

**“Perhaps I’d better go back to Mr. Jadassohn”:
Charles Ives’s Harmonic Training in Late Nineteenth-
Century America**

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Charles Ives’s music is best known for its musical borrowing, stylistic diversity, and progressive use of harmony—for example, freely mixing functional diatonic tonality with bitonality, and experimenting with polychords and non-tertian structures. But most of his earliest music, composed under the guidance of his father George, and his Yale professor Horatio Parker, was quite conservative and reflective of mid-to-late nineteenth-century European trends. One consistent feature of Ives’s early instruction in tonal harmony was a textbook chosen by both teachers: the *Manual of Harmony* (*Lehrbuch der Harmonie*, 1883) by the German composer, theorist, and pianist Salomon Jadassohn (1831-1902).¹ Jadassohn’s textbook, which achieved widespread popularity in nineteenth-century American music schools, is a manual based almost exclusively on vertical chord construction using eighteenth-century thoroughbass practice (e.g., Kirnberger), with some attention to contemporary chromatic harmony.

The use of Jadassohn’s book for Ives’s harmonic instruction is particularly notable because George Ives and Parker were almost complete opposites aesthetically; George Ives valued radical experimentation, whereas Parker stressed pedagogical rigor and the emulation of European models. In his own writings, moreover, Charles Ives attacked Jadassohn’s “academic” approach to music theory numerous times, citing him as an example of everything wrong with conventional musical training (e.g., the quotation in the title of this essay was Ives’s sarcastic response to a violinist who did not understand

¹ Salomon Jadassohn, *Manual of Harmony*, translated by Paul Torek and Henry Bickford Pasmore (New York: G. Schirmer, 1890).

his music). Although scholars such as Carol Baron, J. Peter Burkholder, and Philip Lambert have discussed Ives's training with his father and Parker, these accounts have not examined how Ives's sometimes awkward and tentative adventures in tonal harmony may have their origins in Jadassohn's textbook and teachings instead of from merely his father's experimental inclinations and his student rebellion against Parker.²

I contend that Ives's familiarity with Jadassohn's text and its teachings are reflected in the harmonic procedures of several early tonal compositions (ca. 1888-1902). In particular, three principles from Jadassohn's manual closely relate to these works: first, a rigidly vertical approach to harmony and sonority that downplays the role of melody; second, a strong emphasis on the augmented triad as a primary sonority that creates unusual harmonic progressions; and third, the employment of common tones to produce nearly all adjacent chord connections. I also trace heretofore unexplored connections between Jadassohn's theories, influenced by nineteenth-century German aesthetics from Hoffmann to Schopenhauer, to later writings by Parker and Ives. These discoveries reveal the impact of this prominent German "manualist" on the development of the idiosyncratic American composer and on late nineteenth-century American music theory pedagogy in general.

Music Theory in Late Nineteenth-Century America and "Practical" Harmony

By the time Ives entered Yale in 1894, music theory instruction in the United States reflected a strong Germanic influence that favored a new "practical" type of pedagogy. One reason was that many distinguished composers associated with the burgeoning conservatory movement in America had themselves studied in Germany under composers espousing this approach. Such renowned composers as John Knowles Paine (the first professor of music at Harvard in 1875), Ives's teacher Horatio Parker (named Battell Professor of the Theory of Music at Yale in 1894), and George Whitefield Chadwick (appointed Director of the New England Conservatory in 1897), all took their turns studying with composers like Carl Reinecke and Josef Rheinberger in Munich and Leipzig. Upon their return to the United States, they adopted texts written by Germans that advocated a "practical" approach to teaching harmony to

² See Carol Baron, "George Ives's Essay in Music Theory: An Introduction and Annotated Edition," *American Music* 10, no. 3 (1992): 239–88, J. Peter Burkholder, "Ives and Yale: The Enduring Influence of a College Experience," *College Music Symposium* 39 (1999), and Philip Lambert, *The Music of Charles Ives* (New Haven: Yale University Press, 1997), 25-38.

their students, as opposed to a theoretical or philosophical perspective more common in the early nineteenth century. Robert Wason explains that in the latter part of the nineteenth century the influential German theorist Hugo Riemann “divided music theory as a whole into two categories: ‘speculative’ theory and ‘practical’ harmony,” neither of which had much to do with “musical practice, for analysis, the means by which theoretical precepts could be tested in practice, had all but disappeared from works on harmony.”³ This “practical” approach, best illustrated in texts by the German theorist Ernst Richter and Jadassohn, aimed to present the basic concepts of harmony and voice leading in clear, concise language with a minimum of speculation. Richter, Jadassohn’s teacher and predecessor at the University of Leipzig Conservatory, clearly summarizes this approach in the preface to his *Lehrbuch der Harmonie* (1853):

The author conceives that such a textbook should contain what is fundamental and most essential in musical theory, presented briefly, yet in as complete a form as possible; and that these fundamental features should always be accompanied by references to and directions for their working out in practice, to fit the student for later attempts at composition. This book contains no scientifico-theoretical treatise on harmony, but, although based on the firm foundation common to all methods of harmony, is intended solely for practical ends, which would seem very difficult to attain by abstract scientific study with our present meagre equipment . . . With this practical aim in view the author has endeavored to present the laws of harmony, and the teachings drawn from observation and experience, in a clear and simple manner, and—as he intended the book for study—to let the principles contained therein operate through their own force, without attempting to win a wider circle of readers by clothing them in especially learned language or an attractive form.⁴

Moreover, Leonard Phillips notes that Richter’s text was even anachronistic historically, as it “stems directly from the thoroughbass practice of the 18th century and represents a pedagogical philosophy which kept theory instruction virtually removed from the mainstream of 19th-century music.”⁵ This pedagogical approach proved exceedingly popular, particularly in America; Richter’s text, for instance, was in its eighth edition

³ Robert Wason, *Viennese Harmonic Theory from Albrechtsberger to Schenker and Schoenberg* (Rochester: University of Rochester Press, 1982), 116-17.

⁴ Ernst Friedrich Richter, *Manual of Harmony*, translated by Theodore Baker (New York: G. Schirmer, 1912), iv.

⁵ Leonard Phillips, “The Leipzig Conservatory, 1843-81” (PhD diss., Indiana University, 1979), 135.

when it was first translated into English (and would go into over 25 editions well into the twentieth century) and Jadassohn's harmony book was in its third German edition by the time it was first translated into English in 1890.

