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THE DIATONIC AND THE CHROMATIC IN SCHENKER'S THEORY OF HARMONIC RELATIONS

Matthew Brown

Of all issues in music theory, few are more perplexing than explaining the coherence of highly chromatic tonal music. In many cases the difficulties are interpretative and vary from piece to piece. But more often the problems are conceptual in nature and stem from the basic ways in which we think about the tonal system.

At least since the time of Rameau, theorists have defined tonality through diatonic relationships based on the major and minor scales. Consequently, they have regarded chromatic elements as elaborations of or substitutions for diatonic scale members. As Leonard B. Meyer explains, "Chromaticism is almost by definition an alteration of, an interpolation in or deviation from this basic diatonic organization."[1]

While this approach works well enough for pieces in which chromatic elements appear as local inflections, it is less successful for those—such as Bach's "Chromatic Fantasy and Fugue" or Haydn's *Chaos*—in which chromaticism seems to dominate the texture. To account for these more extreme cases, theorists confront an awkward dilemma: either they must treat the works as mutations of diatonic structures, or they must place them outside the limits of normal tonal theory. Neither solution is satisfactory: the former largely devalues the structural implications of chromatic events, and the latter suggests that

composers such as Bach and Haydn wrote music that, strictly speaking, is not tonal.

Far from resolving this paradox, Schenkerian theory, as it is commonly understood, has in fact perpetuated it. Since many Schenkerians assume that background and middleground structures are basically diatonic, they tend to treat chromatic elements as products of surface voice-leading. As William Benjamin has noted, some writers "oversimplify" much highly chromatic music by "explaining away large swathes of non-scale tones as substitutes for diatonic scale-degree representatives or as linear interpolations."[2] Other theorists, such as Gregory Proctor and Patrick McCreless, claim that Schenker's methods must be expanded by new theories of chromatic tonality in order to cope with this repertory. Proctor, for example, has suggested that tonal music should be divided into two main types: "classical diatonic tonality," as described by Schenker, and "nineteenth-century chromatic tonality," as derived from the chromatic scale.[3]

The purpose of this article is to show that, instead of confirming conventional theories, Schenker himself offered a radical new way of dealing with highly chromatic tonal music. Part I of the paper shows how, in the *Harmonielehre* (1906), Schenker derived a fully chromatic tonal system from the tonic triad.[4] Part II demonstrates that although this system is fundamentally diatonic, chromatic triads do not substitute for or elaborate diatonic chords but are generated directly from the tonic triad. Finally, Part III describes the ways in which Schenker used this theory in *Der freie Satz* to generate chromatic events as far back as the deep middleground.[5] In this way, I will suggest that for Schenker, chromatic elements can play an essential role in the generative process. Throughout this paper my aim will be to establish what Schenker himself wrote, and to interpret rather than criticize his ideas.

I

Originally published in 1906 as Volume 1 of the *Neue musikalischen Theorien und Phantasien,* the *Harmonielehre* represents Schenker's first extensive theoretical writing and his most exhaustive survey of harmonic relationships in tonal music.[6] The book has two main parts: the first, the *Theoretischer Teil,* covers "the topography of the material–that is, systems, intervals, triads, seventh chords and so on," while the second, the *Praktischer Teil,* deals with "the truly functional, the driving force of the fundamental musical ideas: namely, the progression of *Stufen,* chromaticism and modulation."[7]

Binding both parts together is the concept of the *Stufe. Stufen* are best described as harmonic states, each one defined by its position relative to the tonic. Although they are labelled by conventional Roman

numerals, *Stufen* may be presented in many different ways: they may appear as root chords or in inversion, they may be expanded or "composed-out" by passing, neighboring, or tonicizing chords and, as we will see shortly, they may occur in diatonic or chromatic form. It is this propensity for transformation that prompted Schenker to declare that the concept of the *Stufe* is the most important feature of harmonic theory.[8] *Stufen,* then, are not mere triads; they are triads or transformations of triads within a given tonal system.

How exactly do these diatonic and chromatic *Stufen* relate to the tonic chord? During the course of the *Harmonielehre,* Schenker answers this question in three stages.[9] First he demonstrates how, using the triad and cycle of fifths, it is possible to build a succession of diatonic triads on all members of the major and minor scales. Next, using the principle of mixture, he combines the members of the major system with those of the minor. Finally, he invokes mixture and tonicization to produce a single major-minor system that encompasses the full range of diatonic and chromatic triads on all seven *Stufen.*

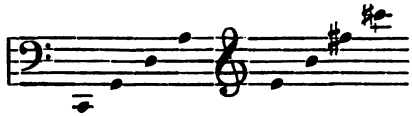
The first stage is summarized in Table 1. Schenker begins by assuming that since, from a given note, only the first five overtones are audible, the triad must ipso facto serve as the primary element of the tonal system. Next to the octave, he regards the fifth as the strongest interval; hence he proposes that it is the fundamental generating force within the system. As shown in Table 1a, Schenker uses this latter property to create a cycle of fifths above the tonic. Since, if sounded, each member of this cycle will imply its own overtone series, the cycle in Table 1a can be rewritten as a succession of major triads (Table 1b.) To counteract the natural, outward motion of the cycles in Tables 1a and 1b, the "Artist" then construes another cycle of fifths that descends back to the fundamental (Table 1c.) Having compressed the two cycles into the space of an octave (Table 1d), Schenker extends the descending cycle beyond the tonic I in order to generate the IV *Stufe* or "underfifth" (Table 1e.)

At this point in the argument each *Stufe* is still represented by a major triad: to make this succession diatonic, Schenker maintains that "the content of the more distant fifths, starting from the second fifth, is tempered and modified by the content of the fundamental and from the fifths immediately above and below it."[10] Thus since F, as the root of the subdominant, is more closely related to the tonic than F♯, the third of the supertonic, the latter is modified (Table 1f.)

Whereas the major system is based primarily, though not exclusively, on what Schenker identified as natural processes, he concedes that the minor system draws only the cycle of fifths from the overtone series. He suggests, therefore, that the latter is constructed ad hoc by the artist as an analogue to the major system, on the grounds that "at least two

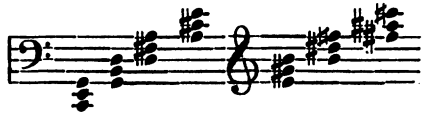
Table 1

a.



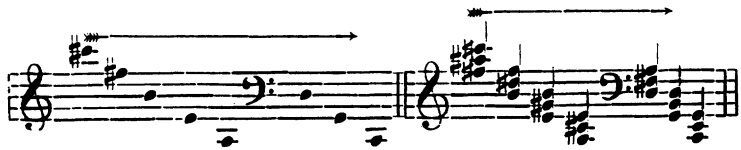
Harmonielehre, par. 14, p. 42

b.



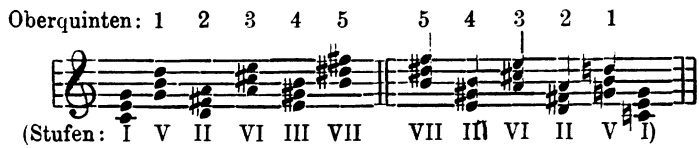
par. 14, p. 43

c



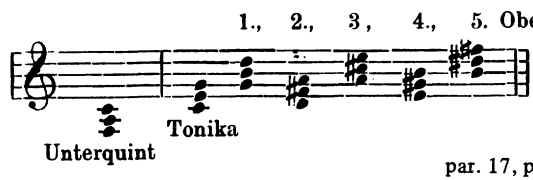
par. 16, p. 51

d.



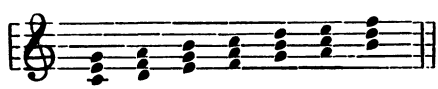
par. 16, p. 51

e.



par. 17, p. 54

f.



par. 18, p. 55

components of the minor triad–the root and the fifth–belong to the series" and that "from a psychological, artistic perspective, the behavior of the minor triad is quite comparable to that of the major triad."[11] Even though it may be a bona fide construct, Schenker always regarded the minor system as conceptually inferior to the major system.[12]

After describing the two diatonic systems and their transpositions, Schenker next invokes the principle of mixture to make the resources of each system available to the other. In paragraph 38 he explains the natural origins of mixture:

> The tone lives a richer life, it satisfies its vitality all the better the more it revels in these relationships–that is, first, when it unites major and minor–and second, the more intensely it revels in each [system].[13]

Schenker adds that there hardly exists a piece that does not rely on mixture of one sort or another.[14]

To illustrate the different ways in which mixture can operate within the combined system, Schenker constructs an elaborate chart, given here as Table 2a. The major system is marked at the top and the natural minor–with its lowered third, sixth, and seventh *Stufen*–at the bottom. Between these two poles, Schenker has six rows, corresponding to the six possible combinations of natural and flattened *Stufen:* in rows 1, 2, and 3 the flattened third, sixth, and seventh *Stufen* appear individually within an otherwise major context (row 1 is the ascending melodic minor scale and row 3 is the Mixolydian mode), while in rows 4, 5, and 6 different pairs of mixed *Stufen* are shown (row 4 is the harmonic minor scale and row 5 is the Dorian mode.) The arrows along the right side of Table 2a–unfortunately cut from the English translation–emphasize that mixture can occur to varying extents between these two poles.[15] To underscore the harmonic implications of these different states, Schenker lists the tonic, dominant, and subdominant *Stufen* for each row as shown in Table 2b.

