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**The roles of symmetrical measure groups in Mozart's piano sonatas**

**Delfausse, Robert Alan, Ph.D.**

**City University of New York, 1988**

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THE ROLES OF SYMMETRICAL MEASURE GROUPS  
IN MOZART'S PIANO SONATAS

by

Robert A. Delfausse

A dissertation submitted to the Graduate Faculty in  
Music in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy,  
The City University of New York

1988

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This manuscript has been read and accepted by the Graduate Faculty in Music in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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## Abstract

THE ROLES OF SYMMETRICAL MEASURE GROUPS  
IN MOZART'S PIANO SONATAS

by

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Advisor: Professor Joel Lester

This dissertation focuses on the listener's expectation while listening to a phrase (or to other types of measure groups) that the phrase will be completed within a specific number of measures. The author discusses groups of examples from the piano sonatas in order to show that Mozart uses several techniques to create and contradict this expectation in subtle ways. Each of these techniques requires the listener to reinterpret a passage's rhythmic structure, which has a psychological effect that is dramatically appropriate at specific points within a movement. There are, for example, two techniques by which Mozart contradicts the listener's expectation that a cadence will occur at a particular moment. By immediately creating a new, equally strong expectation of when the cadence will occur, Mozart postpones and dramatizes the arrival of the cadence. Two other techniques draw the listener's attention to a modulating measure group in a dramatic way, underscoring the structural significance of the key toward which it moves.

A symmetrical measure group, as defined in the disserta-

tion, has an exclusively duple-ordered structure; its length in measures is equal to some power of two (two, four, eight, etc.). Mozart's music often prompts the listener to expect a symmetrical measure group after hearing little more than half of such a group. The ease with which symmetrical structure can be implied allows Mozart to create and contradict the listener's rhythmic expectations with great subtlety. The contradiction of the listener's expectations often involves elision (abridgement) of the implied symmetrical group by a new measure group. Mozart's elisions of eight-bar groups frequently occur well before the final measure. It is likely that most listeners and performers feel the effects of such subtle elisions without being aware of their basis in symmetrical structure.

In the final chapter the author describes in greater detail the listener's gradual perception of a large symmetrical measure group. He then distinguishes between the analytic approach of the dissertation, based on this gradual perception, and several analytic approaches presented in the recent theoretical literature on rhythm.

## PREFACE

This dissertation describes rhythmic structure in Mozart's piano sonatas by examining the listener's chronological experience of hearing various passages. This approach has been suggested by the passages themselves, in which Mozart seems to employ the listener's ability to perceive rhythmic structure as a basis for increasing the dramatic dimension of his music. A constant focus throughout this study, one that allows us to recognize a special relationship between Mozart and his listener, is the listener's formation of an expectation of how long a particular measure group will last.

This dissertation focuses on the foreground of Mozart's music. Heinrich Schenker's theory of levels of tonal structure has become a consistent and invaluable basis for today's theoretical discussion, and it might well be expected that any new study would distinguish among foreground events in terms of their architectural importance within the tonal structure of a movement. This study, however, considers tonal events primarily within the context of the foreground rhythmic structure of a movement--a structure that is described as a succession of measure groups. The premise of the study is that foreground rhythmic structure has its own grammar, a grammar necessary not only to

articulate important tonal events, but to control the pace at which all events in the movement occur. A focus on this kind of rhythmic structure allows the analyst to recognize the dramatic aspect of a movement's unfolding in time. This study regards all measure groups within the rhythmic structure of a movement as equally important in this dramatic sense, even when the groups obviously contrast in terms of their hierarchical importance within the movement's tonal structure.

The reader may also be surprised at the absence in this study of the terms expansion and extension, terms that have been a part of our analytic vocabulary for several decades, and that might seem appropriate to describe many of the passages I discuss. I have avoided these terms because they do not adequately describe, with regard to Mozart's music, the independent rhythmic structure and dramatic function that unexpected measures can have. As stated above, this study gives equal attention to all discernible measure groups, even those that might be dismissed as mere expansions or extensions of groups considered to be more essential to the musical fabric.

A few words should be said about the listener whose perceptions play such an integral role in this study. The listener I have in mind may be either a trained musician or a layman having only a basic familiarity with music of the Classical period. In either case I assume that the listener

is attentive, and is sensitive to the elements that can imbue a movement with a sense of drama. I should also stress that the perceptions and expectations I ascribe to the listener probably do not exist on a fully conscious level. This would be equally true of the experienced listener who can anticipate a movement's every turn.

The reader may legitimately question whether the listener just described is a living, breathing person or, rather, a hypothetical construct. In the first case, the assertion that a given passage will elicit a specific expectation from any listener fitting the above description is clearly untenable. In the course of reading this study, the reader will no doubt repeatedly assume the role of the listener, questioning whether he or she has at a given moment the expectation I describe. Understanding "the listener" in this concrete sense, the reader should freely substitute the phrase "may expect" whenever I state that the listener "expects" or "certainly expects" a measure group to last a certain number of measures.

The reader should also regard the listener described in this study as a hypothetical construct. It will be seen that the expectations of this hypothetical listener arise in direct response to the presence of certain features in a given passage. The features necessary to trigger an expectation in this listener are outlined in the first chapter, and serve as the basis for discussing each of the musical

examples in the dissertation. Whenever I state that a passage does or does not strongly elicit an expectation, the statement reflects not only a subjective judgement, but the extent to which these same features are present in the passage.

Regarding the listener in this hypothetical sense, as a listener who responds with complete consistency to the presence of certain features in a passage, our attention is shifted to the music itself, and to the fact that passages from all periods in Mozart's creative life seem to address this hypothetical listener in the same way. Putting aside the issue of whether an actual listener has a specific expectation, we can examine this dissertation's principal assertion: that Mozart repeatedly attempts to create an expectation in his listener. This kind of assertion about a composer's intent is most dangerous when it is made with regard to a single passage. The assertion is less irresponsible, however, if it is stated as having resulted from a process of inductive reasoning, its strength resting on the similarities among numerous passages that individually suggest the composer's intent. The reader should then regard the assertion with an appropriate degree of skepticism, but must also examine all of the passages that are the basis for the assertion.

Many of the statements made in this study apply specifically to the piano sonatas. Yet the reader should be aware

that my interest in this topic first arose while examining a passage in one of Mozart's piano concertos, and that my sense of the topic's validity followed a broad survey of works by Mozart in various genres. Recognizing principles of rhythmic structure common to examples from all periods, I then chose the piano sonatas as a representative body of Mozart's works, in order to uncover the variety of musical situations in which these principles appear, and to examine the frequency with which passages governed by these principles occur. Statements made in this study with regard to these specific questions thus apply only to the piano sonatas.

I am grateful for the role that Professor Joel Lester has played at the various stages of this dissertation. His comments have affected its style, organization, and content. Both the enthusiasm and the reservations he has expressed have been crucial in the evolution of this study into its present form. I am also grateful for the assistance of Professors Stoddard Lincoln and Sherman Van Solkema, whose comments have resulted in a further clarification of the ideas presented in the study.

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## CHAPTER 1

THE LISTENER'S PERCEPTION OF SYMMETRICAL MEASURE GROUPS:  
A WORKING VOCABULARY

Musicians are well aware of the tendencies of Haydn and Mozart to avoid a continuous regularity of phrasing by writing phrases of ambiguous structure and unexpected lengths. This study has grown out of a general observation that in many passages in Mozart's works this ambiguity of structure exists only temporarily in the listener's experience of hearing the movement. A phrase by Mozart often begins in a straightforward manner, progressing far enough for the listener to form a specific expectation of its rhythmic and tonal structure. After the listener has formed this expectation, something occurs that contradicts it. Such a contradiction engages the listener's sense of musical structure in a vital way, focusing the listener's attention on the new, structurally ambiguous event. The passage then continues by incorporating this event within a new group of measures that reestablishes rhythmic and tonal coherence. Passages fitting this general description are not actually irregular in rhythmic structure; their complexity results from a splicing together of groups of measures that are quite coherent in themselves.