Part of the attraction of these texts was their ability to synthesize concepts from the highly influential writings of Gottfried Weber (1779-1839) with slightly more contemporary harmonic techniques found in early nineteenth-century chromaticism. Weber was one of the first practical writers of music theory, publishing his own music manual (*Allgemeine Musiklehre zum Selbstunterricht für Lehre und Lernende in vier Vorkapiteln*, 1822) best known today for introducing the concepts of "multiple meaning" (e.g., whereby a C-minor triad can be interpreted as the submediant in E-flat major, the subdominant in G minor, etc.) and "step theory" (extending the concept put forth by Georg Vogler) whereby Roman numerals are used to correlate chord function with scale degree, and distinguishing major and minor keys with upper-case and lower-case numerals respectively (as well as including the circle for diminished chords).⁶ Weber's manual was also popular in the United States due to its straightforward approach to theory, with a minimum of speculative theory. The impact of Weber's teachings has endured, as these concepts are still part and parcel of many undergraduate music theory textbooks presently used by contemporary universities.⁷

However, these texts found their detractors. The main criticism put forth was that they were too pedantic, extracting the life out of the creative side of music celebrated in earlier treatises that prized empiricism and speculation. Contemporary scholars judge these texts particularly harshly, for example describing works by Jadassohn as advocating a "dull, mechanical familiarity with what is now generally regarded as inadequate analytical and compositional techniques," featuring "pedantic part-writing routines," and others describing the entire state of music theory instruction in late nineteenth-century America as "a mélange of stultified ideas" illustrating a "dearth of new ideas."⁸ Paul Henry Lang describes these authors (e.g., Reicha, Fétis, Jadassohn,

⁶ For more on Weber's theories, including his idea of "multiple meaning" see Janna Salslaw, "Gottfried Weber and Multiple Meaning," *Theoria* 5 (1990-91): 74-103.

⁷ One of the most revealing aspects of examining Richter's and Jadassohn's texts in particular was how little the basic approach to teaching theory has changed in well over a century. Many contemporary textbooks are inspired by the writings of Heinrich Schenker, but many chapters in the "practical" texts could be substituted very easily with current texts without any trouble.

⁸ The first description (Jadassohn) from David Damschroder and David Russell Williams, "Salomon Jadassohn," in *Music Theory from Zarlino to Schenker: A Bibliography and Guide* (Hillsdale, NY:

Riemann, etc.) as “manualists,” and rigid academicians who “teach technical expediency, and as a result the student becomes proficient in only the technical means of many-voiced construction and orchestration This instruction teaches a *métier* not an art.”⁹

Other criticism of the practical approach came from notable composers and theorists such as Arnold Schoenberg and Heinrich Schenker, both of whom expressed several problems with Richter’s (and by extension, Jadassohn’s) approach to harmonic pedagogy.¹⁰ Schoenberg’s disagreements likely arose from the “manualists” lack of application to composition, whereas Schenker differed philosophically with them. Schoenberg was particularly troubled by Richter’s preferred methods for modulation: the dominant seventh and diminished seventh chords. He believed that modulations that occur through only a few such unprepared chords are too “artless and primitive,” and thus we need “[a] richer and more complex means of modulation.”¹¹ Schenker shared Schoenberg’s concerns about the practical manuals’ dubious methods of modulation and he found Jadassohn’s pedagogy particularly flawed and confused, arguing that Jadassohn failed to understand the horizontal composing-out of scale-steps. In reference to an example from Jadassohn’s text *Kunst zu modulieren und präludieren*, Schenker explains:

He accords to each scale-step the identical value of a half-note, translates the scale-steps simply into triads or seventh-chords (what an obvious tautology) . . . and believes that thereby he has reached the effect of a modulation, whereas, in reality, he stopped short at his unfree sketch, although he wrote it over again. In my opinion this way of

Pendragon Press, 1990), 128; the second from Daniel Harrison, *Harmonic Function in Chromatic Music* (Chicago: University of Chicago Press, 1994), 298; and the third from Robert Wason, “Musica Practica: Music Theory as Pedagogy” in *The Cambridge History of Western Music Theory*, ed. Thomas Christensen (Cambridge: Cambridge University Press, 2007), 66.

⁹ Paul Henry Lang, *Music in Western Civilization* (New York: W.W. Norton, 1941), 973-94.

¹⁰ Because Jadassohn studied with Richter, and their books display the same general philosophical and musical approach, we can consider criticism of one to apply in general to the other. Differences in Jadassohn’s book will be explained later.

¹¹ Arnold Schoenberg, *Theory of Harmony*, translated by Roy E. Carter (Berkeley: University of California Press, 1983), 15.

proceeding is to be criticized all the more because Jadassohn most likely knows full well that a real modulation looks somewhat different.¹²

In addition, Schenker disapproved of using homegrown examples instead of drawing material and concepts from the repertoire itself.

Schenker was indeed correct about the manualists' lack of connection to "real" music in their texts, as Jadassohn's book contains almost no examples from the repertoire save for a brief excerpt from Bach's *Well-Tempered Clavier* used in a discussion of acceptable cross relations. By only including composed examples, most of them just a few measures long in the keys of C major or C minor, Jadassohn opens himself up to the criticism that his explanations are abstract and devoid of context. In the preface to the *Manual of Harmony*, he acknowledges that including such self-composed works may not be as artistic but he argues that this strategy benefits the students, writing that "it is therefore better to show the pupil the application of and the exceptions to the rule by means of examples specially constructed for the purpose; although such little pieces, written merely to teach certain points, possess neither the value nor the charm of artistic compositions."¹³ Schenker similarly offered scathing commentary on this type of pedagogy in relation to Richter's text, which is also bereft of examples from the literature, asking the questions, "Where are they [examples demonstrating a concept] found in works of art? Thus it is not chance but merely a natural consequence of the contradiction inherent in this example that the author could not find a sample from any master-work to fit this example of harmony (i.e., scale-steps), infested as it is with counterpoint (i.e., rules of voice-leading)."¹⁴ Schenker's point certainly rings true here; this type of pedagogy can produce unidiomatic and unusual progressions that have little basis in actual practice.

Music Theory at Yale in the 1890s

The practical approach to music theory pedagogy was instituted at Yale University in the 1890s, when Horatio Parker was first appointed to the faculty, and when Charles

¹² Heinrich Schenker, *Harmony*, ed. by Oswald Jonas, translated by Elisabeth Mann Borgese (Chicago: University of Chicago Press, 1954), 337-38.

¹³ Jadassohn, *Manual of Harmony*, iii-iv.

¹⁴ Schenker, 176-77.

