

OCTATONICISM RECONSIDERED AGAIN

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My earlier article made two central claims about Stravinsky's music. First, I argued that Stravinsky, like Debussy and Ravel, used the modes of the nondiatonic minor scales. To this end I provided more than a dozen examples of such scales in Stravinsky's early music, the longest of which rivals in length and explicitness any of the octatonic passages in *The Rite of Spring*. My second claim was that Stravinsky's music is animated by a broad range of polyscalar superimpositions involving more than just the octatonic and diatonic scales. I further suggested that scales in Stravinsky are sometimes surface phenomena, produced by underlying superimpositions that do not conform to any single collection. Here I provided several examples where it seemed to me that

focusing on scales (in particular, focusing on the octatonic scale) hindered real musical understanding. Finally, in the course of making these positive points, my article raised several methodological questions about Pieter van den Toorn's analytical procedures. I pointed out, for example, that any proper subset of the chromatic scale can be decomposed into octatonic and diatonic components, and I challenged van den Toorn to explain when such decompositions are musically significant. Furthermore, I argued that the notion of "polytonality," repeatedly dismissed as inconsistent by van den Toorn, has a perfectly useful meaning, and that it can be applied to actual music, Stravinsky's included. Implicit in these points was a challenge that van den Toorn refine and develop his critique of polytonality, a critique which he has carried out mainly by way of citations to Benjamin Boretz and Allen Forte.

I am disappointed that van den Toorn's long response does not take up any of these issues. Instead, like a defense lawyer with a weak case, he chooses to impugn the witness's credibility rather than deal with the substance of the testimony. I do not begrudge the aggressive tone of his reply; it is natural to become personally invested in one's scholarship. And if I am right, then much of van den Toorn's work is misdirected. I am, however, concerned about the numerous inconsistencies and misrepresentations in van den Toorn's response. For these muddy the intellectual waters, preventing readers from making a reasoned choice between my arguments and his.

I will not try the reader's patience by enumerating all the various ways in which van den Toorn manages to cloud the issues between us, but here are a few pertinent examples.

1. Referring to my discussion of Petrouchka's second tableau, he writes:

It is not true that, were the Petrouchka chord to be set aside, "only *four other measures* of octatonic material" would present themselves in the second tableau. If we include the Petrouchka chord in our calculations (a much more direct way of proceeding than the one proposed by the author), at least four measures of explicitly octatonic content (Collec-

tion III) would present themselves at rehearsal 48, six measures of such content at rehearsal 49, and nine at 51 (the tremolos). Out of a total of thirty-nine measures in the opening section at rehearsals 48–52, nineteen are inferable as explicitly octatonic.

I claim that, *besides* the Petrouchka chord, there are only four other measures of octatonic material in the ballet's second tableau. Van den Toorn responds that this is false, arguing that *if we count the Petrouchka chord*, we find more than four measures of octatonic material. This is logically incoherent. Further, van den Toorn includes in his count, not just fifteen measures of the Petrouchka chord (rehearsals 49 and 51), but also several measures where almost half of the notes are non-octatonic (see his Example 13). None of this shows that I have said anything false.¹

2. Writing about the sixth mode of the melodic minor scale, which Jazz theorists call the "locrian #2" scale, van den Toorn says:

Diatonic or non-diatonic modal scales are applied informally by Jazz musicians and theorists as well, of course, as the author notes. Typically, however, the application of these scales in Jazz circles evokes a tradition of some kind, a characteristic sonority or harmonic use. The problem here, however, is that such uses postdate the three early Stravinsky works to which the author makes reference. The "locrian #2" mode, assigned to rehearsals 6, 25, and 32 in *The Rite of Spring*, seems to have come into existence among Jazz musicians during the bebop times of the 1950s.

This confuses the name of a thing with the thing itself. It is probably true that the *term* "locrian #2" came into existence in the last fifty years. However, the *object*, the mode itself, has been in use for nearly a century. In his "Étude comparée des langages harmoniques de Fauré et de Debussy,"

- 1 It may be that van den Toorn wants me to include measures 2 and 8 as octatonic. My original account did not include them, since no actual pitches are attacked in these measures. However, I am happy to concede the point, in which case there would be six measures of octatonic material (other than the Petrouchka chord) in the scene. From the standpoint of my larger argument, the difference between four and six measures is not significant.

François Gervais finds the mode in Debussy's *Pelleas*. In "The Consecutive Semitone Constraint: A Link Between Impressionism and Jazz," I provide two other examples of impressionist use of the "locrian #2 mode," both of which predate *The Rite of Spring*. That article explicitly discusses the relation between the impressionist and Jazz treatment of nondiatonic minor scales, and suggests that the former may have influenced the latter.²

3. Van den Toorn writes:

In my own *The Music of Igor Stravinsky*, the passages at rehearsals 6, 8, 16–18, and 22–4 are described as "explicitly octatonic." All four passages are shown to be "of substantial duration, relatively unimpaired by outside interference, with the collection complete or nearly so." "This, I submit, is not just wrong," Tymoczko asserts, "but wrong in a way that should make us suspicious of the underlying methodology."

