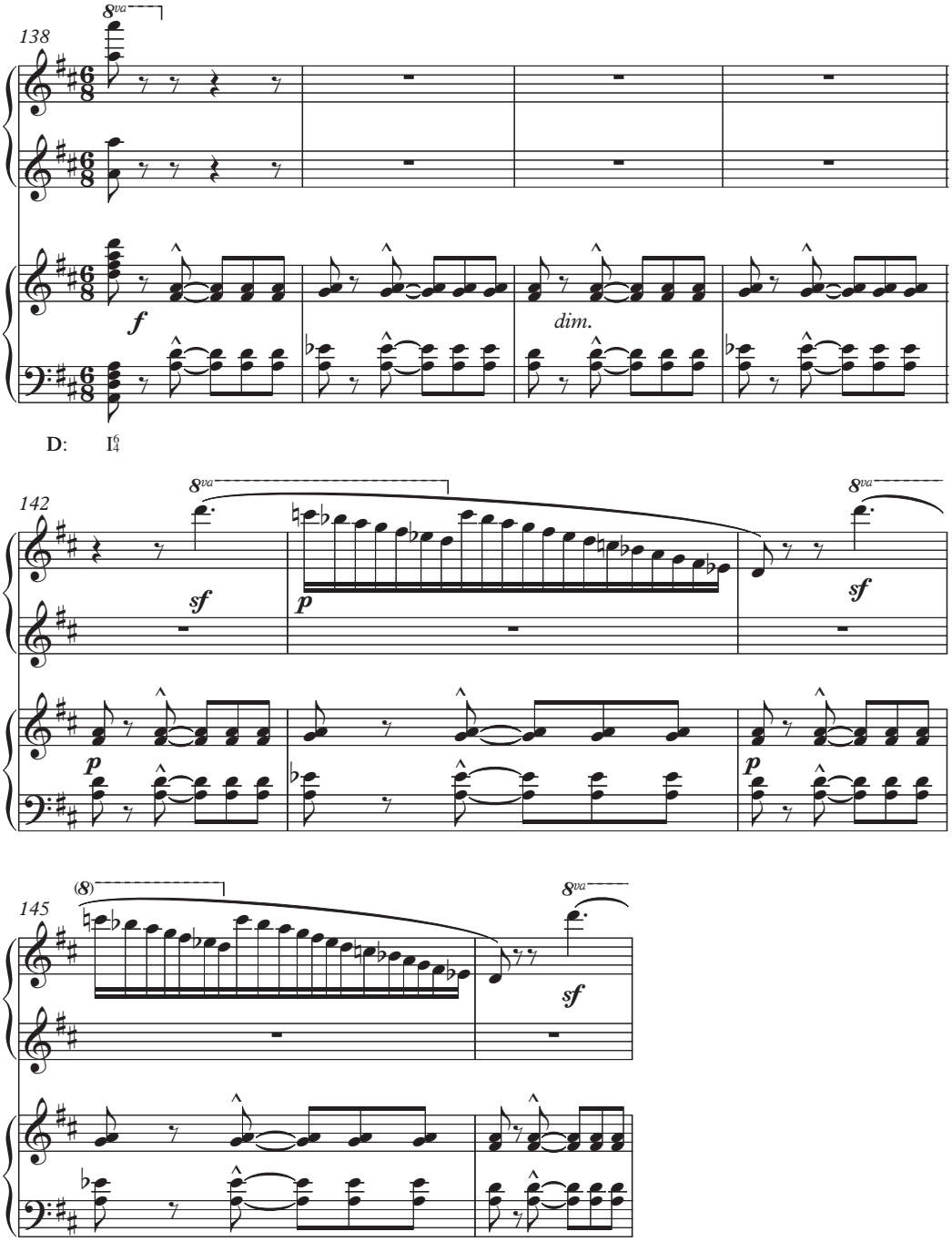
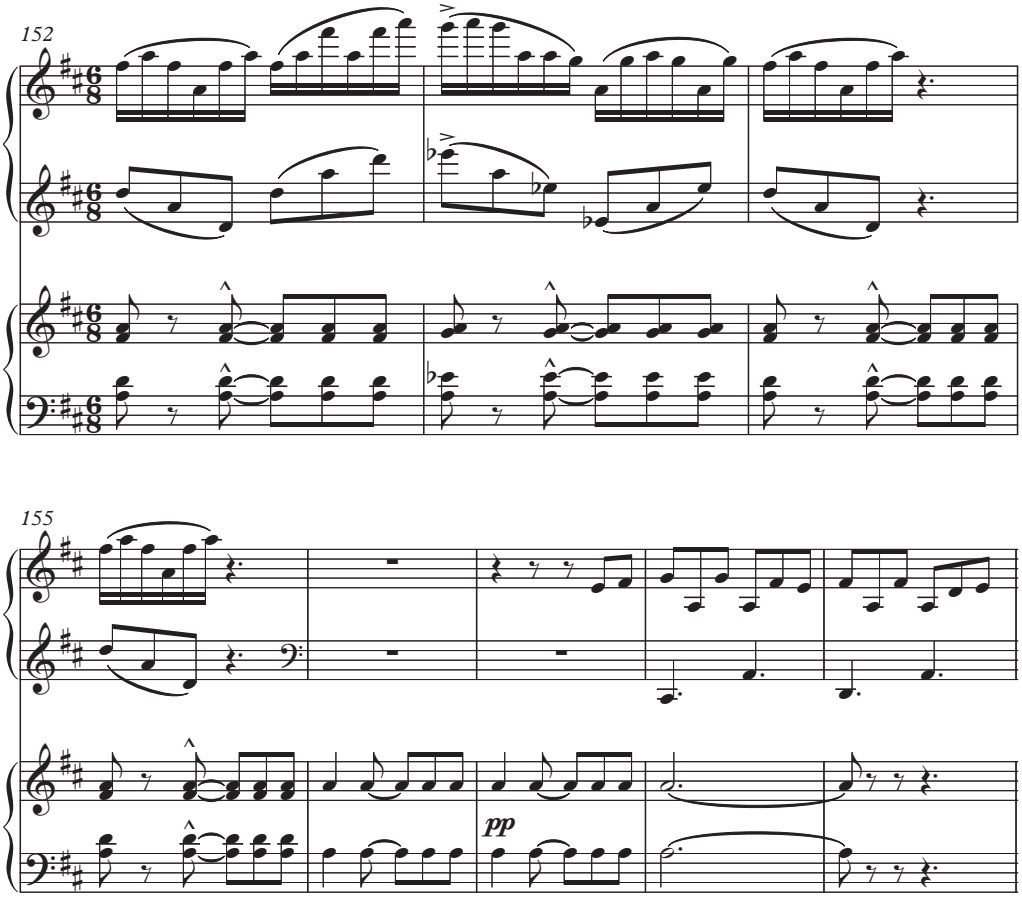