Ives entered as a student (1894). Parker’s predecessor, the organist Gustave J. Stoeckel, hired in 1855 as an instructor of church music at Yale College and later appointed Battell Professor of Music in 1890, taught three courses in music theory: Harmony, Counterpoint/Canon/Fugue, and Forms. The course description for Harmony is presented here:

Harmony. 2 hrs. Both terms: acoustics, intervals, chords with inversions and combinations. Modulation. Nonharmonic tones. Suspensions. Accompaniment of a melody.¹⁵

When Parker arrived and assumed leadership of the music program, he added three additional courses in strict and free composition, instrumentation, and the history of music, and modified and expanded the course description for the harmony class:

Harmony (Music 270, 2 cr). Monday and Thursday, 2 pm. A study of chords, their construction, relations, and progressions. This course covers the following subjects: Intervals, triads of M & m scales and their inversions and resolutions; Modulations; Chromatically altered notes; Harmonization of a given melody; Harmony in two, three, and five parts; Simple instrumental accompaniments. The work is principally the writing of exercises from figured bass. The exercises will be corrected in the classroom with explanations & illustrations. Jadassohn’s *Harmony* (B&H, NY & Leipzig) is used as textbook.¹⁶

The topics covered in this newly revised course description correspond closely to the table of contents of Jadassohn’s text and emphasize a solid grounding in voice leading and figured bass. Parker was also likely influenced by the pedagogical trends he was exposed to while studying in Munich with Rheinberger, as well as from his training with George Whitefield Chadwick, who studied composition with Jadassohn for three months privately in Leipzig. As Rosalie Sandra Perry explains, “Parker’s philosophy of music education emphasized a rigid, theory-dominated program of instruction Parker’s uncompromising, rather antihumanistic position concentrated on the

¹⁵ *Report of the President of Yale University, 1894* (New Haven: Private Printing, 1894), 4; reprinted in Rosalie Sandra Perry, *Charles Ives and the American Mind* (Kent, OH: Kent State University Press, 1974), 6, n. 10. For more on Parker’s courses, see Luther Noss, *A History of the Yale School of Music, 1855-1970* (New Haven: S. Z. Field Printing Co., 1984), 45-48.

¹⁶ William K. Kearns, “Horatio Parker (1863-1919): A Study of His Life and Music” (PhD dissertation, University of Illinois at Urbana-Champaign, 1965), 110-11.

disciplinary aspects of music.”¹⁷ In spite of this academic and seemingly stifling approach to theory and composition pedagogy, Parker could count many successful students during his tenure at Yale in addition to Ives, including Roger Sessions and Quincy Porter.

Although the music curriculum at Yale was usually restricted to upper-level students (juniors and seniors), Ives was able to audit courses as a freshman and sophomore with Parker on the basis of his original compositions; by Ives’s own comments and his scholastic record, we can be reasonably confident that he took Music 270 with Parker. Additionally, we know that he absorbed much more from Parker than he would later admit, as confirmed by the works he wrote during his Yale study and through “surviving counterpoint exercises [that] show clearly . . . a more exigent level than those for his father.”¹⁸ One reason for Ives’s frustration with Parker may have resulted from his earlier training with his father, because they apparently covered many of the same topics:

Father had kept me on Bach and taught me harmony and counterpoint from [when I was] a child until I went to college. And there with Parker I went over the same things, even the same harmony and counterpoint textbooks (Jadassohn), and I think I got a little fed up on too much counterpoint and classroom exercises (maybe because, somehow counterpoint gradually became so much associated in my mind as a kind of exercise on paper, instead of on the mountains).¹⁹

Ives’s ambivalent remembrances of Parker came much later in life, when he painted a picture of Parker as a good craftsman and solid composer of religious music, steeped in the “governed by the German rule,” but unable to comprehend Ives’s compositional experiments and goals. However, Parker provided Ives with a traditional training in harmony, counterpoint, and other areas that taught him skills that would serve him well as he embarked on his own compositions.

¹⁷ Perry, 7.

¹⁸ Charles Ives, *Memos*, ed. by John Kirkpatrick (New York: W.W. Norton, 1971), 49, n. 5.

¹⁹ *Ibid.*, 49.

Jadassohn...

Though Jadassohn is largely forgotten today, his own biography and music are worth examining, as they inform the pedagogical principles disseminated to many American students, including Ives.

Jadassohn taught composition, theory, and piano at the Leipzig Conservatory from the mid-1850s until his death in 1902. Leipzig was a city rich in musical activity, owing particularly to the influence of Felix Mendelssohn, who founded the Conservatory. After a few years of piano study with Franz Liszt (1849-52), Jadassohn furthered his training in music theory by working with Richter and Moritz Hauptmann, and was named “royal professor” at the Leipzig Conservatory in 1893, succeeding Richter. He thought of himself primarily as a composer, writing works for all types of ensembles and achieving some success; unfortunately, at the time his Jewish religious background may have prevented him from garnering more fame. It was through his music theory texts, however, that he became an international figure. He authored books covering nearly all areas of music-theoretic study: just his *Musikalische Kompositionslehre* alone consisted of five volumes: harmony, form, counterpoint, instrumentation, and “practical” music, which covered ear training and figured bass.²⁰

As mentioned, Jadassohn’s books continued a largely conservative tradition of theory pedagogy advocated by his Leipzig colleagues, though his ideas and observations were slightly more contemporary with music of his time due to his fondness for the music of Liszt and Wagner. As Janna Saslaw points out, Jadassohn’s harmony text “most resembles Richter’s harmony manual (1853), although—because of Jadassohn’s exposure to the music of Liszt and Wagner—it goes further in its discussions of chromaticism and enharmonicism.”²¹ In fact, Jadassohn’s theoretical work has been the subject of some ridicule in part because of these discussions of chromaticism, in particular related to a peculiar analysis of the first measures of the Prelude to *Tristan and Isolde* in a short book about Wagner’s use of harmony.²² Example 1 reproduces Jadassohn’s analysis:

²⁰ Damschroder and Williams, 128.

²¹ Janna Saslaw, “Salomon Jadassohn,” *Oxford Music Online*.

²² Salomon Jadassohn, *Melodik und Harmonik bei Richard Wagner* (Berlin: Harmonie, ca. 1889), 27.

Example 1. Jadassohn's analysis of Wagner's Prelude to *Tristan and Isolde*, mm. 1-11.

Langsam.

pp

cresc.

f#s: V11 G# a:II A: II B: III C: IV D: V E: VI F# VII G# VIII A IX B X C XI D XII E XIII

f#s: V11 G# c: II A: h: II G# c: V7

cresc.

c: II G# IV7 f: Ly es: II G# e: V7

In the example, Jadassohn analyzes the first 11 measures as being in 13 different keys, highlighting his aforementioned unusual approach to modulation. Wason explains that for Jadassohn, “chordal meaning—no matter how farfetched—is always chosen by the ear above melodic meaning; and the analysis which results shows the most extreme concentration upon chordal identity at the expense of harmonic syntax.”²³ Similarly, Damschroder and Williams state that Jadassohn’s “harmonic perspective fostered a jumble of key changes that segmented chordal progressions into small compartments, often with no apparent relationship among them.”²⁴ This analytical approach thus ignores any sort of contrapuntal or linear interpretation and brands Jadassohn as a

²³ Wason, *Viennese Harmonic Theory*, 95. Also see Milton Babbitt, *Words about Music*, edited by Stephen Dembski and Joseph N. Straus (Madison: University of Wisconsin Press, 1987), 146, for an interesting take on Jadassohn’s *Tristan and Isolde* analysis.

²⁴ Damschroder and Williams, 128.

fervent believer in privileging the vertical over the horizontal. This pedagogical approach extends to how he described chords and illustrated their function, as seen below.