Van den Toorn quotes me completely out of context here, misrepresenting my point. The sentence he cites refers not at all to his analysis of rehearsals 16–18 and 22–4 of *The Rite of Spring*, and only secondarily to his analysis of rehearsals 6 and 8. What I wrote was:

Nevertheless, van den Toorn has analyzed most of these passages [i.e., most of the passages in Stravinsky's early music that involve modes of the nondiatonic minor scales³] as resulting from the combination of octatonic and diatonic materials. This, I submit, is not just wrong, but wrong in a way that should make us suspicious of the underlying methodology. For Examples 5(a) [rehearsal 35 of *Petrouchka*] and 6(a) [rehearsals 32–36 of *The Rite of Spring*] are near-incontrovertible instances of modal use of the melodic minor scale; if even *these* passages can be interpreted as the result of "octatonic-diatonic interaction," then we should rightly ask whether there is any music that *cannot* be understood in this way.

The last sentence is the crucial one, I should think. While my earlier article acknowledged that readers might not agree with all my analyses, I suggested that some of them—such as

my analysis of rehearsal 35 of *Petrouchka*, and rehearsals 32–6 of *The Rite of Spring*—were "near-incontrovertible." (For a justification of this claim, see below.) It was van den Toorn's misreading of these explicitly melodic-minor passages that prompted my doubts about his analytical methodology. Under the circumstances, I am disappointed that he did not see fit to discuss either the doubts or the analyses that prompted them.

Incidentally, van den Toorn *is* wrong to describe rehearsals 16–17 of *The Rite of Spring* as "explicitly octatonic."⁴ Indeed this music is arguably not octatonic at all. Example 1 presents van den Toorn's reduction of the passage, as it appears in *The Music of Igor Stravinsky*. Example 2 presents a more complete summary. Van den Toorn's analysis silently leaves out every non-octatonic element in the music—the ostinato bass, the bassoon's trilling C[♯], and the blaring stacks of fifths in the brass and winds.⁵ Example 3 shows how these elements suggest two different diatonic collections. The upper-register fifths, coupled with the bassoon trill and the viola arpeggios, set the descending flute tetrachord (C–B[♭]–A–G) in a C mixolydian context. The ostinato fifths in the low strings suggest an E[♭] dorian reading of the English Horn figure. Example 3 further shows how the two scales are almost completely separated in register: the only points of overlap are the C-mixolydian notes C₄ and D₄, which lie below the E[♭] dorian D₄[♭] and E₄[♭]. Finally, the second measure of Example 3 represents the total pitch content of the passage as a gapped stack of fifths, with only a missing A[♭] needed to connect the English Horn's D[♭] to the strings' E[♭].⁶

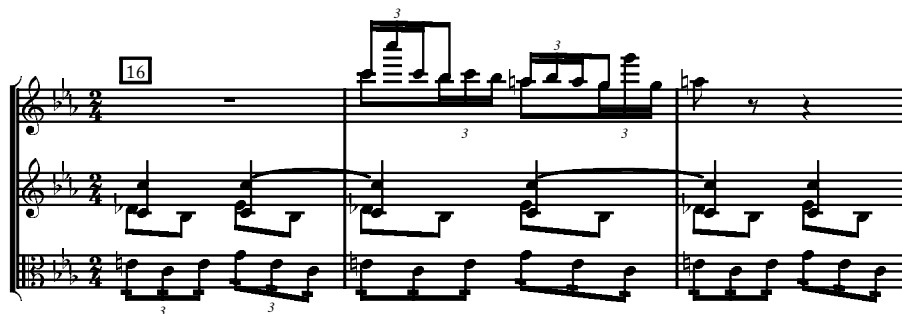
2 At no point have I claimed that the locrian #2 mode entered jazz before 1940.

3 Examples 5(a) and (b), 6(a), (b), (e)–(g), 7(a), and 7(b) in my original article.

4 Van den Toorn's repeated description of rehearsal 18 as "explicitly octatonic" is a mistake. Rehearsal 18 is virtually identical to rehearsal 13, a passage which van den Toorn does not describe as explicitly octatonic.

5 Van den Toorn 1987 continues to omit the ostinato bass, restoring the stack-of-fifth chords only in the last two measures of rehearsal 17.

6 Harrison 1997 explores a similar passage in Milhaud that can be read as both a single stack of fifths, and as a combination of two different diatonic components.



EXAMPLE 1. *Van den Toorn's reduction of The Rite of Spring, rehearsals 16–17.*

Clearly, it is wrong to describe this (fifth-based) music as “explicitly octatonic,” where that description implies that the music is “relatively unimpaired by outside [i.e., nonoctatonic] interference.” If blaring diatonic trumpets do not constitute substantial outside interference, then nothing does.