As a final but separate instance of mixture he proposes that the Neapolitan enters the minor system from the Phrygian mode to avoid the diminished triad on II.[16] Although the Phrygian II will obviously occur in major keys, Schenker insists that it does so through prior mixture since "in the strictest sense it is really the property of today's minor system."[17] Schenker subsequently lists the complete range of *Stufen* in C major-minor as follows:

C	D♭	D	E♭	E	F	G	A♭	A	B♭	B
I	♭II	II	III		IV	V	VI		VII	[18]

By referring to the mixed third, sixth, and seventh *Stufen* with a single Roman numeral, Schenker indicates that the combined system still has

Table 2a. *Harmonielehre*, par. 41, p. 110

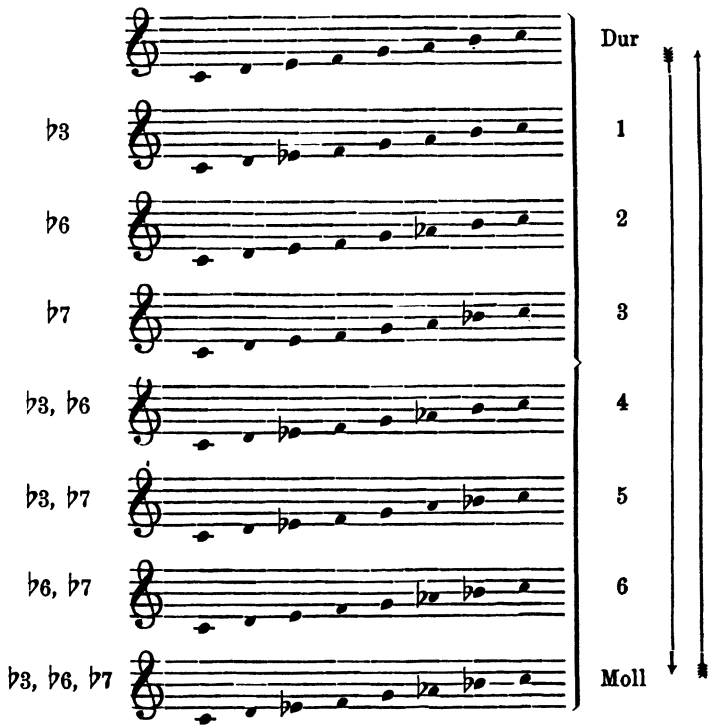
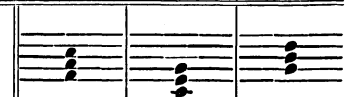
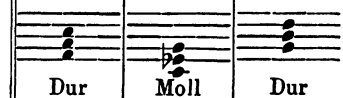
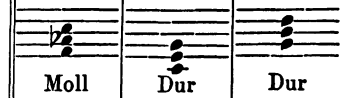
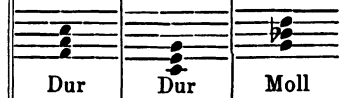
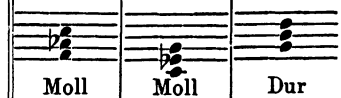
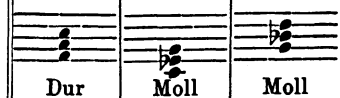


Table 2b. *Harmonielehre*, par. 48, p. 117

Die Dreiklänge der I., IV. und V. Stufe in allen Mischungsreihen.

	IV	I	V
in Dur:	 Dur	Dur	Dur
in der ersten Reihe (der sogenannten melodischen Mollreihe):	 Dur	Moll	Dur
in der zweiten Reihe:	 Moll	Dur	Dur
in der dritten Reihe (einer mixolydischen):	 Dur	Dur	Moll
in der vierten Reihe (der sogenannten harmonischen Mollreihe):	 Moll	Moll	Dur
in der fünften Reihe (einer dorischen):	 Dur	Moll	Moll
in der sechsten Reihe:	 Moll	Dur	Moll
in Moll:	 Moll	Moll	Moll

only seven *Stufen,* but that the second, third, sixth, and seventh *Stufen* have two distinct forms.

This latter point becomes even clearer in the third and final stage of the derivation when he announces that each of these *Stufen* can themselves appear as major or minor triads:

> Nothing stands in the way of projecting an "apparent" key chromatically on each of these *Stufen;* in so doing mixture, as an ever present compositional procedure, can once again penetrate this pseudo key as well.[19]

Schenker includes these extra forms in his previous list, thereby producing the chart given in Table 3 (this chart is also absent from the English translation.)[20] Table 3 indicates quite clearly that each *Stufe* may be presented in many different ways: for example, in C major-minor, the III *Stufe* may appear as a major or a minor triad on E♭ as well as a major or minor triad on E. Mixture refers, then, not only to the interchange of chord qualities and roots between the major and the minor systems (for example, A♭ major chords within F major) but also to the more general exchange of major and minor chord types (for example, an E major chord in C major or an A♭ minor chord in F major.)[21]

In order to produce all possible triads, Schenker still needs to generate those on ♯IV. Since he rejects any possibility of Lydian mixture on the grounds that the subdominant and dominant must always be available in pure form, he explains ♯IV as a means of inflecting V:

> Certainly, we shall see in the chapter on chromatic alterations just how readily one raises a fourth *Stufe* by a semitone in the major (also freely in the minor) to produce a diminished triad, especially when its purpose is to prepare the V *Stufe*—thus in F major, B♭ is raised to B thereby transforming the IV *Stufe* into the diminished triad B-D-F. It is not advisable, however, to consider this chromatic B as a Lydian element since this sharpening betrays the intention of chromatic alteration too clearly to warrant accepting it as a diatonic IV *Stufe* within the framework of the system.[22]

As becomes clear in paragraphs 136–162, tonicization is vital to Schenker's understanding of chromatic phenomena. At the beginning of paragraph 136 we read:

> Not only at the beginning of a composition, however, but also in the midst of it, each *Stufe* displays an irresistable desire to attain for itself the value of the tonic as the strongest *Stufe.* If the composer surrenders himself to this desire of the *Stufe* to attain the strongest value of the tonic within a diatonic system, I call this process "tonicization" and the phenomenon itself "chromaticism."[23]

In the following pages, Schenker explains precisely how tonicization may be achieved using applied dominants, leading-note chords, and by

Table 3. *Harmonielehre,* par. 160, p. 395

C-$\frac{\text{dur}}{\text{moll}}$ (selbstverständlich),

Des-$\frac{\text{dur}}{\text{moll}}$, wenn die zweite phrygische Stufe als scheinbare Tonart chromatisch (also auch mit Zuhilfenahme anderer Stufen) präpariert wird,

* Es-$\frac{\text{dur}}{\text{moll}}$ entsprechend einer chromatischen Tonart auf der dritten Stufe,

E-$\frac{\text{dur}}{\text{moll}}$ dto. auf der dritten Stufe,

F-$\frac{\text{dur}}{\text{moll}}$ dto. auf der vierten Stufe,

G-$\frac{\text{dur}}{\text{moll}}$ dto. auf der fünften Stufe,

As-$\frac{\text{dur}}{\text{moll}}$
A-$\frac{\text{dur}}{\text{moll}}$ } dto. auf der sechsten Stufe,

B-$\frac{\text{dur}}{\text{moll}}$
H-$\frac{\text{dur}}{\text{moll}}$ } dto. auf der siebenten Stufe.

*should include D-$\frac{\text{dur}}{\text{moll}}$

means of diminished sevenths, augmented sixths, and other altered chords. However, in emphasizing ♯IV as a means of inflecting V, Schenker never deals with the possibility of ♯IV as a secondary key area.

Finally, then, Schenker arrives at a single major-minor system in which the full range of diatonic and chromatic triads is related to the tonic chord. Table 4 summarizes this entire process: line 1 gives the tonic triad, lines 2 and 3 give the major and minor systems, line 4 the combined diatonic systems, and line 5 the complete major-minor system.

II

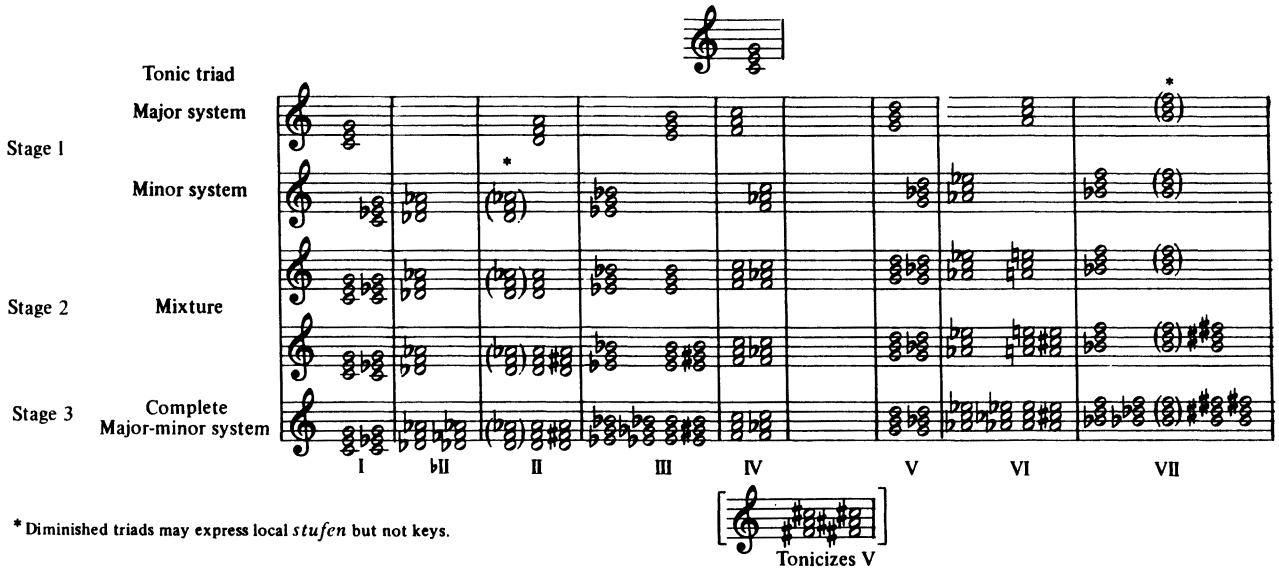
Now that we have sketched the broad outlines of Schenker's harmonic theory, let us look more closely at its internal structure. From the outset, Schenker's presentation hardly stands as a rigorous formal proof of the theory, since many of the steps follow one another through the introduction of ad hoc assumptions. For example, he offers no logical reason why the ascending cycle in Table 1a should stop at VII, or why the descending one should go beyond I to IV. Similarly, his attempt to eliminate the chromatic triads from Table 1c seems rather arbitrary, as does his distinction between the products of "Nature" and those of the "Artist." Some may also question his decision to treat ♯IV merely as a subordinate to V, though it is not immediately obvious how to reply to Schenker's rejection of Lydian mixture.