...and Ives

In addition to Jadassohn's unusual perspectives on modulation—accomplished mainly through abrupt chromatic chords and theoretically possible on every chord or measure, other techniques found in the *Manual of Harmony* emerge in some of Ives's early music. It is impossible to ascertain exactly what Ives gleaned from Jadassohn, but because he used that particular text for study as a youth as well as a college student, it is plausible that some concepts presented in the book could have influenced musical decisions. Ives's early tonal music from the mid-1880s to a few years after his graduation from Yale in 1898 consists largely of sacred choral works, organ music, songs, the First String Quartet and the part of the First Symphony, in addition to other miscellaneous pieces. These pieces reveal a young composer learning his craft and engaging with traditional forms and harmonic structures, though not without some experimentation or a critique of music theory conventions.²⁵ Yet attempting to explain some of Ives's awkwardness and idiosyncrasies with tonal harmony by inexperience alone overlooks the impact of his teachers and their instructional materials.

The first topic from Jadassohn's text that resonates with early Ives works is a strong vertical approach to harmony and sonority. The Wagner analysis discussed earlier illustrates Jadassohn's interpretation of harmonic syntax and meaning, one that eschews any contrapuntal interpretation of the opening of the *Tristan* Prelude. This approach seems hardwired in Jadassohn's conception of music, as even his counterpoint book, written shortly after the *Manual of Harmony*, begins with writing in four parts (placing a cantus firmus in each of the voice parts), bypassing the idea of species counterpoint entirely.²⁶

Even though Ives was trained as an organist and clearly encountered much

²⁵ For an interesting interpretation of tonality in some of Ives's early experimental pieces like *Psalm 67* and unpublished exercises, see J. Peter Burkholder, "The Critique of Tonality in the Early Experimental Music of Charles Ives," *Music Theory Spectrum* 12, no. 2 (1990): 203-23.

²⁶ See Jadassohn, *A Manual of Single, Double, Triple, and Quadruple Counterpoint*, translated by Theodore Baker (New York: G. Schirmer, 1902).

Ives’s music contains many instances of chords built by stacking, even if they do not make much sense functionally; these occur even in some of his early pieces (particularly choral settings). I wish to examine two pieces—one more conventional, and the other more experimental—for their emphasis on verticality and challenges to linear analysis.

Ives’s song “At Parting,” written around 1889 when he was 15, figures prominently in Ivesian lore because it was one of the works he presented to Parker in order to be accepted for composition study at Yale.²⁹ The song is in a clear ternary form, with the outer sections in the style of nineteenth-century parlor songs (e.g., Stephen Foster), and almost completely diatonic in G major. The middle section, by contrast, is far more chromatic and striking, as it diverts from G major and consists of a string of chords that have little tonal relation to G major. Ives seems to be experimenting with chords and keys and channeling Jadassohn’s *Tristan* analysis, ignoring standard tonal syntax. See Example 3, which shows mm. 11-20 of “At Parting.”

Example 3. Ives, “At Parting,” mm. 11-20.

heart. 2. The frag - rance it ex - hales, Ah! If you but on - ly know, where heart. but in dy - ing, dy - ing fails it is my love my love for you. 3. The heart.

(1889)

²⁹ See Ives, *Memos*, 116.

After an authentic cadence in G major that concludes the A section, the second verse contains a chain of seventh chords of various types: half-diminished, diminished, major-minor, as well as a peculiar cadence that moves to a B-flat major triad, joined to its predecessor enharmonically by the fifth of that chord (E-sharp to F natural). Following the unusual “chordal meaning” analytical interpretation proposed by Jadassohn for the music of Wagner, one might analyze the middle section of “At Parting” as each chord representing a different key area in Example 4.

Example 4. Ives, “At Parting,” reduction and chordal analysis of the middle section from mm. 12-19.

Measure 12: F-sharp: vii°7
Measure 13: B: vii°4/2
Measure 14: G-sharp: V7, E: vii°7
Measure 15: F-sharp (?):vii°6/5 (misspelled), B-flat: I
Measure 16: B-flat: I, G: V7 (9th?)

This interpretation makes little sense, as it does not take into account chord function or hierarchy, ignores the vocal melody, which rises and falls with each chord chromatically, and overlooks some of the common tones between chords that makes the connections smoother (also something recommended by Jadassohn, as discussed shortly). One plausible way to explain this chromatic succession comes from the text, in which the singer inhales the fragrance from a rose representing his heart that he gives to his departing lover and is suddenly overcome: “where but in dying, dying fails it is my love for you.” Ives could be simulating the ecstatic and uncontrollable nature of love and passion through the inclusion of meandering chromatic passages that act as sound and experience, instead of following tonal syntax and movement toward a clear tonal goal.

Ives’s music also features the construction of vertical sonorities built of multiple chords to create dense textures. His predilection for experimentation with sonorities and density came from George Ives, who thumbed his nose at Parker’s insistence that Charles follow the standard rules of tonal harmony and chord construction. A later example that contains unusual mixed sonorities and defies a linear interpretation comes from the *Postlude for Thanksgiving Service* for organ, a sketch that was later incorporated into *Thanksgiving Day and Forefathers’ Day*, the last movement of the *Holidays Symphony*. The organ sketch, dated to around 1897 while Ives was studying with Parker, features tall sonorities—mostly stacked polytriads that move up and down slowly and chromatically. There is a linear chromatic quasi-ostinato in the Pedal, all sounding over a pedal C, while an important motive (what Ives called the “Harvest Work Theme”) appears in the Swell. Though analysis can sort out these disparate parts, Ives intended that they sound simultaneously given the evidence in the sketches. Example 5 shows the first page of the *Postlude*:

Example 5. Ives, *Postlude for Thanksgiving Service*, mm. 1-9.

The musical score for Example 5, Ives's *Postlude for Thanksgiving Service*, mm. 1-9, is presented in three systems. The first system (measures 1-3) features three staves: Swell (4' only), Great Organ (8' only), and Pedal. The Swell staff begins with a triplet of chords. The Great Organ staff has a chromatic line of chords. The Pedal staff has a chromatic line of notes. The second system (measures 4-6) features the 'Harvest Work Theme' in the Swell staff, with a 'tension torn away' annotation. The Great Organ and Pedal staves continue their chromatic lines. The third system (measures 7-9) continues the piece with similar chromatic textures in all three staves.