Van den Toorn also misreads me in a number of other, smaller ways. He seems to interpret my Example 12 as an attempt to provide a harmonic summary of the sort found in my Examples 10, 15 and 20. But this table only attempts to chart the development of the Petrouchka chord proper, rather than summarize *Petrouchka's* second tableau. Likewise, van den Toorn interprets my assignments of nondiatonic scales in Examples 10, 15, and 20 (and in the example captions throughout the article) as implying judgments about pitch-class priority. They do not.⁷ There are many more mis-

interpretations to be found in the response, but I will not take up the reader's time detailing them. Instead, I propose to turn to some of the larger, and more theoretically interesting, disagreements that separate the two of us.

STRAVINSKY'S SCALES

My earlier article offered numerous examples to support the claim that Stravinsky used the modes of the nondiatonic minor scales. I had expected van den Toorn to concede the point, while challenging its significance. For example, he might have argued:

- 1) that Stravinsky's use of the scales is relatively infrequent, and confined to his earlier works;⁸ or
- 2) that these scales themselves can be accounted for “at a deeper structural level” as combinations of octatonic and diatonic elements.

Instead, he chose a riskier path. He suggests that these scales do *not* appear in Stravinsky's music, but are merely the products of my overheated analytical imagination.

Consider Example 4, which presents the melody of the first twenty-six measures of the *The Firebird's* “Infernal

7 Here, I bear a good part of the responsibility for the misunderstanding. My assignment of diatonic scales in Examples 10, 15, and 20 does attempt to indicate pitch-class priority through the use of mode names. My assignment of nondiatonic scales does not indicate pitch priority, that issue being either unresolved or discussed in the text. The inconsistency results from the fact that there are no agreed-upon names for the modes of the nondiatonic minor scales. I regret that I was not clearer about this issue in the original article.

8 This is a point that I, in turn, am prepared to concede.

EXAMPLE 2. *The Rite of Spring*, rehearsals 16–17.

Dance.”⁹ Example 5 proposes three possible interpretations of this passage. The first, which I favor, portrays the music as involving the fourth mode of the E harmonic minor scale. The second, shown in Example 5(b), suggests that the passage involves the traditional dorian mode plus one “non-harmonic” D \flat . (The postulated diatonic D \flat does not appear in the

music.) Example 5(c) follows van den Toorn in analyzing the passage as resulting from the combination of the diatonic and octatonic scales.¹⁰ The pitches A, C, D \sharp , E, F \sharp , and G are interpreted as belonging to octatonic Collection III; the pitches A, B, C, E, and G, are interpreted as belonging to the A natural minor scale. (Again, the diatonic D \flat and F \flat as well as the octatonic B \flat and C \sharp , do not appear in this passage.)

9 The example omits the accompanying A drone and the punctuating A–E orchestral chords.

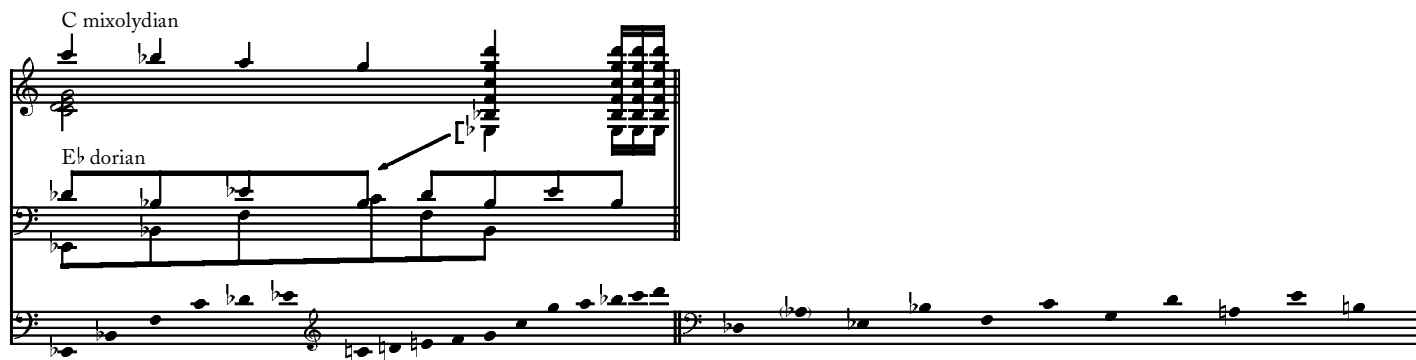
10 See van den Toorn 1983, 18.

The musical score consists of six staves. The first staff begins with a measure number 17 in a box. It features a complex melodic line with several triplet markings (indicated by a '3' over a bracket). The second and third staves are marked 'Str., Brass' and contain block chords, some with triplet markings. The fourth staff has a '(tr)' marking and contains a series of slurs over eighth notes. The fifth and sixth staves continue the melodic and harmonic lines with various note values and slurs.