Nevertheless, despite these problems, Schenker's basic line of reasoning does have many important implications not only for his own future development but also for tonal theory in general. What the argument lacks in formal consistency it makes up in imagination and insight.

Perhaps the most striking feature of the theory—and certainly its most radical departure from nineteenth-century tradition—is Schenker's decision to take the tonic triad rather than the diatonic scale as the basic element of his system. From the opening of *Harmonielehre,* it is clear that Schenker rejects the a priori significance of scales on acoustical grounds, since they cannot be taken directly from the overtone series. More significantly, however, he also denies that scales are capable of accounting for the hierarchical nature of tonality and for the mutual dependence of harmony and counterpoint.

Schenker takes up this latter point most vehemently in the Preface to *Kontrapunkt* I, in a blistering attack on the origins of exotic scales. He writes:

> The people of the East, just like our ancestors (–Quod erat demonstratum!–), have the childish illusion of a scale-system, which they fix on paper, merely because they follow the horizontal pattern of melodies. . . . And thus, innumerable systems are believed in specifi-



* Diminished triads may express local *stufen* but not keys.

Table 4

> cally as such, even though a "system" in the real meaning of the word is quite impossible due to the lack of precise differentiation of the all-too-limited tonal material, and hence the so-called systems may therefore claim at most a mechanical, descriptive value (again, exactly like those systems of our oldest periods), and in any case they can obviously apply only to horizontal lines.[24]

For Schenker, then, scales have only a limited function as theoretical constructs and can at best describe linear phenomena. Of course, by denying that scales have generative power, he does not dispense with them altogether. On the contrary, the choice of seven *Stufen* clearly invokes some prior notion of the scale. However, Schenker is quite adamant in his belief that scales derive from the triad and not vice-versa.

From a conceptual standpoint, Schenker gains three immediate advanages from building his system in this new way. First, since he believes that mixture, tonicization and fifth relations are inherent properties of the triad, he can legitimately claim that his system is generative. To borrow a biological metaphor, it is as if the triad were genetically encoded with its own means of harmonic reduplication, in much the same way that a living cell is programed with the necessary and sufficient information from which to reproduce itself in countless different guises. The fact that the tonic triad can effectively create all other triads using harmonic principles means that the system is also transformational.

Second, since Schenker's system is based on a harmonic entity, it follows that he could then conceive of intervals in harmonic terms and not merely as the distance between scale members. As Schenker puts it: "today, the ability to appear in triads or seventh chords is the conceptual prerequisite of intervals."[25] Thus consonant intervals–unisons, octaves, fifths, fourths (between upper parts), thirds and sixths–gain meaning because they appear in major and minor triads, while dissonant intervals–seconds, sevenths, augmented and diminished sonorities–are significant because they appear in seventh chords. By linking intervals to chords, he allows for the horizontal presentation of harmonies, an idea that leads directly to the notion of prolongation.[26]

Attractive as this position may seem, Schenker was later forced to modify it in one important way. Whereas in the *Harmonielehre* he accepts seventh chords as discrete harmonic entities in order to allow seconds and sevenths as intervals, he subsequently retracts this view in *Kontrapunkt I,* claiming instead that dissonances ultimately arise from passing motion.[27] Stripped of their a priori status as harmonic entities, sevenths chords cannot normally express *Stufen.* In the preface to *Kontrapunkt I,* Schenker writes:

> The *Stufe* lives in our perception only as a triad. That is, as soon as we expect a given *Stufe* we expect, above all, a triad and not something

in the form of a seventh. In this case, the seventh degree is not an *a priori* element in our perception in the same way that the fifth and the third degrees are; rather, it is an *a posteriori* element . . . that we comprehend in retrospect as passing motion or as a means for chromaticism.[28]

This does not mean, of course, that sevenths could never be conceived as discrete chords; it does mean that they can only assume harmonic status in special situations and, as we learn in *Der freie Satz,* that they can only be prolonged if they express some consonant state at a higher structural level.[29]

Third, besides uniting harmony and counterpoint, Schenker's theory claims to account for all possible tonal phenomena. At the beginning of the *Harmonielehre,* Schenker stresses the importance of completeness as a property of systems:

> Must not, then, a system have enough power to explain absolutely all possible occurrences within its domain? And doesn't one always regard the system that encompasses the most cases as the best one?[30]

We see him use the idea of completeness in two main ways. On the one hand, although Schenker dismisses the idea of modes and exotic scales as independent systems, he insists that they should and can be explained within a more general theory of tonal relations. In his words:

> In dropping the Dorian, Phrygian, Lydian and Mixolydian "rows," we have apparently reduced the number of possible relationships into which the tone could enter, to the detriment of its vitality and egoism. However, this loss is merely apparent. The tone bravely stood its ground, and it seems it was the tone itself that forced the Artist to leave the door ajar for relationships of a Mixolydian, Dorian character etc., even when the Artist no longer believed in the validity of those systems.[31]

He continues:

> If the so-called Dorian and Mixolydian qualities are established by the major and minor systems alone (these understood correctly, of course), why then take on the burden of still more independent systems?[32]

Modes, then, are not alternative systems analogous to tonality—the "dialects" of tonality, which arise from specific operations within the tonal system. In this sense, tonality can be regarded as a family of harmonic languages, each one based on the properties of the triad.

On the other hand, Schenker uses the criterion of completeness to refute Riemann's theory of harmonic functions. While he certainly accepts that the tonic, dominant, and subdominant triads have a

statistical and perhaps even conceptual prominence within the tonal system, as Table 2b confirms, Schenker nevertheless denies that these functions alone are comprehensive enough to account for *all* tonal progressions. Near the beginning of *Kontrapunkt* I, he specifically criticizes functional theory for its inadequate treatment of the III *Stufe* and for its inability to deal with sequences. According to Schenker:

> But don't all these exceptions . . . immediately presuppose the recognition of all the remaining *Stufen* of the system, beyond I, IV, V, as independent *Stufen* in their own right?[33]

Moreover, just as all seven diatonic *Stufen* are required within the system, so their various chromatic counterparts are also essential. As we have seen, these chromatic *Stufen* do not elaborate or substitute for diatonic *Stufen,* they are alternative ways of expressing the same harmonic state. Indeed, as Schenker explains, chromatic *Stufen* are subject to exactly the same types of prolongation as diatonic ones:

> In its chromatic state, the *Stufe* proves itself to be the same spiritual and higher unity that we have already defined for the diatonic form; the obligation to return to the diatonic system does not imply any restrictions as far as the duration of the chromatic *Stufe* is concerned; its duration remains variable just like that of the diatonic *Stufe* and varies from a minimum to the greatest conceivable maximum.[34]

Schenker does not deny that diatonic relationships are empirically more common than chromatic ones, or that much chromaticism may indeed elaborate diatonic models; rather he insists that because a simple diatonic model cannot account for every possible chromatic occurrence, a more comprehensive theory of harmonic relations is necessary. Thus, while Gregory Proctor and others may be justified in distinguishing on stylistic grounds between "classical diatonic tonality" and "nineteenth-century chromatic tonality," Schenker saw no such distinction: he conceived of one and *only* one system of tonal relations.[35]

III

Let us now turn to *Der freie Satz* to see how Schenker expanded the theories outlined in the *Harmonielehre.* In the preceding discussion we saw how Schenker took the tonic triad as the basis for the tonal system and how he derived all other triads using mixture and tonicization. Nearly thirty years later, in *Der freie Satz,* Schenker was still stressing the same point, as he makes clear in the following remark:

> A truly well established tonality can guide even the greatest number of chromatic phenomena back to the basic triad.[36]

This phrase reinforces the claim near the end of *Harmonielehre* that there is no limit to the degree of chromaticism in tonal contexts.[37] Furthermore, as with the *Harmonielehre,* the principles guiding this chromaticism are mixture and tonicization.

