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Tonal Unity and Quality of Motion:  
A Schenkerian Study

by

Kennett Lehmann

A dissertation submitted in partial fulfillment  
of the requirements for the degree of

Doctor of Philosophy

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Chairman of Supervisory Committee

Program Authorized  
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Abstract

Tonal Unity and Quality of Motion:  
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by Kennett Lehmann

Chairman of the Supervisory Committee  
Professor Jonathan Bernard  
School of Music

The subject of this study is quality of motion in tonal music as viewed from the structural perspective of Schenkerian tonal theory.

The Schenkerian concept of composing-out is identified as the primary basis of quality of motion. Thus a progression displays a sense of "purposeful" motion as it composes-out, or traverses, a harmonic interval. As the composing-out is furthered through the application of prolongation, other kinds of qualities arise in the progressions that are generated. Each of the generated progressions is heard not just as a motion traversing its own intervallic space, but also as a delay of, or detour from, the motion of the original progression. The generated progression may also be heard as directed toward or away

from the original progression: for example, an initial ascent is heard as directed toward the fundamental line, a circumstance which seems to energize the quality of the ascent in a special way. Such qualities as this that are born of a relation to higher structure are referred to in this study as inflections.

Specific Schenkerian prolongational techniques in both upper voice and bass are reviewed, including initial ascent, motion from the inner voice, reaching-over, complete and incomplete transference of the forms of the fundamental structure, motion to the applied divider, and auxiliary cadence. One chapter is given over in its entirety to a discussion of structural division and interruption. In all cases, the principle of tonal unity as embodied in composing-out is seen to lead to clear distinctions in quality of motion. Two negative examples are considered in the final chapter, where ambiguity of quality of motion is shown to be symptomatic of a breakdown of tonal unity.

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## CHAPTER I

### INTRODUCTION

Schenkerian analysis of a tonal piece of music reveals that voice leading operates at different structural levels. At each level there are characteristic voice-leading events in the form of linear progressions, arpeggiations, and neighboring-note motions that, in counterpoint with other such events, compose-out intervals and harmonies (express them horizontally). There are also prolongation relations between events from one level to the next. Prolongation is actually a generative relation that maps an event at a higher or earlier level (one nearer the background of the piece) into one or more events at a lower or later level (one nearer the foreground, or musical surface). The newly generated material is understood to elaborate the original, higher-level event, and to further the composing-out of its underlying interval or harmony. The prolongation also "expands content" in that the generated material usually consists of multiple event-offspring, and always contains more tones. The relation is recursive, linking the events at the background level of the piece to the events of the foreground (in their greater abundance) at the musical surface.

The goal of this dissertation is to investigate and classify the kinds of motion and motion relations that arise in the emergent structure. At issue is quality of motion, by which we mean the musical-phenomenal quality of the unfolding of the events. This includes the basic sense of purposeful motion that attaches to events as they compose-out their own intervallic spaces, as well as the more subtle play of pressure and counterpressure that characterizes events in their larger, multi-leveled contexts. According to the breadth and depth of these contexts, we should expect to find the quality of motion of events refracted, or inflected, in a great variety of ways.

This sense of inflection, as we shall call it, is the focus of our study. As a term, "inflection" is usually understood in connection with chromatic alteration, as one or more diatonic tones are temporarily raised or lowered. Chromatic alteration does indeed lead to an inflection of quality of motion, and therefore comes under consideration here. We are, however, construing the concept of inflection in a wider sense, as something integral to the larger composing-out process. Simply put, the sense of inflection evolves side by side with the expansion of musical content. This expansion begins with the transformation and prolongation of the voices at the background level of the piece and continues with the transformations and

prolongations of the subsequent levels.<sup>1</sup> As events come into being they are endowed with special qualities of inflection as they relate to other events in the emerging hierarchy of levels. That a pitch is chromatically raised or lowered is not particularly significant in itself. Rather, the alteration is significant as it evokes the place of the event within the hierarchy. It is this, the relation of event to hierarchy, that actually informs the event and accounts for the sense of inflection we attribute to it. Chromatic alteration plays a part, but it is not the only part.

What is central to our conception of inflection is not chromaticism but the unity that is at the heart of composing-out. Behind the inflection of every event stands a higher-level, unitary purposeful motion to which the inflection refers. The reference to higher structure follows upon the fact that all new content emerges from higher structure through transformation and prolongation. At the head of the transformation process, at the background level of the piece, stands the fundamental structure.

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<sup>1</sup>Transformation refers to the mapping of the voice-leading counterpoint as a whole, prolongation to the mapping of the events of the individual voices, into the counterpoints and events, respectively, of the subsequent (lower) levels.

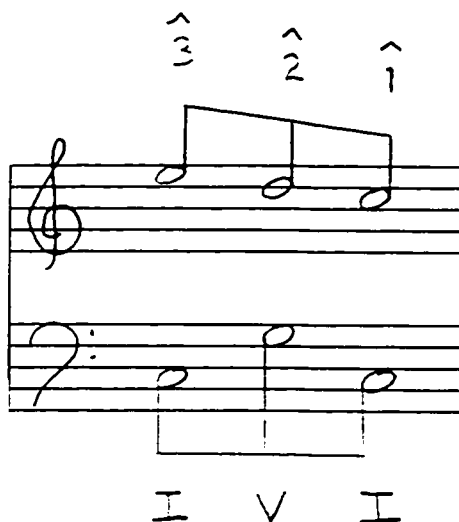


Fig. 1.1: The fundamental structure from  $\hat{3}$

Figure 1.1 depicts one of the possible forms of the fundamental structure.<sup>2</sup> This tonal archetype constitutes the most basic expression of composing-out in the piece, and hence the most basic expression of unity in the piece. Here, in abbreviated form, the "chord of nature" of the tonic harmony is delineated contrapuntally in the coordinated progressions of the fundamental line (upper

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<sup>2</sup>The descending upper voice of the fundamental structure (the fundamental line) may take one of three forms, starting from either the third, fifth, or eighth degree of the tonic scale, thus:  $\hat{3}$ -- $\hat{2}$ -- $\hat{1}$ ,  $\hat{5}$ -- $\hat{4}$ -- $\hat{3}$ -- $\hat{2}$ -- $\hat{1}$ , or  $\hat{8}$ -- $\hat{7}$ -- $\hat{6}$ -- $\hat{5}$ -- $\hat{4}$ -- $\hat{3}$ -- $\hat{2}$ -- $\hat{1}$ .

voice) and the bass arpeggiation (lower voice).<sup>3</sup> Because the fundamental structure is the starting point, the unity it represents is axiomatic for the whole compositional elaboration, from background to foreground. All inflection ultimately refers to it.

In the passage below, Heinrich Schenker describes how the basic "motion toward the goal" of the fundamental line naturally gives way to compositional elaboration. Here we can begin to appreciate, in the terms of Schenker's prose ("obstacles, reverses, disappointments"), something of the general, qualitative feel that attaches to what we are calling inflection.

In the art of music, as in life, motion toward the goal encounters obstacles, reverses, disappointments, and involves great distances, detours, expansions, interpolations, and, in short, retardations of all kinds. Therein lies the source of all artistic delaying, from which the creative mind can derive content that is ever new.

Expansion of content takes the form of "retardations" of the motion toward the goal, the result and expression of a compositional process of "artistic delaying." Schenker goes on to say, "thus we hear in the middleground and foreground

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<sup>3</sup>The bass arpeggiation itself delineates the tonic harmony thus: root--fifth--root. Note that the harmonic-cadential succession I--V--I represents a different aspect of the arpeggiation. Both aspects, melodic and harmonic, are to be understood at once.

an almost dramatic course of events."<sup>4</sup> The drama stems from the nature of the process. On the one hand, the introduction of new content seems to challenge the motion toward the goal in the guise of bringing on "obstacles, reverses, disappointments"; on the other hand, the resolution of events only affirms this motion, thus vividly illuminating the events themselves as "detours, expansions, interpolations."

In general, then, an inflected event is heard as a detour from, or delay of, higher motion. As we shall see further, there are many different ways to make the delay, each reflected in the quality of motion of the event. But in every case the following applies: the inflection cannot be perceived except that the higher motion being prolonged is perceived. In other words, there can be no sense of detour without a sense of what is being detoured from. The converse also applies: the higher motion cannot be perceived except that the inflection of the individual, subordinate event is perceived. The inflection, which is integral to the quality of motion of the event, both stems from and leads to our apprehension of the larger unity.

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<sup>4</sup>Heinrich Schenker, Free Composition, trans. and ed. Ernst Oster (New York: Longman, 1979), p. 5. All future references to this work will be abbreviated as F.C.

Let us now step back a little and consider more carefully some of the concepts and terms we have introduced, in particular the idea of quality of motion. What is it we are referring to when we use its name?

If we examine a Schenkerian voice-leading analysis, we notice that the most conspicuous variable is that of pitch. Events are characterized according to specific pitches (thus, for example, c--g--c). Of course, unless one has "perfect pitch," one may not hear in terms of specific pitch. Intervals, however, are just as explicitly represented, not to mention contour (ascending perfect fifth--descending perfect fifth). Do we hear the specific intervals, at least, if not the specific pitches?

As far as quality of motion is concerned, the question is off the mark; neither pitches nor intervals, as such, really come into focus. So, at least, goes the argument of the music theorist and philosopher Victor Zuckerkandl, whose insights concerning the nature of tonal motion may be profitably considered at this point. According to Zuckerkandl, tonal motion constitutes an entirely different sort of phenomenon, as distinct from pitch or interval succession as meaning is from the sounds of language. Zuckerkandl in fact rejects the very concepts of pitch and interval as musical categories. In place of pitch he points to what he calls the dynamic quality of tone. The difference is illustrated by comparing

a single tone in an isolated context with the same tone as it marks the completion of a half cadence in a melody:

We hear something more, something new, of which there was not even a trace in the single tone. A new quality has accrued to it--we must call it a dynamic quality. The single tone was simply a tone; the same tone at the end of the phrase in our melody is a tone that has become active, a tone in a definite state of activity. We hear this state, we hear it clearly and directly, in the tone itself. What we hear in this way we can best designate as a state of disturbed equilibrium, as a tension, a tendency, almost a will. The tone seems to point beyond itself toward release from tension and restoration of the equilibrium.<sup>5</sup>

The dynamic quality, according to Zuckerkandl, is the essential musical quality of the tone. When we hear a melody, what we are really hearing is not a succession of differences in pitch but a succession of differences in dynamic quality. Zuckerkandl asks:

Is what we hear in e'--a' really only the succession of two tones of different pitch? . . . What occurs is always and only the tone e with a particular dynamic quality, the tone a with a different dynamic quality. The dynamic quality, not the pitch, makes the tone a musical fact. Hence, whenever we have a succession of two tones, an interval, as a piece of tonal motion--as an element, that is, in a musical context--we must necessarily hear something in it besides different pitches, namely, different dynamic qualities. That we do so in fact, any child who has received elementary musical instruction can confirm for us. One of the first things he is taught is to recognize intervals by ear. He does it not by estimating pitch distances, but by identifying dynamic qualities (in the guise of tone syllables, do re mi fa sol . . .). A pupil who, asked what

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<sup>5</sup>Victor Zuckerkandl, Sound and Symbol: Music and the External World, trans. Willard R. Trask, Bollingen Series XLIV, Vol. I (New York: Pantheon Books, 1956), p. 19.

e'--a' is, correctly answers "A fourth" has not estimated a pitch distance correctly; he has heard something else, namely,  $\hat{5}$ -- $\hat{8}$ , sol--do! And he knows, he has learned, that sol--do is a fourth. This, and none other, is the way in which intervals are heard. The interval actually heard does not extend between two different pitches; it extends between two different dynamic qualities.<sup>6</sup>

The experience of tonal motion, according to Zuckerkandl, is rooted in the perception of change of dynamic quality over time. The dynamic change from one tone to another constitutes a "step" in the course of motion. The specific quality of motion of the step makes itself felt in terms of what Zuckerkandl calls a dynamic field, which he invokes in place of the conventional idea of a space defined by pitch, or "the totality of all possible tones arranged according to high and low." Zuckerkandl explains, "intervals are steps [of motion], not because tones are variously high but because they are variously directed." He goes on to describe an ascending motion in the major scale: "The beginning  $\hat{1}$ -- $\hat{2}$  runs counter to the will of the tones; it is a step against the forces in operation, 'away from . . . .' The close  $\hat{7}$ -- $\hat{8}$  does what the tones want to do; it is a step with the forces in operation, 'toward,' a step that leads to the goal." Figure 1.2 is a diagram (adapted from Zuckerkandl, p. 98) of the dynamic situation.

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<sup>6</sup>Ibid., pp. 91-92.

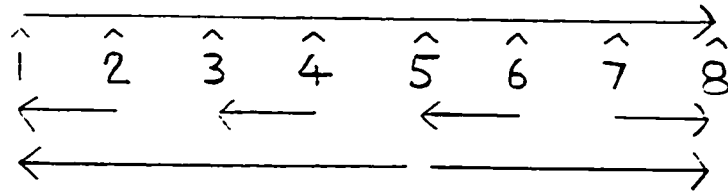


Fig. 1.2: The dynamic field

The top arrow represents the ascending scalar motion, the bottom arrows the disposition of the tonal forces in terms of which the motion, "away from" or "toward," is reckoned. Note that the shorter arrows point to members of the tonic triad. A stronger dynamic points in the direction of the tonic itself, both  $\hat{1}$  and  $\hat{8}$ , from scale degree  $\hat{5}$  (thus  $\hat{5}$  is always poised to move "toward" the tonic, descending or ascending). The dynamic of  $\hat{6}$  points in one direction or the other depending on the particular circumstances.

Zuckermandl points out that the arrival of the ascending scalar motion at the tonic  $\hat{8}$  represents a return to the

dynamic of  $\hat{1}$ , thus bringing about an "arrival at the point of departure as goal."<sup>7</sup>

If we were to look upon this example as a case of composing-out, we might interpret it as an octave progression filling in the intervals of the tonic harmony,  $\hat{1}--\hat{3}--\hat{5}--\hat{8}$ . Zuckerkandl's dynamic field, however, is not a function of the specific form taken by a composing-out. Rather, it reflects the natural or given tendencies among the tones of the diatonic collection, without respect to contingent structure. It is, in other words, precompositional. Composing-out is not precompositional (by definition), but a matter of artistic labor and design. As we shall see, it does not simply operate within the pre-set dynamic field; it creates its own dynamic fields. Yet the natural motion qualities away from and toward that Zuckerkandl has identified still obtain (especially in the harmonic progressions of the bass, which will be considered in chapter 3) even if they must ultimately defer to the qualities of composing-out. Emphatically, the question is not that of mere coming or going, but of moving contrary to or in accord with a directional force (as in the departure from  $\hat{1}$ , on the one hand, and the approach toward  $\hat{8}$ , on the other, in the example above).<sup>8</sup>

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<sup>7</sup>Ibid., pp. 95-98.

<sup>8</sup>Zuckerkandl, for his part, regards the dynamic field in the scale as adequate only for folk songs, not for art music. In art music, "we find that stronger tones have

Pitch and interval, then, have been left behind as such. They appear not as primary musical attributes, but as part of the technical substrate. The real action is the play of dynamic-driven motion. Let us affirm that this same principle applies to the Schenkerian tonal perspective, including the specification of structure in a Schenkerian graph analysis. Not pitch and interval, but purposeful motion of composing-out is the essential Schenkerian datum. This is what one seeks to read in a graph. It is not enough merely to note, for example, the occurrence of a stepwise descent through a perfect fifth to the tonic. Rather, a proper reading requires re-creation of the original analysis from engagement with the music, which must hum around, in one form or another, in the reader's head. Only then does quality of motion materialize, and with it the true meaning of the symbolic depiction. Thus the descending fifth-progression,  $\hat{5}--\hat{4}--\hat{3}--\hat{2}--\hat{1}$ , is heard not as an ordering of

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subordinated weaker tones to themselves. The motion does not proceed, as it were, in a straight line but as if in flourishes and circuits, with the weaker tones playing around and connecting the stronger tones. Hearing such melodies is not just a simple hearing of motion; it is a stratified hearing, which groups and classifies: the ear understands as it follows; distinguishes between the principal and the subordinate elements of the motion" (ibid., p. 99). Zuckerkandl does not put this specifically in terms of composing-out and transformations between structural levels--his book is not identifiably Schenkerian or even very technical, but philosophical. He does discuss Schenkerian theory in the successor volume to this work, Man the Musician, trans. Norbert Guterman, Bollingen Series XLIV, Vol. II (Princeton: Princeton University Press, 1973), pp. 169ff.

pitches or intervals over time, but as a full-blooded purposeful motion. Note that, as a matter of composing-out, the articulation of the underlying structural interval (the perfect fifth, in this case) is the "motivation" for the motion, imparting to it its characteristic impetus and purposefulness. In effect, the tonal space outlined by the underlying interval is furnished with its own special dynamic field, just because of the contingent circumstance of the composing-out. In all cases, this field is oriented in the direction of motion: linear progressions, arpeggiations, and the like always express a quality of purposeful motion toward the goal-tone, whether descending or ascending.

The task of hearing quality of motion is most challenging when multiple levels of structure are involved. It is not just that there are many levels of voice leading to consider, but also that one must get from one level to the next, i.e., consider the relations between levels. These are the prolongations. In keeping with the idea of expansion of content and composing-out, prolongation is generative in concept. It maps an event from an earlier level into events at later levels (thus do the later events and levels conceptually arise). The prolongation of an event normally comes about through the elaboration of one or more tones. A tone is elaborated or spun out to form new material, thus bringing on a further, more profuse stream of

motion. The treatment of the remaining tones of the event may or may not involve additional elaboration, as the prolongation is completed and the new level of motion filled out.

Let us consider an example. In fig. 1.3 we see the prolongation of a descending third-progression.



Fig. 1.3: Prolongation of a third-progression

The head-tone of this progression is elaborated or spun out to form a subsidiary descending third-progression; the connecting, middle tone is elaborated to form another subsidiary descending third-progression; and the concluding tone, the goal-tone, is transferred to the new level of motion unchanged. The voice-leading graph depicts all this most succinctly, that is, the events, their pitches, and their points of connection. As far as quality of motion is concerned, however, this is as yet an uninterpreted graph.

The relevant relations must be heard, the music must hum around in our heads.

When this happens, we hear the effect of the prolongation on the quality of motion of the events. For each level, the effect is different. The motion of the higher-level event is heard to be beset by two detours that delay (and thus "lengthen") the steps of its progress. The motions of the lower-level events are heard to make the detours and, at the same time, to embody qualities of away from--to use Zuckerkandl's term in a new context. Each motion constitutes a projection away from the principal, more purposeful course of motion toward the goal. Thus each "runs counter to the will of the tones; it is a step against the forces in operation." It happens that each motion is also a motion of composing-out--it traverses its own third-space. But the relation to higher structure must prevail. Even as each motion drives home toward its own goal, it is constrained and ultimately "reined in" by the superior dynamic pull exercised by the higher-level event. The music must continue down some other, more definitive path, we feel.

For the lower-level event, then, the prolongation effects an overall modulation of forward thrust. This is our inflection. The concept applies to the lower-level event in recognition of the special quality (in this case, the quality of being "reined in") that attaches to it as it

delays and resists the course of higher motion. Of course, the very idea of delaying and resisting higher motion implicates the higher-level event. This reminds us that the basis of the inflection is the relation between the events. We are, however, looking at the relation from the point of view of the lower-level event, which, as the disrupter of more purposeful motion, is the "transgressor" in the relation.

As the larger context is taken into account, more relations must come to bear on the sense of inflection. The motion of the higher-level event in fig. 1.3, for example, might be part of the prolongation of a still higher-level event (not shown in fig. 1.3), and thus might embody a reined-in type of inflection itself. The farther subordinate events would then be heard as reined-in motions within a reined-in motion, detours within a detour.<sup>9</sup> Ultimately, the sense of inflection of each event must take into account all the prolongation relations in the line of descent of the event.

Since prolongation is the main spring of inflection, our study will be chiefly concerned with the relation of the inflected event to higher structure. It

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<sup>9</sup>See F.C., fig. 84, a graph of the Nocturne in Eb, Op. 9, No. 2, by Chopin, from which our fig. 1.3 is excerpted. Note that the bass against which the lines are counterpointed is not shown in our excerpt.

should be pointed out, however, that everything about the event, including its rhythm and its subsequent prolongation (if it is not a foreground event) is integral to the inflection. That is, everything about the event exists for the sake of the relation to higher structure. Nothing about it exists for its own sake. This circumstance reflects the fact that the principle of unity (the unity of purposeful motion) subsumes every aspect of the music.

To take the case of rhythm: Every motion of composing-out displays some kind of rhythmic patterning, or "flow with pulsations," to use Carl Schachter's words.<sup>10</sup> But what the motion does above all is to uphold an unremitting purposefulness over its entire course. The motion is a unitary phenomenon. Its status as a diversified or rhythmically patterned phenomenon is ancillary. That is, the rhythm is there to serve the composing-out, to give the unitary quality a more particular and characteristic feel.