Again, any sort of linear analysis is difficult because of the prominent sonorities that are held and woven chromatically through the texture. Eventually, the orchestrated version adds hymn tunes that rise out of these thick chords, but the organ sketch is remarkable for its density and notable emphasis on sonority. The impulse for fusing together different sonorities without reference to function may have come from George Ives, but the idea of vertical analysis and presentation may owe something to Jadassohn's text, which allows all permutations of stacked triads and seventh chords, for example:

All fundamental chords introduced by us, whether Triads or chords of four tones (chords of the Seventh), can be formed on all degrees of the major and minor scale and used both in the fundamental position and, for the most part, in their inversions also.³⁰

This vertical method of chord construction appears again in Jadassohn's discussion of modulation. At first, his recipe for how to modulate seems standard enough, requiring that the new tonic must occur on a strong beat and be followed by an authentic cadence to establish the new key with what we would now call a pivot chord. But after his explanation of how common tones between chords makes for smoother modulations, Jadassohn writes the following:

The chord of the Diminished Seventh is the principal means for getting quickly and easily from one key into any other. It can enter freely anywhere without preparation of the seventh. It allows many a resolution and progression into minor and major and, by the enharmonic change of one or more or all of its tones, it can incline even towards the most remote keys.³¹

One could argue that the diminished seventh chord grew in importance in the nineteenth century, especially as employed for modulation through its enharmonic reinterpretation, and in that sense Jadassohn reflects the time in which he composed and lived. However, that chord was also overused as a modulation panacea as Schoenberg and Schenker implied, and in the subsequent examples in the text, Jadassohn presents nearly every permutation possible, most of which sound awkward or clumsy. Moreover, the second sentence in the preceding quotation that permits the diminished chord to

³⁰ Jadassohn, *Manual of Harmony*, 147.

³¹ *Ibid.*, 183.

“enter freely anywhere without preparation of the seventh” contradicts his earlier chapters about the diminished seventh chord where he requires preparation.³²

As shown in “At Parting,” Ives adopted some of Jadassohn’s suggestions, with examples of extended passages of diminished seventh chords moving between keys to modulate. Another later example of this technique can be found in the “Intermezzo for String Quartet” from Ives’s sacred cantata, *The Celestial Country* (ca. 1898-1902, a piece that was started with Parker, and finished after graduation). This piece is one of Ives’s most ambitious early works, scored for vocal quartet, mixed chorus, organ, string quartet, brass, and timpani. The “Intermezzo” is cast in ternary form, and the outer sections remind one of Schubert with a predominantly lyrical melody and simple accompanimental texture. But like “At Parting,” the harmonic language grows more chromatic and wandering in the middle section of the piece, leaving the home key of B-flat major for more unstable regions; this segment seen in Example 6 is ignited by an extended section of diminished seventh chords.

Example 6. Ives, *The Celestial Country*, “Intermezzo,” mm. 61-77.

³² See pp. 82-83 of the *Manual of Harmony* for Jadassohn’s explanation of voice leading for the diminished seventh chord.

Beginning at m. 61, marked “Tempo di scherzo,” Ives demonstrates his facility with chromatic harmony by using sequences of diminished seventh chords to modulate from B-flat to D major by m. 90. He builds intensity through dynamics and articulations, particularly the accent-staccato gesture found starting at m. 61. Ives scores this section artfully, following proper rules of voice leading and at its conclusion, even forges a smooth common-tone modulation using D back to the A section’s home key of B-flat major. It is likely that this movement was at least started under Parker’s supervision, given that his own cantata *Hora Novissima* was used as the model for parts of *The Celestial Country*, hence the “correct” resolutions of the diminished seventh and chromatic modulations.

In addition to an emphasis on verticality and unusual approaches to modulation with constant use of the diminished seventh chord, Jadassohn’s text examples also illustrate some archaic harmonic principles as well. For instance, Jadassohn designates the augmented triad as a primary triad in minor keys; in his discussion of the mediant chord in minor keys, Jadassohn explains that “on the 3rd degree we find a new form of chord, a triad having a major third and an augmented fifth. This we call the augmented triad.”³³ He calls this a “dependent” triad because of its dissonant properties, but gives no further explanation for its construction. The mediant triad in minor has long been the subject of debate, but the idea of it becoming a “primary” triad again seems to stem from Richter.³⁴ Including the augmented triad in this category leads to unusual and awkward progressions, as seen in Example 7.

³³ Ibid., 46.

³⁴ David M. Thompson, *A History of Harmonic Theory in the United States* (Kent, OH: Kent State University Press, 1980), 17. Thompson notes that Weber omitted spelling *any* harmony on scale degree 3, thus avoiding augmented triads altogether (13).

Example 7. Jadassohn, *Manual of Harmony*, p. 38 (Augmented Triad).

The image shows a musical score for Example 7, consisting of three systems of music. Each system has a treble and bass staff. The first system is labeled 'a.' and the second 'b.'. The Roman numeral analysis for the first system is: $\alpha: \text{i VI V III}' \text{i iv i VI iv ii}^0$. The second system has two lines of analysis: the first line is $\text{III}' \text{V VI} \dots \text{iv ii}^0 \text{V} \dots \text{i i VI V III}'$ and the second line is $\text{III V VI iv ii}^0 \text{V i}$. The third system has a single line of analysis: $\text{III V VI iv ii}^0 \text{V i}$. The music features augmented triads and other chords, with some notes marked with a sharp sign (#).

As before, this example vividly shows Jadassohn’s vertical bias, as the III+ has no passing function (as it later would in most analytical explanations) and stands on its own without any particular harmonic function. Use of the augmented triad as an individual sonority occurred in the late nineteenth century (e.g., notably in Liszt’s *Nuages Gris*) and thus, Jadassohn appears to be reflecting the music of his time. However, devoid of any examples from the literature, the progressions come off as awkward at best, unidiomatic at worst, with an unusually brisk harmonic rhythm that disregards any large-scale harmonic function (peruse Jadassohn’s own Roman numeral analysis for proof).

Ives was particularly fond of the augmented triad and its functional ambiguity throughout his compositional career. In his early tonal music, the chord stands out as a pungent dissonance in much of the overall bland harmonic landscape. But, in addition to being used as an independent sonority, Ives also uses the augmented triad as a voice-leading structure in ways that Jadassohn does not explain—as an altered dominant, for example—such as in a progression like V-V⁺-I, when ascends chromatically to create tension. Such an example appears in the second measure of “Crossing the Bar,” a

work for mixed choir and organ written around 1891. Example 8 shows the first three measures of the piece.

Example 8. Ives, “Crossing the Bar,” mm. 1-3.

The image shows a musical score for the first three measures of Charles Ives's "Crossing the Bar". The score is for a mixed choir (Soprano, Alto, Tenor, Bass) and organ (Organ and Pedal). The tempo is marked "Andante sostenuto, ♩ = 63". The time signature is 4/4. The lyrics are "Sun - set and ev - r". The organ part includes markings like "[Sw. pp]", "[Gr. p]", and "[8', very little 4']". The Pedal part includes the marking "[8', very little if any 16] [p]".