Yet while the conceptual basis of Schenker's system remained constant between the *Harmonielehre* and *Der freie Satz,* the scope of the theory widened considerably. First, in *Der freie Satz* Schenker no longer presented the generating triad as a vertical sonority, but as a contrapuntal complex. This complex (the *Ursatz* or fundamental structure) consists of an upper part (the *Urlinie* or fundamental line) that descends from $\hat{8}$, $\hat{5}$, or $\hat{3}$ to $\hat{1}$ and a lower part (the *Bassbrechung* or bass arpeggiation) that moves from I to V and back to I. The fundamental structure in fact summarizes the essential rules of contrapuntal motion: as Carl Schachter has emphasized, the two parts resemble a second species pattern in which the $\hat{2}$ appears as a melodic dissonance passing between the chord tones $\hat{3}$ and $\hat{1}$.[38]

Second, the generating triad described in *Der freie Satz* controls the harmonic structure of an entire piece and not just a local key area as it did in the *Harmonielehre.* In the final chapters of the *Harmonielehre,* Schenker suggested that when a piece changed key it actually changed system.[39] During the 1920's, however, as he developed the idea of structural levels, Schenker gradually realized that monotonal compositions were in fact controlled by a single tonal system and that so-called modulations were merely excursions within one basic framework.[40] According to this revised theory, secondary key areas express *Stufe* in just the same way that surface chords do, hence Schenker's recurrent phrase "Stufen der Tonalität als Tonarten."[41] Thus, the fundamental structure has harmonic as well as contrapuntal implications: as the progenitor of all *Stufen,* it summarizes the essential principles of monotonality.

Besides rejecting the conventional idea of modulation, this theory also dispensed with traditional notions of key relations, such as that of "relative" major and minor. As John Rothgeb explains:

> The concepts of 'relative' major and 'relative minor' are indeed foreign to Schenkerian thought. If, for example, an A-minor chord were tonicized within a work in C major, Schenker would explain it any of several ways, depending upon the larger context: the A bass might be a passing tone in a descending or ascending linear progression; it might be an upper neighboring tone to V; or any of several other possibilities. He would never invoke an independent concept of 'relative' keys.[42]

To clarify the relationship between the foreground and background structure, Schenker devised an intriguing chart, given here as Table 5.

Table 5. *Der freie Satz*, Fig. 1

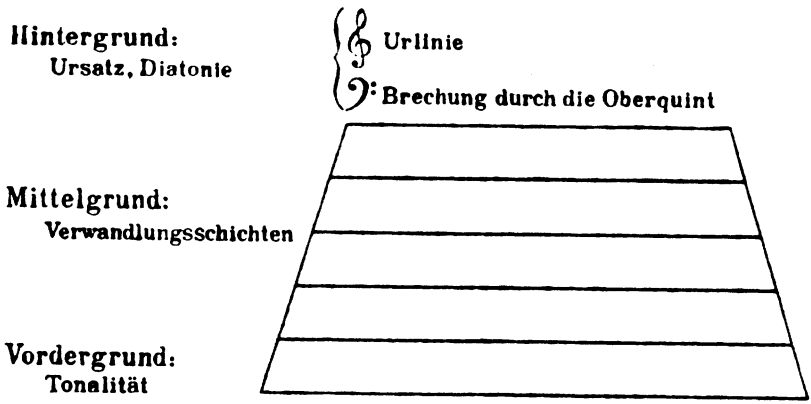


Table 6

III Mediant [First level middleground]				VI Submediant [Second level middleground]			
C major							
♭III	E♭	G	B♭	♭VI	A♭	C	E♭
♭III♭	E♭	G♭	B♭	♭VI♭	A♭	C♭	E♭
III	E	G	B	VI	A	C	E
III♯	E	G♯	B	VI♯	A	C♯	E
C minor							
III	E♭	G	B♭	VI	A♭	C	E♭
III♭	E♭	G♭	B♭	VI♭	A♭	C♭	E♭
♯III	E	G	B	♯VI	A	C	E
♯III♯	E	G♯	B	♯VI♯	A	C♯	E

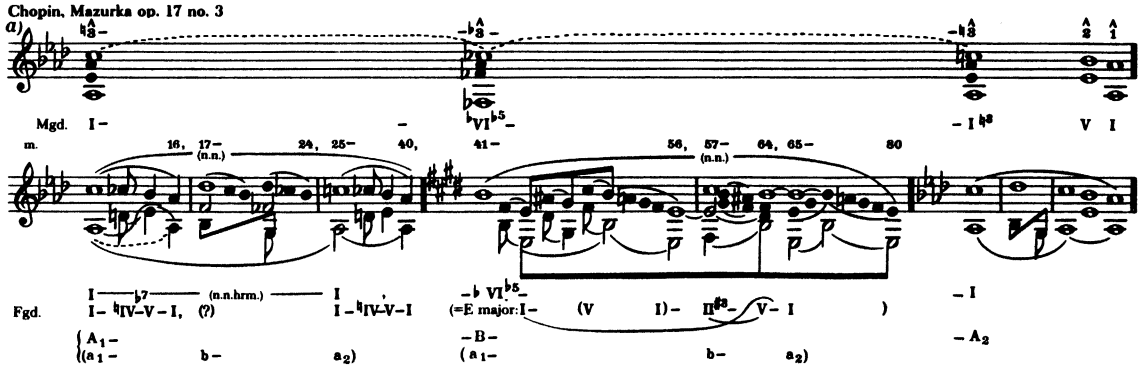
[After Krebs]

(Unfortunately, this figure is missing from Jonas' edition of *Der freie Satz* and hence from Oster's translation.) Table 5 clearly distinguishes between what Schenker terms the diatony of the fundamental structure and the tonality of the foreground. In the accompanying text, Schenker goes on to state that strictly speaking, diatony is a feature of the fundamental line.[43] He then contrasts sparseness of diatony with the richness of the foreground tonality, which encompasses "the sum of all occurrences, from the smallest to the most comprehensive."[44] It is unclear, however, from Table 5 at precisely what level he permitted specific chromatic elements to enter.

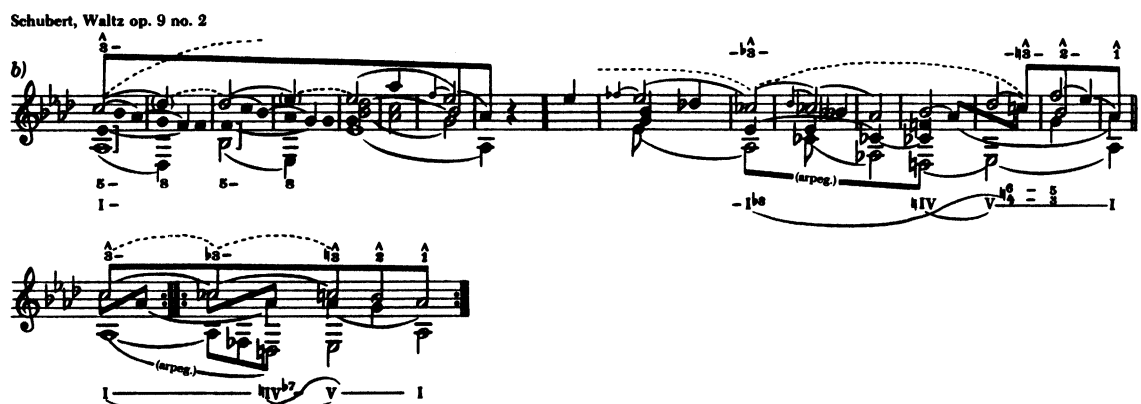
As mentioned at the start of this paper, many Schenkerians believe that chromatic chords and pitches are mostly generated at the surface or in the immediate middleground. Adele Katz and Felix Salzer, for example, both claim categorically that a chord has harmonic function only if it occurs within a limited number of diatonic progressions (for example, I-II-V-I, I-III-V-I, I-IV-V-I, I-VI-V-I and I-V-I); in almost all cases their own deep middleground graphs are exclusively diatonic.[45] At first sight this position certainly conforms to the deep middleground paradigms given in Part 2 of *Der freie Satz;* nevertheless examples from later in the treatise show that these middleground progressions can be presented in numerous chromatic forms, following the principles laid out in the *Harmonielehre.*

According to Schenker, chromatic elements may enter the deep middleground in three main ways: through the prolongation of the fundamental line, through mixture in the bass arpeggiation and through the tonicization of the bass *Stufen.* Schenker deals with the first of these topics explicitly in Part 2 of *Der freie Satz* under the headings of mixture and Phrygian II. In paragraph 103, he declares that third mixture can appear in all $\hat{8}$-$\hat{1}$, $\hat{5}$-$\hat{1}$ and $\hat{3}$-$\hat{1}$ lines (mixture of $\hat{6}$ can occur in $\hat{8}$-$\hat{1}$ lines at more foreground levels only.)

To illustrate his point, Schenker shows two instances of third mixture: Chopin's Mazurka in A♭ major, op. 17 no. 3 (Ex. 1) and Schubert's *Trauer* Waltz in A♭ major, op. 9 no. 2 (Ex. 2). In the first case, the primary melodic tone C is prolonged by a lowered third, C♭, that extends across the entire middle section of the piece—the C♭ is in fact supported by the local tonic of E major which functions as F♭ (♭VI of A♭.) Chopin's use of mixture in the central section gives a good indication of the sort of form-building function that chromatic events may fulfill within a musical structure. In the second case, the lowered third (C♭) is supported by a diminished seventh (♯IV7) at the deep middleground. What makes this particular analysis so remarkable is the fact that the diminished seventh chord does not actually appear at the foreground of the piece—instead, we find a German sixth, F♭-A♭-C♭-D (m. 13). Schenker's reinterpretation of this chord may at first seem unusual;



Example 1. *Der freie Satz*, Fig. 30a



Example 2. *Der freie Satz*, Fig. 30b

nevertheless, it provides ample proof of the freedom with which he handled chromatic chords.