As the unitary, purposeful motion undergoes prolongation, relations of inflection arise to mark the newborn events. The inflection of the newborn event explains the event, answering that most vital of questions, "what is this event doing here?". The answer points to the

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<sup>10</sup>Carl Schachter, "Rhythm and Linear Analysis: A Preliminary Study," The Music Forum, Vol. IV (New York: Columbia University Press, 1976), pp. 281-334. According to Schachter, even the progressions of the fundamental structure display a kind of rhythm, identified by Schachter as tonal rhythm (in this article Schachter identifies and distinguishes tonal rhythm and durational rhythm).

original motion, to its original, unitary purposefulness. The rhythm of the event is there to serve this pointing function, to give the inflection, that is, its more particular and characteristic feel.

What else is integral to the inflection? Let us turn again to fig. 1.3 and consider now the relation of the two subordinate events to each other. Neither one is a prolongation of the other, but they still have a collateral relation in the prolongational hierarchy. Specifically, the one event participates with the other in the further composing-out, that is, in the prolongation of the higher-level event. This circumstance sets the two events in a special hearing context. By their common task, the effect of the second event is heard to work off the effect of the first. In addition (if only with increasing familiarity with the piece), the effect of the first event is heard to work off the anticipated effect of the second. This is an aspect of inflection that obtains in principle not only between collateral events that are immediately adjacent, but also between those that are not, at the same or at different levels. The linchpin of the relation is the place of the higher-level event (the common ancestor) as conduit.

Can we really hear the pull of events wholly in advance of their sounding? If for no other reason than familiarity with a piece, the answer should be yes. There may, however, be an organic principle involved as well.

According to Schenker, the synthesis of a composition depends to a considerable extent on repetition, both overt and concealed (that is, repetition in a non-obvious, elaborated, expanded, condensed, or otherwise altered form, at the same or a different level, in the same or a different voice). The importance Schenker attaches to repetition does not mean, however, that it constitutes a separate doctrine from composing-out. For as Schenker remarks apropos of one series of foreground repetitions, "one cannot repeat too often that the way to a true understanding of this type of repetition leads through the middleground and background."<sup>11</sup> Note that in fig. 1.3 both lower-level events are repetitions of the form of the higher-level event they help to prolong. Such repetition both within and between levels tightens the sense of organic connection. Yet the essential structural relation remains the prolongation itself.

To the extent that we anticipate repetition in the service of composing-out, we should be able to hear the pull of future events as parallelisms-to-be. This is perhaps more easily done when repetition is overt, as in a sequence, for example, or a da capo aria. In any case, we can entertain a more or less portentous feel for the foreground to come as it relates to that which we have already heard.

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<sup>11</sup>F.C., §254. The reference is to fig. 119, ex. 9a-e, illustrating repetition in the Overture from Mendelssohn's Midsummer Night's Dream.

This would seem to apply not only to repetition, but to lack of repetition as well, i.e., contrast (we can, for instance, anticipate not only an eventual return to the material of the A section, but also the intercession of an upcoming, contrasting B section, in the course of an ABA). Naturally, familiarity with the piece (as well as historical-stylistic conventions) can only aid this kind of prospective hearing.

Quality of motion is the domain wherein voice-leading events and their relations find their proper expression. By their qualities of motion we shall know them. We know the individual event by its purposeful motion toward the goal. We hear the quality of purposefulness in the motion itself as it transpires. By this we entertain a feel for the whole: at any given moment we have a sense of where the motion is headed, as well as where it has come from. Our feel for the whole may not be perfect; it may be subject to progressive modification. Yet to the extent that we hear purposefulness in a motion, that present quality must implicate the event in its entirety.

As prolongation comes to bear, new events arise whose relations to the original event are indicated by their inflections. The inflections implicate the original event by their own qualities of motion (if an event is heard as a detour, that which it is a detour from must also be heard or sensed at the same time). To be sure, if we examine fig.

1.3 we note that only one tone of the higher-level event is elaborated or spun out to form each subsidiary event. The subsidiary motion is not, however, a motion away from that one tone; it is a motion away from the principal course of motion that is the entire higher-level event. Indeed, it is only as a part of the principal course of motion that the individual tone comes by its significance as something structurally prior.

The fundamental structure itself is sensed in the inflection of every event of the piece, and in every case the perceptual link is a direct relation (not a collateral one) in the prolongational hierarchy. The fundamental structure thus appears as an ultimate, ever-present guiding force, implicated in its entirety--past, present, and future--by its effect on the present moment. In Schenker's words:

The fundamental structure is always creating, always present and active; this "continual present" in the vision of the composer is certainly not a greater wonder than that which issues from the true experiencing of a moment of time: in this most brief space we feel something very like the composer's perception, that is, the meeting of past, present, and future.

This breadth of vision in the "continual present" takes in events at all levels through the "constant awareness" of the transformation levels and the relations between them:

The secret of balance in music ultimately lies in the constant awareness of the transformation levels and the motion from foreground to background or the reverse. This awareness

accompanies the composer constantly; without it, every foreground would degenerate into chaos.<sup>12</sup>

That the breadth of vision should obtain moment by moment (i.e., "constantly") means that the hearing is immediate, rather than retrospective. To say this, however, is not to deny the place of retrospective hearing. Retrospective hearing certainly plays a role. The point is, however, that we do not have to wait for the consummation of events before we can begin to perceive their significance. We can hear long-range effects at the very start of a piece. In so doing we obtain a broad view at once. Even if it is subject to future modification, the view is essentially sustainable. Indeed, the maintenance of a more or less consistent view (not to be confused with a static or "synchronic" view) over the course of our listening to a piece may be regarded as the fruit of our accumulating experience with the piece, through listening, performance, and study.

Ultimately, in the web of connections, the motion quality of each event must implicate that of every other event. Each event implicates the whole. Schenker puts it this way:

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<sup>12</sup>F.C., §29. Schenker is speaking from the composer's point of view. We are taking the position that this vision represents the ideal toward which performers and listeners can also strive. For the record: "There is no doubt that the great composers--in contrast to performers and listeners--experienced even their most extended works not as a sum total of measures or pages, but as entities which could be heard and perceived as a whole," p. xxiii.

The total work lives and moves in each diminution, even those of the lowest order. Not the smallest part exists without the whole. The establishment of an inner relationship to the whole is the principal problem not only in the creation of diminution out of background and middleground, but also even in its re-creation, where constant reference to middleground and background must be made. The atmosphere of diminution is the whole.<sup>13</sup>

The problem of the establishment of an "inner relationship" to the whole is, as we interpret it, the problem of the attribution of the motion qualities that derive from the whole, in terms of which each diminution or event is fully constituted. As Schenker indicates, this is a problem in composition and also in analysis and hearing.

What we are hearing, finally, is the motion of the composing-out of the tonic harmony and the march to the goal at the end of the piece. This is a unitary process, though a highly complex one, like that of a single bodily gesture that is the product of the cooperation of many different muscular contractions. We strain to apprehend the entire motion, in all its complexity, even in the different "flexings" of the individual events.

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<sup>13</sup>F.C., §253. Ernst Oster explains in a footnote, p. 93, "the term diminution as used by Schenker means embellishment in a general, broad sense. It has nothing to do with diminution meaning 'repetition in smaller note values' (i.e., the opposite of augmentation)." Schenker refers in particular to melody and motivic material of the foreground as diminution (different motives are different diminutions).

Our perspective naturally changes over time. The quality of motion or "dynamic state" of the present moment must change as the piece unfolds, as future events become present and present events become past (and also, to a greater or lesser extent, as new relations come to light and old interpretations are revised). Yet all the while we appropriate the time of the whole--past, present, and future--to the present moment. This is because our understanding of the present, its particular quality of motion and inflection, is shaped by the push and pull of events variously located in, and spanning, the past, present, and future.

Having been brought to the brink of the whole, we must now unfortunately beat a hasty retreat. For while quality of motion must ultimately take into account the whole work, our technical discussion, if it is to be useful, must deal with relatively limited contexts. In the next chapter we examine inflection in the upper voice. Although the contexts are limited, the essential significance of inflection should always be apparent: the pointing beyond the event itself in the direction of some greater unity.

## CHAPTER II

### INFLECTION IN THE UPPER VOICE

In this chapter we investigate the inflection of motion in structural situations of the upper voice. The more important prolongational techniques will be sifted first to point up general qualities of inflection that they share; and second, to show that each technique has its own characteristic quality of inflection (or set of qualities) that distinguishes it as a meaningful structural category.

Let us begin by positing two general types of inflection, one or the other of which is basic to most, though not all, situations. In fig. 1.3 a type of inflection was depicted wherein one motion was seen to delay the progress of another, higher-level motion and in the process be constrained or reined in by it. This type of inflection is a function of the projection of the subordinate event away from the higher-level event as the two are related prolongationally. Let us designate this type of inflection back-inflection, in recognition of the direction of the constraining force, away from which the lower-level event is moving.

The converse of this type of inflection is to be seen in motion that proceeds not away from but toward. A

motion that leads into a structurally prior event will be inflected with a special kind of forward impetus as it homes in on the more potent line of motion. This inflection is over and above the normative quality of purposeful motion that characterizes the composing-out of an interval. That motion aims merely at its own completion. The inflection looks beyond the goal of the motion's own completion to the goal of joining the structurally prior motion. Let us designate this type of inflection forward-inflection.

These two basic types of inflection are illustrated in fig. 2.1, a graph of the opening measures of the first movement of Beethoven's Sonata for Piano, Op. 2, No. 1. As the analysis shows, the music opens with an ascending arpeggiation in the upper voice which culminates in the structural tone  $ab''$ . This structural tone begins the initial ascent, a third-progression (with neighboring note N) leading to the head-tone  $\hat{5}$  of the fundamental line. Because the initial ascent is a higher-level event, the motion of the opening arpeggiation leading into it is forward-inflected. It is as though getting to the plane of that more purposeful motion is the arpeggiation's raison d'être, propelling it forward.

Just as the arpeggiation reaches  $ab''$ , however, there comes a stepwise descent to  $f''$ . This motion is back-inflected, directed away from the structural line (the initial ascent). With this answer to the arpeggiation, a

①    ②    ③    ④    ⑤    ⑥    ⑦    ⑧

I (V)

**Allegro.**

Fig. 2.1: Graph of Beethoven, Op. 2, No. 1, I, mm. 1-8

pattern is established of ascending--descending, forward--back-inflected motion that serves to mark the subsequent progress of the initial ascent. There follows accordingly a second forward-inflected arpeggiation to the neighboring note  $bb''$  in m. 4 with descending, back-inflected answer to  $g''$ . The third time around the arpeggiation is foreshortened to reestablish  $ab''$  in m. 5, whereby the pace of the inflection pattern is accelerated as the initial ascent is driven home through  $bb''$  to  $c'''$ . At the tone  $c'''$ , the head-tone  $\hat{5}$  of the fundamental line is reached. This arrival is a momentous event, in pursuance of which the initial ascent derives its own special kind of forward-inflection. As a matter of course, this forward-inflection affects all subordinate motion within the initial ascent, augmenting the local inflection there. Thus the lead-up arpeggiations feel the draw not only of the initial ascent but of the fundamental line as well. Their descending answers feel the draw too: each back-inflection, heard in the context of the larger forward-inflection, is imbued with added tension and suspense. Each takes on the character of a pause for breath in a pressing task.

No sooner is the head-tone of the fundamental line reached than the melody collapses precipitously in a descending sixth-progression to  $e''$ . This falling away from the goal reached is a back-inflection, and it seems to act as a kind of recoil to the forward-inflection of the initial

ascent as a whole. It is as though the forward--back pattern elaborated earlier in the small were now replicated in the large.

We see in this example that, as far as the upper melody is concerned, the forward-inflected lines are those that ascend, the back-inflected those that descend. This is the normative condition in the upper melody--the normative "polarity," we can call it. It is explained by the circumstance that the outer voices, the bass and soprano, are structurally most significant. Whatever the structural level, they will form a basic, two-voiced contrapuntal framework (cf. fig. 1.1). Linear progressions and arpeggiations that arise as the result of transformation attach themselves to one or the other outer voice, each as a subordinate motion to or from some conceptual inner-voice tone. (The newly-generated motion, for its part, may then constitute a "new" outer voice at the new level of structure.) The crucial relation, however, is always with the structural outer voice (i.e., the outer voice of the previous level). As the subordinate motion is directed either toward or away from this structural voice, so will it be forward- or back-inflected. It follows, then, that a forward-inflected line directed toward the structural soprano will normally ascend to that outer voice, just as a back-inflected line will normally descend from it.

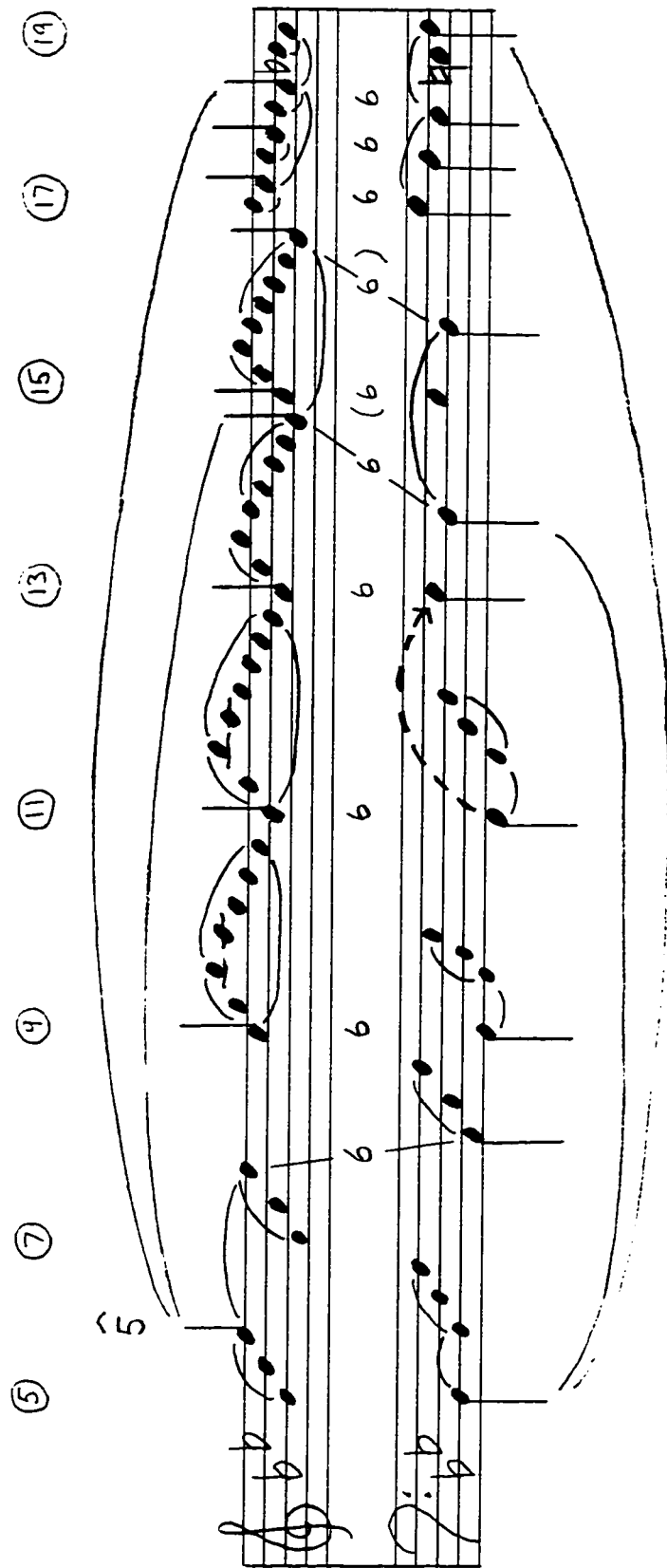
Sometimes, however, the melody extends above the structural soprano. When this happens, the course of the soprano is artfully disguised, as well as the relation of the melody (or diminution) to it.

The various concealing devices of foreground diminution have a particular musical attractiveness. We delight in them, and diminution has its greatest triumph in the fact that it can make us forget the bare outlines of a work. . . . Particularly the high and low registers, which contribute to the expressive and ecstatic quality of instruments--and so are indispensable--often disguise the actual path of the diminution [i.e., where it is headed in relation to the structural line].<sup>1</sup>

The kind of melody that has this special effect Schenker designates according to its direction, thus: descending or ascending diminution. From the point of view of inflection, both types participate in a reversal of our normative polarity: forward-inflection now descends, back-inflection ascends. This reversal is evident in the next example, the opening of the exposition of the first movement of Schubert's Fifth Symphony (see fig. 2.2), which features the same thematic material inflected first one way then the other as it plays either side of the structural soprano. The material in question is the ascending head-motive which in mm. 5-6 forms an arpeggiation up to the structural tone f''. Here the motive is forward-inflected. After the

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<sup>1</sup>F.C., §§ 258-9. The comment in brackets is the present author's.



III<sup>6</sup> V

Fig. 2.2: Graph of Schubert, Symphony No. 5, I, mm. 5-19

(Sept. 1818.)

**Allegro.**

The musical score is arranged in a system of ten staves. The instruments are listed on the left: Flauto, Oboi, Fagotti, Corni in B, Violino I, Violino II, Viola, and Violoncello e Basso. The tempo is marked 'Allegro.' and the date '(Sept. 1818.)' is in the top right. The Flauto part has a melodic line with a slur and a dynamic marking of *pp*. The Oboi part has a similar melodic line with a slur and a dynamic marking of *pp*. The Fagotti part has a melodic line with a slur and a dynamic marking of *pp*. The Corni in B part has a melodic line with a slur and a dynamic marking of *pp*. The Violino I part has a melodic line with a slur and a dynamic marking of *pp*. The Violino II part has a melodic line with a slur and a dynamic marking of *pp*. The Viola part has a melodic line with a slur and a dynamic marking of *pp*. The Violoncello e Basso part has a melodic line with a slur and a dynamic marking of *pp*. The score is in 3/4 time and features various musical notations including notes, rests, slurs, and dynamic markings.

Fig. 2.2 (continued)

A musical score for piano, consisting of ten staves. The score is written in a key signature of two flats (B-flat and E-flat) and a common time signature (C). The notation includes various musical symbols such as notes, rests, beams, and dynamic markings. The first staff begins with a treble clef and a key signature of two flats. The second staff has a treble clef and a key signature of two flats. The third staff has a bass clef and a key signature of two flats. The fourth staff has a treble clef and a key signature of two flats. The fifth staff has a treble clef and a key signature of two flats. The sixth staff has a treble clef and a key signature of two flats. The seventh staff has a treble clef and a key signature of two flats. The eighth staff has a treble clef and a key signature of two flats. The ninth staff has a treble clef and a key signature of two flats. The tenth staff has a bass clef and a key signature of two flats. The score includes dynamic markings such as *p* (piano) and *f* (forte). There are also some markings that look like *z.* and *d.* with arrows. The music is a complex piece with many notes and rests.

Fig. 2.2 (continued)

modified repetition in mm. 7-8, the arpeggiation shoots up to  $bb''$  in mm. 9-10. At this point the structural soprano has moved from  $f''$  down to  $eb''$ , and the foreground melody has crossed over it. Now the motive is back-inflected, in that the structural tone belongs to the point of departure rather than the goal of the motion. Superficially the same, the repetition of the motive has taken on a very different, not to say contrary, quality of motion. No longer representing convergence with the main line of structure, it takes on here the character of a projecting sally into the upper air, as it were. It is the office of its descending answer (the fifth-progression  $bb'' --eb''$ ) to bring the melody down to earth (thus completing an exercise in boundary play, or departure and return to the structural line). The melody continues to unfold in this way, above the structural soprano and with polarity of inflection reversed, until the conclusion of the controlling fifth-progression in m. 16. At this point a higher-order voice asserts itself in the definitive descent to  $c''$ .

Because it unfolds above the structural soprano, this kind of "descant" melodicizing exceeds the bounds of the basic, two-voiced contrapuntal framework defined by soprano and bass. It is therefore marked by a sense of "apartness," which we can describe in the present instance as kind of airiness or etherealness. An index of this "apartness," a signal that the boundary soprano has been

overreached, is the reverse polarity of the inflection. Thus the ascending back-inflection betokens not merely a reined-in motion away from the structural line, but also a motion from within to without; the descending forward-inflection not merely a homing-in motion toward the structural line, but also a motion from without back to within.

While it is to the lower-level (subordinate) event that we are applying the term "forward-" or "back-inflected," let us reiterate that the inflection is based on the prolongational relation between lower and higher. This means that the effect of the relation on the higher-level event must be heard to be present in the lower (and vice versa). Thus the most general characteristic of inflection, forward- or back-, is that of delay: the progress of the higher-level event is delayed by the generation of new content. That sense of delay--of tension--must be heard all the while in the new content, as something present in the subordinate motion itself. Looking once more at the initial ascent in the Beethoven example, fig. 2.1, we note that even as we feel the draw of the fundamental line, we have to wait for it to begin. As Schenker says, "the initial ascent represents a delaying at the very outset of the piece."<sup>2</sup> The sense of delay is integral to the forward-inflection. Indeed, only as we feel the delay do we so keenly look

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<sup>2</sup>F.C., §124.

forward to the arrival at  $\hat{5}$ . Without the delay there is no inflection at all.