This brief example is abrupt, as it is played by solo organ and the augmented chord occurs as the second chord of the piece, but it follows appropriately in the progression with the D-sharp leading to E and the B leading to C, while holding the G constant in the choral entry on a C-major triad. Other examples of the augmented chord in “Crossing the Bar” are treated in ways more like Jadassohn describes, as a true sonority. In m. 24, the choir sings an unaccompanied passage that repeats the same augmented triad at the beginning (though spelled differently, this time as E-flat-G-B) answered by short motives in the organ. This usage of the augmented triad differs

from the previous example, as it does not function within a tonal progression; the progression of triads reads as follows, starting at m. 23:

E major---E-flat+----G-flat, moving toward A major in m. 32.

All three triads can be connected by half-steps, but here the augmented triad is treated as an equal sonority within the context of the major triads around it. Whereas this usage of the augmented triad appears in late chromatic harmony, the frequency with which Ives uses the augmented triad in such a short piece, as well as other later pieces raises the question of where he might have discovered such sounds during his early development as a composer.

Ives may have also been influenced by Jadassohn’s solution for how to connect nearly any one chord to another: through common tones. By holding common tones between as many chords connected in a progression as possible, a myriad of common and unusual relationships can be formed. Jadassohn explains that:

In general, any chord-connection is good where one or two tones belonging to two chords in common are retained in the same voice. But even without the natural bridge of a sustained tone, the connection of two chords may be good when the several voices are led from the tones of one chord to those of another in a manner well adapted to singing.³⁵

See Examples 9 and 10 for the accompanying musical examples.

Example 9. Jadassohn, *Manual of Harmony*, p. 97.

204.

a: I7 h: VII⁰₇ a: I7 VII⁰₇ a: I7 V₇ a: I7 d: IV

a: I7 d: II⁰₇ a: I7 V₇ etc.

Jadassohn, *Harmony*. 7

³⁵ Jadassohn, *Manual of Harmony*, 98.

Example 10. Jadassohn, *Manual of Harmony*, p. 98.

205.

a. b.

g: vii⁰₇ *c*: V IV V *C*: I *C*: IV vii⁰₇ I

c. d. e.

C: ii₇ iii V₇ I *C*: vii⁰₇ I *C*: V₇ *a*: III' V₇

The first example shows how common tones can be held to produce chromatic chords, and the second example illustrates the second part of Jadassohn’s directive, showing “good progressions” without common tones but “led in true vocal style.” Apart from producing some peculiar harmonic progressions, Jadassohn’s analysis is remarkable, interpreting consecutive chords as being in different keys and completely ignoring tonal syntax as in his Wagner analysis. Tellingly, the striking aural effect of these progressions was not lost on Jadassohn, who included a disclaimer that should they sound “harsh and strange” it is because the examples lack “preceding or following chords.”³⁶

As with the preceding techniques, Ives also adopts Jadassohn’s method of chord connection through common tones to achieve striking and unusual chord connections. “Songs My Mother Taught Me,” from around 1895 when Ives was at Yale, serves as a representative example of using common tones both to extend a phrase harmonically as well as to set up a modulation. The poem by Adolf Heyduk, which Antonín Dvořák famously set as the fourth of his *Gypsy Songs*, Op. 55, paints a picture of nostalgia and yearning for the past, similar to the text by Frederick Peterson that Ives set in “At Parting.” Also similar to “At Parting,” “Songs My Mother Taught Me” is cast in a loose ternary form and stylistically resembles parlor song in its outer sections that are flanked by a more chromatic and melodically fluid middle section. It is unclear if Ives

³⁶ Ibid.

knew Dvořák’s setting, which is largely diatonic until its climax toward the end, but Ives’s own setting incorporates a liberal use of chromaticism in its middle section that subscribes to Jadassohn’s guidelines regarding chord connection.

The first instance of Ives using common tones to guide a progression occurs at mm. 14-17, seen in the piano part from original score as well as in my reduction in Example 11.

Example 11. Ives, “Songs My Mother Taught Me,” mm. 14-17, with reduction.
Original:

Reduction:

E-flat	E-flat+	Cm	It6 in G	G: I
I	+	vi	(odd spelling)	

From the E-flat tonic in m. 14, Ives holds its G (implied in m. 14) and E-flat pitches while ascending chromatically in the soprano and bass parts. The progression moves from a I to an “inverted” augmented tonic (another Ives favorite), to vi (Cm), to what would function as an It6 in the key of G major—the key where the music moves next. The use of the It6 as a dominant substitute instead of its usual subdominant function

is not only striking, but also supports Ives's history of employing a vertical conception of chords, instead of the linear view of an augmented sixth chord serving as a voice-leading phenomenon that moves stepwise to the dominant. In other words, while the G and E-flat common tones continue to sound, Ives uses the top voice C-sharp in the It6 not as #4 moving to the root of a dominant chord in G major (D major), but rather as #4 leading to 5 in a tonic G-major chord in m. 17. This unusual resolution is made possible by the use of common tones that allows Ives to modulate from E-flat major to G major.

Another example of this common-tone technique occurs toward the end of the song, from mm. 20-26. This excerpt is shown in Example 12.

Example 12. Ives, "Songs My Mother Taught Me," mm. 19-29, with reduction of mm. 20-26.

Original:

The image shows a musical score for the song "Songs My Mother Taught Me" by Charles Ives, covering measures 19-29. The score is written for voice and piano. The key signature has two flats (B-flat and E-flat). The time signature is 2/4. The lyrics are: "each mel-o-dious meas-ure of-ten tears are flow-ing, flow-ing from my mem-ory's treas-ure. Songs my mother taught me". The score includes dynamic markings such as *dim.*, *poco rall.*, *pp*, and *ppp*. The piano accompaniment features complex chordal textures and arpeggiated figures.

Reduction:

Eb: F# half-dim7 BM (CT⁰⁷) Bm F#M EbM

Immediately after the G-major section, Ives suddenly shifts to a B pitch center (first in major, then in minor) by writing a first-inversion F-sharp half-diminished chord at m. 20 that will serve as the basis of another chromatic passage that ends with a modulation back to the song’s home key of E-flat major (thus creating an overall key structure of E-flat/G/B/E-flat; an augmented triad). In this case, the progression starts with the C, E, and F-sharp held to m. 22, when the “tonic” B remains fixed as Ives writes a B-major triad, a B major-minor seventh chord in third inversion to a G-sharp diminished seventh chord (CT⁰⁷), followed by a B minor and F-sharp major chord. The text at this point refers to the narrator teaching his or her children songs “flowing from my mem’ry’s treasure”; Ives repeats the text to emphasize the common-tone progressions, ending on F-sharp, the dominant of B major, before returning to E-flat major. While there is a break between the F-sharp major and E-flat major chords at m. 26, the remote modulation is facilitated more smoothly by the common tone A-sharp/B-flat that links them.

As before, in a song from this early period (Ives was studying with Parker at this point)—also in a sentimental, parlor style tinged with late-nineteenth century harmonic structures—Ives employs compositional techniques that can be found in Jadassohn’s harmony textbook resulting in progressions and transitions that may reflect this influence. Unlike the contrived examples in Jadassohn’s book, however, Ives skillfully maneuvers the use of chordal connection with common tones allowing him to write chromatic lines on top that touch on remote key areas.