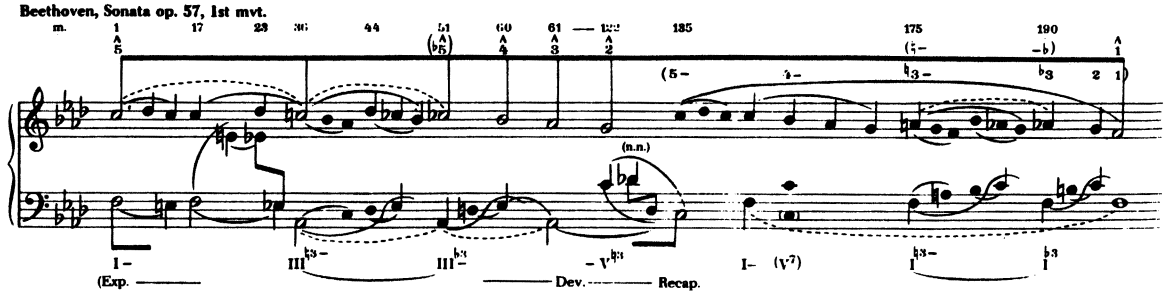
It is important to stress that mixture is an independent means of prolongation, quite distinct from linear progressions or neighbor-note motions. As Schenker explains, to be considered a true linear progression a line must traverse at least the interval of a third, while at the deep middleground, only upper neighbor-note motions around $\hat{5}$ and $\hat{3}$ are possible.[46] Sometimes these prolongations may themselves be chromatic—for example, the succession $\hat{5}$-$\flat\hat{6}$-$\hat{5}$ is quite common, with the $\hat{6}$ supported either by $\flat$VI, or by IV$\flat$.[47]

Two other examples of chromatic intrusions should be mentioned. The first one concerns the first movement of Beethoven's Piano Sonata in F minor, op. 57 (Ex. 3). According to Schenker the first part of this interrupted structure descends through $\flat\hat{5}$ at the deep middleground (that is, $\hat{5}$-$\flat\hat{5}$-$\hat{4}$-$\hat{3}$-$\hat{2}$-$\hat{1}$). However, in this case the $\flat\hat{5}$ is not a passing tone between $\hat{5}$ and $\hat{4}$, but a third mixture in A$\flat$(III) brought about by a modal change in the second group at m. 51.[48] Second, in his graph of Schubert's song "Auf dem Flusse" in E minor, Schenker shows how mixture can occur within the initial ascent onto the headtone. As shown in Example 4, the headtone G is approached by an ascending arpeggiation through the raised third, that is, E-G♯-B-E-G.

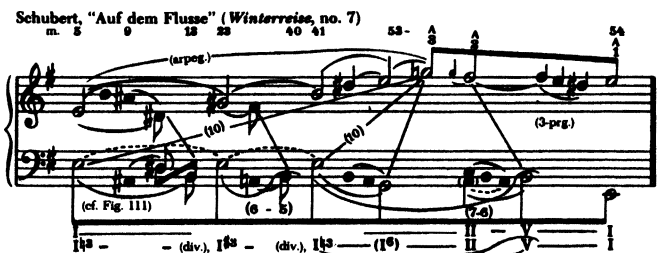
Having discussed mixture, Schenker immediately considers the possibility of Phrygian II. As shown in Example 5, he offers two voice-leading sketches of which $\flat\hat{2}$ precedes $\hat{2}$ in the fundamental line. The use of accidentals rather than a key signature suggests that these examples are in C major and not C minor and this detail raises the question as to whether a preliminary mixture is required before $\flat\hat{2}$ to avoid the augmented second $\hat{3}$-$\flat\hat{2}$ (or alternatively, whether a preliminary descent onto $\natural\hat{2}$ is required.) If such mixture is necessary, then it perhaps confirms Schenker's comment in the *Harmonielehre* that the Phrygian II ultimately belongs to the minor system.

Chromatic elements need not, of course, be confined to the fundamental line at the deep middleground; they may also occur within the bass arpeggiation. For Schenker, the primary interval of the fifth in the bass arpeggiation can only be composed-out at this level through II, III and IV. Nevertheless, through mixture, each of these *Stufen* can appear in chromatic form. Mixture of II and IV presents few theoretical problems since it only affects the quality of the triad and not the root. Mixture of III, however, raises broader questions. Following Harald Krebs, I have summarized the various possible mediant mixtures in Table 6.[49]

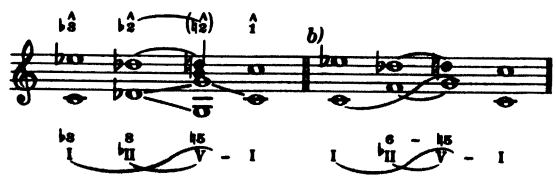
Besides the fairly common case of arpeggiations through III♯ in major keys, Schenker gives two examples of the more unusual instance of arpeggiation through ♭III in the major.[50] In the case of Beethoven's Piano Sonata, op. 2 no. 2 (Ex. 6), the tonic A major is arpeggiated



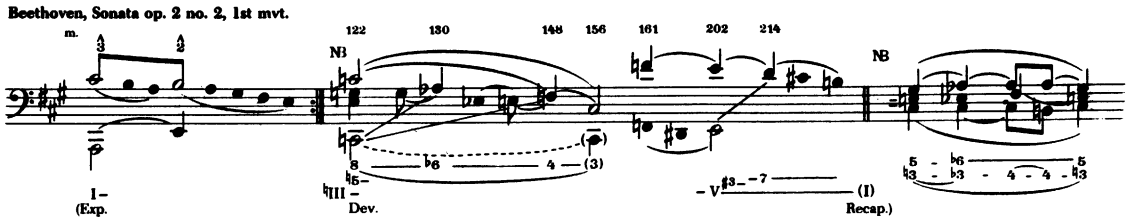
Example 3. *Der freie Satz*, Fig. 154.4



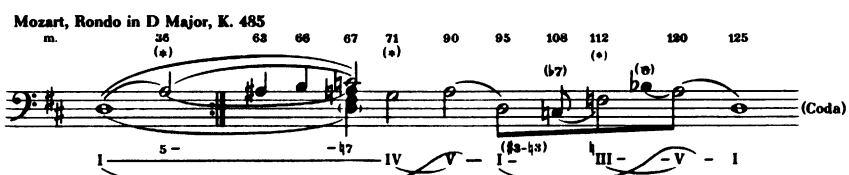
Example 4. *Der freie Satz*, Fig. 40.2



Example 5. *Der freie Satz*, Fig. 31



Example 6. *Der freie Satz*, Fig. 100.5



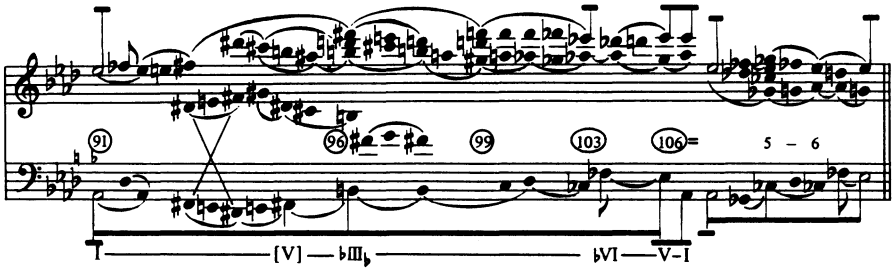
Example 7. *Der freie Satz*, Fig. 155.3

through C in order to account for the prominent shift to C major at the beginning of the development section. In the case of Mozart's Rondo in D major, K. 485, the motion onto F is preceded by a modulation to D minor as given in Example 7. Krebs himself graphs one instance of an arpeggiation through $\flat III_{\flat}$ in the major from the second movement of Mozart's Symphony no. 39, K. 543. As shown in Example 8 Krebs suggests that mm. 91-126 articulate a progression I-$\flat III_{\flat}$-($\flat$VI)-V-I. Krebs also shows one example of a succession through $\sharp III_{\sharp}$ in the minor, namely in Chopin's Rondo op. 1 (see Ex. 9). While arpeggiations of these latter types are certainly rare in common practice and will be carefully prepared by the composer at surface levels, they do lie within the boundaries of Schenker's system: as we have seen, $\flat III_{\flat}$ and $\sharp III_{\sharp}$ are merely alternative forms of the III *Stufe*.

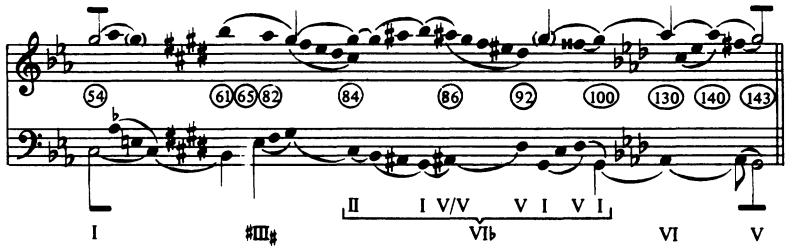
The third way in which chromatic elements can enter the deep middleground is by inflections of the structural dominant. A good instance of this procedure may be found in Example 2. Here Schubert reinforces the structural dominant by a diminished seventh ($\sharp IV^7$-V). One of the interesting features of Schenker's notation is that he marks progressions through $\sharp$IV by a pair of interlocking slurs: as Schenker explains, these slurs are characteristic of progressions involving II or IV where they emphasize the contrapuntal basis of the progression.[51] He also uses these slurs for progressions through $\flat$II. In various other graphs he shows that $\sharp$IV can also inflect interrupted structures, as for example in his analyses of the third movement of Beethoven's Piano Sonata, op. 26, and Chopin's Mazurka in B minor, op. 33 no. 4.[52]

The structural dominant may also be reinforced by augmented augmented sixth chords ($\sharp IV^6_5$), as Schenker demonstrates in his analysis of the Chaos from Haydn's *Creation* (Ex. 10). Carl Schachter has recently offered a slightly different example in his excellent study of the first movement of Brahms's Second Symphony, op. 73 (Ex. 11).[53] Here, Schachter suggests that the augmented sixth F-A-D$\sharp$ (mm. 116-17) connects with the main tonic D major by a "chromaticisized voice-exchange." Similar occurrences of chromatic alteration within voice exchanges can be found throughout the tonal literature.