EXAMPLE 2. [continued]

Readers may ask how we can decide among these interpretations. Following my original article, we might cite three different considerations. First, the harmonic-minor interpretation is more parsimonious than the others: it accounts for all the pitches in the passage, and postulates none that do not appear. Second, the harmonic-minor interpretation is supported on historical grounds: the harmonic minor scale is a familiar musical object, one that Stravinsky obviously knew; and he had available examples of modal uses of the non-diatonic minor scales in the music of Debussy and

Ravel. Finally, the numerous examples that I provided in my original article provide a third sort of evidence. I hoped there to convince readers, by dint of sheer quantity, that the many occurrences of nondiatonic minor modes could be attributed neither to mere coincidence nor (as van den Toorn would have it) to incompetence on my part. Nevertheless, readers may still feel that these three types of evidence are not absolutely compelling. We may have reasons—for instance, van den Toorn's analysis of the entire Stravinsky corpus—to favor the less parsimonious interpretations given by Examples 5(b)



EXAMPLE 3. *An analysis of the pitch structure of rehearsals 16–17 of The Rite of Spring.*



EXAMPLE 4. *The “Infernal Dance of King Kastchei” (melody only).*

and (c). Is there anything more definitive that can be said in this regard?

There is. We need the concept “scale” because we need the notion of *scalar transposition* to explain how this passage works.¹¹ As Example 6 shows, the second 8-measure phrase of the melody shifts the corresponding pitches of the first phrase up *by two scale degrees*. (The one exception is the last eighth note of the third bar of the example, where the upper melody would need an E \sharp for the scalar transposition to be

exact.¹²) In order to express this fact, we need to treat the E harmonic minor scale as a genuine musical object. Specifically, we need to understand the scale’s E \flat as a fourth scale degree—as a D \sharp —rather than a non-harmonic tone or a tone

11 I use “scalar transposition” as an alternative to the more typical “diatonic transposition,” since the underlying scale here is nondiatonic.

12 The substitution of E \flat for E in this passage produces a subtle musical pun. In measures 7–8 of Example 4, the E \flat produces an exact chromatic sequence: A–C–E–E \flat becomes C–E \flat –G–F \sharp . But the diatonic sequence is destroyed, since scale degrees 1–3–5–4 are now answered by 3–4–7–6. What permits this subtle play between diatonic and chromatic transposition is the fact that two (acoustic) triads can be built on the sixth degree of the harmonic minor scale.

a) The fourth mode of the E-harmonic minor scale. b) A dorian, with a non-harmonic tone.

c) octatonic + diatonic.



EXAMPLE 5. *Three interpretations of the "Infernal Dance," mm. 1–26.*

belonging to a background octatonic collection.¹³ To do otherwise is to forgo our ability to account for the parallelism, the transposition-within-a-scale, that links the two phrases of Example 4.

What is therefore lacking in the analyses given by Examples 5(b) and (c) is the sense that the resultant pitch collection has any unity or structure of its own. As analysts, we need to be able to say that E^b is a *step above* C[♯], just as B is a *step above* A. But this is not true of Example 5(b)'s 8-note collection. Nor is it true of Example 5(c)'s octatonic and natural minor scales. Furthermore, it is not true that arbitrary superimpositions of octatonic and diatonic elements will produce a scalar resultant. Thus, even if we were to favor an analysis along the lines of Example 5(c), we would need to acknowledge that Stravinsky's particular octatonic-diatonic superimposition is special precisely in that it has scalar qualities. This is tantamount to acknowledging that there is an important level of description in which this music involves the harmonic minor scale, rather than the octatonic and diatonic scales.

Many of the same points can be made about the end of *The Rite of Spring's* "Dance of the Adolescents." I take it that no one would question that Example 7(a), which occurs after

rehearsal 48, involves a scale—I hear it as B^b natural minor, despite the low E^b bass. We need the concept "scale" to explain that the trumpet part consists of parallel second-inversion seventh chords: what makes these chords "parallel" is that they are all related by diatonic transposition; and what makes them "seventh chords" is that they can all be expressed as a stack of three thirds relative to the underlying (B^b natural minor/E^b dorian) diatonic collection.¹⁴ In much the same way, we want to say that the viola part consists in a descending scale (a unidirectional pattern of notes, each related by scale-step to the one that comes before it), and that the second time this pattern occurs it is doubled at the third (i.e., it occurs in conjunction with its diatonic transposition). Without the concept "scale," and its concomitants "scale-step" and "diatonic transposition," we simply have no access to these analytically obvious facts.