A Matter of Aesthetics

As I have shown, Jadassohn's harmony text contains a mixture of techniques and concepts still in practice today, as well as more anachronistic directions and suggestions for a "theory of chords and their interconnections."³⁷ Yet perhaps the most revealing and pertinent passages from Jadassohn's text as they pertain to Ives occur in the final chapters of the *Manual of Harmony*, entitled "How to Listen to Music." In this and the following chapter, "Substance and Form," Jadassohn elucidates what he calls the "ideal musical listener," someone who should be able to develop an ability to *hear* a work in its entirety in full score without actually *hearing* it. After decrying the contemporary practice (as of the 1880s) of bringing scores to performances as "sheer nonsense" and admonishing "trifling disturbances" such as coughs in a concert hall, he echoes German critics and writers such as Hoffmann, Schopenhauer, and Hanslick who elevated the supposed abstraction and supremacy of instrumental music such that it "has no meaning but a purely musical one."³⁸ To emphasize this point, in a passage about different types of listeners, Jadassohn declares that only the "ideal musical listener" is allowed to enter the "temple of music," whereas most listeners only get into the "vestibule."

Where Jadassohn, Parker, and Ives intersect most closely is through a lengthy discourse about what Jadassohn calls "form" and "substance." He explains that there is a difference between the "form" and "substance" of a musical work; but he also acknowledges that both processes and constructions must belong together, "for how and where can form and substance be separated," but then provides examples of the important distinction between the two. Not surprisingly for a contemporary and student of the philosophers and critics listed above, Jadassohn selects Beethoven's Seventh Symphony as a model example of a piece that contains great "substance," though he asserts that it takes form to realize these ideas.³⁹ By contrast, Chopin is branded as a composer whose First Piano Concerto has beautiful themes, but "scarcely one musician of even average refinement of taste could be found, who would approve of

³⁷ Ibid., 233.

³⁸ Ibid., 239ff. See Arthur Schopenhauer, *The World as Will and Representation*, translated by E.F.J. Payne (Mineola, NY: Dover Publications, 1966); Eduard Hanslick, *The Beautiful in Music*, translated by Gustav Cohen, edited with an introduction by Morris Weitz (New York: The Liberal Arts Press, 1957); E.T.A. Hoffmann, "Review of the Fifth Symphony" (Beethoven), reprinted in Ludwig van Beethoven, Norton Critical Score: *Symphony No. 5 in C Minor* (New York: W.W. Norton, 1971), 150-63.

³⁹ Jadassohn, *Manual of Harmony*, 243.

the movement as a whole.”⁴⁰ Jadassohn takes issue not only with Chopin’s “substance,” finding it pretty, but vapid artifice without “depth,” but also with how the concerto movement is put together formally; in a nutshell, it is a work that appeals on the surface, but fails to hold up under formal and structural scrutiny, which one assumes could have been avoided had Chopin used the principles laid out in Jadassohn’s own book.⁴¹

This binary opposition between “form” and “substance” is also echoed in the writings of Horatio Parker. In an address to his colleagues at Yale about his sabbatical year in Europe, Parker frames this idea of “form” and “substance” in directly nationalistic terms. He argues that “music among the Anglo-Saxons is built upon a more solid foundation” whereas music from France and Italy is “superficial” or filled with “manifest limitations that one may regard it [Italian music] as outside the sphere of reasonable activity.”⁴² The key terms “form” and “substance” are used in reference to how contemporary composers tried to create a “new vocabulary,” and as a result they “lost sight of form and substance” because for Parker, traditional means were still adequate for musical composition. For Jadassohn, Chopin’s music was suspicious because of its poor formal structure and surface beauty (and one may infer that his national heritage may have played into Jadassohn’s judgment), and similarly for Parker, conservative German music was superior because of its supposed divine inspiration and its accomplished formal prowess.

The idea that a musical composition should stand on its own (i.e., “art for art’s sake”), contain “substance” and be constructed with solid “form” resonated with Jadassohn and Parker, and this argument was later adopted fervently by Ives. For all of Ives’s innovations and adventurous compositions, his aesthetics were still a product of the late nineteenth century. As J. Peter Burkholder explains, “His mature works

⁴⁰ Ibid., 243-44.

⁴¹ It is worth noting that Ives also held a negative view of Chopin’s music largely for the same reasons as Jadassohn—that it lacked “substance”—but he framed it within an overtly patriarchal narrative whereby Chopin’s music was viewed as overly feminine: “One naturally thinks of him with a skirt on, but one which he made himself.” See Ives, *Memos*, pp. 134-35, Jeffrey Kallberg, *Chopin at the Boundaries: Sex, History, and Musical Genre* (Cambridge: Harvard University Press, 1996), and Judith Tick, “Charles Ives and Gender Ideology,” in *Musicology and Difference: Gender and Sexuality in Music Scholarship*, ed. by Ruth Solie (Berkeley: University of California Press, 1995): 83-106.

⁴² William Kearns, *Horatio Parker, 1863-1919: His Life, His Music, His Ideas* (Lanham, MD: Scarecrow Press, 1990), 49-51.

are in the standard concert genres of the symphony, overture, etc. Like the Romantic composers he had taken as models, Ives adopted a conception of music as an art practiced for its own sake, in which the experience of the individual listener was paramount, rather than a communal experience of entertainment or worship.”⁴³

Thus, Ives’s concepts of “manner” and “substance” as explicated in the *Essays Before a Sonata* published in 1920 resonate strongly with views championed by Jadassohn and Parker. This dualism for Ives morphed and took on several iterations throughout his writings, but the essence of it can be explained as follows: “substance” refers to the “reality, quality, spirit” of an artwork, one that has “conviction,” “its birth in the spiritual consciousness,” but is “practically indescribable.”⁴⁴ By contrast, “manner” is the way the “substance” is “translated into expression,” and of decidedly “lower” aesthetic value. For Ives, composers and authors who exude “substance” are figures like Bach, Beethoven, Emerson, and Thoreau, while those dependent on “manner” include Debussy and Poe. So Ives does not exclude sorting artists from a nationalistic perspective particularly in music where German composers (e.g., Bach, Beethoven) are exalted over others (especially French composers like Debussy), but he hinges this duality on this belief explained by Philip Lambert: “Manner that does not reflect substance is bad, and that in such cases the manner itself receives undue attention.”⁴⁵ We cannot be certain if Ives’s aesthetic beliefs about art were developed and formulated through study with his father, Parker, or perhaps even his other experiences at Yale, but the appearance of such ideas in Jadassohn’s final chapters, as well as Parker’s teachings likely influenced by his study in Germany suggests that Ives may have constructed his most famous artistic binary comparison as filtered and handed down from within his harmony textbook.