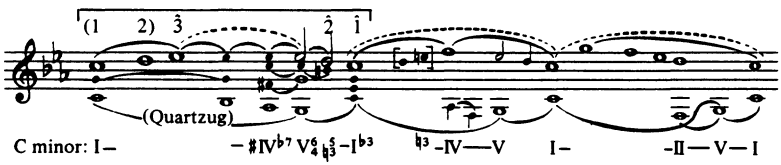
Having established that Schenker's deep middlegrounds can indeed be fully chromatic (the limit will be set by the work's voice-leading structure), we should not be surprised to find that more foreground levels exploit these resources in ever more complex ways, particularly in the services of motivic design.[54] Example 12 shows some of the many ways in which chromatic elements can appear at or near the surface. Perhaps the most important expansion of harmonic resources at the surface levels involves progressions through VI and VII. Whereas only ascending progressions (I-II-V-I, I-III-V-I and I-IV-V-I) can



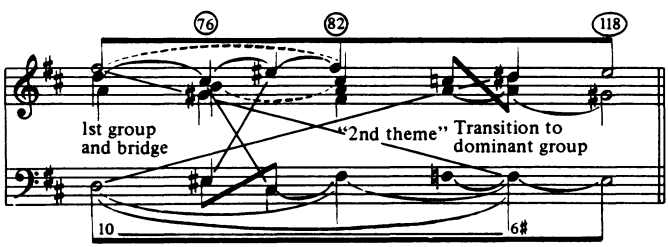
Example 8 Mozart, Symphony in E♭, K543, 2nd mvt. [Krebs, Ex. I:8]



Example 9 Chopin, Rondo, Op. 1 [Krebs, Ex. II:38]

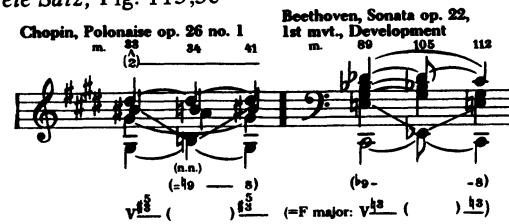


Example 10 Haydn, *Die Vorstellung des Chaos.* [Das Meisterwerk in der Musik, Anh. XIII, Fig. 9]

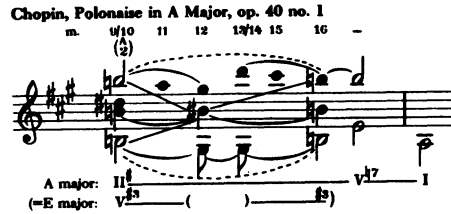


Example 11 Brahms, Symphony in D, Op. 73, 1st mvt. [Schachter, Ex. 7]

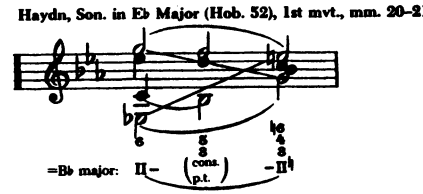
a. *Der freie Satz,* Fig. 113,3c



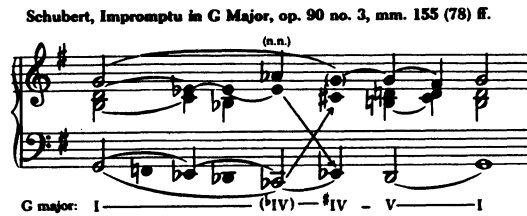
b. *Der freie Satz,* Fig. 113.4



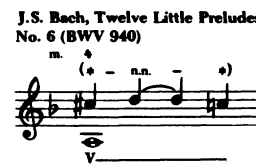
c. *Der freie Satz,* Fig. 56.h



d. *Der freie Satz,* Fig. 100.3f



e. *Der freie Satz,* Fig. 114.2a



Example 12.

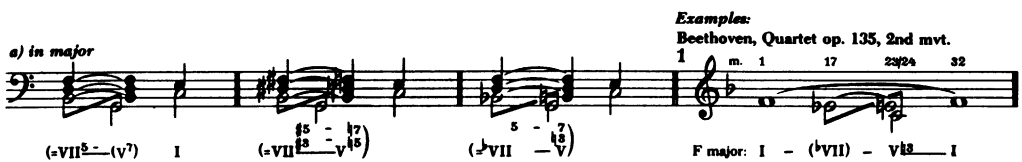
appear at the deep middleground, progressions through VI or VII can appear at the second and subsequent levels.[55] Furthermore, through mixture, the VI and VII *Stufe* can both appear in major and minor form on the raised and lowered degree. Following Krebs, the full list of submediant forms is given in the right hand column of Table 6.[56] We have already seen an interesting instance of motion through ♭VI in Example 1 and similar examples can easily be found. However, in many cases progressions to VI or ♭VI are absorbed within the unfolding of ♭II, II or IV (for example, I-VI^7-II-I or I-♭VI-♭II-V-I.)[57] In a similar way, VII and ♭VII often inflect unfoldings of V, as Schenker explains at great length in passage devoted to VII-V successions (see Ex. 13).[58]

* * * *

According to Schenker, then, chromatic elements are inherent in the tonal system. Through the concepts of mixture (Phrygian II) and tonicization, he managed to construct a comprehensive monotonal theory that not only relates the full range of chromatic elements to the tonic—the prerequisite of any genuine monotonal theory—but allows chromatic events to emerge from the deep level middleground. Since this is at the level at which musical forms emerge, Schenkerian theory also accepts that chromatic phenomena indeed play a vital role in shaping the overall structure of a piece.

Though it lacks proper formal derivation, Schenker's arguments overturn many basic preconceptions about the nature of the tonal system, such as the a priori significance of scales, the origins of intervals, and even such common notions as relative keys and functional substitution. For Schenker the tonal universe encompasses an almost limitless range of harmonic possibilities, restricted only by the rules of voice leading.

Given this result, the familiar criticism that Schenker had difficulty coping with extreme chromaticism such as that of late nineteenth-century music seems unfounded. A careful reading of his comments about Wagner and other late nineteenth-century composers suggests that their music was not somehow too chromatic, but rather that the individual *Stufen* were obscure and poorly articulated at deep levels. In paragraph 89 of the *Harmonielehre,* Schenker complains that many modern composers fail to coordinate *Stufen* with voice leading: that in some cases any sense of *Stufen* is lacking altogether, while in other cases that the *Stufen* are "too long, stretched too thin to support or sustain with any security the complexities of voice leading."[59] Schenker's celebrated attacks on Wagner are certainly of this type: both in the *Harmonielehre* and in *Das Meisterwerk* II he criticizes Wagner not for



Example 13. *Der freie Satz,* Fig. 111

writing too chromatically but for failing to control surface spans at the middleground.[60]

The implications of this criticism are important: they underline the significance Schenker placed on chromatic *Stufen* and on the problems of chromaticism in general. Indeed, one might even say that Schenker's real contribution to harmonic theory was showing that a fully chromatic theory is necessary not only to account for late nineteenth-century styles but also for understanding the works of the common practice style as well.

NOTES

This paper was originally presented at Columbia University in May 1984.