Likewise, I take it as completely uncontroversial that Example 7(b) involves two scales. The top four lines are in A natural-minor; they are a chromatic transposition of the immediately preceding Example 7(a). The lowest musical voice moves stepwise along the chromatic scale.¹⁵ Now consider Example 7(c). All the factors that lead us to see scales in

13 Note that Stravinsky consistently spells this "fourth scale degree" as an E^b. I do not take this to be a significant difficulty; what is important is how the note behaves, not how it is written.

14 Note that the notion of a "third" itself involves the notions of scale-step and scalar transposition.

15 This stepwise chromatic motion is somewhat obscured by Stravinsky's characteristic octave displacements.

EXAMPLE 6. *Kastchei's melody as scalar transposition.*

Examples 7(a) and (b) are present here as well. There are parallel seventh chords in the horns (and eventually, strings); ascending stepwise runs in the viola and violins (eventually doubled at the third, fifth, and seventh); and, most interestingly of all, there is octave-displaced stepwise bass motion of the sort found in Example 7(b). Here, however, the stepwise *chromatic* motion of (b) has become the stepwise *melodic minor* motion of (c). (Such scale-to-scale transformations are explored in Matthew Santa's article "Defining Modular Transpositions."¹⁶) Again, all of these notions—"parallel," "doubled," "seventh chord," and "stepwise"—implicitly involve the concept of transposition-within-a-scale. In addition, we need the concept "scale" not just to explain the *internal* consistencies of the passage, but also to explain how this music relates to that of (a) and (b). For the parallel seventh chords in the horns in (c) are the *same sort of musical object* as the parallel seventh chords in the trumpets in (a), just as the ascending scales (doubled at the third, fifth, and seventh) in the strings of (c) are the same sort of musical object as the descending scales (doubled at the third) of (a). Van den Toorn would evidently have us forgo all of these observations simply because the scale in (c) is neither diatonic nor octatonic. To me this is plainly unacceptable. It is obvious that (c) involves a scale, and the analyst can deny it only at the cost of his own credibility.

POLYTONALITY AND SUPERIMPOSITIONS

The second major point at issue concerns the disputed notion "polytonality." Van den Toorn has been very blunt in his attacks on this concept, describing it as a "real horror of the musical imagination," one that is "too fantastic or illogical to be of assistance."¹⁷ But it is not clear exactly why he thinks this. In large part, this is because he has never articulated his difficulties with the concept, preferring instead to cite other authors—Benjamin Boretz and Allen Forte, whose views on this question are by no means clear—rather than explaining his concerns directly.¹⁸ Arguments from authority, however, can be made on both sides of this issue: while it is true that some writers have dismissed the notion of polytonality, a much larger group of theorists, including Arthur Berger and Richard Taruskin, believe "polytonality" to be a coherent concept.¹⁹ Clearly, what is needed is not polemic, but a careful consideration of the underlying issues.

¹⁷ Van den Toorn 1983, 63–4.

¹⁸ The passages van den Toorn cites are Forte 1955, 137 and Boretz [1972] 1995, 244.

¹⁹ See Taruskin [1987] 1990. Berger, in a personal communication, allows that "polytonality" is a legitimate analytic concept, and even agrees that it is reasonable to provide a polytonal analysis of the Petrouchka chord. He continues to prefer the octatonic explanation, however. In this context, I should mention that Berger has some serious reservations about van den Toorn's views. I regret that my earlier article overstated the degree of agreement between them.

Fl.

Vla.

Tpt.

Tbn.

Str.

This musical score is for rehearsal 28+4 of *The Rite of Spring*. It features five staves: Flute (Fl.), Viola (Vla.), Trumpet (Tpt.), Trombone (Tbn.), and String (Str.). The key signature is B-flat major (two flats) and the time signature is 2/4. The Flute part has a melodic line with some accidentals. The Viola part has a melodic line with some accidentals. The Trumpet and Trombone parts have a rhythmic pattern of eighth notes. The String part has a rhythmic pattern of eighth notes.

EXAMPLE 7(A). *The Rite of Spring*, rehearsal 28+4.

Fl.

Ob.

Ob., E.Hn.

Str.

Hn., Cb.

This musical score is for rehearsal 31 of *The Rite of Spring*. It features five staves: Flute (Fl.), Oboe (Ob.), Oboe/English Horn (Ob., E.Hn.), String (Str.), and Horn/Contrabass (Hn., Cb.). The key signature is B-flat major (two flats) and the time signature is 2/4. The Flute part has a melodic line with some accidentals. The Oboe part has a rhythmic pattern of eighth notes. The Oboe/English Horn part has a rhythmic pattern of eighth notes. The String part has a rhythmic pattern of eighth notes. The Horn/Contrabass part has a rhythmic pattern of eighth notes.

EXAMPLE 7(B). *The Rite of Spring*, rehearsal 31.

EXAMPLE 7(c). *The Rite of Spring*, rehearsal 32.

