

placed the most prestige on this genre, as otherwise Mysliveček might have considered venturing into comic opera—by far the more prestigious genre in the long-term. He divides Mysliveček's operas into three periods: the 1767–73 works that established his reputation, the 1773–77 works that were written for more accomplished singers and that included more innovative aria forms, and the 1778–80 late works that gave slow-fast aria types greater emphasis. Freeman's approach to operatic form is lucid yet detailed, and should prove informative to both the novice and the specialist. His classification of arias based upon subtle alterations of convention shows his fluency with what is to many an arcane corner of music history. Since Mysliveček gradually included more arias influenced by sonata form in his operas, one potentially fruitful area of further study would be to investigate the ways in which his music parallels the evolution of instrumental sonata forms by other composers at this pivotal point in its development.

The book's second half is a complete catalog of Mysliveček's oeuvre. The instrumental portion updates the work of Angela Evans and Robert Dearling (*Josef Mysliveček, 1737–1781: A Thematic Catalogue of His Instrumental and Orchestral Music* [Munich: Katzschler, 1999]). A surprising number of works in Freeman's catalog are listed as

doubtful or are attributed to multiple composers, the most common of whom are Dittersdorf and Pleyel. The vocal half of the catalog updates a 2001 catalog published on the Web by Stanislav Bohadlo (<http://www.jmc.cz/stan/myslivecek/> [accessed 17 February 2010]). Included throughout both sections are notes on factual discrepancies, library holdings, and discography. The documentary appendices include all of Freeman's major primary sources in both their original language and translation.

Freeman's book, as detailed and comprehensive as it is, underscores the dearth of information and paucity of modern, accurate research on the non-canonic composers of the mid- and late-eighteenth century. Very little that has been written on Mysliveček prior to Freeman's book can be trusted without cross-referencing this text. Having consolidated and advanced our knowledge of this composer significantly, and having unearthed even more questions relating to his music, Freeman's work simultaneously challenges the field of musicology to fill in the all-too-apparent holes in our knowledge of the non-canonic contemporaries of C. P. E. Bach, Haydn, and Mozart.

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NINETEENTH-CENTURY FRANCE

In Search of New Scales: Prince Edmond de Polignac, Octatonic Explorer. By Sylvia Kahan. (Eastman Studies in Music, v. 63.) Rochester, NY: University of Rochester Press, 2009. [xiv, 389 p. ISBN 9781580463058. \$75.] Music examples, illustrations, bibliography, index.

There are a number of different types of forgotten stories that deserve to be retold. Sylvia Kahan's *In Search of New Scales: Prince Edmond de Polignac, Octatonic Explorer* tells a history-altering story about the composer and theorist Prince Edmond de Polignac (1834–1901), who began (but did not publish) a treatise on the octatonic scale in 1879, later published octatonic works with analytic commentary, and would enter into a literary battle with the Hungarian theorist de Bertha to claim discovery of this scale. It is tantalizing to consider the impact Polig-

nac's work could have had on research into this scale. Although Rimsky-Korsakov had referred, in a letter from 1867 to Balakirev, to his use of the scale in the symphonic poem *Sadko*, which he had composed earlier that year, Polignac's treatise predates other scholarship on this topic, likely including even Rimsky's harmony text, which was published in 1884–85. Even more intriguing is the possibility raised by Kahan regarding the potential influence Polignac may have had on both Debussy and Ravel, both of whom used this scale.

Kahan's study is organized into two main sections: the first consists of a biography of the Prince, one that includes extensive analysis of his works; and the second presents Polignac's treatise (in both English and the original French) complete with commentary. Kahan's biography of Polignac might at first seem superfluous to the main thrust of her study, the Prince's discovery and exploration of the octatonic. Nevertheless, the biographical, historical, and musico-theoretical information presented here combine to paint a vivid portrait of Polignac as well as of the final quarter of nineteenth-century France. Without context, it is difficult to understand how her research on Polignac's classical education and his family's talent for mathematics, a French treatise on Greek folk melodies, or France's knowledge of Russian music in 1878, could explicate and inform the Prince's octatonic discovery, yet Kahan makes one side of this coin seem impossible without the other. Given this inseparability between history and theory, it is not surprising to see that the author thanks Richard Taruskin in the study's acknowledgements; his *Stravinsky and the Russian Traditions* (Berkeley: University of California Press, 1996) is perhaps the most famous example of this scholarly philosophy.

Kahan does not attempt to claim Polignac as an "unjustly neglected composer" (p. 3). The reader is nevertheless allowed to witness the Prince's compositional development through excerpts from works published throughout his career as well as those used as examples in his treatise. His early works contain mediant and tritonic key relations as well as the exploration of other scales (more on this below), all of which lays the groundwork for his discovery of the octatonic. In the end, in spite of Kahan's meticulous and thorough research, she is unable to pinpoint the cause behind Polignac's discovery; his adventurous nature combined with a thorough mathematical training and exposure to Greek tetrachordal theory are cited as the most likely catalysts.