This study approaches the piano sonatas as a represen-

tative body of Mozart's works, focusing on the several points within sonata-form movements at which the listener is most often required to make the kind of perceptual adjustment just described. The similarities among passages occurring at corresponding points in different movements seem to justify speaking of several distinct compositional techniques. Each of these techniques can be distinguished both by the specific procedures it involves and by the dramatic function it serves within the movement.

Although this chapter contains several examples of such techniques, it has the broader task of describing the characteristics of musical structure that must be present for the listener to form an expectation of how long a particular phrase or group of measures will last. It is first necessary to define the term measure group as it is used in this study, and to distinguish among several different kinds of measure groups.<sup>1</sup>

An underlying assumption of this study is that a movement by Mozart consists of a succession of measure groups of various sizes. Very occasionally a single measure seems to stand alone, but in general measures cohere in groups by virtue of homogeneity of design and unity of function. An additional assumption is that the listener is able to perceive the rhythmic structure of individual measure groups.

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<sup>1</sup> I have underlined the first appearance of terms used repeatedly in this study.

This ability varies according to the complexity of the particular group's structure, however. The term group is purposely vague, allowing its application to both the smallest and largest groupings of measures, and avoiding preconceived notions of the meanings of such terms as phrase, sentence, and period. The analytical approach used in this study attempts to recognize the boundaries of all the measure groups within a movement, to describe the particular function and energy of each group, and to describe the rhythmic character of the transition from one group to the next. This approach begins with no preconceptions concerning the rhythmic structure of any single group, allowing for the great variety in rhythmic structure that groups within a single movement can show.

#### Active, Static, and Transitional Measure Groups

The function and energy of a particular measure group can usually be described by placing it within one of three general categories. Occasionally a group seems to belong to none of these categories, or to show characteristics of two of them. Despite its limitations, this typology is helpful in determining the role of a particular measure group with respect to a cadence, and in recognizing the boundaries between consecutive measure groups.

An active measure group is characterized by motion toward a cadence. It begins and continues in such a way that the listener expects it to end with a cadence. Often

the melodic character of an active group is a primary factor in implying a cadence; groups generally described as phrases and themes fall within this predominant category. On the other hand, groups that would not be so described can also generate an expectation of a cadence. Active measure groups receive the most attention in this study, just as they occupy the listener's attention for the greater part of a movement.

The final chord of a cadence can fall within the structure of an active measure group, yet this chord may also initiate a new group that has the sole function of prolonging the chord. I refer to this type of group as a static measure group.

Transitional measure groups have the function of preparing a following active group. A transitional group usually introduces a voice-leading motion necessary for the active group to begin. This motion may involve a modulation to a new key area, or it may occur within an already established key area. A measure group can also show a transitional function by more purely rhythmic means. A static group, for example, can assume a transitional function simply by continuing or accelerating melodic motion until the next active group.

The listener, perceiving the preparatory function of a transitional group, does not hear its connection with the following active group as a cadence, even though this con-

nection may involve a dominant-tonic progression. The listener's expectation of a cadence thus develops only within active groups. Active groups alone are characterized by the separate stages of beginning, continuation, and cadential closure.

In a movement of a piano sonata by Mozart the succession of measure groups of various lengths, rhythmic structures, and functions constitutes the overall rhythm or pacing of the movement. Each group plays an appropriate role. Within a sonata-form movement, for example, a fifteen-bar active group that moves toward the cadence of the second key area has a different function than a six-bar static group prolonging the final tonic chord of that cadence. A three-bar transitional group in the middle of a development section may quietly provide a modulation preceding an extended theme in a new key. In short, the aim of identifying measure groups in Mozart's music is not simply to divide a movement into segments, but to recognize the role of each successive group in dictating the pace of the movement. The succession of measure groups articulates the rhythmic structure of the movement in a very complete sense.

#### Symmetrical Measure Groups

This study focuses on the roles of symmetrical measure groups within the conception of rhythmic structure just described. Symmetrical measure groups fall into two categories, those which appear literally in the music, and those

which are only implied. A group of the first kind shows an exclusively duple-ordered structure. Such a group might consist of two, four, eight, or sixteen measures; its length is always equal to some power of two. Any segments within the group will divide the group or segments within the group evenly, that is to say, symmetrically. An implied symmetrical group continues long enough to convince the listener that it is a symmetrical group of a specific length, but does not complete this implied structure.

While all three types of measure groups described above may show literal symmetry, in general only active groups are able to imply a symmetrical structure. The duple ordering that becomes apparent as an active symmetrical group unfolds suggests to the listener the possibility of a complete symmetrical group. The beginning of a motion toward a cadence in the second half of the group allows the listener to form a specific expectation of its length. The existence of this rhythmic expectation, and thus of the possibilities of either fulfilling or contradicting it, underlies the several compositional techniques described in this study.

The active role of the listener is crucial in the formation of such an expectation of length. Given the relative ease with which the listener can follow the progress of a duple-ordered measure group, it seems justified to assert that the listener counts the measures of an active symmetrical group, albeit in a semiconscious way, in expectation of

its eventual completion.<sup>2</sup> This counting is simultaneously a purely rhythmic process--a counting of duple-ordered pulses --and an interpretive act, by which the listener recognizes the unity of the group and interprets its structure.

The listener's counting of measure-pulses within an active symmetrical group is essential in a way that one's counting of beats within measures is not. The number of beats in each measure of a movement is generally consistent.<sup>3</sup> The number of measure-pulses that will cohere as a distinct group, however, is subject to the great variety of measure groups that can appear within a movement. The group may or may not show duple ordering. If it does, the listener is only alerted to the possibility of a symmetrical group. The listener cannot assume, as one can with regard to the number of beats within every measure, that the measure group will contain a given number of measures. An active symmetrical group of greater length requires the listener to interpret its structure over a longer span of

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<sup>2</sup> Carl Schachter has pointed out that duple ordering has the advantage of allowing the listener to perceive most easily the various levels of pulse within a given span. "There is a far greater disproportion between successive levels," for example, if measure groups reflect triple ordering (1, 3, 9, 27, 81) rather than duple ordering (1, 2, 4, 8, 16). "Rhythm and Linear Analysis: Aspects of Meter," soon to appear in The Music Forum 6.

<sup>3</sup> This is only generally, not always, the case in Mozart's music. The slow movement of the Symphony in C, K. 551, for example, although notated in triple meter, switches several times to duple meter. A more common deviation from the notated meter is the switch to compound meter, in which each notated measure contains two measures.

time. The listener must weigh the relationship of each new segment to the preceding segments, and consider the probability that a particular musical event is a signal of closure, indicating a symmetrical group of a specific length. The expected moment of closure assumes a dramatic importance and rhythmic weight corresponding to the length of such a group.