1. Leonard B. Meyer, *Emotion and Meaning in Music* (Chicago: University of Chicago Press, 1956), p. 217. In a similar vein, William Mitchell observes, "There are two ways in which chromatic elements appear in diatonic textures, by Interpolation and by Replacement. Interpolation refers to those instances in which the chromatic half step is introduced between diatonic tones. Replacement occurs, often as an abbreviation of interpolation, when a chromatic variant is substituted for a diatonic element." "The Study of Chromaticism," *Journal of Music Theory* 6 (1962): 11.
2. William Benjamin, "Interlocking Diatonic Collections as a Source of Chromaticism in Late Nineteenth-Century Music," *In Theory Only* 1/11 (1975): 31. Of the numerous studies dealing with the problems of graphing highly chromatic tonal music, see William Mitchell, "The Tristan Prelude: Techniques and Structure," *The Music Forum* 1 (1967): 162–203; Benjamin Boretz's analysis of the Tristan Prelude in "Metavariations Part IV: Analytic Fallout (1)," *Perspectives of New Music* 11 (1972): 159–217; Henry Martin's reply to Benjamin, "The Linear Analysis of Chromaticism," *In Theory Only* 2/1 (1976): 47–50; Gregory Proctor, "Technical Bases of Nineteenth-Century Chromatic Tonality: A Study in Chromaticism," (Ph.D. diss., Princeton University, 1978); Arnold Whittall, "The *Vier ernste Gesänge* Op. 121: enrichment and uniformity," in *Brahms: biographical, documentary and analytical studies,* ed. Robert Pascall (Cambridge: Cambridge University Press, 1983), pp. 191–207 and Deborah Stein, *Hugo Wolf's Lieder and Extensions of Tonality,* (Ann Arbor, Mich: UMI Research Press, 1985.)
3. According to Gregory Proctor, "Schenker was forced to narrow . . . his system to the inclusion of Mozart and the exclusion of Wagner." "Technical Bases," p. 7. Proctor proposes that "there is not a single 'common practice' extending from the early 17th century through the end of the 19th century. Rather the era can be divided into two large, overlapping style systems . . . classical diatonic tonality, and nineteenth-century chromatic tonality." According to Proctor "the two systems are distinguished by their respective conceptions of chromatic generation": in the former, "chromaticism is defined as the interaction of different diatonic scales" while in the latter "there is but one chromatic scale from which all diatonic scales are derived as subsets" (pp. iii–v). Patrick McCreless, among others, has tried to combine Proctor's theories with concepts outlined by Robert Bailey, see his "Ernst Kurth and the Analysis of the Chromatic Music of the Late Nineteenth Century," *Music Theory Spectrum* 5 (1983): 60–62.
4. Heinrich Schenker, *Neue musikalischen Theorien und Phantasien,* vol. 1 *Harmonielehre* (Stuttgart & Berlin: J. G. Cotta, 1906).
5. Heinrich Schenker, *Neue musikalischen Theorien und Phantasien,* vol. 3 *Der freie Satz* (Vienna: Universal, 1935).
6. The publication history of the *Harmonielehre* is more complex than is often supposed. So far as I can tell, the treatise was first published with Schenker's name in Stuttgart and Berlin by J. G. Cotta. Universal Edition then distributed the work in Vienna: some copies replace Schenker's name with the phrase

"von einem Künstler" while other copies lack the title page altogether or paste the label "Wien, Leipzig" over the original imprint. The treatise was later edited by Oswald Jonas and translated by Elizabeth Mann-Borgese under the title, *Harmony* (Chicago: University of Chicago Press, 1954.) Although Jonas's edition contains many helpful notes, it does not include any list of changes. In fact, Jonas cut some 75 of the original 379 examples, notably those dealing with intervals (Exs. 111–131), seventh chords (Exs. 190–213), tonicization (Tables XI–XVIII), and chromatic *Stufen* (p. 395) as well as several substantial musical quotations. He also tampers with the remaining text and examples. To avoid any confusion I have translated each extract myself from the first edition (Stuttgart/Berlin.) Unless otherwise stated, all citations come from the *Harmonielehre.*

7. "das bloss gleichsam Topographische der Materie: also Systeme, Intervalle, Drei- und Mehrklänge u.s.w.," "das wirklich Funktionelle, das Treibende der musikalischen Urideen: nämlich Stufengang, Chromatisierung und Modulation etc. gezählt werden" (p. vi).
8. "Gerade in ihrer höheren, abstrakten Natur ist die Stufe das Wahrzeichen der Harmonielehre" (par. 83, p. 198). Robert Wason traces the historical precedents for Schenker's notion of *Stufen* in his book, *Viennese Harmonic Theory from Albrechtsberger to Schenker and Schoenberg* (Ann Arbor, Mich.: UMI Research Press, 1985) and his article "Schenker's Notion of Scale-Step in Historical Perspective: Non-Essential Harmonies in Viennese Fundamental Bass Theory," *Journal of Music Theory* 27 (1983): 49–73. Though Wason often touches upon the idea of chromatic *Stufen,* particularly in his discussion of Mayrberger and Schalk, he does not deal with this topic in any detail.
9. The first and second stages of this derivation are summarized by Oswald Jonas, *Introduction to the theory of Heinrich Schenker,* ed. and trans. John Rothgeb (N.Y.: Longman, 1982), p. 21ff; Sylvan Kalib, "Thirteen Essays from the Three Year books *Das Meisterwerk in der Musik* by Heinrich Schenker," vol. 1 (Ph.D. diss., Northwestern Univ., 1973), pp. 3–12; David M. Thompson, *A History of Harmonic Theory in the United States,* (Kent, Ohio: Kent State Univ. Pr., 1980), pp. 162–180. None of these writers considers Stage 3.
10. "der Inhalt der ferneren Oberquinten, von der zweiten angefangen, wurde temperiert und abgestimmt auf den Inhalt des Grundtones, seiner ersten Oberquint und Unterquint" (par. 18, p. 55). For further discussion see Oswald Jonas, *Introduction,* p. 26.
11. "Schliesslich spitzt sich das Problem also dahin zu, ob es angesichts dessen, dass der Molldreiklang mindestens mit zwei Elementen, mit Grundton und Quint, der Obertonreihe zunächst ja durchaus nicht widerspricht und dass seine Behandlung in psychologisch künstlerischer Hinsicht der des Durdreiklanges parallel läuft, . . ." (Vorwort, p. vii).
12. ". . . eine Superiorität des natürlichen Dur gegenüber dem Moll nicht abzuleugnen ist" (par. 21, p. 63).
13. "Der Ton lebt sich reicher aus, er befriedigt seinen Lebenstrieb desto besser, je mehr er dieser Beziehungen geniesst, d.h. wenn er erstens Dur und Moll vereinigt, und zweitens je stärker in diesen beiden sein Genuss zum Ausdruck kommt" (par. 38, p. 107).
14. "Ich halte es daher im Sinne jeder Komposition eigentlich für wahrheits-

gemässer, z.B. von einer C-dur-moll (C- $\frac{\text{dur}}{\text{moll}}$) zu sprechen, da es sich fast nie ereignet, dass ein C-dur ohne C-mollingredienzien und umgekehrt ein C- moll ohne C-dur ingredienzien auftritt. Es liegt eben die Inanspruchnahme beider Systeme sowohl als aller unter denselben möglichen Kreuzungen im Sinne der Expansionbedürftigkeit des Tones" (par. 40, p. 109).

15. Jonas/Borgese, *Harmony,* Ex. 68, p. 87.
16. See par. 50, pp. 143–49.
17. "Daher darf er denn im strengsten Sinne doch wohl Eigentum nur des heutigen Moll-, nicht aber des Dursystems heissen . . ." (par. 50, p. 143).
18. Par. 160, p. 395.
19. "Nichts steht im Wege, sich nun auf jeder dieser Stufen chromatisch eine scheinbare Tonart vorzustellen, wobei auch in diese nicht einmal wirkliche Tonart selbstverständlich noch ausserdem wieder die Mischung als stets gegenwärtiges kompositionelles Mittel eindringen könnte" (par. 160, p. 395).
20. The omission of the II *Stufe,* D major-minor, is one of several proof-reading errors.
21. Many writers refer to these two types as simple and double mixture–see Felix Salzer, *Structural Hearing,* vol. 1 (N.Y.: Boni, 1952), pp. 178–181; Howard Cinnamon, "Chromaticism and Tonal Coherence in Liszt's *Sonetto 104 del Petrara,*" *In Theory Only* 7/3 (1983): 6. Edward Aldwell and Carl Schachter add a third category "secondary mixture" in *Harmony and Voice Leading,* vol. 2 (N.Y.: Harcourt Brace Jovanovich, 1979), pp. 186–193.
22. "Wir werden allerdings im Kapitel von der Chromatik sehen, wie gerne man gerade eine vierte Stufe in Dur (freilich auch in Moll) um einen Halbton erhöht, um zu einem verminderten Dreiklang zu gelangen, also in F-dur B zu H erhöht, wodurch die IV. Stufe zum verminderten Dreiklang H D F wird, besonders wenn es gilt, die fünfte Stufe zu bringen. Jedoch würde es sich nicht empfehlen, dieses chromatische H als ein lydisches anzusprechen, da sich in jener Erhöhung zu sehr die Absicht des Chromas kundgibt, als dass es zulässig wäre, eine systemgemässe diatonische IV. Stufe dahinter zu vermuten" (par. 51, p. 150).
23. "Nicht nur aber am Anfang des Stückes, sondern auch mitten im Verlaufe desselben bekundet jede Stufe einen unwiderstehlichen Drang, sich den Wert der Tonika als der stärksten Stufe zu erobern. Wenn nun diesem Drange der Stufe nach dem stärksten Wert der Tonika innerhalb einer Diatonie, der die Stufe angehört, wirklich stattgegeben wird, so bezeichne ich den Prozess als Tonikalisierung und die Erscheinung selbst als Chromatik" (par. 136, p. 337).
24. "die Völker des Morgenlandes, genau wie unsere Vorfahren (–quod erat demonstrandum!–), den kindlichen Wahn eigener "Tonleitersysteme" haben, die sie auf dem Papier fixieren, indem sie lediglich der horizontalen Richtung der Melodien folgen. . . . Und so werden nun zahllose Systeme als solche geglaubt, wo ja ein "System" in des Wortes wirklicher Bedeutung schon einfach aus Mangel an bestimmter Differenziertheit des noch allzubescheidenen Tonmateriales von Haus aus unmöglich ist und die angeblichen Systeme daher (wieder genau so, wie in unserer ältesten Periode) höchstens nur einen mechanisch-deskriptiven Wert, und wie selbstverständlich obendrein nur für die horizontale Linie, beanspruchen dürfen." *Neue musikalischen Theorien und*

Phantasien, vol. 2, *Kontrapunkt,* Pt I, (Stuttgart & Berlin: J. G. Cotta, 1910), par. 5, p. 32.