Conclusion

Shortly after Horatio Parker passed the teaching of harmony onto his colleague Harry Jepson, the Yale Chapel Organist and Choirmaster, Jepson swapped Jadassohn’s *Manual*

⁴³ J. Peter Burkholder, “Ives and the Four Musical Traditions,” in *Charles Ives and His World*, ed. by J. Peter Burkholder (Princeton: Princeton University Press, 1996), 11.

⁴⁴ Charles Ives, *Essays Before a Sonata: The Majority and Other Writings*, ed. by Howard Boatwright (New York: W.W. Norton, 1962), 77.

⁴⁵ Lambert, 6.

of *Harmony* for George Whitefield Chadwick’s *Harmony* published in 1897. Chadwick, who had studied with Jadassohn, organized his harmony textbook differently than his teacher, and more similarly to the presentation of topics in today’s textbooks; for example, he devotes individual chapters to chords built on each diatonic scale degree (e.g., the submediant, mediant, etc.) and puts the book’s focus on practicality, but with basis in actual music (of which there are many examples). In the preface, Chadwick writes:

The object of this book is to give the student a working vocabulary of chords for the harmonizing of melodies in the order of their practical value and harmonic importance. The author has endeavored to encourage the student to use his ever-increasing chord material, — not so much by warnings against what is bad, as by examples of what is good, as musicians understand it, and by maxims deduced from such examples.⁴⁶

Gone is the lengthy discussion of aesthetics and the “ideal listener,” and though the mediant triad is still designated as an augmented triad in minor keys, Chadwick warns that “this chord is not used for the present for harmonizing purposes, but will be considered later on under chromatic passing tones” subscribing to its contrapuntal usage.⁴⁷ His discussion of modulation is divided into closely-related keys and remote keys, and while there are few examples from the literature in this section, the progressions resemble actual practice. Finally, as to the idea of verticality, Chadwick explains that:

The harmonic combinations formed by extending the series of thirds upwards from a given chord of the ninth, or secondary seventh (chords of ninth, eleventh, and thirteenth), have not been specially discussed in this book, for the reason that thorough practice in the use of the secondary seventh chords and suspensions has a tendency to develop these combinations in their most practicable form.⁴⁸

In short, most of what Chadwick advocates either contradicts or smooths out what Jadassohn advocates in the *Manual of Harmony*. In light of what has been discussed in this paper, one wonders if Ives’s music may have sounded different had he used Chadwick’s text.

⁴⁶ George Whitefield Chadwick, *Harmony* (Boston: B.F. Wood Music Co., 1897), iii.

⁴⁷ *Ibid.*, 50.

⁴⁸ *Ibid.*, 235.

But Ives did use the Jadassohn text for at least six years, and I have argued that some of the book's teachings may have influenced the compositional decisions Ives made in his early tonal music. To be sure, Ives was familiar with vernacular music, hymnody, and European classical music—all of which fused together with Ives's own originality to create the beginnings of what would become an individual and striking American musical voice at the turn of the twentieth century. But his early music has often been overlooked because of its apparent derivative nature and awkward technical and compositional craft. Considering how Ives may have been influenced by Jadassohn's textbook can provide another angle toward understanding the development of his compositional technique, and may help explain how and why his music sounds as it does.

References

- Baron, Carol. "George Ives's *Essay in Music Theory: An Introduction and Annotated Edition*." *American Music* 10, no. 3 (1992): 239–88.
- Burkholder, J. Peter. "The Critique of Tonality in the Early Experimental Music of Charles Ives." *Music Theory Spectrum* 12, no. 2 (1990): 203–23.
- _____. "Ives and the Four Musical Traditions." In *Charles Ives and His World*, edited by J. Peter Burkholder, 3–34. Princeton: Princeton University Press, (1996).
- _____. "Ives and Yale: The Enduring Influence of a College Experience." *College Music Symposium* 39 (1999): 27–42.
- Chadwick, George Whitefield. *Harmony*. Boston: B.F. Wood Music Co., 1897. Damschroder, David and Williams, David Russell. *Music Theory from Zarlino to Schenker: A Bibliography and Guide*. Hillsdale, NY: Pendragon Press, 1990.
- Harrison, Daniel. *Harmonic Function in Chromatic Music*. Chicago: University of Chicago Press, 1994.
- Ives, Charles. *Essays Before a Sonata: The Majority and Other Writings*. Edited by Howard Boatwright. New York: W.W. Norton, 1962.

- _____. *Memos*. Edited by John Kirkpatrick. New York: W.W. Norton, 1971.
- Jadassohn, Salomon. *Manual of Harmony*. Translated by Paul Torek and Henry Bickford Pasmore. New York: G. Schirmer, 1890.
- _____. *A Manual of Single, Double, Triple, and Quadruple Counterpoint*, translated by Theodore Baker. New York: G. Schirmer, 1902.
- _____. *Melodik und Harmonik bei Richard Wagner*. Berlin: Harmonie, ca. 1889.
- Kearns, William K. "Horatio Parker (1863-1919): A Study of His Life and Music." PhD diss., University of Illinois at Urbana-Champaign, 1965.
- _____. *Horatio Parker, 1863-1919: His Life, His Music, His Ideas*. Lanham, MD: Scarecrow Press, 1990.
- Lambert, Philip. *The Music of Charles Ives*. New Haven: Yale University Press, 1997.
- Lang, Paul Henry. *Music in Western Civilization*. New York: W.W. Norton, 1941.
- Noss, Luther. *A History of the Yale School of Music, 1855-1970*. New Haven, CT: S. Z. Field Printing Co., 1984.
- Perry, Rosalie Sandra. Rosalie Sandra Perry, *Charles Ives and the American Mind*. Kent, OH: Kent State University Press, 1974.
- Phillips, Leonard. "The Leipzig Conservatory, 1843-81." PhD diss., Indiana University, 1979.
- Richter, Ernst. *Manual of Harmony*. Translated by Theodore Baker. New York: G. Schirmer, 1912.
- Saslaw, Janna. "Gottfried Weber and Multiple Meaning." *Theoria* 5 (1990–91): 74–103.
- _____. "Salomon Jadassohn," *Oxford Music Online*.
- Schenker, Heinrich. *Harmony*. Edited by Oswald Jonas, translated by Elisabeth Mann Borgese. Chicago: University of Chicago Press, 1954.

Schoenberg, Arnold. *Theory of Harmony*. Translated by Roy E. Carter. Berkeley: University of California Press, 1983.

Thompson, David M. *A History of Harmonic Theory in the United States*. Kent, OH: Kent State University Press, 1980.

Wason, Robert. *Viennese Harmonic Theory from Albrechtsberger to Schenker and Schoenberg*. Rochester, NY: University of Rochester Press, 1982.

_____. "Musica Practica: Music Theory as Pedagogy." In *The Cambridge History of Western Music Theory*, edited by Thomas Christensen, 46-77. Cambridge: Cambridge University Press, 2007.