Contradiction of the Listener's Expectation of Symmetrical Structure by the Use of Elision

The rhythmic effect achieved when the listener's expectation of a symmetrical group's length is contradicted is dramatically different from the effect achieved when that expectation is fulfilled. Mozart uses several compositional operations to contradict the listener's expectation of symmetrical groups, but the technique that he uses most frequently, and in the widest variety of situations, is elision. This technique has been described by theorists since the late eighteenth century, and the term itself has been assigned various meanings by more recent theorists. In this study it always indicates an abridgement of a measure group's implied length.<sup>4</sup> Example 1-1, which reproduces the

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<sup>4</sup> Heinrich Christoph Koch's discussion of the "suppression of a measure" in his Versuch einer Anleitung zur Composition (1782-93) is the first discussion of this compositional operation of which I am aware. He does not consider this technique from the perspective of the listener's expectation, but only as a way of joining two four-bar phrases as a "compound phrase." See Introductory Essay on Composition: The Mechanical Rules of Melody, Sections 3 and 4, translated by Nancy K. Baker (New Haven: Yale University Press, 1983),

## Example 1-1. Sonata in D, K. 311/I.

Allegro con spirito

54-56. The ambiguous usage of the term elision stems from its use to describe two different aspects of a passage. It is necessary to determine which aspect is being described: the missing measure (or measures) of the first phrase, or the sense of tonal overlapping that often occurs in this situation. Using the term in the first sense, one can say that the first phrase is elided (abridged) by the second, or that the second phrase elides the first. Using it in the second sense, one can say that the first phrase elides (connects or overlaps tonally) with the second.

Example 1-1, continued.

first key area from the first movement of the Sonata in D, K. 311, illustrates the interdependence of elision and an expectation of symmetrical structure.<sup>2</sup>

This passage contains three elisions, each of which abridges an implied symmetrical group. Measures 1-3 and 4-6 imply four-bar groups, and measures 7-12 an eight-bar group. Three questions help to focus the discussion of each of these elisions and of every passage in which Mozart first creates and then contradicts an expectation of a measure group's length: how is the expectation created, how is it contradicted and simultaneously replaced with a new expectation, and what purpose might this perceptual adjustment

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<sup>2</sup> The rhythmic analysis shown above the staff in example 1-1 establishes the format for all the analyses in this study. Upward extensions of barlines indicate the beginning of a new measure group. The actual length of each measure group is indicated over the group by the number of measures: -3-, -4-, -15-, etc. For asymmetrical groups (a three-bar group, for example) and completed symmetrical groups the number of measures appears over the midpoint of the group (over the midpoint of a measure in the first case, over a barline in the second case). For elided symmetrical groups the number of actual measures appears over the midpoint of the implied group (over a barline). The abbreviations written through many of the vertical extensions of barlines indicate specific relationships between the adjacent groups. These relationships are explained in the text.

serve within the overall pacing of the movement?

The listener's expectation that a symmetrical group will have a specific length requires that the group show two elements: duple ordering, and motion toward a goal. The duple ordering is established from the beginning of the group. The groups in example 1-1 (bars 1-3, 4-6, and 7-12) are typical of Mozart's most frequent and effective procedure: two similar segments comprise the first half of each group, after which the second half shows a change of design and continuous motion toward a cadence. Measures 1-2 (and 4-5) contain two similar one-bar segments (the melody resting in the second quarter of each bar); measures 7-10 contain two two-bar segments. Changes of design at measures 3, 6, and 11 mark the second halves of these implied symmetrical groups, yet melodic elements are retained from the first halves, indicating the unity of the groups.

Duple ordering alone cannot create the expectation of a symmetrical group of a specific length. Without motion toward a goal, the symmetry of the group can be recognized only after the fact, after it has come to rest and another group has begun. The listener can sense the length of the group, however, if the second half introduces rhythmic and/or tonal elements not heard during the first half, elements implying motion toward closure. The use of a continuous line of shorter note values, heard in the left hand in measures 3 and 6, and in the right hand in measure 11, is a

characteristic way in which Mozart creates a sense of acceleration toward a goal. A change in dynamic level from soft to loud, as at bar 11, often underscores the urgency of the new motion.

Cadential harmonic motion--the introduction of the subdominant and/or dominant cadential functions--is a clear signal to the listener that an active symmetrical group is approaching its goal. The II<sup>7</sup> and V<sup>7</sup> chords in the second half of measure 3 (and measure 6) are an unmistakable signal that the group's goal, the tonic chord, will arrive at its fourth and final measure. The listener's tonal and rhythmic expectations of the group thus arise at the same moment; they are actually a single expectation.

Measures 7-12 proceed just as clearly toward a cadence after the first half of the implied group prolongs the initial tonic by moving to and back from the dominant. The ascent to the highest pitch in the phrase early in the second half of the group (d<sup>3</sup>, bar 11) is another signal of impending closure; here, as is usually the case, it is closely paired with the arrival of the cadential subdominant function (II<sup>6</sup>, bar 12). Although the elision at measure 13 interrupts this group after six measures, that is, after only the cadential subdominant function has been heard, the listener has probably formed a rhythmic and tonal expectation of the group by this point. The listener expects, I believe, an eight-bar phrase, the dominant chord arriving in

the seventh bar, the tonic arriving in the eighth bar.

Two factors enable the listener to recognize that an elision has occurred: the appearance of musical material at the point of the elision (after the barline) that cannot be construed as a continuation (or completion) of the implied group; and the structural coherence of the eliding group. Both factors may be present, contributing together to the listener's recognition, or one of the two, most often the second, may be the decisive factor. The eliding groups at measures 4 and 7 of example 1-1 do not immediately contradict the listener's sense that a four-bar phrase has been completed. The opening phrase implies at the end of measure 3 an ending on scale step  $\hat{3}$ , an ending that is tonally incomplete only in the sense of calling for another phrase ending on  $\hat{1}$ .<sup>6</sup> Measures 4-6 in turn imply the ending on  $\hat{1}$  that follows at measure 7. Thus the eliding groups become apparent only as they continue, although the listener quickly recognizes measure 4 as the beginning of a repetition of measures 1-3, and measure 7 as the beginning of a new phrase.

I use the term hidden elision whenever the eliding group can temporarily be heard as a continuation of the previous

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<sup>6</sup> Johann Philipp Kirnberger discusses the listener's recognition of such tonally incomplete phrases. "We have a phrase that is indeed comprehensible, yet after which another or several more phrases are expected to complete the meaning of the period." The Art of Strict Musical Composition, translated by David Beach and Jurgen Thym (New Haven and London: Yale University Press, 1982), 405.

group. Hidden elisions differ from more obvious elisions in that they require the listener to reinterpret the rhythmic status of a portion of music that has already been heard. I refer to this type of reinterpretation, based on the coherence of the new group, as retrospective hearing.

The elisions at measures 4 and 7 barely qualify as hidden elisions; the upward-resolving appoggiatura at measure 4 and the changes of dynamic level and accompaniment pattern at measure 7 are partial indications of the elisions.<sup>7</sup> Thus a brief digression from our discussion of example 1-1 is necessary here in order to provide a clearer example of this technique (see example 1-2).

Example 1-2. Sonata in C, K. 279/II.

At the end of measure 32 the listener can have only a tentative expectation of what will follow, but probably interprets measures 29-32 as two two-bar segments within a

<sup>7</sup> The rhythmic analysis in example 1-1 places the abbreviation "hidd." in parentheses for this reason.

larger measure group. These two segments could easily be heard as the first half of a modulating phrase having the symmetrical structure just described as typical of Mozart (2+2+4, see page 11). Regardless of such an expectation, the listener's sense that a second segment has been completed at measure 32 is contradicted when measure 33 repeats the melodic motive of measure 32. The parallelism between these two measures suggests a new, four-bar symmetrical group beginning with two one-bar segments. At measure 34 the acceleration of motion toward a cadence confirms the structure of this new group at its midpoint. In contrast to a straightforward elision, where the rhythmic reinterpretation takes place almost immediately, the hidden elision here allows measure 32 to be construed at first as a continuation. It is only when the music continues into measure 33 that the coherence of the new group, appropriating measure 32 as part of its structure, retrospectively indicates the elision.