Because it precedes the institution of the fundamental line, the initial ascent embodies a special kind of delay found nowhere else. It is always forward-inflected. As a rule, the inflection will implicate a rhythmic displacement, too. By this we are obliged not only to wait for the onset of the fundamental line, but also to wait for it beyond the point at which it ought to have occurred already. This point is always the definitive or structural beginning of the piece (following upon any ancillary introduction or upbeat). In the Beethoven example, the structural beginning occurs at m. 1. This is where the head-tone  $\hat{5}$  of the fundamental line, the tone  $c'''$ , "ought" to occur, or, more precisely, where it does occur at a higher level of structure. This is shown in the expanded graph of the Beethoven example in fig. 2.3. The placement of  $\hat{5}$  at m. 1 at level a is in keeping with the Schenkerian principle of outer-voice simultaneity, according to which essential contrapuntal relations between soprano and bass appear as verticalities at higher levels. The essential relation is between the soprano  $\hat{5}$  and the bass I. Looking back from level c to level a we see that the adjustment or shifting back of the soprano to vertical alignment with the bass represents a normalization of the soprano's rhythm.

a)

b)

c)

Fig. 2.3: Expanded graph of Beethoven, Op. 2,  
No. 1, I, mm. 1-8

Note that the bass itself has been normalized (shifted back) to m. 1 at level b so that it conforms to the onset of the two-measure hypermeter beginning there. Looking the other way, from level a to level c, we see that the transformation into the foreground brings on the displacement of these normative rhythmic relations.<sup>3</sup>

Let it not be supposed, however, that the initial ascent is thereby deprived of its forward-inflection, that is, just because the head-tone of the fundamental line is "really" already in place at the higher level. Rather, the effect is analogous to that of a suspension: we still feel the draw of the resolution, even though it comes late, off the beat. The displacement, in fact, heightens the tension.

In its most general guise, an inflection is the action of one motion serving to delay another; more particularly, we say that a motion is forward-inflected when it is directed toward the motion it delays, back-inflected when directed away from it. As we have seen in the case of

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<sup>3</sup>The principle of outer-voice simultaneity is promulgated in William Rothstein's "Rhythm and the Theory of Structural Levels" (Ph.D. Dissertation, Yale University, 1981), from which the term "rhythmic normalization" derives. See chapter 5 of that work, and also Rothstein's article "Rhythmic Displacement and Rhythmic Normalization" in Trends in Schenkerian Research, ed. Allen Cadwallader (New York: Schirmer Books, 1990).

Note that in the Beethoven example there are two foreground displacements in the initial ascent at level c that are normalized at level b. The neighboring note bb'' is normalized to vertical alignment with the e♯ in the bass, and the preceding ab'' is normalized along with the f to m. 1.

the initial ascent, the inflection may carry the burden of a displacement, just as it may also express a particular kind of "taking-hold," full of portent, just because the motion itself is wholly introductory to the fundamental line. There is, it is clear, a characteristic particularity to the inflection when we get down to cases. Let us affirm the following: for any given prolongational technique (such as the initial ascent, for example) there is a more or less specialized form of inflection that is identifiable with it. We emphasize once more that our attribution of inflection to a motion or a class of motion is always a projection onto it of the greater relation the motion participates in.

If the initial ascent has special significance as an introduction to the first tone of the fundamental line, what about an ascent to a subsequent tone of the fundamental line, or, indeed, to a subsequent tone of any structural upper voice, fundamental line or not, once that upper voice has been established? Such an ascent is designated motion from the inner voice by Ernst Oster, as translation of Schenker's term Untergreifen. Like the initial ascent, this ascent is forward-inflected. What it lacks, however, is the sense of portent associated with the initial ascent--the structural upper voice is already in place. Yet it is just its relation to the already-in-place upper voice that gives motion from the inner voice its special character:

Motion from the inner voice (Untergreifen) means a reaching-down to an inner voice



maintained."<sup>5</sup> It is as though the motion bubbled up from below to buoy up the b', which otherwise might have been in danger of sinking to the a' in m. 3 as a mere neighboring note to it. In order to avoid such an effect, the motion from the inner voice must be brought out, which is to say its forward-inflection must be brought out, so that the a' is understood as an accented passing tone. The difference in overall effect is considerable.

The distinguishing characteristic of motion from the inner voice is the idea of the "reaching-down." The reaching-down is not itself a motion event or diminution, but the relation across the space or discontinuity that separates the dangling upper-voice tone from the newly activated inner-voice tone that kicks off the actual motion. In the present instance, this space is between the b' and the g' at the end of m. 2. The reaching-down, b'--g', contributes to the quality of the forward-inflection of the actual motion, g'--a'--b'. The reaching-down seems like a real reach for support; the motion from the inner voice seems to spring forth in response, charged, as it is, with just the kind of forward-inflected propulsion that may serve to "buoy up" the upper-voice tone. This is, of course, only one particular instance; but any motion from the inner voice must be heard in light of the reaching-down as well as the coming-up.

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<sup>5</sup>F.C., §233.

With reaching-over (Übergreifen), we encounter an operation that, at least from the point of view of contour, is the converse of the situation in motion from the inner voice. The "reaching" in reaching-over proceeds up to a descending event, rather than down to an ascending one. There is a conceptual difference, however, in that reaching-over involves a crossing of voices, whereby an inner voice is elevated to the higher register to become the new upper voice. Figure 2.5 illustrates the operation as it is repeatedly applied to link four descending arpeggiations of a third (see Free Composition, fig. 101, ex. 3).

The musical score consists of two systems, each with a treble and bass staff. The key signature is two sharps (F# and C#). The tempo marking is *leneramente*. The first system shows a descending arpeggiated line in the right hand with fingerings 4, 2, 1, 2 and a trill (tr) over the final note. The second system shows a similar descending arpeggiated line with fingerings 3, 3, 1, 3, 3, 1, 2 and a trill (tr) over the final note. The left hand accompaniment consists of chords in the bass clef.

Fig. 2.5: Beethoven, Op. 109, III, Var. 2, mm. 9-12

The first descending arpeggiation,  $g\#'-e'$ , represents the course of the upper voice at the most immediate, foreground level. As the  $e'$  is held over into the next measure, another tone,  $a'$ , suddenly appears on the scene, usurping the role of upper-voice tone. Where does this  $a'$  come from? It is not the continuation of the erstwhile upper voice (that would be the  $e'$  which is still sounding). The  $a'$  in fact comes from an inner voice. We hear it as arising from somewhere below, audibly reaching-over the erstwhile upper voice in the process.

Like all operations, reaching-over is motivated by its relation to higher structure. "The purpose of reaching-over," Schenker says, "is either to confirm the original pitch-level or to gain another." The structural line in this example is  $g\#'-a'-b'-c\#''$ . Inasmuch as the arpeggiation down from  $g\#'$  to  $e'$  represents a divergence from this line, the reaching-over may be conceived of as putting the melody back on track. Thus the pitch-level  $a'$  is gained in order to continue the line from the "original" (i.e., structural) pitch-level  $g\#'$ .

The form of the reaching-over in this case is one of two basic types that Ernst Oster distinguishes in his commentary in Free Composition. Oster refers to the types as A and B. In type A, the structural tones are the head-tones of the descending figures. This is the type seen in the example above. From our point of view, this means

the descending figures are themselves back-inflected. In type B, the structural tones are the goal-tones, which means the figures are forward-inflected. Figure 2.6 shows an example of type B in schematic form. Concerning type B, Oster comments, "the superimposed inner-voice tone introduces a tone of the upper voice from above, and so resembles an upper neighboring note. In this form, the lower tone is the main tone and is introduced by the upper tone."<sup>6</sup>

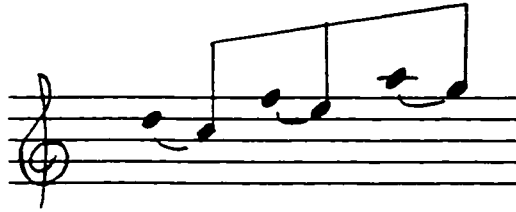


Fig. 2.6: Reaching-over, type B

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<sup>6</sup>F.C., §134. See the comprehensive schematic of fig. 41. Oster cites b2 and b3 in this schematic for type A. For type B he cites d (cf. our fig. 2.6). Type A and B may appear together, Oster notes, citing b1 and, in contracted form, a1, among others. Oster distinguishes the contracted forms of type A, citing a2 and a3.

Here we note that it is the descending figure itself that regains the structural tone to put the melody back on track. The reaching-over, for its part, must strike the listener as all the more eruptive, calling attention to itself more forcefully than in type A. This is what Schenker seems to say in the following passage, in reference to cases involving structural arpeggiation:

The more the entries of the reaching-over restrict themselves to chord tones [type A], the more the entries themselves resemble an arpeggiation. If greater freedom is employed [type B--see fig. 2.6], the arpeggiation becomes less obvious and the reaching-over predominates until the goal is attained, bringing complete clarification.<sup>7</sup>

In general, if the effect of the reaching-over predominates, as in type B, it is at the expense of the projection of the underlying structural line. In such cases we should expect the specifically forward quality of the inflections of the descending figures (related, as it is, to that projection) to be somewhat overshadowed. As we have seen, the effect of the reaching-over is the seeming usurpation of the upper voice from below. This action thrusts the ensuing descending figure into precipitate prominence at its entry, and causes, at the same time, the precipitate eclipse of the erstwhile upper voice, including, especially, the goal-tone of its motion. These characteristics are all aspects of the motions' inflection. They overshadow, in type B, the

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<sup>7</sup>F.C., §132. The interpolations in brackets are the present author's.

specifically forward quality of the inflection to the extent that the sheer volatile jaggedness of the music overshadows the projection of the structural line.

Note that the descending figures depicted in fig. 2.6 are two-tone successions. This brings up the issue of progressions that do not, in themselves, compose-out chordal intervals. This class of progressions includes not only two-tone successions but also such illusory linear progressions as the seventh-progression. How do their inflections differ from the inflections of events that compose-out intervals? When composing-out takes place, the motion to the goal has its own motivation: to frame the underlying chordal interval. A sense of purpose attaches to the act in and of itself. It happens that in the upper voice this sense of purpose will be more powerfully expressed in a linear progression than in an arpeggiation, thanks to the passing quality of the stepwise motion. The sense of purpose will be still more powerfully expressed if the linear progression is counterpointed with its own cadential bass motion--most powerfully expressed of all if one of the forms of the fundamental structure is mimicked in its entirety, as frequently happens in the foreground (see below).

In general, the more purposeful the motion, the more secure the delineation of the underlying chordal interval and the more self-contained the progression. As a

matter of inflection, the more self-contained progression must present itself as a more formidable obstacle of delay to the progress of higher motion. It puts up a kind of resistance to higher motion, with the result that there is a more or less heightened sense of tension. A two-tone succession, because it does not compose-out any chordal interval, expresses relatively little self-containment, puts up relatively little resistance. It justifies its existence only as an embellishment of the higher-level event to which it is attached. For this we can say its inflection, as it points forward or back, is all the more readily apparent; but what is comparatively lacking is tension.

Somewhat different is the case of the neighboring-note motion in its complete form: for example, the melodic scale-degree progression  $\hat{3}\text{--}\hat{4}\text{--}\hat{3}$  or  $\hat{5}\text{--}\hat{6}\text{--}\hat{5}$ . In a situation where it can lay claim to the status of an event in and of itself (its three tones could legitimately be grouped together by a slur in a graph), the neighboring-note motion does exhibit a certain degree of self-sufficiency. Indeed, the motion can be so firmly established (with adequate bass support) as to qualify for use in the far middleground, where the neighboring note itself can be prolonged to the extent of an entire middle section of a piece. The essential basis for the relative self-sufficiency of the neighboring-note motion in such cases is the motion's close adherence to the form found in strict counterpoint. That is

to say, the motion both departs from and returns to the main pitch level, with consonant support at both beginning and end.<sup>8</sup>

One result of this is that the inflection of the neighboring-note motion does not exhibit a marked directionality, forward or back. We might perhaps think of the motion as starting off back-inflected and ending up forward-inflected as it departs from and returns to the main pitch level. The transition, however, is smoothed over. The inflection, like the motion itself, is without sharp edges. Its chief significance ultimately lies in the tension it can express as a relatively well-entrenched delay--even if it does not compose-out a harmonic interval.

A lesser kind of motion that nonetheless still has the capacity to serve a middleground is that which results from mixture. Mixture is an operation whereby a tone from the minor mode is introduced into the major, or vice versa. One form it can take is the motion  $\hat{3}--\flat\hat{3}--\hat{3}$ . Like the neighboring-note motion, this motion can be the basis of a three-part form in the middleground. Yet it differs from the neighboring-note motion in its relative lack of significant progression--it remains on a version of  $\hat{3}$

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<sup>8</sup>By contrast, "when the main tone in a neighboring-note figure returns at a dissonant interval or in an accented-passing-tone progression . . . then a five-tone diminution results in which the neighboring note appears to fall away. In such cases the neighboring note lacks form-generating power." F.C., §196. See fig. 76 in that work.

throughout. Of all middleground motions, it is the least fraught with tension.

Although the neighboring-note motion has a much firmer foundation, neither motion, it must be admitted, has the same potential to generate tension as the motion which actually composes something out. It is important to realize that tension is an expression of structural cohesion. What the tension signifies specifically is the supremacy and control of the higher-level event over the lower. Ultimately, the greater the tension, the more manifest is that control. Thus the most cohesive composition will feature a maximum of composing-out on as many levels as possible.

Figure 2.7 is a sketch of the opening eight measures of the Minuet from Haydn's Symphony No. 104. Here we have an example of composing-out in a highly self-contained form. The descending fifth-progression in the upper voice is counterpointed against the complete bass arpeggiation I--V--I (see the tones beamed together in either voice). The counterpoint in fact mimics that of the fundamental structure. This parallelism is the result of what Schenker calls a transference of the form of the fundamental structure to an individual harmony (the individual harmony in this case being the tonic; the transference is applied to an abiding, higher-level I chord underlying the whole progression). As a tonal archetype,



**Menuet**  
**Allegro**  
**[Tutti]**

2 Flauti  
 2 Oboi  
 3 Clarinetti in La/A  
 2 Fagotti  
 2 Corni in Re/D  
 2 Clarini in Re/D  
 Timpani in Re-La / D-A

**Allegro**  
**[Tutti]**

Violino I  
 Violino II  
 Viola  
 Violoncello e Basso

Fig. 2.7: Graph of Haydn, Symphony No. 104, III, mm. 1-8

the fundamental structure signifies the ultimate unity of a composition. As its form is transferred into the foreground, it functions as a highly cohesive and self-contained counterpoint.

That we are dealing with a transferred form of the fundamental structure (and not the fundamental structure itself) is evident at once because, for all its purposefulness and self-sufficiency, the descent of the upper voice cannot in any way be heard as conclusive (i.e., as signalling the end of the piece). The Minuet is, after all, just getting under way. At the background level, therefore, the head-tone  $\hat{5}$  of the fundamental line remains holding (this is represented in the graph by the uppermost beam). With the conclusion of this eight-bar phrase comes a repetition, followed by a middle section, followed by another repetition, extended and varied. This last repetition ends the first statement of the Minuet, and carries a strong sense of closure. Indeed, the descent at this point is on a higher structural level, with the complete fifth-progression understood as encompassing the entire first statement (its head-tone  $\hat{5}$  is likewise shown in the graph as holding--i.e., spanning the passage--by the middle beam in the upper voice). Still, the piece is not over. There must be a Trio and reprise of the Minuet to follow. Only with the final repetition of the phrase at the end of the reprise do we feel that the descent in the upper

voice is really conclusive. This descent is that of the true fundamental line,  $\hat{5}--\hat{4}--\hat{3}--\hat{2}--\hat{1}$ .

Yet, all the while, each instance of the transferred form strives to make a finish. "The derived linear progression wants itself to be a true linear progression," says Schenker. The transferred form from the fundamental structure wants this very much. It would willingly be a true fundamental-line progression if it could. Instead of making a finish, however, it must be content with making a very well-supported delay. Because the delay is so well supported, the degree of generated tension is particularly high. To be sure, the music progresses undaunted, lithe and serene every step of the way. The fact that the overall continuity is sure, however, in no way argues against the effect of the delays; quite the contrary. The tension sustains the continuity. If, indeed, the subordinate motions expressed no real sense of delay and tension, there would be little or no "counterpressure" against the force of the background motion in evidence. The result would be a lack of apparent vigor in the latter, a less sure continuity. The music would not appear, as it does, joyfully to bob up from the delays encountered to reassert itself.

Each instance of the transferred form of the fundamental structure, then, is rife with tension. In that each instance constitutes, in itself, a case of composing-

out par excellence, we can say that the more perfect the local composing-out, the more powerful the ultimate inflection. In the present case, the form the tension takes in the upper voice is that of back-inflected motion. Each descent says "not yet," as it projects away from the higher-level motion. Each of the transferred forms of the bass arpeggiation also says "not yet." One difference, however, is that the bass arpeggiation returns each time to its point of origin (i.e., I). There is, moreover, a harmonic basis to the motion. This brings us to the next chapter, in which we explore the motion of the bass and the role of harmony--or rather, the progression of the harmonic scale-degrees. The peculiarly harmonic qualities of motion that arise in the bass strongly affect the inflection found there. As we shall see, directionality of inflection, forward or back, can be very strong--or, as in the present case, remain essentially subdued even as the inflection itself is full of tension. But let us postpone further remarks on the particular example, and proceed to the general discussion.

## CHAPTER III

### THE BASS

In tonal music, the bass line carries a double burden. One burden is melodic: the bass projects itself in terms of recognizable motives, ascending or descending, more or less characterized by stepwise motion. Melody in the bass is essentially no different from melody in the upper voice. The more it is characterized by linear progressions, the more effectively does it compose-out its intervallic spaces. The other burden carried by the bass is harmonic. By this we do not mean the given harmony that is composed-out as an intervallic space, but rather the progression from one harmonic degree to the next in service of composing-out.

The kind of progression that can lay claim to true harmonic significance is based on the interval of the fifth as given by the harmonic series of overtones. Harmonic progression by fifth, or fifth-relation (i.e., the fifth as abstracted from its strictly vertical form in the series of overtones), has its own special quality (to be discussed below) that is quite distinct from the essentially connective quality of melody. To be sure, harmonic progression can move by other intervals as well. In such cases the connective quality of melody must come into play.

Yet the fifth-relation is usually understood to be in the offing as the ultimate motivation, preeminently the fifth-relation between I and V in the cadential bass arpeggiation I--V--I (both in its complete and incomplete forms). In the progressions I--II--V--I and I--IV--V--I, for example, the II and IV have melodic significance as stepwise adjacencies to I and V, respectively. Yet in both cases it is the greater harmonic relation I--V that is being served. It is being served melodically, and it is also being served harmonically, be it noted, in that II and IV stand in fifth-relations of their own, II to V and IV to I. Both melodically and harmonically, the motivation is to anchor I--V.<sup>1</sup>

The melodic principle is also in evidence in the progression I--III--V--I, where III acts as a connective, albeit without benefit of stepwise motion. Here we see that the III stands in no harmonic fifth-relation of its own. It does, however, divide the motion to V at the third, with the result that all three members of the tonic triad are arpeggiated. This in itself has harmonic significance. Unencumbered as it is by passing tones, arpeggiation naturally emphasizes the triad as such, thereby setting in

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<sup>1</sup>The fifth-relations II to V and IV to I are expressed as fourths (i.e., fifths in inversion). Note that the formula I--V--I can itself be expressed as fourths (e.g., c--G--c), but only at the later structural levels (see F.C., §187). In the fundamental structure--always archetypal in its significance--the bass arpeggiation knows only the fifth.

relief the harmonic relation between root tone and fifth. This is a general property of arpeggiation that applies even to arpeggiations in the upper voice. The difference is that in the upper voice the harmonic is routinely overshadowed by the melodic-connective. The fact that this is not the case in the bass points to the reality of the distinction between the concept of harmonic degree--even when it partakes of the melodic principle--and pure melody. Whereas in the upper voice the linear progression reigns supreme, in the bass stepwise motion must ultimately give way. Thus the complete space-filling progression from I to V is gutted at a higher level, leaving at most only one intermediate connective in the form of II, III, or IV, whose position in the contrapuntal complex has received some sort of structural emphasis. Ultimately even this connective must yield, leaving the bare and essentially harmonically driven fifth-arpeggiation I--V as the most potent element of the composing-out.<sup>2</sup>

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<sup>2</sup>See F.C., fig. 14, ex. 2, fig. 15, ex. 2, and fig. 16, ex. 2. It should be noted that there are some harmonic progressions that do not aim at the fifth-relation or otherwise take part in a cadence or cadence-like motion. The progression I--VI--I, for example, can occur as support to a neighboring-note motion without any further justification than that (see F.C., fig. 153, ex. 2; note that the neighboring-note motion, g'--a'--g', belongs to an inner voice). So also can I--IV--I occur. In both cases, the progression derives its harmonic significance (its right to bear Roman numerals, as it were) essentially from the "emphasis" it receives as supporting line to a significant contrapuntal-melodic event. This is different from the situation discussed above, where the emphasis on harmonic degrees is tied up with the drive toward the

We know that the interval of the fifth has its basis in the harmonic series: the upper fifth is generated as an overtone of the fundamental (actually in compound form of a twelfth, which is "abbreviated" for the purposes of art to a fifth). The derivation from the fundamental is significant in that it endows the fifth with a natural directionality, from "progenitor" (the fundamental) to "descendant" (the upper fifth). As the fifth is expressed over time (now as a fifth-relation), it retains this natural directionality to give rise to a truly qualitative harmonic progression. As Schenker explains in his early treatise Harmony, the quality of progression cuts two ways, depending on whether the fifth-relation takes an ascending or descending form. The ascending form is the natural one, corresponding to the natural rising order of harmonics in the harmonic series. Thus the ascending fifth-relation is understood to embody the ideas of procreation and growth, linking as it does "progenitor" to "descendant" in that order. Schenker refers to the ascending fifth-relation accordingly as development.<sup>3</sup> From the point of view of quality of motion, development may suggest to us the idea of projection, or motion directed not so much toward a goal as

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cadence--certainly the main business of harmonic motion. See Schenker's remarks in F.C., §278.