The biography becomes more analytical once the Prince makes his discovery, and this trend culminates in the final chapter devoted to lengthy analyses of five selected octatonic works from between 1878–79 and 1900. Kahan's analysis and commentary

gradually introduce the reader to the material from the treatise that forms the second half of her study. This organization not only allows the reader to absorb the Prince's ideas before reading them in his own words, but serves to make those ideas more comprehensible as well. The chaotic and incomplete state of the treatise as Kahan discovered it necessitated serious editing on her part, and raises unanswerable questions as well: Did the Prince intend to publish the document, and if so, for what audience? It is for these reasons that the treatise itself is reproduced, as the author explains, with significant editorial intervention in order to present the work in the best light. After reading Kahan's description of the document, including the Prince's capricious pagination and the treatise's general organization, the reader will thank the author for producing such a clear and readable edition. Kahan's presentation and commentary are superior to those of Polignac's own.

Readers familiar with modern octatonic theory—from Arthur Berger ("Problems of Pitch Organization in Stravinsky," *Perspectives of New Music* 2, no. 1 [Winter 1963]: 11–42), to Pieter van den Toorn (*The Music of Igor Stravinsky* [New Haven: Yale University Press, 1983]), and Taruskin ("Chernomor to Kashchei: Harmonic Sorcery, or Stravinsky's 'Angle,'" *Journal of the American Musicological Society* 38, no. 1 [Spring 1985]: 72–142)—will be happy to find in Kahan's analytic commentary and the treatise itself the theoretical equivalent of a page-turner. One fascinating aspect of the Prince's octatonic thought is how much material he presented nearly a hundred years before it was "first" published by Berger in 1963. Perhaps even more intriguing are the differences between Polignac's approach to octatonic theory and our current one.

In spite of surface differences, there is remarkable similarity between Polignac's exposition of the scale and the ones presented later by Berger and van den Toorn. Although Polignac refers to his discovery as the "chromatico-diatonic" scale and uses the labels A, B, and C for its three collections (unlike all modern theorists), he clearly identifies the scale's main properties: its alternating half step, whole step construction, its symmetry around the minor third and tritone, its limitation to three

distinct collections, and the range of triads and seventh chords that can be formed on each of the four nodes of the scale. Polignac refers to these four nodes as the scale's "tonics" and the remaining four notes as its "dominants." Kahan points out that the Prince had no historical precedents to guide him, and so his use of terminology here begins a mixture of diatonic and octatonic thought that finds various manifestations elsewhere in the treatise: the construction of key signatures for the three collections; the description of octatonic passages as major or minor depending on the quality of their final sonority; and the unquestioning use of perfect intervals between entries in imitative writing.

It is curious that Polignac concentrates his attention on the ascending semitone, whole tone version of the scale to the near exclusion of the ascending whole tone, semitone version. The Prince was well aware of the (0 1 3 4) and (0 2 3 5) tetrachords produced by each version respectively. Kahan notes that Polignac makes only a brief mention of the diatonic qualities inherent in the (0 2 3 5) tetrachords that appear in one of his octatonic examples. The Prince apparently did not share Stravinsky's later predilection for the interplay between diatonic and octatonic scales that Berger and van den Toorn find central to Stravinsky's Russian style. This is not to say that Polignac's works are not forward looking; although his octatonic scores are not of the same quality, there are passages that look ahead to the music that Stravinsky, Bartók and Scriabin would write after the turn of the century. In spite of this, Polignac, like Rimsky-Korsakov, juxtaposed rather than superimposed octatonically referential chords and scale fragments, leaving Stravinsky to cross this compositional Rubicon.

One topic that Polignac explores more thoroughly than modern octatonic theorists is the concept of modulation, undoubtedly due to his more extensive use of this technique than later octatonic composers. Polignac notes that there are four common pitches between any two octatonic collections, which create the possibility for common pitches to bridge the motion from one to the other. A further extension of Polignac's mixture of octatonic and diatonic thought noted above is his continu-

ous search throughout the treatise for the octatonic equivalent of cadential formulae from tonal harmony. His first examples harmonize melodic fragments— $\hat{1}-\hat{1}$ (implying a plagal cadence) and $\hat{1}-\hat{7}-\hat{1}$ (implying an authentic cadence)—in an octatonic context that requires the modulation between collections. Periodicity in an octatonic context, which also requires modulation, follows quickly. Subsequent examples continue this search while avoiding modulation altogether, although the Prince never seems to have found a solution that satisfied him. Polignac's exploration of this topic provides contemporary evidence to support van den Toorn's ideas of stasis and deadlock being inherent in passages devoted to a single octatonic collection.