The eliding group at measures 7-12 of example 1-1 begins with the scale step  $\hat{1}$  and root-position tonic chord implied by the preceding group. Theorists have generally concurred with regard to elisions like this one that the listener hears both an ending and a beginning. It should be emphasized, however, that in situations like this the listener hears the eliding measure (or a portion of it) first as an ending and then as a beginning. Heinrich Schenker implies

these separate stages in the listener's perception in one of his comments in Free Composition. He is discussing the elision at measure 35 of Mendelssohn's Songs Without Words, No. 30 (example 1-3), an elision similar to the one at measure 7 of Mozart's Sonata.

Here . . . the fourth bar of the second 4-measure group is reinterpreted as a first bar. Incidentally, music is the only art in which an ending can also be a beginning; this situation is clearest when one single tone is involved. In this phenomenon lies the root of any possible reinterpretation of metric values.<sup>2</sup>

Example 1-3. Mendelssohn's Songs Without Words, No. 30.

The image displays three systems of musical notation for Mendelssohn's Songs Without Words, No. 30. Each system consists of a grand staff with a treble and bass clef. The first system starts at measure 26 and ends at measure 30, with a '-4-' annotation above the staff. The second system starts at measure 31 and ends at measure 35, with a '-3-' annotation above the staff and 'ell.' written to the right. The third system starts at measure 36 and ends at measure 40, with a '-4-' annotation above the staff. The score includes various musical markings such as *cresc.*, *sf*, *dim.*, and *dolce*. The key signature is one sharp (F#) and the time signature is 3/4.

<sup>2</sup> Free Composition, translated and edited by Ernst Oster (New York: Longman, 1979), 125-26.

Rhythmically, there is a retrospective reinterpretation: what briefly sounds like an ending is reinterpreted by the listener as a beginning.

Tonal closure can certainly occur across an elision, despite the listener's rhythmic reinterpretation. There are various degrees of tonal closure, however, and two aspects of the Mozart passage make the listener's sense of tonal closure at measure 7 relatively weak. The first has to do with the size of the symmetrical group preceding the elision. The principal cadences in Mozart's piano sonatas consistently appear at the end of the largest groups in the movement. The listener's sense of tonal closure seems to depend partly on the length of time during which closure can be anticipated. Here there is only an implied four-bar group and its repetition.

The second aspect of the passage preventing a strong sense of tonal closure concerns the function of the eliding group. As in all elisions involving scale step  $\hat{1}$  and the root-position tonic chord as a tonal pivot, the listener's reinterpretation involves hearing this chord as an initial tonic rather than a cadential tonic, that is, as the first chord of a new group. The degree of tonal closure the listener hears varies according to the audible function of this new group with respect to the elided group. In the Mendelssohn passage, the eliding group is a static group prolonging the final cadential chord; its primary function

is to draw attention to the arrival of this chord.<sup>7</sup> In Mozart's Sonata the eliding group at measure 7 is itself an active group, and it draws attention to itself by showing broader dimensions (two-bar segments) and a new character and texture. Perhaps one function of the first six measures of the movement is to prepare and give way to this broader beginning. The first two elisions provide continuity, avoiding the pauses that would follow cadences occurring within four-bar groups.

The elision at measure 13 has a more dramatic function. I have already suggested that the listener expects measures 7-12 to conclude in two more measures with a full cadence. An eight-bar phrase ending with a full cadence would provide a thorough sense of closure for the first key area. The eliding group immediately contradicts the listener's expectation of this cadence, however. At measure 13 the expected cadential formula ( $\frac{4}{4}$ - $\frac{3}{4}$ ) does not appear in the left hand, and the right hand begins a new pattern from  $c\#^2$  instead of descending, typically, to  $a^1$  and then dramatically working its way toward  $e^2$  ( $\hat{2}$ ). The eliding group's surprising prolongation of the dominant chord acts as a structural signpost, preparing the following materials in the dominant

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<sup>7</sup> The movement is a short sonata form, without development. The elision occurs during the cadence of the second key area (and at the corresponding point in the recapitulation).

key in a dramatic way.<sup>10</sup>

The structural coherence of measures 13-16, a static group, clearly confirms the elision. Static groups are as often asymmetrical as symmetrical, cohering well enough by virtue of a repeated pattern (for example, 3x1 or 3x2). Symmetrical structure provides a static group with a further degree of cohesiveness, however, which can play an important role in confirming a dramatic elision. Such a static group seems to compensate for the disruptive effect of the elision by appropriating the interrupted symmetry of the elided group. Usually such symmetrical structure becomes apparent only after the static group has ended. Here, however, a symmetrical four-bar group becomes apparent with the acceleration of melodic motion beginning at its midpoint. This acceleration implies the arrival of the group's goal, the final dominant chord, at its fourth bar (bar 16). Such a clear motion toward a goal could have resulted in an additional eliding group at this point.<sup>11</sup>

The principles of balance and variety operate in two ways in this first key area. The literal symmetry of the final static group provides relief after three successive

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<sup>10</sup> This prolonged dominant chord of course does not prepare the key of the dominant in a tonal sense, yet the second-key-area themes in the piano sonatas are quite often preceded by a half cadence in the tonic key. See, for example, the first movements of K. 280, K. 281, K. 283, K. 284, K. 330, K. 545, and K. 547a.

<sup>11</sup> Example 1-5 illustrates such an elision of a static group.

elisions of implied symmetrical groups. The listener's expectation of symmetry, after being denied three times, is finally fulfilled in a straightforward manner. The broader dimensions of measures 7-12 as compared to the other groups are also critical to the pacing of this passage. The difference here is not simply one of size (*vis-à-vis* bars 1-3 and 4-6); the listener hears this group unfold more slowly in time. Sections in Mozart's sonata-form movements often present one large active group (or two in the case of longer sections) surrounded by smaller groups. These larger groups provide a central focus for the listener's expectation of rhythmic and tonal closure within the section.

Arrival of the Final Cadential Chord after a Completed Symmetrical Group: Transference and the Added Downbeat Measure

The symmetrical groups in example 1-1 are all connected by elision. One would expect that if the first three groups were not elided each of them would come to rest in its final measure (bar 4 of 4, or bar 8 of 8). The next measure group would then have to begin independently, without any connection with the preceding group. There is, however, a means other than elision by which an active symmetrical group can imply a goal, engaging the listener's expectation of its length, and still have a vital rhythmic connection with the following group. Measures 54-57 of example 1-4 show this kind of connection with measures 58-61, a varied repetition. The example reproduces the development section from the

first movement of the Sonata in G, K. 283.

Example 1-4. Sonata in G, K. 283/I.

The musical score for Example 1-4, Sonata in G, K. 283/I, measures 54-71, is presented in four systems. The tempo is marked 'Allegro'. The key signature is G major (one sharp). The time signature is 3/4. The score includes piano (p) and forte (f) dynamics, a trill (tr.), and a diminuendo (d.b.). Rhythmic groupings are indicated by '-4-' and '-2-'. Measure numbers 54, 60, 65, and 71 are marked at the beginning of their respective systems. The notation shows a complex rhythmic structure with various groupings and dynamics.

Measures 54-57 show both the duple ordering and the motion toward a goal necessary for the listener to form an expectation of a symmetrical group of a specific length. This group implies its symmetrical structure less gradually, however, than the three elided groups in example 1-1, where two similar segments form the first halves of the groups. In example 1-4, the complementary two-bar segment beginning at measure 56 constitutes the second half of the group; thus

the listener can infer the length of the group only as the cadential motion of measure 57 implies scale step  $\hat{1}$  over the tonic chord (in D-major) as a tonal goal.

Of greater concern to the present discussion is the fact that the implied moment of this tonal goal's arrival lies beyond the symmetrical group. In this situation, the listener expects the tonal goal of the group to arrive with the following measure, hearing the entire group as having spent itself in the process of approaching the goal.