<sup>3</sup>Heinrich Schenker, Harmony, ed. Oswald Jonas, trans. Elisabeth Mann Borgese (Chicago: The University of Chicago Press, 1954), §16.

away from a base point of departure, like the shoot of a plant stem.

To the descending fifth-relation Schenker gives the name inversion. As the name indicates, the relation derives not from the natural rising order of the harmonic series, but from its inversion (another relation born of art, meaning the artistic uses to which the natural order is subject). Being the opposite of development, inversion betokens not procreation but "involution" and return. Its motion quality should therefore be expected to express something like resolution and closure. Schenker's most direct reference to a distinction in quality of motion between the ascending and descending forms of the fifth-relation appears to be this: "A correct and conscious perception of the development of these fifth-relationships, away from the root tone in both directions, rising centrifugally and falling centripetally, is of paramount importance for the artist." The expressions rising centrifugally and falling centripetally would seem to point to the relevant qualities.<sup>4</sup> Victor Zuckerkandl makes the

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<sup>4</sup>Harmony, §19. This quotation is taken from Schenker's larger discussion of the derivation of the diatonic collection (the natural tonal system). The expression "root tone" refers to a tone conceived of as generating its own fifth-related "overtone" for inclusion (or potential inclusion) in the diatonic collection. Thus the tonic C, as root tone, generates G as overtone; G then acts as root tone to generate D, which generates A, which generates E, which generates B. All of these are "root tones." No overtone of B is used in the collection, while F is derived through the artificial process of inversion from

distinction in the familiar terms we have been using, thus: "I--V says 'away from . . . ,' it is a step [i.e., a single motion in the dynamic field]; V--I says 'toward . . . ,' a step in the opposite direction; the whole, I--V--I, says 'away from . . . and back to . . . ,' a succession of steps."<sup>5</sup>

Indeed, we see that Zuckerkandl's principal division of the dynamic field (see fig. 1.2) must be based on the underlying harmonic relation between  $\hat{1}$  (and  $\hat{8}$ ) and  $\hat{5}$ . This observation brings us again to the question of the relation between what is given precompositionally and what is forged by way of composing-out. We said earlier that the dynamic field was a property of the tonal system and stood prior to any manifestation of contingent structure. This applies fundamentally to the fifth-relation itself. Its directionality is built in. As the fifth-relation is pressed into service of composing-out, however, we find that its natural directionality can be superseded by the force of the composing-out itself--even in the bass.

The archetypal form of composing-out is that of the fundamental structure. Here we see that the bass arpeggiation I--V--I features both the ascending and descending forms of the fifth-relation. Unlike the case in

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the root tone C.

<sup>5</sup>Zuckerkandl, Sound and Symbol: Music and the External World, p. 112.

nature (in the phenomenon of the overtone series), the fifth-relation here does not exist for its own sake. Rather, it is involved in a harmonic-contrapuntal complex whose object is to effect a complete, closed, formal statement. To do its part, the bass motion cannot stop at V, but must go on and return to I. Indeed, the counterpoint demands it: as V meets  $\hat{2}$  in the upper voice, the resulting vertical interval, although consonant, lacks ultimate stability, because the  $\hat{2}$  is understood to be passing, on its way to  $\hat{1}$ , the goal-tone of a linear progression ( $\hat{2}/V$  thus provides an instance of the concept of the consonant passing tone as adapted from strict counterpoint to free composition). Thus the opening bass arpeggiation, I--V, although technically a distinct motion event unto itself, is inevitably associated with the consequent resolution V--I. In this way the V itself appears as a "joint" in the larger motion (I--V--I), for which reason it is called the dividing dominant (or divider, for short).

Thus the complete arpeggiation I--V--I takes its place as the bass component of the archetypal structure. As such, every stage of its motion looks forward to the ultimate goal at  $\hat{1}/I$ . The entire motion is heard as purposeful motion toward that goal. But what about the natural motion quality away from in I--V? Do we still hear that? Yes. The natural directionality of the ascending fifth-relation is an essential element: it provides the

necessary "opening" whereby subsequent and effective closure in the form of V--I can be felt to occur. Neither of these effects, however, is primary; rather, they are both contributory to the sense of the composed-out and complete whole. The motion quality that carries the day is that which derives from the whole (even as the whole is being established): purposeful motion toward the goal.

This brings us to the question of inflection. How is I--V--I itself inflected? In the Haydn example of fig. 2.7, the I--V--I belongs to a transferred form of the fundamental structure. The harmony that the form has been transferred to is the higher-level I that is sustained throughout the example, itself part of a higher-level I--V--I. Compared with this higher-level motion, the local I--V--I represents a diversion. So too does the counterpointing fifth-progression in the upper-voice compared with the higher-level motion being prolonged there. Unlike the upper voice, however, the bass arpeggiation returns to its point of origin. The motion neither leaves off at nor picks up from an inner voice, but both departs from and returns to the structural outer voice (represented in the bass by the higher-level, sustained I). The peculiar result is that there is no strong sense of directionality to the inflection, no strong sense of motion reined in or pulled forward by force of higher motion.

The quality of inflection the bass arpeggiation does enjoy to a relatively high degree is that of tension-generating resistance to higher motion. This comes from the entrenchment of the bass arpeggiation as a more or less complete, self-contained unit. As we discussed in the last chapter, this kind of resistance is most pronounced in a transferred form of the fundamental structure. Both the descending upper voice and the bass arpeggiation seem to defy the larger motions to which they are attached and which they prolong, as though they would establish a complete and closed composition unto themselves. Thus a heightened state of tension comes about, which, as we explained in connection with the Haydn example, is the very index of the larger continuity.

This relation applies as well to forms of the fundamental structure that are transferred to harmonies other than the tonic. It often happens that a transference to a subsequent harmonic degree will seem to establish a new key, particularly when chromatic alteration is involved (as it usually is). The transference to the V degree in the exposition of a sonata form, for example, ushers in the apparent key of the dominant in conjunction with the appearance of the second subject (or "second group"; see the schematic in fig. 3.1). This apparent sense of key, however, only points to the manifest assertiveness of the transference as a tonally self-sufficient structure--now



arpeggiation, which, for all its contribution to continuity, is heard as being situated at a remove from the point of origin as well as the ultimate goal of motion; while in the upper voice it is the  $\hat{2}$  that is prolonged, which is understood to be passing between  $\hat{3}$  and  $\hat{1}$  (the circumstance of interruption, denoted by the sign  $\parallel$ , cuts off the progress of both voices at  $\hat{2}/V$ , but does not alter these characteristics). Compare this with the other transference shown in the example, the transference to the preceding I harmony. There it is the foundational degree of the bass arpeggiation that is prolonged and, in the upper voice, the conceptually consonant, non-passing  $\hat{3}$ . Clearly, qualitatively different phases of higher motion must, as they are prolonged, lead to different kinds of inflection.

Yet difference of phase should never be thought of as more significant than the essential continuity that is being upheld. Difference of phase is really an aspect of rhythm, which, as we discussed in chapter 1, is subordinate to purposeful motion in concept. Purposefulness of motion is not something which arises or subsides or grows or diminishes according to the particular harmonic degree or fundamental-line tone in force. On the contrary, it is a transcendent, ever-present quality in the life of the whole event. Thus a form of the fundamental structure may be transferred as effectively to a non-tonic harmonic degree as to the tonic and perform the same essential task, which is

the resistance of the higher-level motion. Tension is generated, the higher-level motion made manifest.

It is clear that the decisive element in the transference is the bass arpeggiation. Indeed, the transference of the bass arpeggiation alone offers a formidable and highly characteristic resistance. Schenker notes that its transference will "guarantee unity, even where the soprano shows no linear progression." He then goes on to cite initial ascents, arpeggiations, unfoldings, and diminutions around a stationary tone, all supported by I--V--I.<sup>6</sup> In each case, the bass formula helps to frame a more or less self-contained structure ("guarantees unity"), the effect of which is to solidify resistance to higher motion.

Let us now consider the inflection of incomplete forms of the bass arpeggiation. An incomplete form of the bass arpeggiation results when either the concluding or the initial I of the complete form is excluded. Thus arise the applied bass progressions I--V and V--I.

The applied progression I--V is presented schematically in fig. 3.2 (adapted from fig. 130, ex. 2, of Free Composition). The V of this progression is called by Schenker the applied divider (it is also known as the back-relating dominant). In this particular example it is

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<sup>6</sup>F.C., §243.

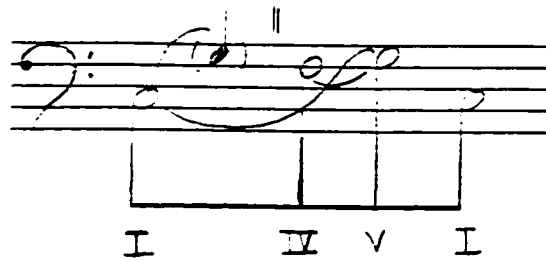


Fig. 3.2: Motion to the applied divider

not actually assigned the Roman numeral V. It is simply depicted as an upper fifth (in parentheses) projecting from I. This emphasizes the fact that the applied divider acts essentially to prolong the I, which is understood to belong to a higher level of motion, in this case the complete harmonic progression I--IV--V--I. It is evident here that the motion to the applied divider travels away from the main line of motion and terminates in an inner-voice tone. This voice-leading circumstance alone must prompt us to hear the motion to the applied divider as back-inflected. On top of this, however, the motion is informed by the natural harmonic directionality of the ascending fifth-relation. Because the ascending fifth-relation is not here a component part of the complete arpeggiation I--V--I, its natural directionality is not overshadowed by the purposeful motion

that characterizes that closed structure as a whole (see our discussion above). The result is that the motion to the applied divider redounds more powerfully to a projection "away from" its point of origin. The motion is inflected this way by dint of the voice-leading prolongation (the relation between the two levels of motion) and the natural harmonic directionality of the ascending fifth-relation that is brought to it.

Figure 3.3 provides a concrete example. This is the first eight measures of the first movement of Mozart's Piano Sonata, K. 576. In the upper voice the music begins with a forward-inflected arpeggiation up to  $f\sharp''$ , which is the head-tone of the overall controlling third-progression  $\hat{3}--\hat{2}--\hat{1}$  (see the graph). This lively ascent is immediately followed by a back-inflected descent to  $e''$  through a four-tone diminution that includes the neighboring note  $g''$ , thus:  $f\sharp''--g''--f\sharp''--e''$  (the skip to  $a''$  is an interpolation).<sup>7</sup> The move to  $e''$  is supported in the bass by motion to the applied divider, designated in the graph by a V with an arrow pointing back to I, after Felix Salzer's notational practice.<sup>8</sup>

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<sup>7</sup>Concerning the type of neighboring note involved in the four-tone diminution here, cf. n. 8 in chapter 2.

<sup>8</sup>Felix Salzer, Structural Hearing: Tonal Coherence in Music, 2 vols. (New York: Charles Boni, 1952; corrected reprint ed., "two volumes bound as one," New York: Dover, 1982). The example we are discussing is one used by Salzer to illustrate his own explanation of the applied divider (see pp. 152-3 and ex. 277). The present analysis differs

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

I (II<sup>6</sup>V) II V I

### Allegro

Fig. 3.3: Graph of Mozart, K. 576, I, mm. 1-8

in some particulars from Salzer's, but makes basically the same structural assertions.

Inasmuch as arpeggiation by fifth-relation constitutes the most potent form of composing-out in the bass, the motion to the divider must still figure as a conspicuous mark of punctuation within the larger motion. It puts up far more resistance to higher motion than does, for example, the alternative half-step descent to the 6/3 chord. On the other hand, it does not achieve anything like the self-contained, semi-autonomous effect created by the complete and closed I--V--I. In the present situation, the motion to the divider seems to sharpen our appetite for the coming II harmony in m. 5 and the renewal of the melodic attack in the upper voice. That is, in the bass, it intensifies our feeling that the higher-level motion proceeding from I should go on to II. It does this by way of a not-inconsiderable show of resistance to that motion combined with a very pronounced directional inflection. Aided by the natural harmonic directionality of the ascending fifth-relation, the inflection points backwards to I and thus to the outer-voice progression of which I is a part (i.e., I--II--V--I). The motion to the divider appears reined in, in the manner of all back-inflections, and our attention is thrown back to I in anticipation of what is to follow.

Thus the larger progression in the bass is emphasized. Moreover, the larger progression in the upper voice is also emphasized. Our analysis shows that the

upper-voice counterpoint  $f\#\hat{\prime}\prime\text{---}g\hat{\prime}\prime\text{---}f\#\hat{\prime}\prime\text{---}e\hat{\prime}\prime$  reduces to the two-tone succession  $f\#\hat{\prime}\prime\text{---}e\hat{\prime}\prime$ . By virtue of projecting away from the higher-level  $\hat{3}\text{--}\hat{2}\text{--}\hat{1}$ , this motion is necessarily back-inflected. The motion to the divider underscores this inflection, thus causing the  $f\#\hat{\prime}\prime$  and the higher-level motion to which it belongs to be more strongly brought out.

At this point our perception of the higher-level  $\hat{3}\text{--}\hat{2}\text{--}\hat{1}$  takes the form of heightened anticipation of the coming  $\hat{2}$ , just as our perception of the higher-level bass takes the form of heightened anticipation of the coming II harmony. The upper voice, however, does not immediately progress to the  $\hat{2}$ , for the parallelism with the opening arpeggiation is now due (m. 5). Our anticipation of  $\hat{2}$  stays with us over the course of this arpeggiation, only now it is redirected to the interpretation of the emerging forward-inflection of the arpeggiation (even as our anticipation of  $\hat{2}$  is also fed by the forward-inflection of the arpeggiation). If the parallelism here does not sound redundant but fresh and vital, then we can say it is in part owing to the invigorating influence of the preceding motion to the applied divider. By the effect its inflection has on both outer voices, it has helped place the  $\hat{2}$  more clearly in view as the goal-tone of the arpeggiation.

The motion to the applied divider finds its structural dual in the applied progression V--I. As another

form of incomplete bass arpeggiation, the applied V--I has the same tendency to emphasize higher motion. Like the motion to the applied divider, V--I prolongs a higher-level harmonic degree located at its own I. The difference is that V--I serves to introduce that element of higher motion instead of referring to it after the fact. As a result, the motion carries a forward-inflection instead of a back-inflection.

Figure 3.4 (adapted from fig. 110 of Free Composition) shows the basic progression V--I plus the different forms it can take by the addition of a cadential harmonic degree prefatory to V (that is, II, III, or IV; the important characteristic in each case remains the absence of the initial I of the complete arpeggiation). Schenker's term for this type of bass progression is auxiliary cadence.<sup>9</sup> Since the auxiliary cadence is another form of incomplete bass arpeggiation, the natural harmonic directionality of the descending fifth-relation can express itself free and clear of the larger, question-and-answer, open-and-shut type of purposefulness of the complete arpeggiation. The natural impulse of the descending fifth-relation toward resolution is able to vent itself more or less directly, such that the motion of the auxiliary cadence seems to be thrown forward.

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<sup>9</sup>See F.C., §§244-5.

The image shows a single staff of music in bass clef with a common time signature. The notation consists of a sequence of notes and rests, with Roman numerals and figured bass symbols written below the staff. The sequence is as follows:

- Measure 1: A half note G2, followed by a whole rest. Roman numeral: V I.
- Measure 2: A half note F2, followed by a whole rest. Roman numeral: IV V I.
- Measure 3: A half note E2, followed by a whole rest. Roman numeral: III V I.
- Measure 4: A half note D2, followed by a whole rest. Roman numeral: III V I.
- Measure 5: A half note C2, followed by a whole rest. Roman numeral: II V I.
- Measure 6: A half note B1, followed by a whole rest. Roman numeral: II V I.

The figured bass symbols are: (0) (0) in measures 1 and 2; (0) (0) in measure 3; (0) (0) in measure 4; and (0) (0) in measure 5.

Fig. 3.4: Auxiliary cadence

It is not, however, a motion of genuine resolution; for, as an "auxiliary" structure and also as a motion constituting an inflection, the auxiliary cadence must be understood to be thrown forward into the path of higher motion. The aim of the auxiliary cadence is to emphasize that higher motion. Let us consider Schenker's analysis of the exposition of the first movement of Mozart's Sonata for Piano in C, K. 279. This analysis is depicted in fig. 154, ex. 1, of Free Composition, from which our fig. 3.5 is adapted. The auxiliary cadence II--V--I, functioning in the apparent key of the dominant ("= G major"), ushers in at m. 20 the higher-level V of the structural I--V underlying the exposition. The V is thereby emphasized and with it the structural motion to which it belongs. The auxiliary cadence itself is touched off by the descending fifth-relation VI#--II, an auxiliary cadence to the auxiliary cadence, as it were. The whole progression follows upon a motion to the applied divider ("div."), which motion underlies the first large phrase or period of the exposition (first group) but whose quality of closure must sound tentative in the scheme of things (back-inflected). The entrance of the auxiliary cadence seems designed to break through the momentary lull and forcibly bring home the motion to V. The series of descending fifths, VI#--II--V--I (in the key of G), zeroes in on V with all the force of harmonic-directed motion. Thus the harmonic element may be

16 17 20 21 25 29 30 31

I (div.) ( ) V  
 (= G major: VI# II - V - I)

II V I)

Fig. 3.5: Graph of Mozart, K. 279, I, exposition

seen to act as a kind of overdrive that boosts the forward-inflection of the voice leading, making the arrival at V sound like something definitive.<sup>10</sup>

Note that the upper-voice  $\hat{2}$  is already in place from m. 17. Schenker states, "there is no doubt that the  $\hat{2}$  is in force from the entrance of this  $\hat{a}'$ "; therefore measures 17-20 cannot be considered merely a transition."<sup>11</sup> This would seem to imply that the V was in force from m. 17 as well, as the proper structural support for the  $\hat{2}$ . The appearance of V in m. 20 would then constitute a delayed arrival, a rhythmic displacement in the foreground occasioned by the introduction of the auxiliary cadence. If we were viewing a reduction of this passage separated into different staves for the different structural levels, we would actually see the position of V rhythmically normalized (shifted back) at a higher structural level such that its beginning coincided with that of the  $\hat{2}$  in m. 17 (cf. fig. 2.3). Schenker shows just such a normalization in fig. 39, ex. 2 of Free Composition (the second movement of

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<sup>10</sup>The auxiliary cadence has the effect of tonicizing the V. Tonicization should always be understood in terms of emphasis (as should chromaticism in general). That a new key should seem to be forthcoming only points to the degree of emphasis given. In the present example, the sense of the local key of G major is related not only to the lead-in auxiliary cadence but also to the additional prolongation that the V undergoes as the second subject of the exposition plays itself out (m. 20ff.). This additional prolongation represents more emphasis of V--so much more that we hear what seems to be a new foreground key.

<sup>11</sup>F.C., §313.

Beethoven's Piano Sonata, Op. 10, No. 3). As in the Mozart example, a pre-interruption structural V is introduced and displaced by an auxiliary cadence (III--V--I in the local key of A minor); in this case the V is able to be shown shifted back at the higher level to the onset of the  $\hat{2}$ . It seems that in both examples, the higher-level position of  $\hat{2}/V$  is based on a "duple ordering" of content. In the Mozart example, the exposition is ordered into two basic sixteen-measure groups. Thus  $\hat{3}/I$  occupies the first sixteen measures,  $\hat{2}/V$  the second. In the Beethoven, the duple ordering appears to be 12 + 12, with a five-measure expansion preceding the interruption sign ( $\parallel$ ).<sup>12</sup>

Another example of an auxiliary cadence with displacement is to be seen in fig. 3.6, the first eight measures of Chopin's Polonaise, Op. 40, No. 1. This example shows an auxiliary cadence entering in m. 5 and leading into III# in m. 6 (which harmonic degree is embedded in the

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<sup>12</sup>Note that in figuring the second sixteen measures of the Mozart example, m. 20 should be counted twice. It represents both the last measure of a four-measure group containing the auxiliary cadence and the first measure of the following four-measure group--i.e., it constitutes an overlap in the hypermeter. Measure 31 ends the basic phrase, where another overlap ushers in a final eight-measure expansion. For Schenker's discussion of the significance of higher metric orderings, see *F.C.*, §286ff. See also chapters 4 and 6 of William Rothstein's dissertation, "Rhythm and the Theory of Structural Levels," as well as his book Phrase Rhythm in Tonal Music (New York: Schirmer Books, 1989), which deals with the relation of hypermeter to phrase structure.

Allegro con brio.

The image displays three systems of musical notation for Chopin's Op. 40, No. 1. Each system consists of a grand staff with a treble and bass clef. The first system begins with a forte dynamic marking (*f*) and includes a piano key signature change from one sharp to two sharps. The second system features a complex rhythmic pattern in the right hand with fingerings 4, 3, 2, 2 and a triplet of eighth notes. The third system continues the piece, ending with a double bar line. Various musical notations such as slurs, accents, and dynamic markings are present throughout the score.