Unfortunately, such consideration is beyond the scope of this response. What I suggested in my earlier article, and what I hope to argue at length elsewhere, is that the phenomenon of auditory stream-segregation is crucial to explaining polytonality.²⁰ (Contrary to what van den Toorn suggests, I offered the term “independent auditory streams” not as a *replacement* for the notion of “polytonality,” but as a component in the *explanation* of the phenomenon.) It seems to me that a reasonably flexible notion of “tonality,” coupled with a clear understanding of the facts of auditory perception, suffices to place the concept of “polytonality” on a firm footing. But this is a matter for another paper.

Instead, let me focus on the specific analytical issues. Van den Toorn writes:

For Berger and myself, the special attraction of the octatonic set lay not so much in its ability to circumvent concepts such as “polytonality” (as the author claims, p. 85), as in its ability to account in concrete

pitch-relational terms for something of the character or “sound” of Stravinsky’s music, its quality of “clashing,” “opposition,” “stasis,” “polarity,” and “superimposition.” Far from canceling or negating such terms, subsumption of configurations such as the Petrouchka chord by the octatonic set explained them further. Tymoczko has both Berger and myself believing just the opposite.

This is yet another misrepresentation. The question was never whether van den Toorn’s analyses acknowledged the existence of superimposed pitch-centers, or multiple “polarities.” Rather, it was whether van den Toorn correctly understands the nature of Stravinsky’s superimposition technique. Here, there are a number of related points that need to be distinguished.

The first has to do with the types of “polarities,” or superimposed pitch-centers, to be found in Stravinsky’s music. Because van den Toorn is concerned to “explain” Stravinsky’s superimpositions in terms of the octatonic scale, he almost always identifies contrasting pitch-centers that are a minor third or tritone apart. These are the intervals by which the octatonic scale can be transposed onto itself, and music that

20 Interested readers can view a summary of the argument at <http://music.princeton.edu/~dmritri/polytonality.pdf>.

features such superimpositions can therefore be portrayed (rightly or wrongly) as expressing the symmetry of an underlying octatonic collection.²¹ The problem is that Stravinsky's music contains superimpositions at many other intervals. Example 8, which occurs at rehearsal 94 of *The Rite of Spring*, involves five-note minor-scale fragments that are a *major seventh* apart.²² This passage (which is not analyzed by van den Toorn) is to my mind an extremely clear example of non-octatonic polytonality. (One wonders: if Example 8 is not explained by the octatonic scale, then in what sense does the octatonic scale explain minor-third or tritone-related superimpositions? It seems that van den Toorn must forgo the project of providing a single, unified account of superimpositions in Stravinsky's music.)

The second analytical issue concerns the content of Stravinsky's superimpositions. Van den Toorn allows that Stravinsky's music uses more than one scale at a time, but he limits himself to just a few possibilities: the combination of octatonic and diatonic elements, and (more rarely) the combination of multiple diatonic, or multiple octatonic, collections. By contrast, I think Stravinsky's superimpositions involve a much broader range of material, including chromatic, whole-tone, pentatonic, and the nondiatonic minor scales. Crucially, I also believe that Stravinsky's superimpositions often involve non-scalar elements. Example 9(a), from the end of *The Rite of Spring*, is perhaps intermediate between these two possibilities. Measures 1–3 and 6–7 are completely octatonic, as are the bottom two systems throughout. But on top of this is superimposed a contrasting layer, registrally and

timbrally distinct from the octatonic material. As Example 9(b) shows, the pitch content of this layer consists of the notes B^b–C–D^b–E–F–G. These notes comprise six of the seven notes of the fourth mode of the harmonic minor scale, the very mode which we encountered earlier in *The Firebird's* "Infernal Dance." (Indeed, the harmonic-minor scale's characteristic half step–augmented second–half step pattern is clearly articulated by the four highest pitches in the figure.) While we may not have conclusive reasons for treating this material as scalar, we can confidently declare that it is neither octatonic nor diatonic. This alone should convince us that van den Toorn's categories are inadequate.

The final analytical point at issue concerns the relative priority of scales and superimpositions. I have argued that the appearance of scale-fragments in Stravinsky's music is often a relatively unimportant musical phenomenon, the mere byproduct of a more fundamental process of superimposition. Example 10 demonstrates. Here, I have provided a reduction of the first forty-four measures of the third movement of the *Symphony of Psalms*. The reduction suggests that there are two independent musical processes in play: the melodic notes, given by the closed unstemmed note heads, consist almost entirely of pitches drawn from the C natural-minor scale. (The one exception is the strings' low F[#], which can perhaps be heard as a chromatic lower neighbor.) The harmonic material, given by the open noteheads, involves a series of three major triads that ascend by whole step. It does not take too much in the way of *Fernhören* (or controversial quasi-Schenkerian thinking) to understand this passage as a unified gesture, superimposing a single C-minor scale with a series of triads foreign to that collection.