The Prince's interest in octatonic modulation and sequences in general produce one of the most remarkable and prescient exercises in his treatise, one Kahan curiously does not point out in her commentary on that exercise (pp. 227–28). In this short passage, three descending (0 1 3 4) tetrachords from as many different octatonic collections are presented with two other lines in first species counterpoint. While the Prince's other octatonic music anticipated the work of later composers by thirty years, this passage doubles this number as it is something that would fit quite naturally in Messiaen's *Technique de mon langage musical* (Paris: Alphonse Leduc, 1944). The modulating octatonic bass here actually creates a single collection of mode 2 (E D C B \flat A \flat F \sharp E), while the inner voice contains a single collection of what modern theory refers to as the hexatonic scale (A A \flat F E C \sharp C A). (There is a second inner voice that is also accountable to the same hexatonic collection with the exception of a single F \sharp .)

Polignac also provides practical advice garnered from his experience composing with the "chromatico-diatonic" scale. He points out that while it is possible to duplicate the exact intervallic structure of a motive if it also begins on one of the scale's "tonics," it is impossible to do so if the motive first appears on a "tonic" and is later duplicated on a "dominant." He then provides the intervallic adjustments necessary to make the latter situation work, thus ex-

ploring the modern concept of tonic and dominant forms of a motive. Another of these practical suggestions involves the replacement in certain situations of octatonic $\hat{2}$ and $\hat{3}$ with the semitone that separates them: Scale A's C C \sharp D \sharp E F \sharp G A B \flat C becomes C D E F \sharp G A B \flat C. The result is a rotation of what Polignac referred to as the "major-minor" scale (D E F \sharp G A B \flat C D), which itself is a rotation of the ascending melodic minor scale, here starting on G. The "major-minor" scale appears in the full title of Polignac's treatise, although it is not explored as extensively as the "chromatico-diatonic" scale. It was yet another rotation of this former scale that Polignac used in one of his early works mentioned above, and one he continued to explore in later works, sometimes in counterpoint with the octatonic scale.

It is difficult to find fault with any aspect of Kahan's study, although there are a few points to note: her interpretation of Polignac's modulating octatonic cadences may overreach with its reference to a quote from Henri Reber (p. 187; the Reber work is his *Traité d'harmonie* [Paris: Colombier, E. Gallet, 1862]); the remark that "one senses Polignac's frustration with the limitations of the octatonic collection" (p. 243) is undercut by the surfeit of other examples that seem to revel in sequential rotations by minor third; and the "uncanny parallel" (p. 122) between the Rimsky school's association between the octatonic and the supernatural and Polignac's association between this scale and the Oriental/Semitic might best be expressed by their shared interest in Leit-harmony. But in the end, these and other similar points are but minor quibbles. Kahan has found in Polignac's treatise a historical link between nineteenth- and twentieth-century octatonism as well as the first octatonic treatise in existence, and in his works of 1879 the first pervasively octatonic compositions. Finally, her study will force scholars to rethink the current understanding of the octatonic and its dissemination in France. As both Debussy and Ravel knew Polignac personally and attended his salon, the presumed Russian octatonic influence on them may in fact have come instead from a domestic source.

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The Art of French Piano Music: Debussy, Ravel, Fauré, Chabrier. By Roy Howat. New Haven, CT: Yale University Press, 2009. [xvi, 400 p. ISBN 9780300145472. \$45.] Music examples, illustrations, appendices, bibliography, index.

This new book has a predecessor of sorts in *French Piano Music: A Survey with Notes on its Performance*, by Norman Demuth (London: Museum Press, 1959), in which French music for *clavécin* as well as the piano from Champion and Chambonnières to Dutilleux and Boulez is covered in 179 small-sized pages. By narrowing his historical focus, Roy Howat covers the *belle époque* of French piano music in vastly greater depth and wider scope. The author is a concert pianist who has recorded all of Debussy's piano works (Tall Poppies Records TP 094, TP 123, TP 164, and TP 165 [1997–2003]) and edited many of them with meticulous care and expert judgment for the Debussy *Oeuvres complètes*. He is also an excellent writer whose prose vibrates with life on the page even while feasting the reader with an abundance of historical information and astute technical analysis. Those who know the increasingly rich literature on Debussy published in recent years will already know Howat's *Debussy in Proportion* (Cambridge: Cambridge University Press, 1983), a valuable study of Debussy's idiosyncratic approaches to form, in which the Golden Section is shown to be an important measurement.

The new book relates the varied art of its four composers to each other and within their historical background in France, especially to Couperin and Rameau and to Chopin, who was still alive in Paris when Chabrier and Fauré were born. Schumann was another major influence on all four composers, specifically in his songs and in the characteristics of his keyboard style. Among composers active in France in the 1870s, when the greater part of the story begins, Saint-Saëns and Franck stand out, the former as Fauré's teacher and the latter as Debussy's (for a brief instant), and Fauré in turn as Ravel's teacher before 1905.

Chabrier (1841–1894), the oldest of the four, also died the youngest, but his impact was profound on French music generally,