Figure 3.15b: End of rhythmic ostinato, mm. 152–158.



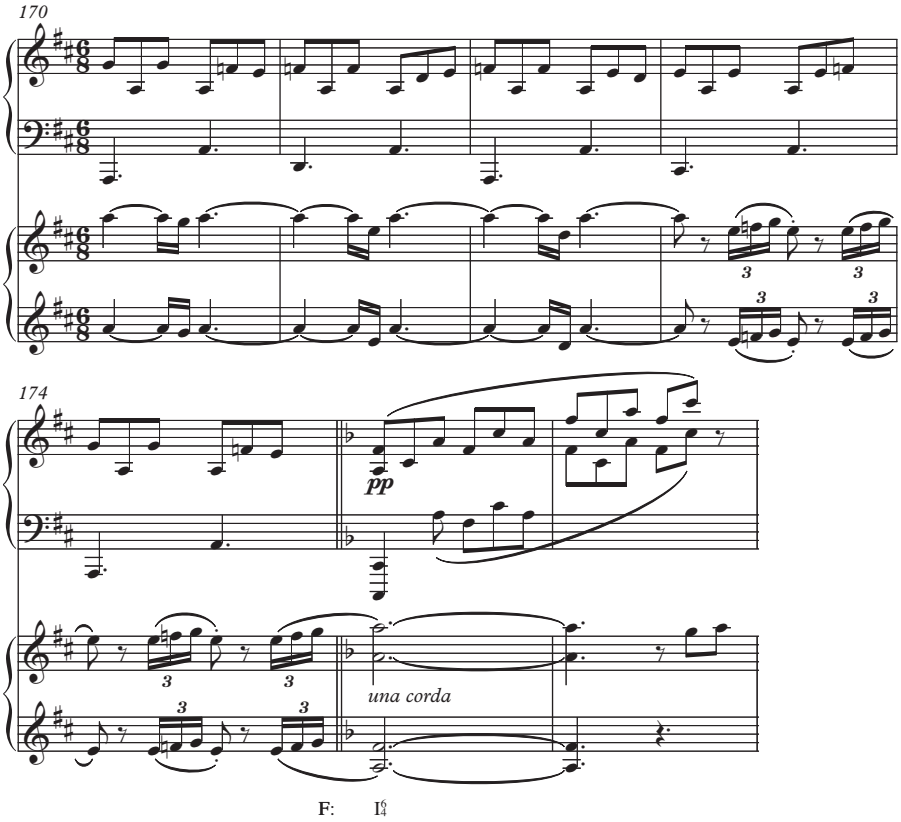
in G. The interval of the augmented sixth, formed by C♯ and E♭, resolves outward into an octave, leading to a G minor chord in second inversion in measure 253 and to a D major chord in measure 254 as per the rules of voice leading. By using the enharmonicism of the E♭ dominant seventh chord, Saint-Saëns creates a gateway to modulate between the distantly related keys of D♭ major and G major.[30]

So far, the transcultural analysis in this paper has focused on key areas and harmonic progressions—how non-major-minor modes undermine diatonic harmonic functions and the

[30] Since a German sixth chord comes from the minor mode (G minor), the use of the chord in G major implies modal mixture.

ways through which Saint-Saëns modulates between diatonically distant modes. Transcultural practices are not limited to movement between harmonies, but can also be applied to an analysis of harmonic voicings within modulatory passages. In fact, Loya suggests that an analysis of the individual voicings of harmonies reveals "harmonic innovations arising from transcultural thinking."[31] Specifically, the unconventional treatment of the $\frac{6}{4}$ chord in *Africa* demonstrates a transcultural practice that deliberately diverges from basic voice leading rules in Western tonal music. In *Africa,* there are many instances in which a tonic harmony is presented

Figure 3.16: Second inversion tonic chord in mm. 170–176.



31 Loya 2011, 47.

as a triad in second inversion despite the fact that the chord is not used to fulfill a neighboring, passing, arpeggiating, or cadential function as we would normally expect in Classical diatonicism. For example, the first chord in measure 138, which announces the arrival of the D *Zidân* mode, is a second inversion tonic chord, as shown in Figure 3.15a. In fact, we do not hear a complete tonic chord in root position at all for the duration of the D *Zidân* mode. As shown in Figure 3.15b, the A in the bass of the rhythmic ostinato has no definite resolution, and instead continues to function as the fifth of the tonic harmony in measure 158. The first tonic note of the passage finally appears in measure 160, when the piano plays a D in the left hand. By this time, however, the mode has changed to D major. The modulation to F major in measure 175, as shown in Figure 3.16, follows a similar procedure: the key is introduced by a $\frac{6}{4}$ chord that does not function in any of the conventional ways mentioned above; rather, the chord functions as a harmony that announces the tonic. Although the $\frac{6}{4}$ chord is in second inversion, a position that normally requires resolution to a consonance, arpeggiation, neighboring motion or passing motion in tonal music, Saint-Saëns treats these chords as a consonance that requires no resolution. While I have discussed two prominent examples here, the piece contains many more cases of the second inversion $\frac{6}{4}$ chord that functions as a consonant tonic harmony. The use of the consonant $\frac{6}{4}$ chord is a quintessential example of a transcultural practice that, while residing within the idiom of Western tonality, allows the composer to diverge from its conventional rules.