Fig. 3.6: Chopin, Op. 40, No. 1

cadential progression I--II--V--I). In his analysis of this passage (see fig. 56, ex. 2e, of Free Composition), Schenker does not notate the auxiliary cadence in mm. 5 and 6 as "V--I" in the key of the III#, as the III# itself does not constitute a key but merely a passing foreground harmony.<sup>13</sup> Nevertheless, the descending fifth in the bass, g#--c#, combined with the chromatics in the upper voice, has the effect of a tonicizing V--I (cf. n. 10). The result is a highly charged forward-inflection emphasizing the III#.

The auxiliary cadence involves two levels of rhythmic displacement. Schenker's analysis indicates that the auxiliary V enters under a 6/4 chord which resolves to 5/3 at the last moment. This in itself represents a displacement of 5/3 within the measure, as the 6/4 is acting as an accented cadential 6/4. At a higher level, the auxiliary V itself acts to displace the following III# for a similar reason. From the point of view of hypermeter, m. 5 is accented relative to m. 6, with the result that the entire auxiliary V of m. 5 "leans" into and displaces the more structural III# of m. 6 like an appoggiatura. The displacement of III# is normalized with the reduction of the auxiliary cadence, which Schenker shows in fig. 40, ex. 1 of Free Composition (here the III# enters at m. 5). Note

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<sup>13</sup>The bass follows the formula given in F.C., fig. 14, ex. 3d and the third illustration of fig. 15, ex. 3c.

another displacement in this graph: the structural  $\hat{2}$  is shown over the II# in m. 9. rather than over the V in m. 16. This indicates a displacement of the V by the auxiliary II# (II#--V = V--I, an auxiliary cadence) based on the same principle described above: m. 9 forms the accented part of the eight-measure hypermeasure of mm. 9-16.<sup>14</sup>

Let us now hasten to say that all these examples in which the auxiliary cadence effects a displacement of the higher-level harmony are exceptions to the norm. Usually there is no displacement involved. Referring to fig. 110 in Free Composition (the structures of the auxiliary cadence--cf. our fig. 3.4), Schenker says,

from our experience of the ascending arpeggiation we understand, in retrospect, that the fundamental tone is  $\underline{C}$  in all such cases, especially since  $\underline{C}$  ultimately appears. The voice-leading is "closed off" from what precedes it: that is, the IV, III, and II are related only to the forthcoming I; they point only to it. However, despite the degrees which belong to the forthcoming root, the space up to its actual entrance belongs conceptually to the preceding harmony. In a sense, the territory of the previous harmony provides a base for the preparation of the following one . . . . The relationships of earlier levels make this clear.<sup>15</sup>

Thus, as William Rothstein puts it, "at a higher level, i.e., one at which only the fundamental tone of the bass structure would appear, the arrival point of the fundamental

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<sup>14</sup>See Rothstein, "Rhythm and the Theory of Structural Levels," p. 120. Rothstein discusses the phenomenon on pp. 84-86 (the V functions as an "accented auxiliary harmony").

<sup>15</sup>F.C., §244.

tone (and thus of the goal harmony) is the same as at the lower level; the fundamental tone may not be shifted back (normalized) to the beginning of the auxiliary cadence."<sup>16</sup> This circumstance is in keeping with the way introductory motion normally proceeds. The auxiliary cadence leads toward and prepares the goal harmony, and subsequently that harmony is reached and takes effect. The examples of figs. 3.5 and 3.6 are exceptions. Let there be no misunderstanding: the auxiliary cadences there retain their introductory function, which is reflected in their essential quality of harmonically-driven forward-inflection; but, like inattentive hosts, they perform their introductions "late" (the goal harmonies have already taken effect at the higher levels).

Our next example shows the more normative timing of the auxiliary cadence. Figure 3.7a is a middleground graph of mm. 1-23 of the first movement of Mozart's Piano Sonata in A minor, K. 310. The auxiliary cadence to III, which makes its appearance at m. 16, involves no displacement of III. The latter arrives definitively at m. 23 with the announcement of the second subject of the exposition. Thus the auxiliary V belongs to "the territory of the previous harmony," which is I. This normative circumstance lends fluidity to the succession of parts. In

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<sup>16</sup>Rothstein, "Rhythm and the Theory of Structural Levels," p. 123.

a)  $\hat{5} \quad \hat{4} \quad \hat{3}$

I (V) → III

b) ① ② ③ ④ ⑤ ⑥ ⑦ ⑧  $\hat{5}$

5-(6) 7-(6) 7-(6)

8-8-8

I II V I (V)

⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱

(upper 10ths)

6/4

I IV IV<sup>b</sup> VII  
I (II<sup>b</sup> V) → III

Fig. 3.7: Graph of Mozart, K. 310, I, mm. 1-23

**Allegro maestoso**

5 *p*

10 *f*

*calando*

15 *p*

Fig. 3.7 (continued)

The image displays two systems of musical notation for a piano. The first system consists of two staves (treble and bass clef) with a dynamic marking of *p* (piano) in the first measure and *f* (forte) in the third measure. A circled number '20' is positioned above the treble staff in the third measure. The second system also consists of two staves, with a dynamic marking of *p* in the second measure. The notation includes various note values, rests, and articulation marks.

Fig. 3.7 (continued)

addition to the change of harmony I--III, there is a phrase disjunction which the auxiliary cadence helps to bridge. The chord of the auxiliary V, which looks forward to III, also represents the tail-end harmony VII of the lower-level progression of the consequent phrase that ends the first period (this is shown in the foreground graph). The auxiliary cadence thus leads from the end of one phrase to the beginning of another (at III).

Figure 3.7b shows the foreground graph.<sup>17</sup> The opening eight-bar phrase, the antecedent phrase of the larger period, starts with the unfolding of two intervals, e''--a' and g#''--d'' in mm. 1-2.<sup>18</sup> The higher-level outer-voice motion e''--d'' is interpreted here as an incomplete neighboring-note motion, as is the inner-voice motion a'--g#'. Neither connects forward to the e'' or the a' of m. 3, which tones constitute the onset of repetition, not resolution, of the figure. Thus mm. 1-2 form a tonal

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<sup>17</sup>Schenker analyzes this music in "Mozart Sonate A-Moll" in the second of the ten issues of Der Tonwille (Vienna: A. Gutmann Verlag [Universal Edition], 1921-24). It is also analyzed by David Beach in "The First Movement of Mozart's Piano Sonata in A Minor, K. 310: Some Thoughts on Structure and Performance," Journal of Musicological Research, Vol. VII (1987): pp. 157-86. The reader may wish to compare these analyses with the present one.

<sup>18</sup>The intervals belong to the two underlying chords, and thus are to be understood vertically at a deeper level. At that level their succession forms a two-voice counterpoint in which e''--d'' constitutes the outer, structural voice, a'--g#' the inner voice. The unfolding then transforms this basic structure, bringing on an additional level of motion (each interval now forms an arpeggiation).

unit, somewhat self-contained, which is repeated in mm. 3-4. Again, the neighboring-note motions are interpreted as incomplete: they do not carry over and resolve in m. 5. Rather, within each two-bar unit the larger continuity is evidenced by the back-inflections that inform the neighboring-note motions. Their very quality of diminishing energy as they seem to fall away (thus: e''--d'', a'--g#') bespeaks the actuality of the larger motions from which they depend.

The four-bar sub-phrase that begins in m. 5 is marked in the bass by motion to the dominant via a descending arpeggiation through a fifth to d which then rises by step to e. This motion is counterpointed in the upper voice by a six-tone diminution through the neighboring note f'' that falls away to close on b' over the dominant in m. 8 (note the resulting interval succession 8--8--8; cf. F.C., fig. 53, ex. 2 and Schenker's discussion §§162ff.). The essential voice leading of the music to this point is depicted in the parentheses that follow in the graph: the initiating tone e'' is sustained at a higher level as an outer-voice tone and the inner-voice tone c'' moves to the b'--another incomplete neighboring-note motion. Meanwhile the bass has executed a motion to the applied divider. Like each of the two pairs of measures in mm. 1-4, the measures 5-8 and also the antecedent phrase as a whole forms a tonal unit based on forms of incomplete motion. Indeed, there is

a certain choppy quality about this music. The strong back-inflection of the motion to the applied divider, however, throws our attention back to the outer voices and we await their continuation.

The consequent phrase starts at m. 9 with restatement of the opening thematic material. This time around there is a descending fifth-progression in the bass starting in m. 11, two measures earlier than the start of the descending fifth-arpeggiation in the antecedent phrase. It enters almost slyly as the melody is attempting to perform its two-bar repetition, as in the antecedent, only now the melody is forced off in a new direction. This effectively forestalls the kind of choppiness that characterized the antecedent phrase. The way to the neighboring note f'' in m. 14 is marked by a series of upper tenths (which, in relation to the fifth-progression in the bass, is "merely contrapuntal," as the latter is the leading progression; see F.C., §221ff, and chapter 5 in the present work.) The neighboring note f'' then falls away to d'' in a voice exchange with the bass. This d'' represents the  $\hat{4}$  of the fundamental line, arrived at over the bass tone f which then moves up by step to g, which motion forms a parallelism to the previous cadential bass motion d--e, as well as to the ascending steps embellishing the motion within the fifth-arpeggiation preceding it (this recurring motif

originates in the d#''--e'' of the very opening of the piece).

Overall, the turn of events seems to reveal a dynamic process wherein the symmetry and choppiness of the opening gradually gives way to a more fluid exposition. With the arrival of d''/g in m. 16 the consequent phrase is essentially completed. That which follows to m. 22 is an expansion. As figured in measures, the basic eight-bar consequent appears to divide into two tonal units of 2 + 6 (or perhaps three of 2 + 4 + 2). Unlike the 2 + 2 + 4 of the antecedent phrase, the division of the consequent does not reinforce a higher metric scheme, with the result that the quality of succession seems less cut and dried, more fluid. The following seven-bar expansion to m. 22 then begins to soften the edges of the larger 8 + 8 symmetry. Finally, the auxiliary cadence to III bridges the boundary between the expanded consequent and the phrase following.

One might wonder why the progression of the phrase structure, which is so conspicuous in the foreground, should be outranked, structurally, by the auxiliary cadence. The reason has to do with the different roles each plays in relation to the higher motion I--III. The antecedent-consequent phrase structure describes an overall harmonic motion from I to VII in A minor. Why does it go to VII in particular? Just so the auxiliary cadence can pick up the VII and lead it to III with the effect of V--I. The

progression of the phrase structure runs its course for the sake of making this connection to, and emphasis of, III possible. Incidentally, this example illustrates the need to look beyond pure phrase structure, for the auxiliary cadence is not itself a phrase or part of a phrase.

Often an auxiliary cadence occurs at the opening of a piece. For example, Chopin's Revolutionary Etude opens over a neighboring-note harmony which resolves to the tonic with the effect of V--I (see Free Composition, fig. 12). In such a case as this the function of the auxiliary cadence is wholly introductory. The motion is certainly not acting to facilitate the more fluid succession of parts, as there is no "territory of the previous harmony" being vacated, only the tonic being approached. There is an analogy here with the initial ascent of the upper voice. In both cases the fact that the event is the first event (in its register, at least) takes on special meaning. Thus in addition to the emphasis that the auxiliary cadence gives to the upcoming tonic, there may also be a special tension born of suspense or portent.

Occasionally the relation to the upcoming tonic is difficult to grasp because one of the auxiliary harmonies makes a conspicuous show of itself, bringing about a "deceptive beginning" (see F.C., §303). The Introduzione to the C-major Rondo finale of Beethoven's Waldstein piano sonata, for example, opens in the apparent key of F major.

This apparent key, however, may be interpreted as the tonicized harmonic degree IV of C major, part of an auxiliary cadence IV--V--I that leads into the Rondo.<sup>19</sup> To hear the Introduzione as an auxiliary cadence in this way means hearing a high-level forward-inflection sustained over the course of twenty-eight measures adagio molto. Thus the perceptual act itself requires long-range concentration. The "deceptive beginning" must be recognized for what it is and the apparent tonic rejected in favor of the real tonic which has yet to make an appearance. Yet this is not an inordinately difficult task. We may very well have a sense that, as the Introduzione progresses, what we are hearing is somehow tentative, that the music is developing in a peculiarly constrained way, seeming to be waiting upon something that would get things moving, some future event of importance, etc. Such impressions are already indications of the inflection. We do not have to be able to identify the explicit harmonic degree--to know that the music is now unfolding over harmonic-degree IV, now over V, now over I. All we need to hear is the inflection. It tells us that the

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<sup>19</sup>See David Beach's example 7 and his concluding remarks in "Analysis Symposium," Journal of Music Theory, Vol. XIII, No. 2 (1969): pp. 186-203, reprinted in Readings in Schenker Analysis and Other Approaches, ed. Maury Yeston (New Haven: Yale University Press, 1977). Even the opening tonicization of F major offers a challenge to the listener. See Charles J. Smith, "The Functional Extravagance of Chromatic Chords," Music Theory Spectrum, Vol. VIII (1986): pp. 94-139, plus the response by David Beach and rejoinder by Smith in the following issue, Vol. IX (1987): pp. 173-85 and 186-94.

music has not yet "arrived," but that it is headed toward that point at which it can proceed to unfold in a more expansive and definitive manner (the beginning of the Rondo). With repeated hearings (and performance and study) our perception of the inflection sharpens, and we become more aware of the complex dynamics involved. It is not necessary to invoke the notion of retrospective hearing, either, as though the auxiliary cadence came as a surprise.

The Waldstein Introduzione is an unusual case for being so extensive, but essentially the auxiliary cadence performs its normal introductory function, as indeed the name "Introduzione" would seem to confirm. There are some cases, however, where the auxiliary cadence constitutes the highest level of bass motion in the piece--the piece actually lacks an ultimate, complete I--V--I. These must be recognized not as unusual but exceptional in principle. Examples that Schenker cites are Chopin's Prelude in A minor, Op. 28, No. 2 (= V--I) and Brahms's Intermezzo in A minor, Op. 118, No. 1 (= III--V--I).<sup>20</sup> On the one hand, it would seem that neither of these examples constituted a case of forward-inflection, for there is no higher motion into which the auxiliary cadence leads. That is, there is no relation to higher motion at all, the lack of which rules out inflection of any kind (regardless of the harmonic progression). On the other hand, one might perhaps assume

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<sup>20</sup>F.C., fig. 110, exx. a3 and d3.

an implied continuation, which Schenker seems to do, at least in the case of the Chopin example (a "true prelude," he calls it, citing its incomplete bass V--I). If a forward-inflection is in fact heard, then such an assumption is valid. (We will touch again on the subject of incomplete structure in chapter 5, as we discuss Schenker's analysis of another work by Chopin whose background quality of motion appears to be genuinely ambiguous.)

Let us emphasize that while both the auxiliary cadence and the motion to the applied divider express highly characteristic directed inflections, they do not form semi-autonomous and self-contained structures--not the way the complete I--V--I does. The incomplete forms cannot put up the same level of resistance to higher motion, cannot generate the same level of tension. Thus although they appear much more clearly to flow into and out of the higher motions to which they are attached, their inflections are not, ultimately, so indicative of the force of those motions. As we shall see in the next chapter this limitation does not apply to the incomplete arpeggiation that is a feature of structural division in the form of interruption.

CHAPTER IV

STRUCTURAL DIVISION AND INTERRUPTION

Figure 4.1a shows a descending fifth-progression over the complete bass arpeggiation I--V--I (one of the forms of the fundamental structure). If the bass of this structure is prolonged, one possible outcome is the double arpeggiation shown in fig. 4.1b. Here, the newly derived counterpoint with the upper voice appears to divide the progression of the upper voice in two, thus:  $\hat{5}--\hat{4}--\hat{3}$  and  $\hat{3}--\hat{2}--\hat{1}$ . This is an example of the concept of division.

a)

$\hat{5} \quad \hat{4} \quad \hat{3} \quad \hat{2} \quad \uparrow$

I                      V    I

b)

$\hat{5} \quad \hat{4} \quad \hat{3} \quad \hat{2} \quad \uparrow$

I    IV   V<sup>7</sup>   I    II   V   I

Fig. 4.1: Division of a fifth-progression

Schenker points out that the original fifth-progression itself remains unprolonged (no new tones have been generated in the upper voice). Only the bass has been prolonged. Yet because the counterpoint affects the upper voice as it does, it is still proper, from our point of view, to speak of inflection there (the relation of the two third-progressions to the original fifth-progression). The lack of real prolongation does mean that the impression made by the division is not particularly strong. As we shall see, this contrasts sharply with the impression made by division in the form of interruption.

In the present case, the two internal third-progressions may be regarded as two mildly distinct stages of the single, larger progression. The division at  $\hat{3}$  is not a definitive goal or point of departure, but more like a way station. At all times the prevailing motion energy is directed toward the final  $\hat{1}$ . This is in fact the general rule regarding division. The unitary purposefulness of the original motion (in this case the fifth-progression) informs and shoots through the motion of the derived segments. Thus Schenker explains in reference to the fifth-progression of the fundamental line: "The forward compulsion toward  $\hat{1}$  still exists at the end of the fundamental-line segment  $\hat{5}--\hat{3}$  or  $\hat{5}--\hat{2}$ . This necessity reaffirms the indivisibility of the progression of the fifth in the fundamental structure, no

matter how much the appearance of a subdivision might seem to deny it."<sup>1</sup>

The condition that forward compulsion toward  $\hat{1}$  must inform and shoot through the derived motion segments applies not only to the kind of division shown in fig. 4.1b, but also to division by interruption. There are two forms of the fundamental line which admit of division by interruption, the fifth-progression and the third-progression. Both divisions are shown in fig. 4.2. Unlike the division in fig. 4.1b, division by interruption does not express a strict partitioning of the original progression. The fifth-progression does not divide into  $\hat{5}--\hat{4}--\hat{3}$ ,  $\hat{3}--\hat{2}--\hat{1}$ ; nor does it divide into  $\hat{5}--\hat{4}--\hat{3}--\hat{2}$ ,  $\hat{2}--\hat{1}$  or  $\hat{5}--\hat{4}$ ,  $\hat{4}--\hat{3}--\hat{2}--\hat{1}$ . Rather, the division takes the form of two separate descents from the head-tone toward the goal-tone, the first descent incomplete because interrupted, thus:  $\hat{5}--\hat{4}--\hat{3}--\hat{2} \parallel \hat{5}--\hat{4}--\hat{3}--\hat{2}--\hat{1}$  (in the case of the third-progression:  $\hat{3}--\hat{2} \parallel \hat{3}--\hat{2}--\hat{1}$ ). The bass progression also undergoes interruption and is divided in similar fashion:  $I--V \parallel I--V--I$ .

According to our general rule we must understand the derived motions as shot through by the forward compulsion that belongs to the original progression. Thus at all times the upper voice must be directed toward  $\hat{1}$ , the

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<sup>1</sup>F.C., §38.

a)

I V I V I

b)

I V I V I

Fig. 4.2: Division by interruption; a) fifth-progression, b) third-progression

bass toward I. In the first part of the division, both upper voice and bass "attempt" to reach these goals, but their progress is interrupted just short of realization. Motion toward the goal is obliged to start all over again. The second time around the attempt is successful, and  $\hat{1}/I$  is reached. The fact that there is reduplication of the tones of the original progression does not in any way pre-empt the division, but rather constitutes a special characteristic of the interruption form.