As can be seen from Example 10, van den Toorn considers two passages in this music to be "explicitly octatonic." The first involves the four notes C–E^b–E[♮]–G, a "minor/major" 4–17[0347] tetrachord; the second involves the five notes E–F–G–G[#]–B. Two aspects of this identification are disturbing. First, the octatonic subsets in question are relatively small, and their identity as octatonic is open to question.

21 It was just this feature of van den Toorn's analyses that led me to suggest that for him, *scales precede superimpositions*: the nature of the octatonic scale determines the types of superimpositions that he allows. So while it is true that his analyses often *portray* the octatonic scale as growing out of superimposed pitch-centers, it is also true that he tends to consider only superimpositions that conform to the octatonic scale's symmetries.

22 A similar superimposition appears at the beginning of Stravinsky's *Concertino* for String Quartet.

EXAMPLE 8. *The Rite of Spring*, rehearsal 94.

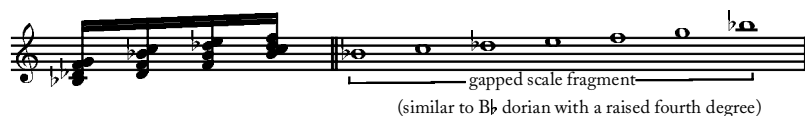
octatonic

octatonic + ?

octatonic

octatonic + ?

EXAMPLE 9(A). *The Rite of Spring*, rehearsal 194+2.



EXAMPLE 9(B)

(Remember that for van den Toorn, “explicitly octatonic” is supposed to imply that the octatonic collection in question is “complete or nearly so.” Four or five notes do not form a “nearly complete” octatonic collection, even under the most generous interpretation.) Second, and more importantly, it is not clear that the fact that these passages involve octatonic subsets is musically relevant. Consider, for example, the relation between the allegedly octatonic material at 40, and the music which immediately precedes it. The F–G bass alternation at 40 clearly grows out of the C–A^b–D–G alternation in m. 39; likewise, the E-major triad at 40 is directly related to the D-major triad in mm. 37–9. Van den Toorn’s analysis seems to suggest that we should take seriously the total vertical sonority at m. 40, but not in the immediately preceding measures. I can see little reason for this, other than a prior theoretical commitment to the centrality of the octatonic scale in Stravinsky’s music. Here, such a commitment distracts us from the more important, long-range processes at work in the music.

In summary, I have argued that Stravinsky uses a much broader range of superimpositions than van den Toorn allows. Some of them involve polarities that do not suggest underlying octatonicism; some involve elements that are neither octatonic nor diatonic; and still others produce scalar subsets as a relatively unimportant byproduct of deeper musical processes. Unfortunately, there is nothing in van den Toorn’s response that leads me to think he has considered any of these points.

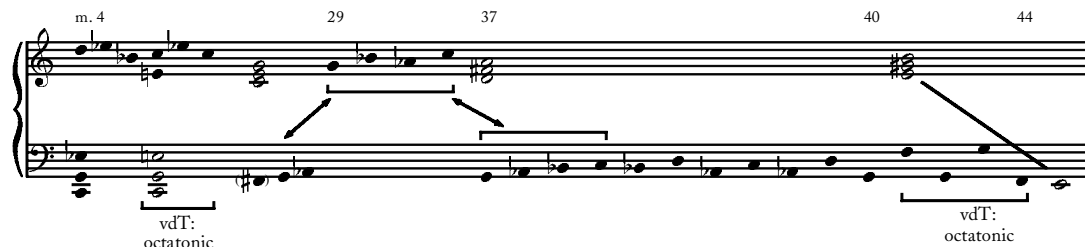
CONCLUSION: STRAVINSKY IN HISTORY

The many disagreements between van den Toorn and myself coalesce into two distinct pictures of Stravinsky’s

place in the history of music. Van den Toorn has portrayed Stravinsky as a relatively isolated figure, an idiosyncratic composer whose peculiarly Russian syntax bears little resemblance to that of other Europeans. By contrast, I am offering a picture of the composer that is more open, one that links Stravinsky backward to French impressionism, and forward to the music of the many musicians who were influenced by him.

For example: van den Toorn has argued that the whole-tone music at rehearsal 100 of *Petrouchka* has little to do with Debussy, preferring to see it as the product of an indigenous Russian tradition that begins with Glinka.²³ I find this doubly unconvincing. First, Glinka tends to use the whole-tone scale melodically, rather than harmonically, as van den Toorn’s own example shows.²⁴ The *Petrouchka* music, however, follows Debussy’s practice, in which the whole-tone scale provides the total pitch-content for an extended passage of music. Second, van den Toorn acknowledges Debussy’s influence on *The Firebird*, including its several whole-tone passages.²⁵ This suggests a rather unsatisfying story in which

- 23 Taruskin also denies that this passage owes anything to Debussy, arguing instead that it represents Stravinsky’s attempt to capture the sound of a six-note equal-tempered Russian folk flute. See Taruskin 1996, 710.
- 24 In Example 10 of his response, the whole-tone scale serves as a bass line for a triadic progression that includes numerous non-whole-tone notes. This has long been recognized as the hallmark of Russian whole-tone practice.
- 25 Van den Toorn writes “Tymoczko should know, too, that the few occasions of overt whole-tone use in *The Rite of Spring* and *Petrouchka* are not especially ‘Debussian’ in sound.” I take this to concede that the whole-tone passages in *The Firebird* are indeed Debussian.