Meter as Transculturation

In the previous section, I have focused mainly on Saint-Saëns's use of modality as the subject of transculturation as well as the coexistence of modality and chromaticism in the harmonic language of *Africa*. Equally salient in this work are the rhythmic and metrical components, which offer particularly ripe examples of divergence from normative syntax in Western art music as a result of transcultural practice. In particular, an analysis of the meter reveals a number of interlocking metrical layers at play, resulting in grouping dissonance, displacement dissonance, and in some cases, metrical ambiguity. A transcultural analysis of meter complements the cultural analysis of additive rhythms and misalignment of melody and meter in Chapter 2 and provides insight into how transcultural rhythmic practices have both interacted with and disrupted Western conventions of rhythm and meter.

Before diving into the analysis, some concepts and terminologies must be clarified. In *Fantasy Pieces: Metrical Dissonances in the Music of Robert Schumann*, Harald Krebs characterizes meter in terms of "layers of motion," defined as a "series of regularly recurring pulses" that are active within each of the layers: the pulse layer, micropulses, and interpretive layers."[32] The most important layer for our discussion is the interpretive layer, which allows the listener to 'interpret' the raw data of the pulse layer by organizing its pulses into larger units."[33] Each of the interpretive layers can therefore be categorized according to the number of pulses contained within the layer. Accordingly, the interpretive layer will be referred to as an *n-layer* with *n* denoting the cardinality of the layer. For example, a series of accents occurring at consistent

[32] Krebs 1999, 23.
[33] Ibid., 23.

intervals of three establishes a 3-layer. Multiple layers can coexist within a given musical passage: in a 6/8 meter, for example, a 2-layer, and 3-layer, and 6-layer may exist simultaneously. Within each layer, Krebs categorizes accents into different types, three of which will be referenced in our analysis: 1) *registral accents* in which the accentuation is derived from a high or low point in the register; 2) *durational accents* in which the accentuation derives from a pattern of long and short durations or rhythms; and 3) *dynamic accents* which provide accentuations through dynamic markings in the score.[34]

The next set of terms concerns metrical dissonance, which will be the focus of the analysis of meter in *Africa*. Metrical dissonance, a topic explored in great detail by Krebs, occurs when two (or more) interpretive layers do not align with one another.[35] Krebs proposes two ways in which metrical dissonance can occur. Firstly, grouping dissonance is a type of metrical dissonance that results from the "association of nonequivalent groups of pulses."[36] For example, a 3- and 2-layer would not align at the same periodicity since their cardinalities are not related as multiples. Secondly, displacement dissonance is a type of metrical dissonance that results from a non-alignment of interpretive layers with the same cardinality.[37] For example, two 4-layers exhibit displacement dissonance if one 4-layer is displaced by three pulses from the entrance of another. The fundamental distinction between grouping and displacement dissonance is that whereas two metrical layers engaged in grouping dissonance periodically realign, whereas those misaligned through displacement dissonance do not. The analysis of

[34] Ibid., 23.

[35] Krebs argues that metrical consonance is a "normal state of pre-twentieth-century tonal music" (Krebs 1999, 40).

[36] Ibid., 31.

[37] While the definitions of groupin dissonance is provided by Krebs, the term itself was originally introduced by Peter Kaminsky in Kaminsky 1989.

meter in *Africa* will focus primarily on grouping dissonance, particularly its relationship with additive rhythms and how interpretive layers interact with one another to create the dissonance.

Figure 3.17a: Additive rhythms in theme A.

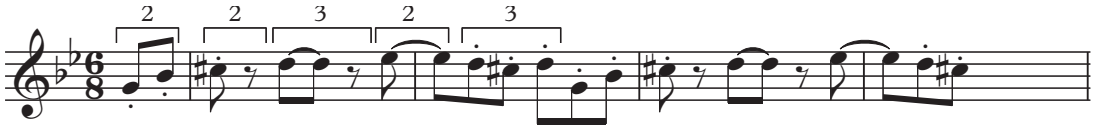
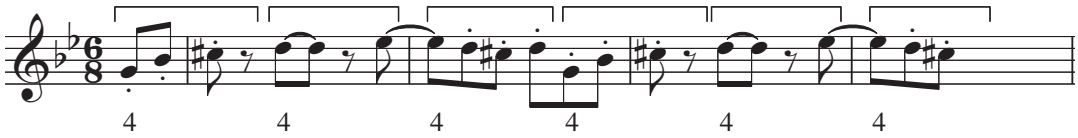


Figure 3.17b: Interpretive 4-layer embedded within theme A.



In Chapter 2, I speculated that additive rhythms are used frequently in *Africa* for two reasons: firstly, additive rhythms marked a departure from normative divisive rhythms in Western art music, and secondly, additive rhythms were a common feature in Arabo-Andalusian music. Theme A, shown in Figure 3.17a, consists of the rhythmic pattern 2 + 2 + 3 + 2 + 3. How do these additive rhythms, appropriated from a melody Saint-Saëns had heard in Algeria, affect the metrical structure of the work when placed into a 6/8 meter? To answer this question, we must first determine the cardinality of the interpretive layer of theme A.