Let us now consider an example. Figure 4.3a-d is a graph of the first twenty measures of the final movement of Mozart's Piano Sonata in A minor, K. 310. Here we are dealing with division not of the background structure, but of a transferred form in the foreground. At this level the division serves as the basis for an antecedent-consequent phrase structure. The controlling progression for the entire passage, however, is the undivided descending third-progression  $\hat{3}--\hat{2}--\hat{1}$  supported by the undivided bass arpeggiation I--V--I (see level a). Division is brought to bear with the interruption of the progression in m. 8. The resultant first segment of the division  $\hat{3}/I--\hat{2}/V \parallel$  (see level b) corresponds to the eight-bar antecedent phrase (see levels c and d and the score).  $\hat{3}/I$  reasserts itself in m. 9 and the progression to  $\hat{1}/I$  is subsequently completed (m. 20). This second segment  $\parallel \hat{3}/I--\hat{2}/V--\hat{1}/I$  corresponds to the consequent phrase. Note that the deceptive cadence in

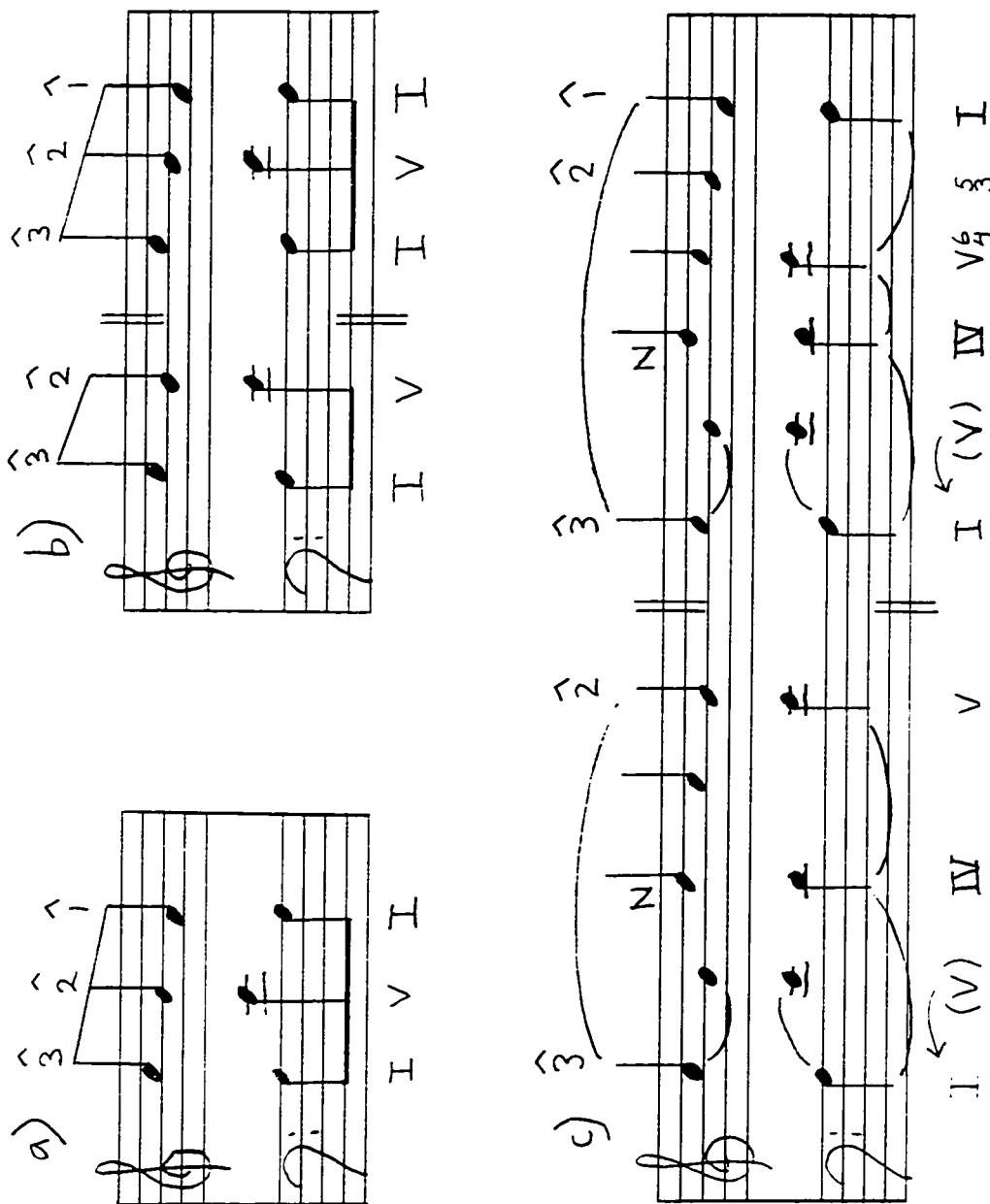


Fig. 4.3: Graph of Mozart, K. 310, III, mm. 1-20

The image displays two systems of musical notation, each consisting of a treble and bass staff. The first system (measures 1-7) begins with a treble staff marked 'd)' and a bass staff. Measure 1 has a treble note with a '3' and a slur, and a bass note with a '6'. Measure 2 has a treble note with a '2' and a slur, and a bass note with a '6'. Measure 3 has a treble note with a '6' and a slur, and a bass note with a '6'. Measure 4 has a treble note with a '6' and a slur, and a bass note with a '6'. Measure 5 has a treble note with a '6' and a slur, and a bass note with a '6'. Measure 6 has a treble note with a '6' and a slur, and a bass note with a '6'. Measure 7 has a treble note with a '6' and a slur, and a bass note with a '6'. The second system (measures 9-19) begins with a treble staff marked '3' and a bass staff. Measure 9 has a treble note with a '3' and a slur, and a bass note with a '6'. Measure 10 has a treble note with a '3' and a slur, and a bass note with a '6'. Measure 11 has a treble note with a '3' and a slur, and a bass note with a '6'. Measure 12 has a treble note with a '3' and a slur, and a bass note with a '6'. Measure 13 has a treble note with a '3' and a slur, and a bass note with a '6'. Measure 14 has a treble note with a '3' and a slur, and a bass note with a '6'. Measure 15 has a treble note with a '3' and a slur, and a bass note with a '6'. Measure 16 has a treble note with a '3' and a slur, and a bass note with a '6'. Measure 17 has a treble note with a '3' and a slur, and a bass note with a '6'. Measure 18 has a treble note with a '3' and a slur, and a bass note with a '6'. Measure 19 has a treble note with a '3' and a slur, and a bass note with a '6'.

Chord progressions are indicated by Roman numerals below the staves:

- System 1: I (1), (V) (2), IV (3), IV (4), V (5), IV (6), V (7).
- System 2: I (9), I (10), (V) (11), IV<sup>5</sup> (12), IV (13), V (14), V (15), VI (16), IV<sup>6</sup> (17), V (18), I (19), I (20).

A double bar line is present at the end of measure 7 and measure 19.

Fig. 4.3 (continued)

**Presto**

The image displays three systems of musical notation for a piano piece. The first system is marked "Presto" and begins with a piano (*p*) dynamic. The music is written in a 2/4 time signature with a key signature of one sharp (F#). Each system consists of two staves: a treble staff and a bass staff. The notation includes various note values, rests, and articulation marks such as slurs and accents. The first system contains 12 measures, the second system contains 12 measures, and the third system contains 12 measures. The piece concludes with a final cadence in the third system.

Fig. 4.3 (continued)

m. 16 leads to an expansion of the consequent phrase from eight to twelve measures.

Crucial to the issue of division is the question, how can the first part of the division ( $\hat{3}/I--\hat{2}/V \parallel$ ) really be heard as a forward compulsion toward  $\hat{1}/I$ ? How can it be heard on a structural par with the second part of the division ( $\parallel \hat{3}/I--\hat{2}/V--\hat{1}/I$ ), which, unlike the first part, actually does end up at  $\hat{1}/I$ ? The present example gives us an opportunity to compare the voice-leading behavior of the first part of the division with that of motion to the applied divider (back-relating dominant). For if the former did lack genuine compulsion toward  $\hat{1}/I$  it would be all but indistinguishable from the latter and its upper-voice counterpoint.

The antecedent phrase itself consists of two sub-phrases, the first of which ends in m. 4. This first sub-phrase is represented structurally in our graph at level c by motion from  $\hat{3}$  to its lower neighboring note supported by motion from I to the applied divider. Characteristic of this configuration is the direction of motion in both upper voice and bass away from a larger structural line. For  $\hat{3}$  ultimately connects over and beyond to the more structural neighboring note  $d''$ , as I connects to IV. Because of this the motions to the lower neighboring note and applied divider are heard as back-inflected (which inflection is

underscored in the bass by the natural harmonic directionality of the ascending fifth-relation).

Now let us consider what happens at the end of the antecedent phrase as a whole. In m. 8 the higher-level contrapuntal motion from  $\hat{3}/I$  is interrupted at  $\hat{2}/V$ . This motion (upper voice plus bass) is left incomplete: there is no resolution to  $\hat{1}/I$ . The question is, is it also left back-inflected? That is, does the initial  $\hat{3}/I$  connect over and beyond the  $\hat{2}/V$ , part of some still higher-level motion that relegates the motion to  $\hat{2}/V$  to a mere excursion away from the main line of action? The answer is no. Specifically, the initial  $\hat{3}/I$  does not connect over and beyond to the second  $\hat{3}/I$  at the opening of the consequent phrase in m. 9. Rather, at that point (m. 9) the music palpably starts all over again. This is not repetition (which would imply continuation of the previous voice leading) but a fresh attack. Both the first and second parts of the division are "attacks" on  $\hat{1}/I$  on the same large scale. The basis of this interpretation is the fact that resolution to  $\hat{1}/I$  is denied in the first part and obtained in the second part in circumstances closely parallel to the first part.

The whole effect can be likened to two swings of a garden pick. Each swing has the same goal: a certain depth of ground. The first swing aims for the goal but comes up short--the motion is "interrupted." The second swing,

traversing the same course as the first, achieves the goal. Neither swing takes priority over the other, for both work together, a coordinated pairing. Thus the motion of the first part of the division,  $\hat{3}/I--\hat{2}/V$ , aims for  $\hat{1}/I$  just as ardently as the motion of the second part. Neither upper voice nor bass can be construed as motion away from a higher line of motion, neither can be back-inflected, because together they constitute the most potent lines of motion there are.

To be sure, the nature of the prolongation leading from the original contrapuntal progression (level a) to the divided structure (level b) is different from that of other prolongations we have so far studied. The difference is reflected in the answer to the question, where exactly are the structural tones of the original progression located within the derived structure? If, as we are claiming, the two parts of the division are of equal structural value, there can be no one-to-one mapping of structural tones between levels. To attempt such a mapping would require placing a subordinate value on some of the tones within the division.

Two such mappings (counterexamples) are given in figs. 4.4 and 4.5. In fig. 4.4 (level b) the  $\hat{3}/I--\hat{2}/V$  of the first part of the (ostensible) division really behaves like motion to the applied divider. It is back-inflected,

Fig. 4.4: Derivation counterexample I

Fig. 4.5: Derivation counterexample II

the  $\hat{2}/V$  (not designated as such in the graph) subordinate to and prolonging the higher-level  $\hat{3}/I$ . The resumption of  $\hat{3}/I$  after the interruption represents continuation of the initial  $\hat{3}/I$ . The second  $\hat{2}/V$  that then follows constitutes the next stage of the structural path of motion.

This interpretation (transposed to A minor) is the one we were arguing against in the Mozart example. It is also the one that Schenker apparently favors in Five Graphic Music Analyses.<sup>2</sup> As we shall see, the interpretation is not supported by the explanation of division in Free Composition. It is not clear, however, that the model itself is implausible. Schenker appears to interpret the recapitulation of Chopin's Revolutionary Etude in this way. In his analysis from Free Composition (fig. 12), he shows  $\hat{3}/I$  at m. 49 moving to a subordinate  $\hat{2}$  and fifth in the bass (m. 58). After the interruption sign,  $\hat{3}$  reappears in subordinate guise (as continuation of the initial  $\hat{3}$ , presumably) over a tonic bass (m. 61). The higher-level motion from the initial  $\hat{3}/I$  is then advanced to  $\hat{2}/II$  at m. 72 (with adjustment to  $\hat{2}/V$  and resolution to  $\hat{1}/I$  to follow).<sup>3</sup> This is perhaps an unusual case. The passage

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<sup>2</sup>Heinrich Schenker, Five Graphic Music Analyses (New York: Dover, 1969). See the alignment of the tones of the fundamental structure with those of the divided structure in the graphs of Bach's "Ich bin's, ich sollte büßen," p. 32, and Chopin's Revolutionary Etude, pp. 54-55.

<sup>3</sup>The graph of this passage in Five Graphic Music Analyses shows the continuity of the initial  $\hat{3}/I$  to m. 72 with particular clarity. See the relation between

consists of two basic phrases in a tonally closed period. The first phrase makes a half cadence on the dominant after eight measures, looking very much like an antecedent phrase. The second (post-interruption) phrase, however, seems too dissimilar to the first phrase to qualify as a consequent in a parallel period. The passage is therefore unlikely to be heard as a pairing of two fully commensurate "attacks" on  $\hat{1}/I$  such as would constitute a real division. Note that the etude as a whole does undergo division by interruption at a higher level.<sup>4</sup>

Turning to fig. 4.5 (our other counterexample in which the tones of the undivided structure are mapped one-to-one into the interruption form) we find something quite different. Here the more structural  $\hat{2}/V$  occurs in the first, pre-interruption part. The second, post-interruption part serves to prolong the final  $\hat{1}/I$  (though possibly within "the territory of the previous harmony," i.e.,  $V$ , in the manner of an auxiliary cadence). In this prolongation the upper voice appears to descend from above the structural line defined by the larger  $\hat{3}--\hat{2}--\hat{1}$ . Such motion outside the bounds set by the structural outer voices seems very strange in a supposedly archetypal structure. Moreover, it is

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"1. Schicht" and "2. Schicht" (level 1 and level 2 below the Ursatz, or fundamental structure), pp. 54-55.

<sup>4</sup>For a genuine division within a division see F.C., fig. 109e3 $\alpha$ - $\gamma$ , Schenker's analysis of Beethoven's "Ode to Joy" theme.

questionable whether the concept of interruption even applies to this model. It does apply to fig. 4.4, for there the motion to the applied divider represents an incomplete form of I--V--I while its upper-voice counterpoint represents an incomplete neighboring-note motion. The motions are interrupted in the sense that their completion is denied. In the present example, however, the completion of the structural  $\hat{3}/I--\hat{2}/V--\hat{1}/I$  is not denied, but merely delayed by a lower-level counterpoint--a normative circumstance of all prolongation.

Figure 4.5 is, however, a model that some critics and commentators have argued is representative of what Schenker really means by the concept of division by interruption. This argument is based in large part on Schenker's explanation in Free Composition and the notation he adopts there, both of which are confusing. Allan Keiler is one critic who takes the view that Schenker contradicts himself, coming out in favor of the model of fig. 4.5 only after implicating the model of fig. 4.4 (or something close to it). Thus Keiler writes, quoting Schenker:

"As a linear progression of a third, the fundamental line  $\hat{3}--\hat{1}$  represents the smallest range of composing-out, the ultimate unity which cannot be further split. Therefore, the fundamental line  $\hat{3}--\hat{1}$  admits of only one form of division, the interruption  $\hat{3}--\hat{2} \parallel \hat{3}--\hat{2}--\hat{1}$ . The initial succession  $\hat{3}--\hat{2}$  gives the impression that it is the first attempt at the complete fundamental line" (p. 36) [§87]. The implication of this [these are now Keiler's own words] is that the melodic descent that follows the interruption is the definitive one, and this end-oriented

interpretation, that is, the claim that the second Ursatz is hierarchically more fundamental than the first, is in line with Schenker's generally left-branching perspective. To be more exact than Schenker, we can translate this interpretation into one of two possibilities:  $(\hat{3}--\hat{2}) \parallel \hat{3}--\hat{2}--\hat{1}$  or  $\hat{3}--(\hat{2} \parallel \hat{3})--\hat{2}--\hat{1}$ . I have bracketed the hierarchically less significant sequence in both cases. The first example would reduce all of the initial descent to a kind of Anstieg (ascent) to the main Urlinie; the second is more in line with Schenker's more usual interpretation of the initial pitch element (rather than the last) . . . as the more essential one.

The second example would be consistent with fig. 4.4. Keiler, however, proposes that Schenker was forced to abandon this model because of the danger that the sequence  $\hat{3}--(\hat{2} \parallel \hat{3})$  might be interpreted as a neighboring-note figuration, contrary to the sense of the interruption. (For the basis of this claim the reader will have to refer to Keiler's article and the model of tonal-hierarchic construction he presents there. If Schenker's analysis from Free Composition of Chopin's Revolutionary Etude is any indication, however, it does not appear that he rejects the interpretation  $\hat{3}--(\hat{2} \parallel \hat{3})--\hat{2}--\hat{1}$  in principle.) According to Keiler, Schenker settled on the alternative model shown in fig. 4.5, "one that," Keiler says, "is absolutely contradictory with his usual modes of analysis." Thus Keiler construes Schenker's words:

"Now we understand that, with respect to the unity of the fundamental structure, the first occurrence of the  $\hat{2}/V$  is more significant than the second" (p. 37) [§90]. And although [Keiler continues] he does not mention the hierarchical status of the first  $\hat{3}$  in relation to the second, his meaning is clear. He now considers the first (interrupted)

descent as the definitive one, the second as a return which this time will lead directly to the conclusive  $\hat{1}$ : "The point of interruption of the first  $\hat{3}$ -- $\hat{2}$  represents a course already run; only the  $\hat{1}$  is still lacking" (p. 37) [§90]. Schenker is here proposing  $\hat{3}$ -- $\hat{2}$  || ( $\hat{3}$ -- $\hat{2}$ )-- $\hat{1}$  as the hierarchical interpretation of the sequence of Ursatz structures, and the contradiction between this interpretation and the preceding one is clear.<sup>5</sup>

Indeed, if we examine Schenker's graphic representation, we find it suggestive of Keiler's reading. Figure 4.6 is based on fig. 21a and b from Free Composition.

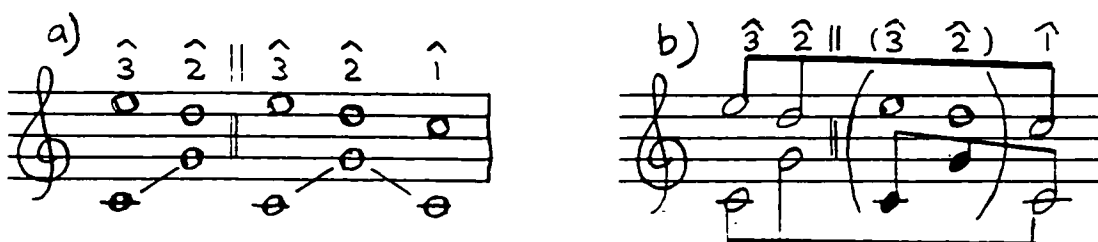


Fig. 4.6: Interruption

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<sup>5</sup>Allan Keiler, "On Some Properties of Schenker's Pitch Derivations," Music Perception, Vol. I, No. 2 (Winter 1983-84): pp. 222-23. Peter H. Smith has recently recapitulated Keiler's argument in "Brahms and Schenker: A Mutual Response to Sonata Form," Music Theory Spectrum, Vol. XVI, No. 1 (Spring 1994): pp. 77-103.

At a, the two parts of the division seem to be of equal structural value (this is consistent with our own interpretation). The graph at b, however, bears a strong overall resemblance to the model shown in fig. 4.5, while the whole notes it features in the second descent may possibly suggest the model in fig. 4.4.<sup>6</sup>

It is questionable, however, whether any of this really concerns structural priority. Does Schenker really mean by the graph of fig. 4.6b to assign different values in the voice leading hierarchy? Or is he perhaps attempting to illustrate something else? Let us see the larger context wherein Schenker makes the statement that the first  $\hat{2}/V$  is more significant than the second.

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<sup>6</sup>A tie to the head-tone from the preceding 3 would suggest the model in fig. 4.4 more strongly. It is not Schenker's practice, however, to use a solid tie to link tones of the same pitch level in this kind of situation. If he uses a tie at all, it is in the form of dashes, as in figs. 24-26 of Free Composition. These figures are models of division for fifth-progressions. While the dashed tie is not inconsistent with the idea that the head-tone of the first descent might connect over and beyond to the head-tone of the second descent, it does not necessarily mean this (cf. Peter H. Smith, p. 82). The dash no doubt indicates application of "the principle of the primary tone" (see F.C., §93). This is a more general concept, meaning the retention in memory of the primary or initial tone of a progression. It is relevant to the apprehension of the individual progression (see Schenker's remarks in "Further Consideration of the Urlinie: II," trans. John Rothgeb, p. 1, second paragraph, in The Masterwork in Music, Vol. II, ed. William Drabkin [Cambridge: Cambridge University Press, 1996]) as well as to the apprehension of the larger construct that the head-tone of the progression may be part of. In the cases of figs. 24-26, the dashed tie may simply call attention to the fact that the second descent starts from the same pitch level as the first, the apprehension of which is vital to the idea of a "fresh attack."

At the first occurrence of  $\hat{2}/V$  the voice-leading undergoes an interruption. The interruption not only creates more content; it also has the effect of a delay, or retardation, on the way to the ultimate goal,  $\hat{1}/I$ . The interruption is able to produce this effect only because it carries within it the fundamental structure, which must achieve its fulfillment despite all detours. Fig. 21b [see our fig. 4.6b] provides a precise view of the constant control that the fundamental structure exerts; only at the goal,  $\hat{1}/I$ , do we see through the game which the interruption has been playing with us. Now we understand that, with respect to the unity of the fundamental structure, the first occurrence of  $\hat{2}/V$  is more significant than the second. This insight is decisive for the fashioning of larger forms and for the impression which they create.

At the point of interruption the first  $\hat{3}--\hat{2}$  represents a course already run; only the  $\hat{1}$  is still lacking.<sup>7</sup>

In the sentence preceding his designation of the first  $\hat{2}/V$  as the more significant Schenker says, "only at the goal,  $\hat{1}/I$ , do we see through the game which the interruption has been playing with us." This suggests that Schenker is not talking about the assignment of structural values, but the process of perception, and that there is some kind of subtle play or challenge involved in it. What might be the more particular nature of this "game" that Schenker refers to? Ernst Oster makes his own conjecture in his explanation of the "contradiction" in Schenker's designation of the first  $\hat{2}/V$  as more significant:

This formulation only seems to contradict Schenker's description of the initial  $\hat{3}--\hat{2}$  as a "first attempt." At the point of interruption, our first impression is indeed that the motion leading to it is "tentative"; the motion comes to

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<sup>7</sup>F.C., §90.

a halt and remains incomplete, at least for the time being. But when we arrive at the final  $\hat{1}/I$ , we are compelled to revise this preliminary impression.<sup>8</sup>

Oster is not, as Keiler contends, trying to have it both ways (not structurally, at least). Rather, he is describing a process of retrospective hearing in which a first impression is ultimately rejected. Thus the motion leading to the point of interruption turns out not to be "tentative" after all. The belated discovery is part of "the game" that the interruption is playing with us. The net result is assignment of structural priority to the first  $\hat{2}/V$ .