The implied tonal goal may then appear in one of two very different ways. Most often the goal occupies the first measure of a new measure group, as at measure 58 of example 1-4. The beginning of this new group, a varied repetition of measures 54-57, is somewhat atypical in contradicting the listener's expectation of scale step  $\hat{1}$  in the right hand. Only the implied tonic chord appears, initiating the new group. More often the expected scale step (usually  $\hat{1}$ ) arrives as well. The listener's sense of tonal closure then depends on the same considerations discussed with regard to elision: the size of the group showing the cadential tendency and the audible function of the new group.

The essential difference between this procedure and elision is that here there is no rhythmic reinterpretation. After having heard a symmetrical group completed, albeit in a purely rhythmic sense, the listener anticipates that a new group may begin at this point, the implied tonal goal of the

first group assuming an initiating function in the new group. Because the listener can anticipate the new group in this way, the cadential energy of the previous group seems almost to introduce the new group. I refer to this situation as transference, suggesting that this cadential energy is transferred to the new group.

The varied repetition at measures 58-61 implies the same tonal goal implied by measures 54-57. At measure 62, however, the expected goal (now providing  $\hat{1}$ ) does not initiate a new group but appears in an isolated measure. This measure allows the cadential motion heard in the preceding symmetrical group to be completed.<sup>12</sup> I refer to such a measure as an added downbeat measure. The adjective "downbeat" indicates that this measure has the same rhythmic status as a measure beginning a new group.<sup>13</sup> The tonal and rhythmic effects of an added downbeat measure stand in contrast to

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<sup>12</sup> The first description of this compositional procedure of which I am aware appears in Kirnberger, op. cit., 407-08. "[A period] consisting of an odd number of measures has something disagreeable about it. However, if the break at the last phrase is made by the dominant in such a way that the close to the tonic absolutely requires an additional measure, the final period acquires an odd number of measures--thirty-three instead of thirty-two, forty-nine instead of forty-eight--without offending the ear." The role of symmetrical structure in Kirnberger's conception of the period seems implicit in this description.

<sup>13</sup> This is the only term used in this study that suggests a relationship similar to the organization of beats within a measure. The symbol "+ d.b." in the rhythmic analyses indicates an added downbeat measure. The dotted extension preceding this symbol, as at bar 62 of example 1-4, indicates the primary relationship of an added downbeat measure to the preceding active group.

those of both elision and transference. It always emphasizes the tonal closure of the preceding group; elision and transference may or may not emphasize tonal closure, depending on the function of the new group. Standing between the preceding symmetrical group and the following group, an added downbeat measure has the rhythmic effect of bringing the movement to a temporary halt. It results in two "successive downbeats," since the following group begins independently, with its own downbeat measure.<sup>14</sup>

Transference is especially important in providing variety in the way that measure groups follow one another in a movement. Its connection of a symmetrical measure group with a following group contrasts with the pause that occurs whenever a symmetrical group arrives at a tonal goal at its final bar. And the sense of rhythmic completion in transference, allowing the listener to anticipate the new group, contrasts with the sense of a missing measure (or measures) when elision occurs.

Both transference and an added downbeat measure are also

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<sup>14</sup> William Rothstein discusses the "successive downbeats" in this situation in Rhythm and the Theory of Structural Levels (Ph.D. dissertation, Yale University, 1981), 232-33. Rothstein uses the term "overlapping phrases" to refer to the situation I have described as transference, and the term "overlapping phrase" to refer to the use of an added downbeat measure (p. 63). The first term implies an overlapping of tonal content between the phrases, a concept that seems to obscure the extent to which measure groups are tonally as well as rhythmically independent. The term would not accurately describe the connection between bars 54-57 and 58-61, where there is a minimal sense of tonal overlapping.

important means of emphasizing tonal closure at the end of active symmetrical groups. The position in which a tonal goal of a symmetrical group receives the greatest rhythmic emphasis is the downbeat of the measure following the completion of the group. The listener can then hear the entire group as approaching this goal, which seems all the more significant for arriving on a downbeat measure. The other two factors already discussed as crucial to the listener's sense of tonal closure work together with this third factor. While the size of the symmetrical group is always an important factor, the function of the new group is obviously a factor only in transference and elision, not when there is only a single added downbeat measure. The listener's sense of tonal closure is thus most complete when a static group begins by transference and clearly prolongs the previous group's tonal goal. The moment of closure is confirmed retrospectively as the new group continues to prolong the tonal goal.

#### Ambiguity of Measure-Group Boundaries

The added downbeat measure at bar 62 of example 1-4 creates a rhythmic break before the retransition to the recapitulation. This break is softened by the introduction during measure 62 of the left-hand pedal used in the following group. Measure 62 also contains the anacrusis to this group. Thus this added downbeat measure, necessary for tonal closure, also has an introductory function.

This passage can also be analyzed--and heard--in a different way, measures 58-61 giving way by transference to a retransition beginning at measure 62. The change of design in the left hand would actually initiate the new group; the right-hand figure beginning in the second part of the measure would be heard as a response to the left-hand's initiating gesture; and measures 62-67 would divide into three two-bar groups. Although I do not subscribe to this analysis, it does call attention to an ambiguity that often arises when Mozart introduces an accompaniment pattern in a measure of tonal closure. An eight-bar phrase closing on the tonic in its final measure may sound as if it is elided if a new accompaniment pattern begins at this point.<sup>15</sup>

In the great majority of such ambiguous passages in Mozart's piano sonatas, the new accompaniment pattern does not begin a new group but acts as a transition to a new group beginning in the next measure. The listener's recognition of the new group is based on the character of the

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<sup>15</sup> See, for example, bar 16 of the third movement of the Sonata in D, K. 576. The following melody in the right hand soon eliminates any ambiguity. At bar 18 of the third movement of the Sonata in C, K. 279, however, the new left-hand pattern does begin an eliding group, and the right hand is heard as a response to the downbeat in the left hand. The rhythmic relationship of a melody to an accompaniment pattern that begins before it in the same bar--that is, whether it is a response within a downbeat measure or an anacrusis--is discussed by Koch, *op. cit.*, pp. 11-13. Koch offers the composer guidelines for avoiding ambiguity in this situation, and thus for determining whether or not the potentially ambiguous measure is to be "considered in determining the length of the phrase."

following melody. An anacrusis figure in the ambiguous measure is typically followed by a forceful melodic gesture in the following measure. The leap to  $b^2$  at measure 63 of example 1-4 is such a gesture, indicating to the listener that it begins a downbeat measure. There is certainly a degree of tension between the downbeats suggested by the left and right hands in this passage; as the two-bar pattern repeats, the right hand's accents (stemming from the leaps in register) contend against the dynamic accents of the left hand. I use the term competing downbeats to describe the sustained rhythmic ambiguity in this type of passage. The priority of the downbeat suggested by the melody is consistently confirmed by the way in which Mozart resolves such ambiguity.

#### The Use of a Prototype to Create an Expectation of Symmetry

As the rhythmic analysis in example 1-4 shows, I hear the retransition as consisting of two distinct measure groups: an implied six-bar group elided at its sixth measure, and a four-bar group that elides the first group. Both of these groups are transitional in function. The single chord they prolong is not the cadential tonic chord of the previous active group, but the dominant chord of the returning principal key of G major. The first group (bars 63-67) shows neither a symmetrical structure nor motion toward a specific tonal goal; the listener cannot anticipate when it will end. Yet this group consists of similar two-

bar segments, the first two of which arrive at tonal goals at their second measures (c<sup>2</sup> and b<sup>1</sup>).<sup>16</sup> The listener expects that the third segment will similarly settle on a<sup>1</sup> at its "second" measure.<sup>17</sup> This pitch does arrive, but within the context of an eliding four-bar group, that is, in a "first" measure.