The melody of theme A consists of twelve eighth-note beats whose accents are divided unevenly as noted in Figure 3.17a. Based on the durational accents in the melody, I

Figure 3.18: Interpretive Layers, mm. 44–60.

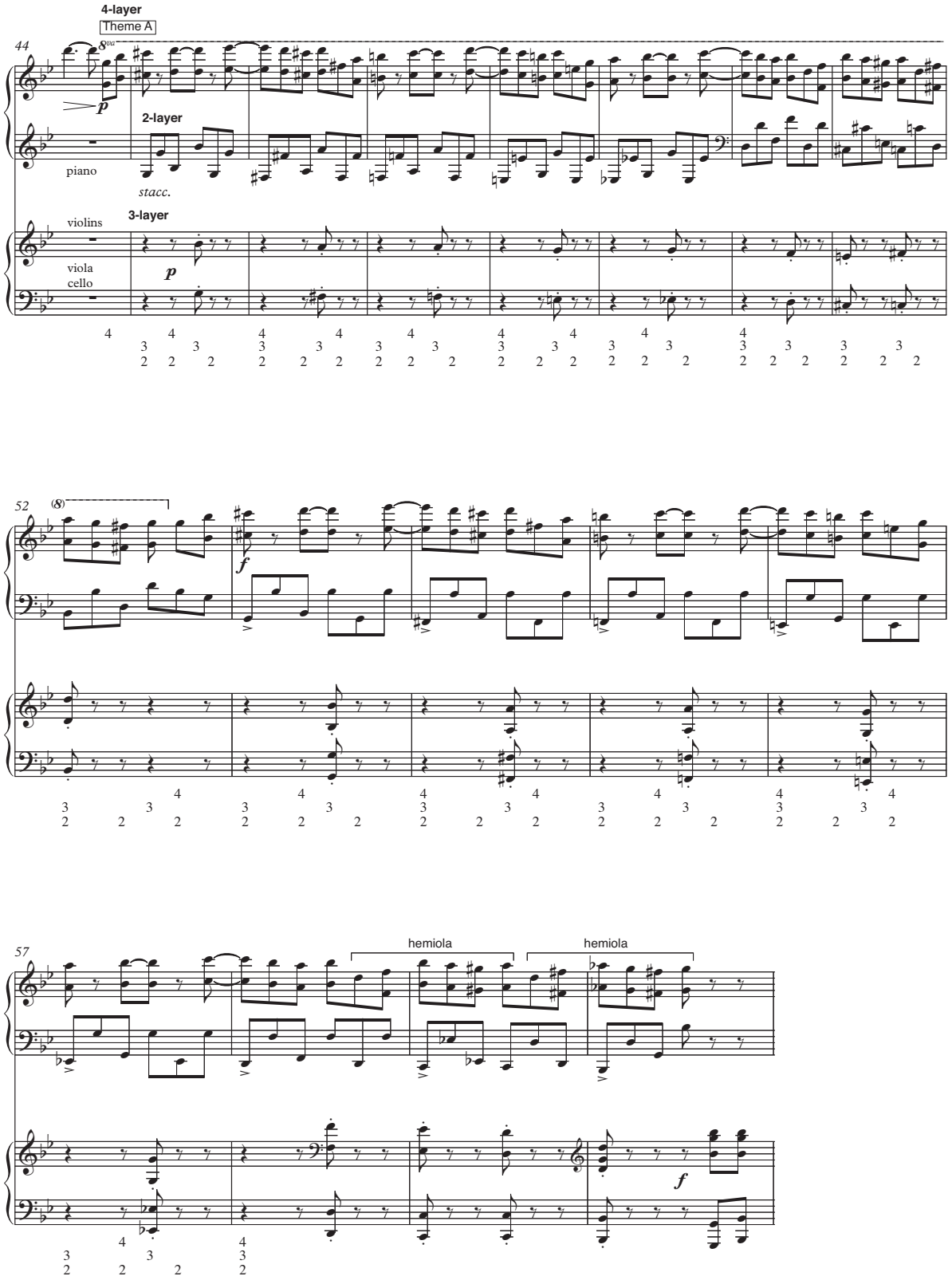
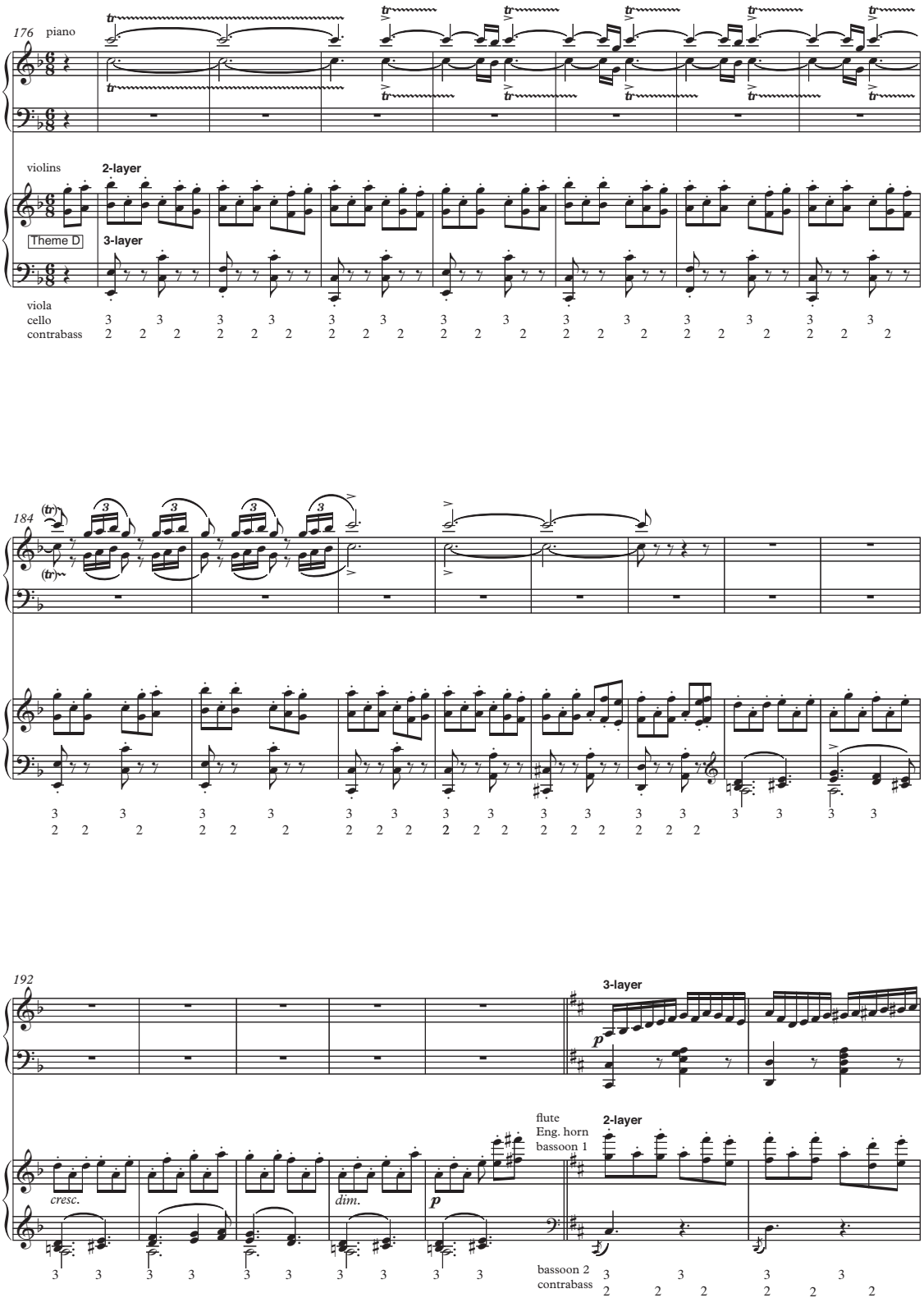