Our own reading, however, must differ from this. We would have to interpret "the game" as referring to the challenge of keeping the interruption constantly in view, and that the condition that "only at the goal,  $\hat{1}/I$ , do we see through the game" requires not an act of retrospective hearing at that point but prospective hearing of that point at all times. The first  $\hat{2}/V$  is then "more significant" than the second only in relation to the overall perceptual task. It is more significant because recognition of the special role it plays in "the game" is the key to understanding the unity of the fundamental structure. To be sure, recognition of the role of the second  $\hat{2}/V$  is no less crucial; but it is virtually automatic, as normative resolution to  $\hat{1}/I$  follows as a matter of course. Whereas the proper understanding of

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<sup>8</sup>F.C., n., p. 37.

the first  $\hat{2}/V$  is much more of a challenge and (especially) a revelation.

It is possible that Schenker's emphasis of the first  $\hat{2}/V$  is simply a concession to the role the first  $\hat{2}/V$  plays in larger forms such as sonata form, although this seems doubtful. Unlike the second  $\hat{2}/V$ , the first  $\hat{2}/V$  in a sonata form is often prolonged extensively ("this insight is decisive for the fashioning of large forms and for the impression which they create"). But again, this circumstance does not imply structural superiority for the first  $\hat{2}/V$ .

If all this sounds very conjectural, one hard fact remains: Neither of the models of figs. 4.4 and 4.5 actually involves division of the fundamental line. The first descent in fig. 4.4 cannot represent a segment of the fundamental line simply because part of it (the  $\hat{2}$ ) belongs to a lower level. The same applies to the second descent in fig. 4.5. In neither case does the unitary purposefulness of the original motion (the force of the undivided fundamental line) inform and shoot through the motion of the derived event. The only circumstance in which that can happen is when the tones of the derived event are weighted with the same structural significance as belong to the tones of the original motion.

It may be that the underlying reason Keiler comes to the conclusions he does about Schenker's presentation of

the concept of division by interruption is the way he thinks prolongation in general must work. As part of his critique, Keiler presents a picture of musical structure in the form of a tree structure (hierarchy) featuring his own syntactic categories (e.g., Tonic Prolongation, Tonic Completion). Within this tree structure the derivation of any constituent ultimately leads back to a harmonic degree or area that is being prolonged. Thus prolongation acts essentially upon individual harmonies, which are understood to include any associated melodic tones (thus, for example,  $\hat{3}/I$ ).<sup>9</sup>

Given the normal condition that the left-to-right order of constituents within the tree structure represents the temporal order of occurrence of the constituents in the music, and given the constraint on tree structures that branches shall not cross, it is impossible to derive the divided, interrupted form of a progression from its original, undivided form in the way that we are maintaining Schenker means; that is, such that (in the case of a third-progression) both the first and the second  $\hat{3}/I$ , both the first and the second  $\hat{2}/V$ , and the final  $\hat{1}/I$  are representative of the  $\hat{3}/I$ ,  $\hat{2}/V$ , and  $\hat{1}/I$  of the undivided structure, respectively. This impossibility applies to any tree structure that takes harmonic degrees (or areas) as basic constituents. Thus, for example, the derivation shown

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<sup>9</sup>See also Allan Keiler, "The Syntax of Prolongation" (Part I), In Theory Only, Vol. III, No. 5 (August 1977): pp. 3-27.

in fig. 4.7, which "attempts" to comply with the conditions just stated, violates the constraint on tree structures that branches shall not cross (this example is not intended as an instance or violation of Keiler's model; the point at issue is more general). Given such a grammar, it is rather the kind of derivation shown in figs. 4.4 and 4.5 that is demanded.

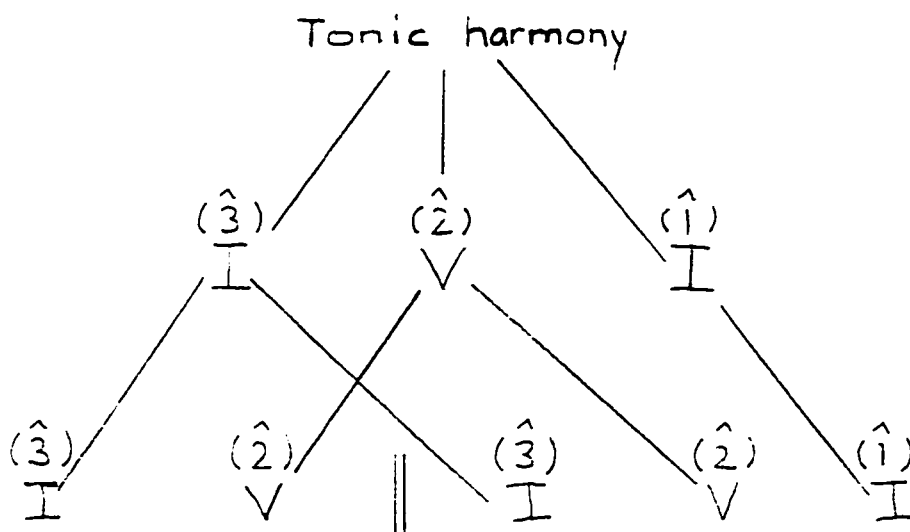


Fig. 4.7: Derivation "attempt" by harmonic degree

Clearly we must either reject our interpretation of division or reject this kind of grammar. In fact we must reject the grammar, but not simply because it fails to model division in the form of interruption. It fails in general to model the essential elements of structure. The essential elements are not harmonic degrees and their associated melodic tones but the motion counterpoints they form. The constituent motions within these counterpoints--the arpeggiations, linear progressions, neighboring-note motions, etc.--are, in turn, the proper objects of prolongation. True, we can and do speak of an individual harmony or melodic tone as "being prolonged," but that is because the prolongation most often (but not always) attaches itself to a particular part of the motion being prolonged. The greater motion itself constitutes the essential structural unit. By the process of prolongation we perceive not so much that the individual harmony or melodic tone has its domain of influence or control expanded (although this is certainly the case) but that the greater motion it belongs to undergoes delay as the result of the generation of new content. Likewise, we perceive the new content not so much as the expression of a single, block-like harmony or the embellishment of a single melodic tone, but as (in our terms) inflected motion, swept up in the larger course of events.

In the case of division by interruption, prolongation does not attach itself to a particular part of the motion being prolonged. We cannot speak of the  $\hat{3}$  or I, the  $\hat{2}$  or V, or the  $\hat{1}$  or I as "being prolonged." We can only say, quite properly, that it is the whole motion  $\hat{3}\text{--}\hat{2}\text{--}\hat{1}$  or I--V--I that is being prolonged. As we said earlier, the nature of this prolongation is different in kind from that of other prolongations we have studied. The essential property of prolongation, however, is present. This is the delay of the original motion by the generation of new content. Whether or not a particular harmonic degree or melodic tone is elaborated in the process is of secondary significance.

If the derivation of division by interruption is to be represented in terms of a tree structure, it would have to look like fig. 4.8. At the root of the tree (or fork of the branch, if we are not talking about the fundamental structure, but a transferred form at a later level) lies the undivided structure as a whole. The branches (links) represent transformation of this whole, while the "leaves" (terminal nodes or constituents) show the resultant division into two new motion counterpoints. The transformation takes the form of prolongation of the upper voice  $\hat{3}\text{--}\hat{2}\text{--}\hat{1}$  into  $\hat{3}\text{--}\hat{2} \parallel \hat{3}\text{--}\hat{2}\text{--}\hat{1}$  and of the bass I--V--I into I--V  $\parallel$  I--V--I. Note that the only real difference

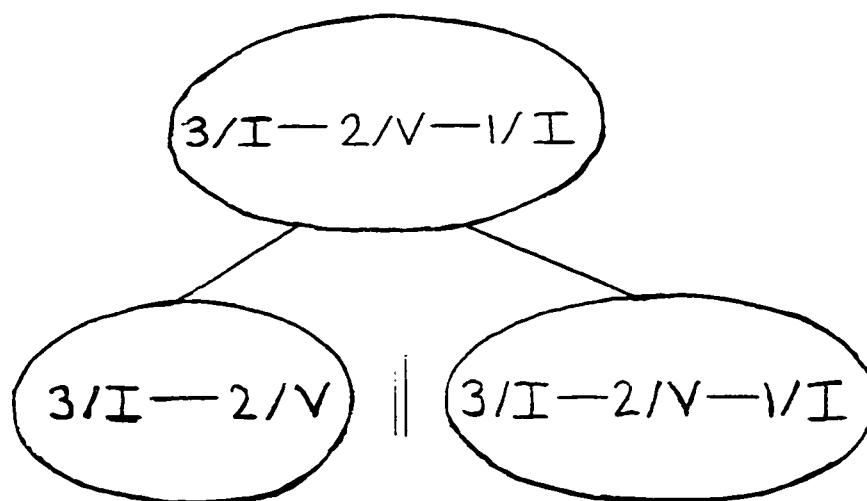


Fig. 4.8: Derivation by contrapuntal progression

between this schematic and the derivation shown in fig. 4.3, levels a-b, is that the latter specifies the tones.

But what about the requirement that both the first and the second  $\hat{3}/I$ , both the first and the second  $\hat{2}/V$ , and the final  $\hat{1}/I$  of the division be representative of the  $\hat{3}/I$ ,  $\hat{2}/V$ , and  $\hat{1}/I$  of the undivided structure, respectively? This requirement is now met, without the violation of syntax we saw in fig. 4.7. The  $\hat{3}/I$  and the  $\hat{2}/V$  of the undivided

structure are simply assigned to both parts of the division, while the  $\hat{1}/I$  is assigned to the second part only. Their distribution is not subject to the constraints of the tree structure because harmonic degrees and their associated melodic tones are not being modelled by the tree structure. Only the motion counterpoints they form are. The assignment of the harmonic degrees and melodic tones follows from the particular way the motions of the division are perceived to behave in relation to the motion of the undivided structure, the way they appear to be shot through with the same high-level, unitary purposefulness.

The close adherence to the quality of motion of the original event is the most significant factor in understanding the inflection of the division. Unlike the straightforward division of the fifth-progression shown in fig. 4.1b, division in the form of interruption involves prolongation of the upper voice as well as the bass and results in expansion of content. This means that the original, undivided progression is heard as being delayed, and the divided progression (the two parts of the division) as making the delay. The fact that the divided progression is nonetheless heard as informed by the same high-level purposefulness of the original means that the sense of delay is all the more forcefully registered. Division by interruption in fact constitutes the strongest, most

securely entrenched kind of delay there is. No other inflection can boast the same level of generated tension or the same level of resultant cohesion.

Thus the antecedent-consequent phrase structure (parallel period) appears as such a natural and convincing musical relation. On a larger scale, there is the example of sonata form. As a formal type, sonata form belongs to the category of "outer form." As is often the case with outer form, the sections of the form do not correlate one-to-one with the parts of the underlying voice leading: thus three sections of form--exposition, development, recapitulation--versus two parts of division by interruption. This kind of asymmetry is not problematic. It indicates that there is more going on than a simple succession of sections. As always, the challenge is to see through to the underlying voice leading so as to hold in view the relation of the sections, phrases, and every other aspect of the foreground, to the greater, unifying stream of motion.

In a sonata form the exposition and development section together fill out the first part of the division, the recapitulation the second part. The  $\hat{2}/V$  of the first part is either reached at the end of the development section, or else established by the second group (i.e., final portion) of the exposition (this is usual in major-key sonatas). In this latter case, the second group prolongs

$\hat{2}/V$  with the aid of a conclusive cadence in the key of the dominant. The development section then represents a further prolongation of  $\hat{2}/V$ , although the prolongation is not so securely established contrapuntally. In major-key sonatas the underlying counterpoint usually shows a motion to the lowered seventh of the dominant over a stationary bass, thus:  $V8--\flat 7$  (see our schematic in fig. 3.1; there the motion to the seventh takes the form of an upward transfer; see F.C., §92). The purpose of the motion to the lowered seventh is to "cancel" the chromatic alteration #7 introduced in the prolongation of  $V$  in the second group of the exposition, to prepare the way for the return to the main tonality in the recapitulation. In minor-key sonatas the underlying counterpoint is  $V\flat 3--\flat 3$  to gain the leading tone (see, e.g., F.C., fig. 40,4). Compared with the second group of the exposition, where  $\hat{2}/V$  receives a much more definitive kind of prolongation, the development section must take on the appearance of an extension or expansion--this despite all the energy and apparent (foreground) modulation it may exhibit.<sup>10</sup>

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<sup>10</sup>That the development in this case should represent an expansion of the exposition is not actually stated by Schenker but it is suggested by his notation. Schenker routinely shows the  $V$  from the exposition as extending through the development. He usually places the interruption sign in the upper voice, and, as a rule, right after the exposition. This might seem to imply that, contrary to what the bass indicates, the development belongs not with the exposition but with the recapitulation (see, e.g., F.C., fig. 47). What this placement actually seems to reflect, however, is the original, pre-expansion extent of

On the other hand, in the case where the development section serves to bring the voice leading up to  $\hat{2}/V$  in the first place (after the second group of the exposition has acted to prolong some other harmonic degree, e.g., III, understood to be a way station between I and V), the development section must, as a section, appear in a different light. No mere expansion, its motion must be seen as part of the primary mission, the getting to  $\hat{2}/V$ . There can be no lurking sense that the main work has already been done.<sup>11</sup>

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the first part of the division. The interruption is heard as "really" occurring there as the expression of a rhythmically or durationally more basic middleground. The development is then heard as an expansion of that middleground, as something "added on." This involves a rather subtle idea. The  $\hat{2}/V$  is prolonged or extended through the development, but within a lower order of structural time. Throughout, the higher-level/higher-order course of motion remains in a "state" of interruption. In effect, the interruption itself is expanded from a dimensionless point into a whole section of sonata form.

The term expansion has a specific technical meaning. A passage qualifying as an expansion has a relation to what Schenker calls a metric prototype, which can be either in the foreground or in the middleground. In addition to §297 of Free Composition, the interested reader should consult chapter 7 of William Rothstein's dissertation, "Rhythm and the Theory of Structural Levels" as well as Carl Schachter's "Rhythm and Linear Analysis: Aspects of Meter," The Music Forum, Vol. VI, Pt. 1 (New York: Columbia University Press, 1987), p. 40ff. It is the present author's feeling that the development section which acts further to prolong or extend  $\hat{2}/V$  does qualify as an expansion in this technical sense.

<sup>11</sup>David Headlam writes: "In major key sonatas, where the exposition ends in V, developments are ultimately reducible, since they have no true harmonic role. In minor sonatas, on the other hand, developments have definite tonal functions (to go from III to V) and so presumably can define a tonal phrase" (from a review of William Rothstein's Phrase

The point we want to emphasize is that, in any case, the voice-leading significance of  $\hat{2}/V$  remains the same. Whether or not it is prolonged in the exposition and sustained further in the development,  $\hat{2}/V$  represents the limit of the motion of the first part of the division. Interruption is inevitable. Yet one might wonder about the preparatory role that V plays in relation to the I of the recapitulation. Does this not tend to argue against the idea of interruption?. In the event, the actual leading of the voices to I is a relatively low-level affair. Thus, although V8-- $\hat{7}$  "tends to bridge over the structural division by leading into the second branch of the interrupted progression," as Carl Schachter says, the division itself remains essentially intact.<sup>12</sup> (Cf. the

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Rhythm in Tonal Music in Journal of Musicological Research, Vol. XII (1993): p. 330). He goes on immediately to ask: "But can we treat development sections in major and minor so differently, depending only on the tonal motion for our definition of internal phrases and formal status?" While we are not concerned strictly with phrase structure, we can answer from a more general point of view (from the point of view of inflection) in the affirmative.

<sup>12</sup>Carl E. Schachter, "A Commentary on Schenker's Free Composition," Journal of Music Theory, Vol. XXV, No. 1: p. 132. When the seventh in the V $\hat{7}$  has been transferred upward over the course of the development, its resolution downward to the 3 of the recapitulation can suggest, in the case of a fundamental line from  $\hat{3}$ , a large-scale neighboring-note formation,  $\hat{3}$ -- $\hat{4}$ -- $\hat{3}$ . The effect, however, is deceptive, for the motion to the neighboring seventh lacks the proper structural bass support (as in I--V, which support rather belongs to the motion to  $\hat{2}$ ). "Therefore," says Schenker, "in Fig. 23 [q.v.], the interruption does predominate; it suppresses the deceptive effect of the seventh as a neighboring note." See F.C., §92.

bridging over of the boundary of higher-level phrases by a lead-in auxiliary cadence, as discussed in the last chapter.)

The onset of the recapitulation announces the second, post-interruption part of the division, as  $\hat{5}/I$  or  $\hat{3}/I$ , as the case may be, is reestablished. Like the consequent phrase in a parallel period, the recapitulation represents a rebeginning, a new attack on  $\hat{1}/I$ . To hear the recapitulation in this way is not at all the same as hearing it simply as a return to the opening tonality and themes, as though there had been no kind of dramatic break involved. The interruption heightens the sense of drama of the whole composition.

But why should this be the case, that is, why in a movement in sonata form in particular? The interruption itself tells only half the tale. Our answer must start with the fact that the divided structure embodies the most tension-charged and therefore cohesive of inflections; the product, as we have discussed, of the most securely entrenched delay of the original, more background motion. Combine this level of tension and cohesiveness with the expansive compositional treatment characteristic of the sonata, and the result will naturally favor the "dramatic." That is, the music will be both expansive and tightly wired at the same time. A composition based on another form may be as long and as expansive as a sonata-form movement, but

unless the structure of its voice leading is based on division by interruption that composition is likely to sound less driven overall.

One piece that is not in sonata form but that certainly sounds driven is Chopin's Revolutionary Etude, which we have already had occasion to refer to. It is a shorter and less expansive kind of piece than a sonata-form movement. There is, for example, no tonicization or extended prolongation of non-tonic harmonic degrees such as leads to the impression of new key areas. The piece displays the tight organization characteristic of division by interruption in a much more bare-knuckled way. The impression it gives is less like a full-blown, elaborated drama than a grinding frontal assault (or rather two frontal assaults,  $\hat{3}--\hat{2} \parallel \hat{3}--\hat{2}--\hat{1}$ ).

There are, however, two conspicuous expansions which Schenker indicates in his graph of the piece by parentheses (see Free Composition, fig. 12). The first expansion consists of the opening eight measures, an introductory lead-in which Carl Schachter describes as an "extended upbeat" to the beginning of the principal tonal action.<sup>13</sup> The harmony that is outlined is designated by Schenker as a neighboring-note harmony whose resolution to the tonic is the equivalent of V--I (an auxiliary cadence).

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<sup>13</sup>Schachter, "Rhythm and Linear Analysis: A Preliminary Study," p. 302.

This same material is then repeated (slightly modified) in mm. 41-48, right before the resumption of the I of the second part of the division. Again, it functions as a lead-in and is presumably heard (at some level) as an extended upbeat to what follows. This time around, however, it also acts to extend the  $\hat{2}/V$  of the interrupted progression from the first part of the division.

This particular passage provides a kind of parallel, in the small, to the development section in a sonata form where the  $\hat{2}/V$  is likewise extended. In both cases, the extension involves an expansion, an expansion which in the present case is relatively easy to hear as such. The present case also shows an interesting overlap. Schenker puts the interruption sign in m. 41, right upon the arrival of the outer voices at  $\hat{2}/V$ . The expansion begins immediately (m. 41) with the return of the opening, introductory material, which, in addition to pointing toward resolution to the coming I, now extends (prolongs)  $\hat{2}/V$ . As William Rothstein shows, however, the proper duration of the  $\hat{2}/V$  itself is a full four measures, for reasons of hypermeter. Thus it spills over into the expansion. The "extra" measures actually produced by the expansion amount to only four in number (instead of eight).<sup>14</sup>

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<sup>14</sup>See Rothstein, "Rhythm and the Theory of Structural Levels," p. 230, Ex. 9.7b. Note that Rothstein's analysis is a rhythmic reduction employing durational reduction notation.

Let it not be thought that division by interruption automatically presumes the kind of energy that this piece exhibits or that one in sonata form may exhibit. The operative word for pieces based on division is not "driven" or "dramatic," but tight. There is no reason why a piece based on division should not be, for example, "serene" in its effect. Chopin's Prelude in G major (Op. 28, No. 3) is a case in point. This piece is unusual for encompassing little more than an antecedent-consequent parallel period. By the use of expansions, however, Chopin is able to flesh-out the period and turn it into a complete piece. The result is unruffled and smooth-flowing.<sup>15</sup>

Yet the piece is nothing if not tight. We might add that quite a few of the shorter preludes in Op. 28 are based on division by interruption, and that they all seem to share a kind of tightness that is in evidence here. Sometimes the tightness borders on constriction (see, for example, Prelude No. 1). These pieces are in fact very well suited to showing off the structural tension of division in a particularly clear and cogent way, just because of their brevity. In longer pieces the tension will tend to be more diffused, the relatedness of the parts and the cohesiveness of the whole less obvious.

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<sup>15</sup>See Carl Schachter's analysis in "Rhythm and Linear Analysis: Durational Reduction," The Music Forum, Vol. V (New York: Columbia University Press, 1980), pp. 202-210.