25. "heute ist die Fähigkeit, im Dreiklang oder Vierklang vorzukommen, begriffliche Voraussetzung des Intervalles" (par. 55, pp. 155–156). It should be noted, however, that Schenker also defines intervals as distances between scale tones—see Table IV, par. 58, p. 157 and Table V, par. 60, p. 159.
26. For example, in Example 107 Schenker shows vertical and horizontal intervals with arrows.
27. Schenker anticipates this argument in his rejection of ninths as chords in the *Harmonielehre,* par. 107–114, pp. 248–77.
28. "Die Stufe lebt in unserer Empfindung nur als Dreiklang. D.h. sobald wir eine Stufe erwarten, erwarten wir sie zunächst nur als einen Dreiklang, nicht also auch etwa als einen Vierklang. In diesem Sinne ist die Sept durchaus nicht mit ein a priori-Element unserer Vorempfindung, ähnlich wie es die Quint und die Terz sind; sie ist vielmehr ein Ereignis a posteriori, das wir wohl am besten aus dem Zweck begreifen, der mit ihn verbunden wurde, d.h. wir verstehen sie hinter als Durchgang, oder als Chromatisierungsmittel." *Kontrapunkt I,* p. xxxiii. Previously in the *Harmonielehre* a *Stufe* could be expressed in the form of a seventh: "Sofern aber der Vierklang als Stufe in Frage kommt . . ." (par. 99, pp. 242–3).
29. Schenker discusses the problems of prolonging dissonances in *Der freie Satz,* par. 168–177. For further information, see Jonas, *Introduction,* pp. 78–79 and 100–103, William Clark, "Heinrich Schenker on the Nature of the Seventh Chord," *Journal of Music Theory* 26 (1982): 221–259 and Carl Schachter, "A Commentary on Schenker's *Free Composition,*" *Journal of Music Theory* 25 (1981): 136–137.
30. "Muss denn nicht ein System vielmehr die Kraft haben, alle auf dasselbe Bezug habenden Erscheinungen restlos zu erklären? Und wird man nicht immer dasjenige System das bessere nennen, das mehr Einzelfälle aufnimmt?" *Harmonielehre,* par. 30, p. 97.
31. "Scheinbar haben wir wohl, da die dorische, phrygische, lydische und mixolydische Reihe fallen gelassen wurden, die Zahl der möglichen Beziehungen des Tones reduziert und dadurch seinem Lebenstrieb und Egoismus geschadet, doch ist dies, wie gesagt, eben nur scheinbar. Der Ton liess sich doch nichts nehmen und er selbst scheint es gewesen zu sein, der die Künstler dazu drängte, auch dort, wo sie lange nicht mehr an mixolydische, dorische u.s.w. Beziehungen glaubten, diese ihm doch offen zu halten" (par. 40, p. 108).
32. "Wenn mit Dur und Moll allein (diese freilich richtig verstanden) sich sogenannte dorische und mixolydische Reize erreichen lassen, wozu dann die Last noch mehrerer und selbständiger Systeme?" (par. 30, p. 97).
33. "Setzen aber all diese Befreiungen vom angeblichen Sequenzencharakter nicht mit Notwendigkeit die Anerkennung auch aller übringen Stufen des Systems, ausser I, IV, und V, als ebenso selbständiger Stufen voraus?" *Kontrapunkt* I, par. 5, p. 41. For further discussions of Schenker's rejection of functional theory, see Oswald Jonas, *Introduction,* p. 127; Hellmuth Federhofer, "Die Funktionstheorie Hugo Riemanns und die Schichtenlehre Heinrich Schenkers," *Internationalen Musikwissenschaftlichen Kongress, Mozartjahr 1956* (Graz: Bohlhaus, 1958), pp. 183–90 and *Akkord und Stimmführung in den musik*

theoretischen Systemen von Hugo Riemann, Ernst Kurth und Heinrich Schenker (Vienna: Österreichischen Akademie der Wissenschaften, 1981), pp. 11–31; John Rothgeb's review of Federhofer's *Akkord und Stimmführung, Music Theory Spectrum* 4 (1982): 131–137; and Robert Wason, *Viennese Harmonic Theory,* pp. 134–5.

34. "Auch im chromatischen Zustand bewährt sich die Stufe als jene geistige und höhere Einheit, als welche wir sie schon im diatonischen Zustand (par. 78) definiert haben, d.h. die Verpflichtung, zur Diatonie zurückzukehren, bildet keine Beschränkung für den zeitlichen Ausbau der chromatischen Stufe; ihre Dauer bleibt ebenso wie die einer diatonische Stufe variabel und schwankt daher von einem Mindestmass bis zum denkbar grössten Ausmass" (par. 159, p. 388).
35. It will be clear from my discussion of Schenker's system that Proctor not only ignores the final stage of the derivation (Table 3), but he also disregards Schenker's powerful argument that scales are incapable of building systems. If the diatonic scales are unacceptable as primitives it follows that Proctor's chromatic scale must also be unacceptable on the same grounds.
36. "Eine wirklich gegründete Tonalität leitet auch das grösste Mass von Chromen sicher in den Grundklang zurück." *Der freie Satz,* p. 5. I have changed Oster's translation very slightly; see Heinrich Schenker, *Free Composition,* ed. and trans. Ernst Oster (N.Y.: 1979), p. xxiii.
37. "Ich kann daher weiters den Grundsatz aufstellen, dass man schon um der Diatonie selbst willen nicht genug chromatisch schreiben kann." *Harmonielehre,* par. 155, p. 380.
38. Schachter, "A Commentary on Schenker's *Free Composition,*" p. 126. In pages 124–125 Schachter discusses the conceptual basis of the *Ursatz* in more detail.
39. *Harmonielehre,* par. 171–182.
40. William Pastille describes the evolution of Schenker's view of organic coherence in his excellent article "Schenker, Anti-Organicist," *Nineteenth-Century Music* 8 (1984): 34.
41. This phrase recurs throughout Schenker's graphs in *Das Meisterwerk in der Musik* (Munich: Drei Masken Verlag, 1925–30). At the beginning of *Der freie Satz* Schenker claims that the concept of modulation is the "most baleful error in conventional theory." *Der freie Satz,* p. 26; Oster, p. 8. It is important to stress that the most significant harmonies in a composition need not be tonicized and that tonicized harmonies necessarily carry greater structural weight than those that are not tonicized. See Carl Schachter, "The First Movement of Brahms's Second Symphony: The First Theme and its Consequences," *Music Analysis* 2 (1983): 63.
42. See Rothgeb's editorial footnote in Jonas, *Introduction,* p. 29.
43. *Der freie Satz,* p. 17; Oster, p. 5.
44. *Der freie Satz,* p. 17; Oster, p. 5.
45. Adele T. Katz, *Challenge to Musical Tradition* (N.Y.: Knopf, 1945), pp. 10–12, Felix Salzer, *Structural Hearing* (N.Y.: Charles Boni, 1952), pp. 88–96 and Fig., 96–118.
46. *Der freie Satz,* par. 106.
47. For example, *Der freie Satz,* Fig 79/4. The neighbor-note motion $\hat{3}$-$\sharp\hat{4}$-$\hat{3}$

seems less likely because $\sharp\hat{4}$ will generally be supported by harmonies that inflect V.

48. Schenker explains this point in his essay "Beethoven: Sonata opus 57," in *Der Tonwille* 7 (1924), pp. 6–7.
49. Harald Krebs, "Third Relations and Dominant in Late 18th- and Early 19th-Century Music," (Ph.D. diss., Yale University, 1980), p. 22. See also Aldwell and Schachter's discussion of chromatic key areas in *Harmony and Voice Leading,* vol. 2, p. 239ff.
50. *Der freie Satz,* par. 55; Oster, pp. 29–30. See also Fig. 14–18.
51. *Der freie Satz,* par. 56; Oster, p. 30.
52. *Der freie Satz,* Fig. 40.6.
53. Schachter, "The First Movement of Brahms's Second Symphony," pp. 62–65. For further discussion of chromatic voice-exchanges see Jonas, *Introduction,* pp. 103–5 and Aldwell and Schachter, *Harmony and Voice Leading,* vol. 2, pp. 87–88, 90–91, 168, 172, 178.
54. See, for example, Schenker's discussion of the avoidance of direct chromatic steps, *Der freie Satz,* par. 249.
55. *Der freie Satz,* par. 186–88; Oster, pp. 68–69.
56. Krebs, "Third Relations," p. 22.
57. *Der freie Satz,* Fig. 132.8.
58. *Der freie Satz,* par. 246; Oster, pp. 89–90.
59. "Nuchtern aber künstlerisch gesprochen: es fehlt am Stufengang, sei es nun, dass er überhaupt ganz fehlt, oder dass die vorhandenen Stufen zu weit, zu überspannt sind, um noch mit Sicherheit die komplizierte Stimmführung zu tragen und zu decken." *Harmonielehre,* par. 89, pp. 220–221. See also Schenker's analysis of Reger's Piano Quintet, op. 64, par. 89, pp. 220–226. This section is missing in Jonas/Borgese.
60. *Harmonielehre,* par. 89. *Das Meisterwerk in der Musik* 2 (1926): 29–30, trans. by Sylvan Kalib, "Thirteen Essays," pp. 197–198. Elsewhere, Schenker criticizes Wagner for his treatment of themes and his contrapuntal technique; for example, see *Das Meisterwerk in der Musik* 2, trans. Kalib, pp. 242 and *Der freie Satz,* par. 161, p. 57.