Figure 3.19: Interpretive Layers, mm. 176–196.



argue that the melody of theme A is comprised of a 4-layer, as shown in Figure 3.17b. Although the melody is not demarcated with accent markings or dynamic accents, the accentuation can be inferred from the durational accents: on the fifth eighth-note beat, the duration of D is notated as two tied eighth notes, differentiating the fifth beat from the previous beats that occur in the melody.[38] The accent that should occur on the ninth eighth-note beat occurs one eighth-note beat earlier as a result of syncopation. This syncopation is emphasized by a durational accent, creating two successive accents that heighten the sense of syncopation. However, because the first and second accents are clearly established, the syncopation does not undermine the perception of the 4-layer. In measures 44 to 60, shown in Figure 3.18, the 3-layer in the strings, marking the beats according to the 6/8 meter, exhibits a grouping dissonance against the 2-layer, which is marked by the registral accents that distinguish the third leap in the lower range against the static pedal-like higher range, and the 4-layer of theme A. Each of the layers is annotated in Figure 3.18. The grouping dissonance continues throughout the passage with the exception of measures 49–51 and 58–60, when the 4-layer is briefly taken over by a hemiola in the right hand of the piano. Using Krebs's labeling system, the dissonance formed by the 4-layer and 3-layer would be labeled as G4/3 (1 = 8th), whereas the dissonance between the 3-layer and 2-layer can be labeled as G3/2 (1 = 8th). Since the cardinalities of the 4-layer and 2-layer are multiples and/or factors of one another, they do not result in grouping dissonance.

A grouping dissonance of G3/2 (1 = 8th) is also present in measures 176 to 189, shown in Figure 3.19. On the one hand, theme D, played by the piano, is characterized by registral

[38] The reason for interpreting the first beat as an accented downbeat, rather than an anacrusis, will be discussed later in the paper.

accents placed on every two eighth-note beats and thus exhibits a 2-layer. The 3-layer is projected by the harmonic accompaniment of the strings played according to the 6/8 meter. The grouping dissonance continues throughout the passage until measure 190, when metrical consonance briefly takes over as the violas and cellos align metrically with the pianos to evoke a clear sense of a 3-layer. At measure 197, however, G3/2 returns again as the winds present the melody (2-layer) and the piano and double bass provide the antimetrical 3-layer to create the dissonance.

While Krebs's theorization of metrical dissonance is undoubtedly a Western conceptualization, Salvador-Daniel's and Bartók's treatises on Maghrebi music suggests that the "misalignment" between the rhythmic ostinato and melody was a phenomenon to which Western listeners were likely to draw their attention. Instances of grouping dissonance exemplify a transcultural process at work, a perspective that has attracted little attention in contemporary music theory. While Krebs's theories are sufficient for analyzing the metrical structure of *Africa* on its own, such an approach ignores the possibility of cultural syncretism made possible by importing rhythmic and metrical elements of Maghrebi music into a Western framework. An understanding of metrical dissonance in *Africa* helps explain why theme A may sound exotic to modern listeners even without a detailed knowledge of its Algerian roots.