In all cases, however, the division provides the strongest kind of "glue" there is to hold the piece (or section) together. The inflection of the division in relation to the original, undivided progression is as tight as possible, ensuring that however the division is subsequently transformed into the foreground, the inflection will make itself felt to the advantage of the sense of unity.

## CHAPTER V

### UNITY AND DIFFERENTIATION

Quality of motion arises as a consequence of harmonic and contrapuntal relations. As an attribute, however, it is predicated of individual voices. And just as it is wont to vary horizontally, in the same voice, from one contrapuntal progression to the next, so it is wont to vary vertically, in the same contrapuntal progression, from one voice to the next.

The quality of a line in the upper voice reflects the fact that the upper voice is the principal melodic voice. There is a natural tendency, stronger than in the other voices, toward stepwise motion. In qualitative terms this may be understood as a natural tendency toward profluence, or "flowingness." There is also a tendency toward embellishment and prolongation through multiple levels of structure. This means that the inflection found in the upper voice is apt to be relatively complex and "layered." In relation to an inner voice, the upper voice also distinguishes itself by the high concentration of purposefulness that gathers to the melodic line. The upper voice stands out, the inner is overshadowed.

Indeed, the inner voice expresses its own essential quality as an auxiliary and subordinate force. Even when it forms a line that projects itself fairly strongly, the inner voice is ultimately dedicated to supporting or otherwise vivifying the presentation of the upper voice (even if this involves becoming the upper voice, as in reaching-over; see chapter 2). The bass, for its part, matches the concentration of purposefulness of the upper voice in the progression of the harmonic scale-degrees. This force (harmonic progression) also affects the more melodic segments of the bass, those that are essentially connective to the scale-degrees, thus serving ultimately to distinguish the entire bass.

Each voice expresses its own kind of quality, even as all the voices together form one harmonious whole. This is such a normative circumstance of tonal music that the role played by the harmonious whole may not be fully appreciated. Qualitative differentiation of voice is not something that exists independent of the unity of the musical context (it is not, for example, a function of mere register). Rather, it arises as a consequence of the unity of the musical context. It is, in other words, a product of composing-out. And just like composing-out it takes its own particular form in the finished composition, more or less complex and profound, as the case may be. Thus beyond the essentially generic differences described above, specific



inflected step c--B. Thus the two outer voices are inflected at the same time, but in contrary ways. To be sure, the back-inflection in the bass is not highly pronounced; but it is enough to provide an interesting and unusual contrast with the upper voice in what might otherwise seem a rather uneventful opening (all those repeated pianissimo eighth-note chords). The pattern is repeated starting in m. 5, and again later starting in m. 14 and m. 18.

A more intense effect of contrariness comes about when the bass moves not by step but by fifth. An initial ascent or arpeggiation (to  $\hat{5}$ ) counterpointed by motion to the applied divider can be particularly arresting in this respect: for example, the opening of the well-known variation theme by Paganini (the 24th Caprice for solo violin; see F.C., fig. 40, ex. 9). As in the Waldstein sonata, the upper voice (forward-inflected) seems to take hold of the music while the bass (back-inflected) seems to let go. An example of the reverse of this relation occurs in the exposition of the first movement of Mozart's Sonata for Piano in C, K. 279, which we have already discussed (see fig. 3.5). In mm. 17-20, the upper voice shows a third-progression d'--c'--b' descending from  $\hat{2}$ . As a projection away from a higher-level motion (the line  $\hat{3}$ -- $\hat{2}$ ), this progression is back-inflected. The bass, executing the

auxiliary cadence (VI#)--II--V--I (in the local key of G major), is forward-inflected.

These examples are only meant to show that differentiation of voice can involve even "contrary" qualities of motion. In all cases the controlling principle is that of unity: we hear the different qualities because we hear a relation to higher structure. It happens that in the examples above the relation to higher structure involves rhythmic displacement. In the Waldstein sonata the structural tone  $g'$  has been pushed forward in the foreground. The agent of the displacement is the opening ascent,  $e'--f\#'-g'$ , which in its "advanced" rhythmic position counterpoints the back-inflected  $c--B$ . The pattern is continued with the subsequent upper-voice tone  $f'$  and the ascent leading to it,  $d'--e'--f'$ , counterpointing  $B\flat--A$ . To hear the difference in inflection between the ascents and their bass lines is to hear the displacements, which is to hear through to the higher-level counterpoint, thus:  
 $g'/c--f'/B\flat--(f')/A\flat--(f')/G$  (see the diagonal lines in the graph). At the higher level the position of  $g'$  is normalized back to vertical alignment with  $c$ , that of  $f'$  to vertical alignment with  $B\flat$ . The two other patterns that start in mm. 14 and 18 resolve in the same basic way, as do, mutatis mutandis, the opening of the Paganini theme and the passage in the Mozart example (in the Mozart example it is the bass that is displaced).

The relation between differentiation of voice and unity is organic. The proper quality of a voice is essentially a function of the particular role the voice plays in the presentation of the whole. The stronger the sense of the whole, the stronger the sense of the proper quality of the voice--highly individualized, or merely supportive, as the case may be. This state of affairs necessarily involves subordination. We have already discussed the auxiliary nature of a line in an inner voice. The principle of subordination in fact applies to all the voices as far as melody is concerned (that is, apart from considerations of harmonic scale-degree progression). When two or more voices proceed at the same time, one voice must dominate. Schenker describes the phenomenon in terms of linear progressions:

When two or more linear progressions are combined, it is essential to determine--from background, middleground, and foreground--which of them is the leading progression. In relation to this leading progression the others must be considered only as counterpoints, whether they proceed in parallel, oblique, or contrary motion, in outer or inner voices. Once one has decided whether the leading linear progression is in the lower or in the upper voice, one must understand the counterpointing progressions as upper or lower thirds, tenths, or sixths.<sup>2</sup>

It is not always easy to determine the leading progression. In the Waldstein example it might be felt that the ascent e'--f#--g' should lead because it outlines an

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<sup>2</sup>F.C., §221.

interval which agrees with the controlling harmony of C. Our analysis, however, implicates the bass line c--B as leading progression. This motion is shown in the graph as bringing about a 5--6 exchange, the purpose of which is to eliminate in the foreground the parallel fifths of the middleground (g'/c--f'/Bb). The 5--6 exchange forms the essential voice leading, with the introductory ascent acting merely to displace the  $\hat{5}$  "gratuitously" and make itself an upper counterpoint to c--B. It is possible, however, that a different 5--6 exchange is at work, one involving not c--B but c--Bb, in relation to which the pattern of displacements is not gratuitous but integral; but the parallel passage beginning in m. 14 does not support such an interpretation.<sup>3</sup>

In our reading c--B is the leading progression; in the interpretation just mentioned it would be e'--f#'--g. In either case the principle of subordination applies: one progression leads, the other follows. The principle is not a law of nature, however, only of composing-out; and like other man-made laws, it can be stretched or broken. Indeed, there is nothing to stop a piece of music from falling into true equality of parts if the composer wants to write it that way. Schenker takes a dim view of such writing. In a footnote from Free Composition he refers to the "pernicious

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<sup>3</sup>Carl Schachter offers a helpful explanation of the concept of the leading progression in "A Commentary on Schenker's Free Composition," pp. 138-41.

practice of counterpointing two independent and equally important motives against one another," adding that Wagner does it in the Prelude to Die Meistersinger. "It would be wrong to invoke fugal technique in justification of such a counterpoint, for the countersubject which accompanies the subject or the answer in a fugue is subordinate to them in importance."<sup>4</sup>

The counterpoint that Schenker must be thinking of from the Prelude to Die Meistersinger is no doubt from the music beginning at m. 158. A sketch of the first eight measures of this music is shown in fig. 5.2. The main theme

158 159 160 161 162 163 164 165

I ? I II (I ———) ? V (II)

Fig. 5.2: Graph of Wagner, Prelude to Die Meistersinger, mm. 158-65

<sup>4</sup>F.C., n., p. 57.

*molto espressivo la melodia*

*p*

*mf e marcato*

The musical score consists of three systems of piano music. The first system begins with the instruction *molto espressivo la melodia* and a dynamic marking of *p*. It features a melody in the right hand with slurs and triplets, and a bass line with chords and triplets. The second system continues the piece with a dynamic marking of *mf e marcato*. The third system concludes the excerpt with further melodic and harmonic development, including slurs and fingering numbers.

Fig. 5.2 (continued)

from the opening of the prelude is set in the bass against the Prize Song melody in the upper voice. Both are full-blown melodies in their own right, and each has in fact acted in the capacity of undisputed principal melody in earlier passages where the setting is more orthodox (see m. 1ff. and m. 97ff.). The problem here is that neither melody will yield: each insists on staking out its own tonal space. Yet just because the other will not yield, each is prevented from encompassing its own space totally securely. This circumstance is reflected in terms of quality of motion.

The analytical sketch shows the progressions that each voice seems to move through--more or less independent of the other, as it were. The harmonic degrees are those suggested by the bass line; the upper voice, however, does not always agree with them. Let us consider the arrival of the upper voice on c'' in m. 160. As far as the upper-voice melody itself is concerned, there seems to be no doubt that the c'' is a structural tone: it serves as the goal-tone of the descending arpeggiation g''--e''--c'' and also as the point of departure for the subsequent diminution c''--e''--g''--f''. Furthermore, its arrival at the beginning of m. 160 sounds definitive--there is no displacement involved. Yet a shade is cast over the sense of structural arrival at this point because the c'' is set not against I (or VI or IV) but against what would appear to be V. Can this c'' really be a significant goal of motion

(and point of departure) if it is so unstable harmonically? But the status of the bass itself is in doubt: how can it be heard to uphold V when V is contradicted by the upper voice?

In the bass it seems that the sixth-progression G--e (mm. 159-61) ought to impress itself strongly as a motion powered by V--I. These harmonic degrees are implied by the bass diminutions. Yet the upper voice contradicts not only the V but also the I, since the underlying counterpoint to the bass e is b' (appearing on the third quarter of m. 161; the preceding c'' is an appoggiatura--or so the Prize Song melody would seem to indicate). Thus the quality of motion of G--e, as well as that of the larger progression it is a part of, c--G--e, must sound somewhat ambiguous or vague.

It appears that by retaining their independence, the progressions of the upper voice and the bass lose a part of their qualitative identity. In fact the resulting ambiguity is the logical expression of a lack of tonal unity. That is, from the point of view of composing-out, the two melodies really do not seem to belong to each other; they do not act as one. Let us add that this is not to deny that their counterpoint may have other musical or dramatic value.<sup>5</sup>

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<sup>5</sup>Apparently even J. S. Bach can write this way. Witness the famous strings melody of the fourth movement of Cantata 140 ("Wachet Auf"), with which, as Albert Schweitzer notices, "the chorale is combined dissonantly, as if it had nothing to do with it" (quoted by David Stern in "Hidden

In a tonally unified structure every progression relates to every other progression, and in the widening net of relations quality of motion acquires more and more definition--not less. Differentiation of voice can be highly nuanced because the inflection of the individual line can be highly nuanced. Indeed, the inflection of the individual line can incorporate "contrary" qualities of motion itself. Figure 5.3, taken from Felix Salzer's Structural Hearing, is a graph of mm. 1-30 of the first movement of Beethoven's Piano Sonata in G Major, Op. 31, No. 1. In the bass Salzer shows the foreground auxiliary cadence IV--(II)--V--I (of V) leading into the d of m. 11. Since this d also marks the completion of the larger motion from I to the applied divider (see the V with the arrow pointing backwards), the auxiliary cadence must be understood not as forward-inflected but as forward- within back-inflected: even as it rushes forward toward d, it is held back, reined in (the higher-level inflection permeates the lower).<sup>6</sup>

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Uses of Chorale Melodies in Bach's Cantatas," in Trends in Schenkerian Research, p. 124). As in the Wagner example, each melody pursues its own structural aims. In m. 14, for example, the strings melody appears to cadence and recommence while the chorale melody, just underway, appears to be busy outlining the tonic harmony (i.e., no cadence yet).

<sup>6</sup>The changes in dynamics seem especially apt in view of the inflection. The change from *p* to *f* at the upbeat of m. 8 helps the entrance of the auxiliary cadence sound like a true burst of applied, forward-inflected energy; but as though to remind us of the prevailing force

## 440 BEETHOVEN Piano Sonata, G Major, Op 31, No. 1

The image shows a musical score for a piano sonata by Beethoven. The score is in G major and consists of two staves, treble and bass clef. The music is marked with a 'a' and a fermata. Below the staves, there are structural hearing annotations. The first staff has a 'I' below it. The second staff has a 'IV (II)' below it, with a bracket underneath it. Below this bracket is a 'V' with a 'of V' below it. The third staff has a 'I' below it. The fourth staff has a 'IV' below it, with a bracket underneath it. Below this bracket is a 'V' with a 'of IV' below it. The fifth staff has a 'I' below it. The sixth staff has a '(II)' below it. The seventh staff has a 'V' below it. The eighth staff has a 'I' below it.

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Fig. 5.3: Structural Hearing, ex. 440

There is no ambiguity here, only an interesting case of composite inflection. Compare this with the situation depicted in fig. 152, ex. 7, of Free Composition,

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of the higher-level back-inflection, the dynamic is changed back to *p* in m. 10 for the concluding segment of the cadence.

Schenker's analysis of the bass line of Chopin's Mazurka, Op. 30, No. 2. The piece is divided into two sections, the first in B minor and the second and longer in F# minor. Schenker cannot be sure, however, of the tonality of the piece as a whole. In Schenker's graph the background bass progression is shown in the part labelled "NB." It takes the form of an ascending fifth that might conceivably be I--V (the V is "divider") in B minor or IV--I in F# minor. If the piece is read as being in B minor, the I--V might conceivably be a motion to the applied divider. If the piece is read as being in F# minor, the IV--I might conceivably be an introductory motion. The one reading would implicate a back-inflection, the other a forward-inflection. But if there is genuine uncertainty as to the controlling key, then there is really no inflection at all, just ambiguity. Again, this is the logical expression of a lack of tonal unity. The two sections do not seem particularly to belong together because the higher motion that they might be part of, that might subsume them, cannot properly assert itself. In effect, the two key areas exist as independent and equally important centers of gravity.<sup>7</sup>

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<sup>7</sup>Such a key relation is not typical of the music of Chopin. It is much more characteristic of the music of Wagner (or rather the music dramas of Wagner). See, for example, Robert Bailey, "The Structure of the Ring and Its Evolution," 19th-Century Music, Vol. I (1977): pp. 48-61,

Let us note, in conclusion, that the very idea of inflection must argue against a common misunderstanding concerning the nature and purpose of Schenkerian analysis. It is often assumed that Schenkerian theory regards deep structure as more significant than surface structure and that the chief business of Schenkerian analysis is reduction (i.e., the discovery of deep structure, especially the fundamental structure). The query then arises: How can Schenkerian analysis really distinguish a great masterwork, when lesser works can just as easily be reduced to their own fundamental structures? If the reduction of these other works yields essentially the same deep structure as the

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and the concepts of expressive tonality and associative tonality.

With respect to the Chopin Mazurka, Schenker says, "a fundamental line and V#3--I in the bass are also lacking here; the uncertainty which rises about the tonality (see N.B.) almost prevents us from calling this Mazurka a completed composition" (F.C., §307). Because of its ambiguity, the incomplete structure seen in this work must differ from the kind that Schenker can identify with a true or strict prelude, that is, one that has an implied or hypothetical continuation that effectively forestalls ambiguity. Schenker regards the incomplete bass V--I of Chopin's Prelude in A minor, Op. 28, No. 2 as of this kind (see F.C., fig. 110, ex. a3), as well as the incomplete bass I--V of the third of the Twelve Little Preludes by J. S. Bach (see F.C., fig. 152, ex. 6). By the prelude concept the bass of the one work can be heard as forward-inflected, because leading into a hypothetical higher-level stream of motion; that of the other work as back-inflected, because projecting away from a hypothetical higher-level stream of motion. There is no ambiguity of governing tonality or of quality of motion in either work.

reduction of the masterwork, then what, by Schenkerian lights, is the difference?

In fact, Schenkerian analysis is not reductive. Even though a graph is sketched from foreground to background, the object is never just the discovery of the next higher level. What one in fact is attending to are the relations between the levels, the feel of one level against another. The analysis could not proceed otherwise. One hears the inflections of a lower level at the same time as one discerns the motion of a higher. This hearing is what is symbolized in the graph by the arrangement of the levels from foreground to background.

The inflections ultimately reach back through every level, forming one complete relational network. This totality constitutes the comprehensive hearing of the piece, symbolized by the graph as a whole. There is, of course, no automatic way for the graph to indicate whether the piece is a masterwork. But the totality of relations does distinguish the particular work, the particular course of the composing-out from background to foreground, whereby things that are valuable to the listener may be discovered.

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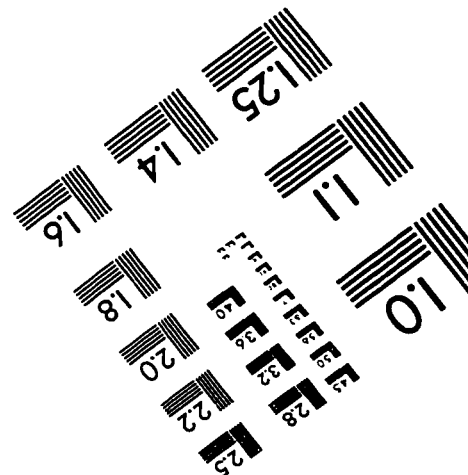
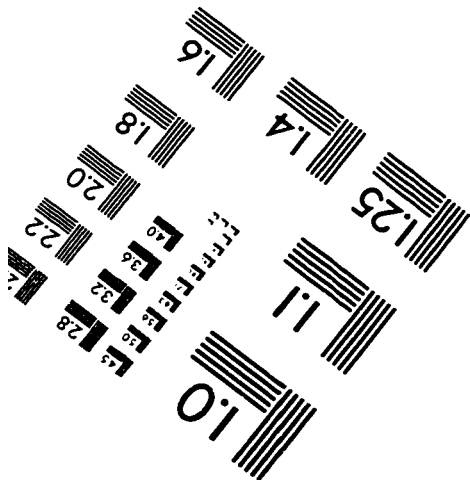
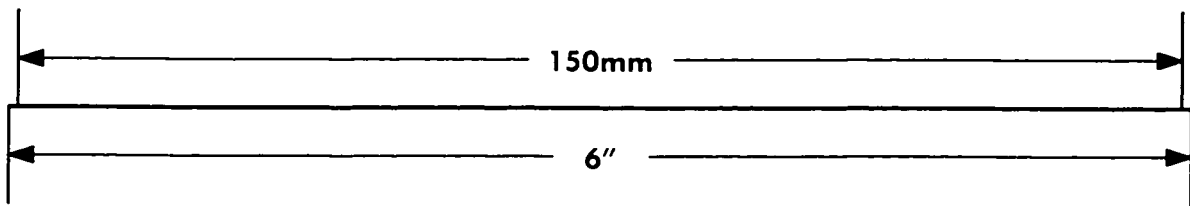
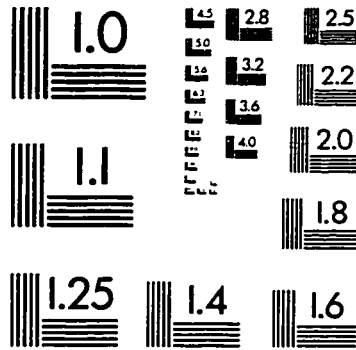
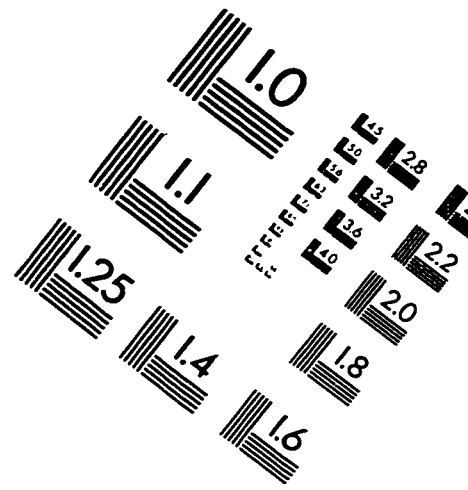
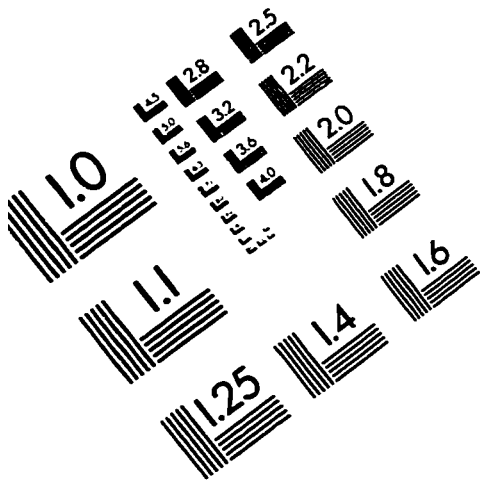
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## VITA

Kennett Lehmann was born in 1955 in St. Louis, Mo. He graduated from Washington University in 1985 with a B.Mus. degree in music composition. In 1989 he received an M.A. and in 1998 a Ph.D, both in music theory, from the University of Washington.

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