EXAMPLE 10. *Middleground polyscalarity in the Symphony of Psalms III, mm. 1–44.*

the *Firebird*'s whole-tone music was influenced by Debussy, but *Petrouchka*'s was not. Common sense, to say nothing of Stravinsky's explicit testimony, suggests that Debussy continued to influence the language of Stravinsky's second and third ballets.

Van den Toorn's rejection of Debussy's influence is symptomatic of his general tendency to isolate Stravinsky from the larger currents of twentieth-century music history. Particularly instructive is his inability to hear any relationship between Stravinsky and modern jazz. There is abundant evidence linking Stravinsky to jazz, including direct testimony (from musicians such as Coleman Hawkins, Charlie Parker, and Joe Henderson), explicit musical quotation (see Example 11), and internal musical evidence (such as Example 12, which compares a fourth-based passage from the *Rite of Spring* to a fourth-based melody by McCoy Tyner).²⁶ In ad-

dition, an equally large body of evidence suggests *indirect* links between Stravinsky and jazz. Stravinsky influenced Hindemith, who in turn influenced many seminal jazz musicians. Stravinsky's music was an important source for Słonimsky's *Thesaurus of Scales and Melodic Patterns*, a book that Coltrane, among others, studied.²⁷ Finally, as I have argued, Stravinsky was influenced by Debussy and Ravel, composers who had an incalculable impact on the syntax of modern jazz.²⁸ To the extent that we deny, or fail to hear these relationships, we miss out on a crucial part of the history of twentieth-century music.

Consider also in this context the consequences of van den Toorn's rejection of polytonality. It is a historical fact that many composers in the twentieth century took themselves to be composing polytonal music, and that many of these believed Stravinsky to be the inventor of the technique. Van den Toorn is forced to conclude that this whole compositional tradition is based on a misunderstanding. He would presumably argue that later twentieth-century composers misheard Stravinsky's octatonicism as polytonality, producing music that had little to do with Stravinsky's actual procedures. I find this view unpalatable. It seems to me that a passage like Example 13, from the end of Bartók's Fifth String Quartet, may derive from passages like Example 8, above. In Example

²⁶ For Coleman Hawkins and Stravinsky, see DeVaux 1997, 449. Charlie Parker mentions both Hindemith and Stravinsky in Levin & Wilson 1949. For Joe Henderson, see *The New Grove Dictionary of Jazz*, s.v. "Joe Henderson." For an interesting discussion of a Woody Herman quotation of *Petrouchka*, see DeVaux 1997, 360 n. 20. The *Rite of Spring* quotation in Example 13 is taken from a 1949 recording of "Cool Blues." A transcription appears in Owens 1974, vol 2, 337. Finally, note that I do not mean to imply that Stravinsky's *Rite of Spring* directly influenced McCoy Tyner's *Passion Dance*, only that the two musicians shared musical concerns.

²⁷ See Demsy 1991.

²⁸ See Tymoczko 1997.

EXAMPLE II. *Charlie Parker quoting The Rite of Spring.*EXAMPLE I2. *Fourths in Stravinsky and Jazz.*

8, Stravinsky superimposes two different versions of a diatonic tune at the interval of a major seventh; in Example 13, Bartok “harmonizes” a B \flat -major tune with an accompaniment in A major. In my view, the similarity between these passages provides a potential example of Stravinsky’s influence on later composers. Yet this sort of influence does not sit easily within van den Toorn’s octatonic-centered framework. Indeed, by rejecting “polytonality,” and interpreting Stravinsky solely through the lens of “octatonic-diatonic interaction,” he has deprived himself of the resources to understand it.

Ultimately, these historical issues will be decided by the theoretical community’s analytical conclusions about Stravinsky’s music. But it is also possible to let the historical issues influence our choice of analytical procedures. Van den Toorn’s Stravinsky is a composer largely concerned with his own idiosyncratic musical technique, engaged in a cryptic process of octatonic-diatonic synthesis, a process that remained almost completely misunderstood until van den Toorn decoded it. My Stravinsky is a much less complicated figure, a composer whose techniques are directly manifested on the surface of his music. This may mean that I am, in the end, a less original and sophisticated analyst than van den

Toorn. But it also means that my Stravinsky is much closer to the one that had such a profound influence on the history of twentieth-century music.

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EXAMPLE 13. Bartók, *Fifth String Quartet*, movement 5, mm. 711–20.

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