In the case of grouping dissonance, the metrical conflict results from multiple conflicting metrical layers, which often can be divided into a main meter and a "shadow meter," which William Rothstein defines as a "secondary meter formed by a series of regularly recurring accents, when those accents do not coincide with the accents of the prevailing

meter."[39] In the case of measures 44–60, as shown in Figure 3.18, a 6/8 meter is projected by the 3-layer in the strings and a 3/4 meter by the 2-meter in the left hand of the piano. This conflict is further complicated by the 4-layer of the melody, which projects a hypermetrical 3/4 meter. In sum, the metrical conflict in grouping dissonance derives from a non-alignment of at least two metrical structures.

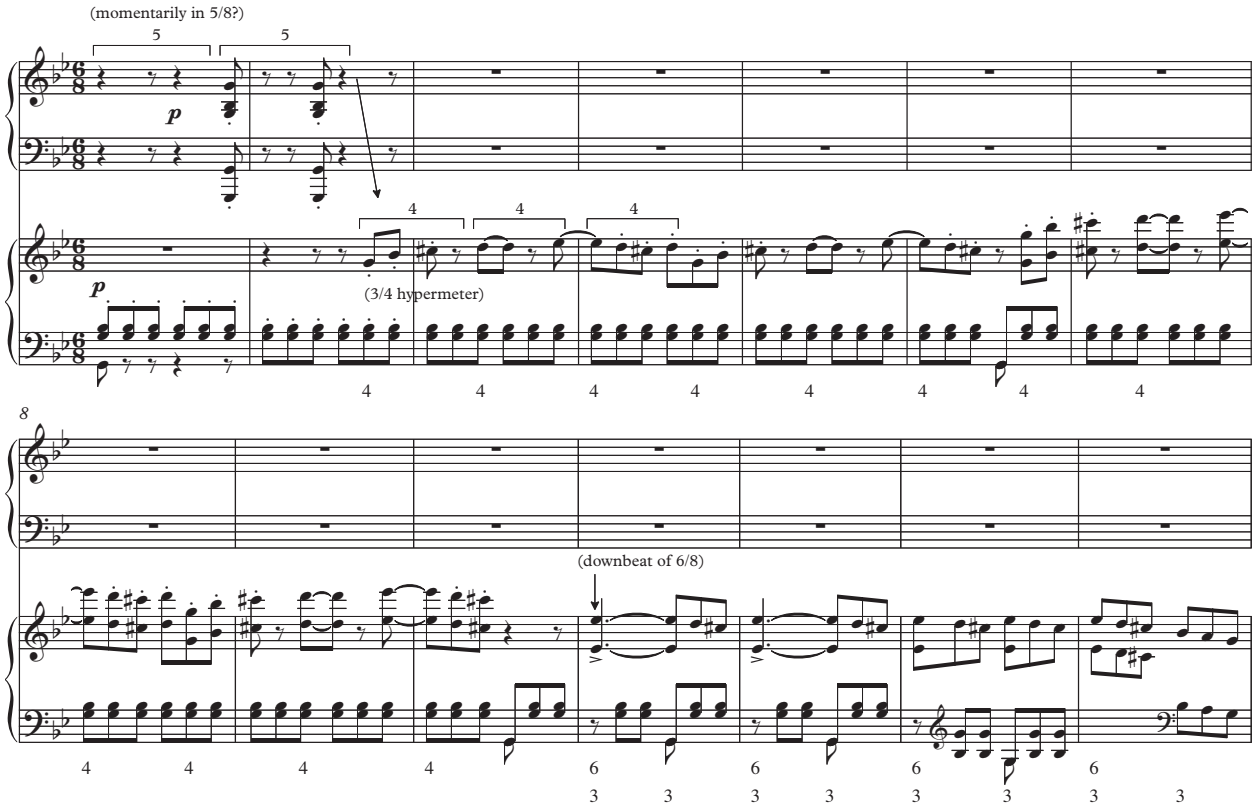
Metrical Ambiguity

Other passages, however, exhibit a different type of metrical conflict altogether: ambiguity. Whereas grouping dissonance is characterized by the presence of multiple interpretive layers, metrical ambiguity makes it difficult for the listener to perceive a clear metrical or antimetrical layer. In other words, metrical ambiguity allows for "two or more plausible and determinate patterns" at any given moment.[40] Gary Karpinski compares metrical ambiguity to Wittgenstein's rabbit-duck illusion: we perceive the Figure as either a duck or a rabbit, but not both at the same time. For Karpinski, ambiguity is an "either-or proposition" in which a listener can construct two meanings.[41]

Metrical ambiguity can take effect in a variety of ways. Justin London categorizes metrical ambiguity into four types: unambiguous metric contexts, latently ambiguously metric contexts, truly ambiguous metrical contexts, and vague metric contexts.[42] The most significant distinction for this paper is that between ambiguity and vagueness. Whereas metrical ambiguity

39 Rothstein 1995, 167.
40 London 2004, 86.
41 Karpinski 2012, 3.0.
42 London 2004, 86.

Figure 3.20: Metrical ambiguity in mm. 1–14.



assumes that there are at least two possible metrical perceptions of a phenomenon, a vague metric context assumes an "absence of one or more normative levels of metrical structure."[43] According to Karpinski, the fundamental issue in defining a meter lies in knowing "where to place the beat or the downbeat."[44] For a vague metrical context, the listener has difficulty making out a determinate metrical pattern.[45]

The first instance of a vague metric context arises in the beginning of the piece in measures 1 to 14, shown in Figure 3.20. Although the piece is notated in 6/8, we do not sense the