The listener's expectation of a "second" measure at measure 68 is obviously not based on measure 67 alone, but on the two preceding two-bar groups as well. These groups serve as prototypes against which the listener can hear the elision at measure 68. I use this term to indicate a statement of a measure group that creates the expectation that a later measure group beginning in a similar manner will have the same length.<sup>18</sup> This expectation is then contradicted,

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<sup>16</sup> The analysis over the staff in example 1-4 indicates these two-bar groups by shorter vertical extensions of the barlines. The lengths of these segments (-2-) are printed at a lower level than the length of the larger group.

<sup>17</sup> I use quotation marks here and elsewhere in this study to indicate the listener's counting of measures within groups. A measure that the listener expects to be or actually hears as a "second" bar or a "seventh" bar may have to be reinterpreted as a "first" bar.

<sup>18</sup> In Free Composition Schenker briefly mentions a "metric prototype" in explaining the concept of expansion: "an expansion follows from one or more measures of a metric prototype. There must be an organic relationship. Despite the fact that prototype and derivation follow one another in direct succession, their relationship can be recognized only from the middleground and the background." Schenker's description seems to indicate a specific relationship in the foreground, yet in his discussion of examples of expansion he describes expansions based on rhythmic normalization of middleground tonal content, that is, not on a preceding

usually by elision. A prototype may directly precede the measure group that differs from it, or it may precede it at a greater distance in the movement. In the first case the second measure group can show melodic and harmonic differences with the prototype (as in example 1-4); it need only show a parallel structure. In the second case there must be a more literal resemblance between the two groups, and the prototype is usually a large or memorable group. Elision of a two-bar group is impossible without a prototype, as a single measure cannot generate an expectation of a two-bar group.

The listener gradually becomes aware of the elision at measure 68, although there are immediate contrasts with the prototypes. The chord on the downbeat of measure 68 is mysteriously quiet after the loud accents beginning measures 62, 64, and 66, and it stops abruptly.<sup>17</sup> The new melodic idea in the second half of the measure then begins loudly, reversing the pattern of dynamics in those measures. It also reverses the descending motion of the previous five

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foreground prototype. Op. cit., pp. 124-25. William Rothstein has tried to clarify and expand upon the idea of a "middleground prototype" that he finds implicit in Schenker's analyses. Op. cit., pp. 162-71.

<sup>17</sup> The first edition published in the Oeuvres Complètes of Breitkopf & Hartel (Leipzig, 1799) places the forte accent on the first beat. Regardless of the placement of this accent, the dynamic accents at bars 62, 64, and 66 prepare the elision in a subliminal way, suggesting the alternative downbeat measure that is realized only with the elision. This kind of preparation for an elision occurs four times within the exposition of the Sonata in C, K. 330.

measures. The listener becomes more certain of the elision as measure 69 repeats the rhythmic structure of measure 68. Such repetition, either of a single bar or of a two-bar segment, often provides retrospective confirmation of an elision (as in bars 13-14 of example 1-1). The symmetrical structure of this group becomes obvious as it nears completion, the soft, descending line in measures 70-71 balancing the two shorter ascents. This completed symmetry provides a final confirmation of the elision.

The elision in this passage plays an essential role in controlling the pace of the movement. A retransition at the end of a development section usually involves a tonal adjustment; it works its way back to the tonic key for the beginning of the recapitulation. Here, however, the tonal adjustment of the retransition, the replacement of c# by c, could have been achieved with fewer measures and without manipulation of the listener's rhythmic expectations. The rhythmic complexity of this retransition is necessary in order to create a sense of structural distance between the cadence at measure 62 and the recapitulation, or, phrased differently, a sense of return from a structurally distant point (bar 62). The retransition achieves this by approaching the recapitulation in two distinct stages. The elision at measure 68 not only requires the listener to make a rhythmic reinterpretation; it also alerts the listener that the eliding group has a different, more urgent function.

Contrasts of dynamics, design, and melodic direction within this group all indicate that it will lead directly into the recapitulation.

Elision of a Static Group without the Use of a Prototype

The role of the elision at measure 39 of example 1-5, from the third movement of the Sonata in B-flat, K. 333, is similar to that of the elision in example 1-3. It is the focal point of a small rhythmic drama, one that is diverting enough to enhance the sense of structural separation between the two surrounding themes. Here, however, the listener's perception of the elision is not based on a prototype. The elided group, like the active groups in example 1-1, implies a symmetrical structure on its own.

Measures 36-40 stand between the second-key-area theme and the returning rondo theme. The dominant chord of the preceding cadence is expanded so that it completes a large symmetrical measure group, the expected tonic chord and scale degree arriving at measure 36. A sense of tonal closure results from the large size of the symmetrical group, its arrival at its tonal goal by transference, and the harmonically static character of the new group. The sudden lowering of the dynamic level at measure 36 and the following melodic progression  $a-e\flat^1$ , however, reveal that the new group also has a transitional function, redefining the F-major chord as the dominant chord of B-flat.

Both of the elements necessary to imply a symmetrical

Example 1-5. Sonata in B-flat, K. 333/III.

Allegretto grazioso

33

36

40

-3-

-2-

tr.

*p*

*f*

*p*

group of a specific length are present at measures 36-38. Duple ordering and motion toward a tonal goal become apparent simultaneously, with the acceleration of the progression  $a-e\flat^2$  at the midpoint of the implied group (bar 38). The introduction of chromatic passing tones also distinguishes the second half of the group, and intensifies the accelerated motion toward  $e\flat^2$ . The loud arrival on the flatted seventh confirms the implied four-bar group at the same time that the change of design in the right hand suggests to the listener that this arrival is a new initiative. The continuation of this design for two measures (appropriating the

duple ordering just elided) confirms these two bars as a separate group.

The Effects of Early Arrival of the Final Cadential Chord within a Group's Symmetrical Structure

The symmetrical groups in the preceding examples that have implied a tonal goal have implied the arrival of that goal at either the final measure of the group or the measure following the group's completion. These two positions maximize the listener's sense of the group's symmetry, allowing the group's motion toward its goal to be heard as a movement toward completed symmetry. Active symmetrical groups occasionally arrive at a tonal goal at an earlier point. An eight-bar phrase, for example, can arrive at the tonic chord of a full cadence at the seventh measure. Such a phrase completes its symmetry by prolonging this chord for two measures. The exposition of the first movement of the Sonata in D, K. 284 ends with such a phrase (see example 1-6).

The arrival of the cadential tonic chord at the seventh measure (bar 50) results in a stronger rhythmic emphasis than the more common arrival at the eighth measure. The explanation of this strength of emphasis lies in the existence of different levels of pulse within large symmetrical measure groups. While counting the single measure-pulses in this phrase, the listener is aware as well of pulses of two measures. The essential changes of harmony occur every two measures, accompanied by changes in design and dynamic

## Example 1-6. Sonata in D, K. 284/I.

Allegro

level. Since the counting of these broader pulses subsumes the counting of individual measures, the listener hears the beginnings of the larger pulses as points of rhythmic accent.<sup>20</sup>

Such phrases appear infrequently in Mozart's piano sonatas. More frequent, and less convincing as symmetrical

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<sup>20</sup> This explanation is an example of what Maury Yeston refers to as "rhythm-to-pitch" analysis, in which the listener's perception of broader levels of pulse is understood as determining the accentual strength of a tonal event. The broader pulses are generally stated in the music, but they may also be "conceptually supplied" by the listener while the music temporarily fails to state them. The Stratification of Musical Rhythm (New Haven and London: Yale University Press, 1976), 65-66, 85.

structures, are phrases that imply the cadential tonic chord after six measures, but either give way to a new group at this point or are followed by a single measure of tonic resolution. The extent to which the listener expects to hear a completed symmetrical group in such cases depends upon the structure of the particular phrase.<sup>21</sup> Consider measures 66-71 of example 1-7, which clearly imply a tonic resolution at measure 72.