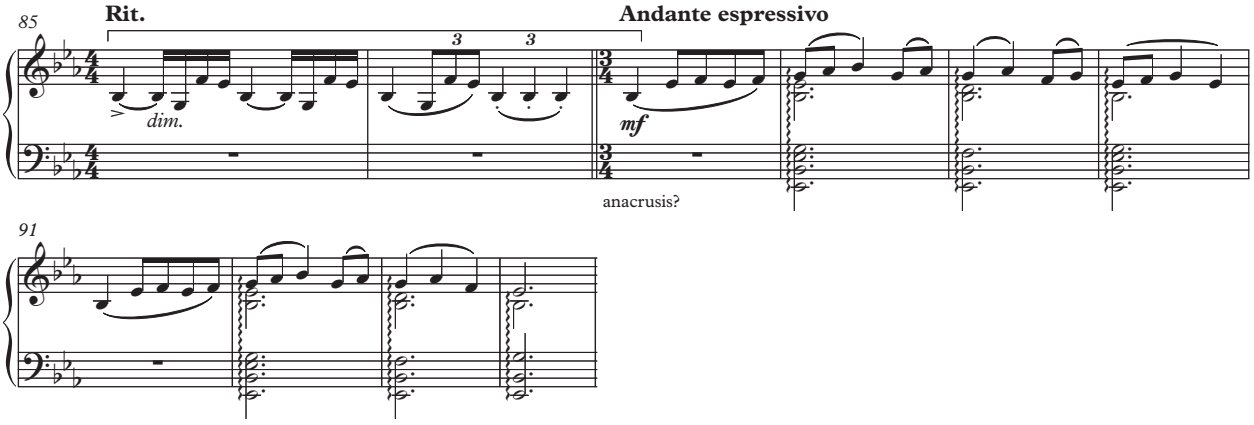
43 Ibid., 86.

44 Karpinski 2012, 3.3.

45 London 2004, 86.

6/8 meter until measure 11, when a 3-layer determines the metrical structure. Different metrical patterns are projected at different points in the passage. For example, a weak 5/8 meter is established in measures 1–2 and a hypermetrical 3/4 meter is projected in measures 2–10 before settling on a 6/8 meter in measure 11. In measures 1–2, the vagueness of the meter stems from the unaccented eighth-notes of the violins, which provide little information regarding a metrical structure due to the undifferentiated pulses. In such a sparse texture, the only potential indicators of meter are the two eighth-note chords played by the piano. The piano enters on the sixth eighth-note beat of measure 1, followed by another entrance on the third eighth-note beat of measure 2, both of which are off-beats in a 6/8 meter. There are five eighth-note beats played by the violins before the entrance of the piano, and five more eighth-note beats before the entrance of theme A. Therefore, although the sparse texture makes it difficult to determine a definite metrical structure in measures 1–2, the entrances of the piano and oboe indicate a 5/8 meter at play. Because the entrance of theme A in measure 2 helps to establish a 5/8 meter in measure 2, it is certainly plausible to perceive this entrance as a downbeat rather than as

Figure 3.21: Metrical ambiguity in mm. 85–94.



anacrusis to measure 3. With the piano dropping out of the texture, our perception now shifts to the hypermetrical 3/4 meter projected by the 4-layer in theme A. We finally sense the notated 6/8 meter in measure 11, demarcated by the eighth-note entrances in the lower strings and the notated and registral accents in the melody.

Another example of a vague metric context occurs at the entrance of theme B in measures 85–94, shown in Figure 3.21. Here, the piano completes a rapid chromatic scalar passage (not shown) and gradually transitions into a slower melodic section. The deceleration is emphasized both by a written *ritardando* marking and by a rhythmic diminution in measures 85–86, in which a sixteenth-note motive is repeated subsequently with eighth-note triplets. Therefore, in measure 86, the triplets sound as if they are sixteenth notes played at a slower tempo due to a sensation of free rhythm and metrical ambiguity made possible by the deceleration. As a result, we still hear the B♭ in measure 87 as part of an eighth-note Figure in measure 86, as shown in Figure 3.21, leading us to hear this B♭ as an anacrusis rather than as a downbeat. If we hear the B♭ as an anacrusis, we perceive the E♭ in measure 87 as the downbeat and starting note of theme B. However, the metrical vagueness is resolved immediately in measure 88 when harmonic accompaniment is added underneath the melodic Figure to establish an unambiguous 3/4 meter.

Identifying vague metric contexts and other metrical conflicts in *Africa* offers, on a broad level, an alternative view into the cultural appropriation of non-Western music by Western composers. While tracing Western melodies to non-Western sources (i.e. modes, rhythms, etc.) allows us to assess the accuracy of the influence and the validity of how the

non-Western culture is being represented, I argue that it is equally important to investigate exotic influences that are less salient than borrowed melodies or rhythms, and to evaluate the ways in which non-Western influences have been integrated into a Western musical context, which in some cases can disrupt conventions of Western compositional thinking. London suggests that "conflicting cues in different layers of a musical texture" are common in a number of non-Western musical cultures, and thus it is possible for a metrical conflict to convey a sense of exoticism. A transcultural analytical approach effectively reveals a more nuanced picture of exoticism that cannot always be explained by a cultural analysis.

Conclusions

While studies in musical exoticism in the nineteenth century have become commonplace in the fields of musicology and cultural theory, the field of music theory has remained relatively distant from such inquires. Loya has lamented the absence of musical analysis from the discourse of musical exoticism, noting that an inquiry into "cultural-critical issues today usually means a further reduction, or even elimination, of music-analytical input."[46] One possible reason for the absence of discussions in exoticism from music theory journals is the dominance of formalist scholarship, spearheaded by Schenkerian theory and pitch-class set theory that continued until the rise of New Musicology in the 1980s. Another reason proposed by Loya is that "traditional music-theoretical mechanisms tend to conceal non-Western elements" and are designed to analyze a specific repertoire: the canonic works of Western art music.[47] An analysis dealing with both Western and non-Western repertoires therefore requires a new theoretical framework that can accommodate the complexity and interdisciplinarity of cultural syncretism.