Example 1-7. Sonata in F, K. 280/III.

Presto

65

66

67

68

69

70

71

72

73

tr.

-6- or -6- ?

or el. ?

f

p

p

-2-

-6-

-2-

-2-

f

It seems unjustified to say that an implied eight-bar phrase is elided at measure 72. Using the terminology I have applied to active symmetrical groups, one could as justifiably say that a six-bar group is completed here, arriving at its tonal goal by transference to a new group. Measures 66-71

<sup>21</sup> This expectation can also be prompted by a preceding prototype, as discussed below.

clearly contain two-bar segments, but nothing distinguishes measure 70 as the second half of an eight-bar phrase. Note that measures 72-77 are also a six-bar group (3x2), so that these two groups together present a broad rhythm to end the exposition.<sup>22</sup>

Measures 9-14 of example 1-8 imply a symmetrical eight-bar group far more strongly. The first half of the implied group consists of a repeated two-bar segment, the second half of continuous motion toward a cadence. At measure 15

Example 1-8. Sonata in E-flat, K. 282/III.

<sup>22</sup> Mozart broadens the final group to a symmetrical eight bars at the end of the movement.

the listener expects the group to be completed in two more measures. These two measures might have provided a full cadence (V in bar 15, I in bar 16) or a broad half cadence (the  $\frac{3}{4}$  chord resolving in bar 16). In either case, the listener hears measure 15 as inadequate for rhythmic closure, and the new group at measure 16 as having begun too early. I refer to this situation as truncation.

Although examples of truncation occur very infrequently in Mozart's piano sonatas, they have a startling, somewhat disturbing, rhythmic effect. Truncated groups deny literal symmetry after the arrival of a tonal goal, not before its arrival, as with elision. Why does Mozart withhold the added measure that would also satisfy the listener's sense of rhythmic closure? One general answer is that truncation, like elision, provides relief from continuous symmetrical structure (see bars 1-23 of example 1-8). Another is that the impression of the next active group beginning too early, as if unable to wait for the completion of symmetry, can emphasize the greater thematic importance or energetic character of this group. In this example, the abrupt half cadence at measure 15 underscores the preparatory function of measures 9-15 with respect to the following second-key-area theme. In example 1-9 (discussed below), the energy of the new idea beginning at measure 42 1/2 is more apparent because it does not wait for the symmetry of the previous group to be completed. Truncation speeds the music along

just at the point that the listener expects it to breathe.

A preceding prototype enables the listener to recognize truncation with particular clarity.<sup>23</sup> Several instances of prototypes indicating a subsequent truncation occur in Mozart's piano sonatas. All of these passages involve a transition from the notated meter to compound meter.<sup>24</sup> The final example of this chapter (example 1-9) illustrates not only this specialized function of truncation, but also Mozart's use within compound meter of the various structures described in this chapter.

#### Temporary Use of Compound Meter within A Movement

I have suggested that, within Mozart's style, measures are audible pulses, counted by the listener in expectation of a measure group's completion. In several movements of the piano sonatas Mozart uses compound meter, in which each notated measure contains two audible measure-pulses. When

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<sup>23</sup> Schenker briefly describes the relationship of a prototype to a truncation, discussing bars 1-15 of Mendelssohn's Songs Without Words, No. 30. An eight-bar antecedent phrase is the prototype; the consequent is only seven bars long, cadencing on the tonic in the seventh bar. Schenker doesn't discuss the listener's sense of a missing measure, yet in his graph of the passage he indicates the surprising effect of the truncation by placing an exclamation point over the seventh bar of the consequent phrase. Op. cit., p. 125. See figure 149, example 1 of the supplement of musical examples.

<sup>24</sup> There are four movements in which such truncated groups (preceded by prototypes) instigate a change to compound meter: the Sonata in C, K. 279/I, bars 17-20; the Sonata in B-flat, K. 281/III, bars 1-8; the Sonata in C, K. 330/I, bars 35-42; and K. 330/III, bars 33-39.

compound meter prevails throughout a movement, as in several of the slow movements, it does not affect the way the listener hears the music; it is merely an eighteenth-century notational convention. Observing the score, however, one notices that critical rhythmic events--the arrival of the cadential tonic chord, or the beginning of a new group by elision--occur at the second halves of the notated measures.<sup>25</sup>

Mozart's insertion of passages in compound meter within a movement generally in simple meter does affect the way the listener hears the music. The listener suddenly hears measure-pulses that occur twice as often as the pulses previously heard.<sup>26</sup> The groups formed by these faster measure-pulses can engage the listener's expectation of symmetry in the same manner as groups composed of the predominant, slower pulses. Example 1-9 reproduces the closing materials from the first movement of the Sonata in C, K. 330, one of the several movements in which this switching to and from

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<sup>25</sup> Kirnberger offers a simple method of distinguishing compound meter: "these meters--for example, the compound 4/4 and the simple common 4/4--can easily be distinguished, since, in the former, the cadences fall naturally on the second part of the measure, which would not be possible in simple 4/4 meter." *Op. cit.*, p. 398. Kirnberger's normative phrase is four bars long, with the final cadential chord arriving in the fourth bar.

<sup>26</sup> Heinrich Christoph Koch discusses the possibility of a movement switching between simple and compound meters. Koch, however, only discusses "melodic sections of a simple meter in a piece composed in a compound meter." *Op. cit.*, pp. 162-63.

compound meter occurs.

Example 1-9. Sonata in C, K. 330/I.

Allegro moderato

The musical score is presented in six systems, each with a treble and bass staff. The tempo is marked 'Allegro moderato'. The key signature is one sharp (F#). The score includes various dynamics such as *fp*, *p*, *sf*, *f*, and *+d.b.* (fortissimo). It also features articulation like *tr* (trills) and *sfz* (sforzando). Performance markings include fingerings, slurs, and accents. Measure numbers 30, 36, 42, 46, 50, and 54 are clearly marked. The score ends with a repeat sign and a fermata.

Measure 34, an added downbeat measure providing tonic closure for the second-key-area theme, also contains the anacrusis figure for the concluding theme at measure 35.<sup>27</sup> This theme begins with a four-bar antecedent phrase, which is the prototype for a truncated consequent phrase. The section in compound meter begins at the second half of measure 42, allowing the consequent phrase only a half-measure of tonic resolution. The melody here indicates the new measure-pulse, as it does in the other movements switching to compound meter.<sup>28</sup> The first bit of melody arrives at a goal at measure 43, that is, at its "second" measure in 2/8 meter. It is thus distinguishable as a two-bar group and, like the two-bar segments in example 1-4, can serve as the prototype for an elision of its repetition. This elision occurs at measure 44 after a single measure (=half-bar) of the repetition, with the entrance of an eight-bar active group equivalent to four notated measures. The new group appropriates the goal of the previous group (the two sixteenth notes on g<sup>2</sup>) for its downbeat, briefly disguising the elision. The changes in dynamics and the left hand's design

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<sup>27</sup> The second-key-area theme, beginning at bar 19, does not complete a single symmetrical measure group by bar 34. My identification of bar 34 as an added downbeat measure is explained in Chapter 2, which discusses complex phrases.

<sup>28</sup> See footnote 24. The other analytical options are: elision at bar 42, in which case the right-hand figure in this bar is a response to its downbeat; and completion of the implied four-bar consequent, in which case the figure is a long anacrusis to bar 43. I hear the first three thirty-second notes of the figure as an anacrusis.

are indications of the elision, yet the threefold repetition of the two sixteenths is most critical, revealing the initiating function of this figure within a new group.