To address this gap, Loya has eloquently demonstrated in his monograph, *Liszt's Transcultural Modernism and the Hungarian-gypsy Tradition*, that transculturation offers a way for music theorists to enter the discourse of musical exoticism. By analyzing the exoticism of Saint-Saëns's *Africa* along the lines of a transcultural approach, we gain a more nuanced understanding of exoticism, transcending previous methodologies that have limited themselves

46 Loya 2011, 4.
47 Ibid., 5.

to a classification of exotic musical signifiers and discussions framed by Orientalist ideologies. Rather than interpreting any point of difference between the Western and Arabo-Andalusian traditions as a signification of "Otherness," transculturation allows us to focus on how musical features influenced by Arabo-Andalusian music interacts with the Western musical parameters. By pursuing such an approach, we avoid framing exoticism as a case of unidirectional representation, and understand it instead as an exchange through which Arabo-Andalusian elements impact the modal and metric parameters of *Africa* on a structural level.

By synthesizing cultural and structural analysis, we have gained a comprehensive understanding of exoticism. Cultural analysis yielded two major findings. Firstly, we have identified musical devices in *Africa* that have been influenced by Arabo-Andalusian music: the analogous intervallic structures between themes and Arabo-Andalusian *ṭubū'* modes, and the frequent use of additive rhythms. Secondly, we have evaluated that modes that belong to the tertiary mode group do not follow many of the structural properties of the diatonic scale, and are thus perceived as "more exotic" than modes that have these properties in common. Moreover, there are problems with transmitting musical parameters from Arabo-Andalusian music to the Western art music idiom due to the differences in tuning and notational practices.

Structural analysis addresses cultural syncretism from a music-theoretical standpoint, assessing the interaction between the Arabo-Andalusian elements and the melodic, harmonic and metrical parameters of *Africa*. Building upon our findings from cultural analysis, we have identified two major parameters in which Arabo-Andalusian influences had a major impact at the structural level: mode and meter. The use of non-major-minor modes allows for

non-diatonic modulations between key areas that would otherwise be distantly related in an environment saturated by major and minor modes. These modulations were often carried out through thirds relations, as demonstrated by their responsiveness to neo-Riemannian operation labels. Despite the use of chromatic thirds relations within the piece, the harmonic language remains predominantly diatonic within each key area, suggesting that the thirds relations we have observed in transitional passages between key areas are an "elaboration of diatonic structures" rather than a system based within a chromatic tonal space.[48] As for meter, uneven rhythms have yielded patterns of grouping dissonance as well as metrical ambiguity, both of which have disrupted the normative state of metrical consonance to achieve a state of instability and unfamiliarity. For *Africa*, the degree to which a passage could be perceived as "exotic" therefore correlates with how the musical parameters present alternative tonal or metrical relationships to those more commonly found in eighteenth-century common practice tonality.

This study opens up research possibilities for other exotic works in Saint-Saëns's oeuvre, particularly those that represent North Africa: *Samson et Dalila* (1877), *Suite algérienne*, Op. 60 (1880) and the Fifth Piano Concerto, Op. 103 (1896). Each of these works supposedly contains material quoted from North African sources: the Mashriqi Hijaz Kar mode in the Bacchanale of *Samson et Dalila*,[49] a Nuba-inspired rhapsodic movement in *Suite algérienne*,[50] and a Nubian melody in the second movement of the Fifth Piano Concerto.[51] Would it be feasible to apply similar music-theoretical tools to conduct a transcultural analysis of these works? I

48 Kopp 2002, 1.
49 Locke 1991, 267.
50 Pasler 2012b, 241.
51 Studd 1999, 204.

speculate that a transcultural analysis will enable us to identify similar characteristics—alternative tonal relationships created through the use of non-major-minor modes and the ubiquitous use of metrical dissonance—across Saint-Saëns's North African-inspired works. Moreover, a corpus study of his related repertoire may reveal similarities in the types of musical signifiers used across the repertoire, allowing us to pinpoint the characteristics of Maghrebi (in the case of *Suite algérienne*) and Mashriqi music (in the case of *Samson et Dalila* and the Fifth Piano Concerto) that were incorporated into the works and perceived by Saint-Saëns as appropriate for exotic representation.

Another fruitful avenue of future research involves a transcultural analysis of a twentieth-century work influenced by non-Western sources. While studies of musical exoticism in the nineteenth century are clouded by the lack of ethnographic studies, recordings, and authentic transcriptions, the advancement of recording technology and the development of ethnomusicological research in the twentieth century has allowed composers to access authentic and unadulterated sources of music, ranging from recordings and videos to transcriptions and theories from around the globe. Comparing a Western composition influenced by a non-Western musical tradition to the original source from which the composer appropriated will present us with valuable information on how and why the original musical features were altered or omitted when incorporated into a Western musical idiom.

Lastly, questions of exoticism need not be restricted to Western composers appropriating elements from non-Western music. In the past century, non-Western composers such as Alberto Ginastera (Argentina), Zhou Long (China), Ahmed Adnan Saygun (Turkey),

Toru Takemitsu (Japan) and Kevin Volans (South Africa) have written compositions in the Western art music idiom that have drawn inspiration from the music of their homeland. The study of *auto-exoticism* is complicated by the fact that the composer is writing in an idiom foreign to their own culture, yet the act of appropriating material from their country of origin is framed as a form of exoticism. To achieve a more culturally balanced understanding of the interactions between Western and non-Western music in an age of globalization, we must depart from the notion that exoticism entails a Western composer borrowing from a non-Western source. In any study of musical exoticism, we must engage the non-Western counterpart as much as possible; I believe the discourse will be enriched to a greater degree if we let the non-Western have its own voice, rather than the West speaking on their behalf.

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