The new group has a clearly symmetrical structure. The midpoint of the group is distinguished by climaxes in register and dynamics, and by the cessation of the left hand. At measure 48 an added downbeat measure (=half-bar) allows tonal closure of this group, after which one hears the same sequence of groups that began at the second half of measure 42. The large group at measures 50-54, however, gives way by transference to a concluding set of groups in simple meter. The slower dotted rhythm of measure 54, heard just before the section in compound meter (bar 41), immediately slows the pace of the music.

The effect of this section in compound meter on the overall pacing of the exposition (and the recapitulation) is unmistakable. In comparison with this section, the preceding forty-one measures of the exposition and the succeeding final five measures proceed at a stately pace. The analogy of a walker suddenly doubling his pace accurately describes the effect this section has of lifting the energy level of the movement.

The effect of the various rhythmic devices used within the section can also be described. The truncation in the middle of measure 42 prevents rhythmic closure and allows the section in compound meter to begin surprisingly. It is

difficult to gauge the extent to which the listener hears this beginning at midbar as a "metrical dissonance," yet it seems most likely that this could occur in a movement like this one, in which the listener has previously heard downbeats only at the beginning of the notated measures.<sup>29</sup> The elision at measure 44, since it brings a downbeat measure on the barline, would have the effect of resolving such a sense of dissonance. Dissonance would recur as a result of the added downbeat measure (=half-bar) at measure 48, and would be resolved finally at measure 50.

This dissertation does not pursue this line of analysis, though it may have validity from the listener's perspective. I assume, rather, that the listener accepts the rhythmic context provided by each successive measure group, and that the particular way in which a measure group gives way to a following group has a specific rhythmic effect, which is to say, a psychological effect. The new idea at the middle of measure 42, for example, is surprising and gives the sense that the movement is accelerating. The elision at measure 44, too, is surprising and results in a sense of acceleration, yet it achieves its effect in a different way.

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<sup>29</sup> Floyd K. Grave has suggested that in movements using compound 4/4 meter Mozart creates a sense of metrical dissonance and resolution based on the priority of the notated barline. Grave does not discuss the appearance of sections in compound meter within movements in simple meter, situations in which the displacement of the downbeat to the middle of the notated bar is particularly striking. See "Common-Time Displacement in Mozart," Journal of Musicology 3 (1984), 429-31.

This chapter has given only brief attention to compositional techniques that appear often enough in the piano sonatas to be described as characteristic of Mozart's style. An example of a technique that has been discussed is the use of elision within a group prolonging a single chord to create a sense of structural distance in a movement.<sup>30</sup> I have been more concerned here, however, to present a basic vocabulary and set of principles that can be used to identify symmetrical measure groups and describe their rhythmic effects. The next several chapters focus on specific compositional techniques with which Mozart engages the listener's sense of symmetrical structure for various purposes.

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<sup>30</sup> This is one of several techniques for which I have compiled lists of examples from the piano sonatas. These lists appear in the appendix of this study.

Chapter 2  
COMPLEX PHRASES

The term complex phrase refers to a passage that moves through several distinct measure groups on its way toward a cadence. The word "complex" in this term indicates that the groups within the phrase are rhythmically independent, and cannot be heard as segments within a large symmetrical structure. Rather, each of these groups implies its own symmetrical structure, engaging the listener's expectation as to the moment of its closure, and each of them except the last group gives way by elision to the next group in the phrase. The word "phrase" in the term indicates that the passage is a single unit from a tonal point of view. It has a single tonal goal, either the cadential tonic of a full cadence ( $\hat{1}$  over I) or the final dominant chord of a half cadence. The listener recognizes that the several groups comprise a single phrase because of this common tonal goal.

All but one of the examples of elision in Chapter 1 occur at the point of the tonal goal's arrival.<sup>1</sup> In each of these examples the tonal goal arrives at the moment of the elision, although it immediately assumes a new role as the

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<sup>1</sup> The elision at bar 13 of example 1-1 occurs a bar before the expected arrival of the cadential tonic chord.

initiating event of the new measure group. Such elisions stress the individuality of both of the measure groups involved. The listener has heard virtually all of the elided group at moment of the elision, and the appearance of the group's tonal goal, despite its rhythmic reinterpretation, confirms the listener's sense of the group's structure.

Elisions within complex phrases generally occur earlier in the elided group's structure. The elision may occur just as the listener is beginning to anticipate a symmetrical group of a specific length, at the sixth or seventh bar of an implied eight-bar group, for example. The listener may not have heard the cadential subdominant chord at this point. The implication of a symmetrical structure in such cases is weaker than when an elision occurs later in the group's structure, at a point closer to rhythmic and tonal closure. I would suggest nevertheless that symmetrical structure is still implied in these cases, though certainly in a more subtle fashion. This subtle implication of symmetry is necessary, allowing the listener to hear the groups on both sides of the elision as parts of the same phrase.

Elisions within complex phrases may also occur quite late in the phrase's tonal structure. In the case of a complex phrase ending with a full cadence, an elision might occur at the arrival of the cadential subdominant or dominant chord. When either of these chords is reinterpreted as the initial chord of the eliding group, this new group can

still move forward toward the same tonal goal implied by the previous groups in the phrase, the cadential tonic chord. The new group can imply a different symmetrical structure, a four-bar structure, for example, if the elided group has implied an eight-bar structure. The listener still hears the tonal goal of the new group as the goal of the entire complex phrase. The rhythmically independent groups within a complex phrase are thus tonally interdependent.

#### Complex Phrases Ending with Full Cadences

It is possible to generalize about the rhythmic function of complex phrases that end with full cadences. These phrases occur within thematic sections of sonata-form movements, sections in which antecedent-consequent phrasing usually prevails and facilitates the listener's perception of measure-group structure. A symmetrical four- or eight-bar phrase followed by an answering phrase with the same structure results in a clear symmetrical group. Complex phrases provide Mozart with a means of avoiding the thoroughgoing symmetry of antecedent-consequent phrasing while achieving comparable length. A complex phrase shows symmetrical structure only within its independent measure groups; the phrase as a whole is asymmetrical. The listener's perception of the rhythmic structure of the phrase is a more active and difficult process, as the listener's sense of symmetrical structure is engaged separately by each of the measure groups within the phrase.

The first thirteen measures of the first movement of the Sonata in F, K. 280 are a typical complex phrase. The rhythmic analysis in example 2-1 is based on the assumption that an eight-bar phrase has been implied after the first six measures. As in many of the examples to follow, this

Example 2-1. Sonata in F, K. 280/I.

assumption cannot be proven. It can only be pointed out that typical components of a symmetrical eight-bar phrase are present to this point. After the phrase begins with two two-bar segments, several new elements at measure 5-6 seem to indicate the second half of an eight-bar phrase. There is a sudden change of dynamic level, and the previous two-bar melodic pattern--three quarter notes followed by a single downbeat note--is replaced by a one-bar pattern that

begins with two eighth notes. A sense of acceleration toward a cadence results from the shorter note values, the shorter melodic segments, and the faster harmonic rhythm (two harmonies in two bars as opposed to two harmonies in the first four bars). The change in the left-hand texture at measure 3 doesn't contradict symmetrical structure; it is a detail that avoids mechanical symmetry.<sup>2</sup> The cadential subdominant chord has not yet appeared, yet the appearance of the cadential chords within the last quarter of an active symmetrical group occurs often enough in Classical practice to be within the listener's range of expectation. If one does expect the phrase to end within eight measures, one expects a descent from scale step  $\hat{4}$  after the six-bar prolongation of scale step  $\hat{5}$  and the tonic chord.

The listener's sense of imminent closure is contradicted by the changes in dynamics, register, and design at measure 7. Even the dominant harmony of this measure is a contradiction; a subdominant function would typically support scale step  $\hat{4}$  of the expected rapid descent. Measures 7-9 subsequently imply a symmetrical four-bar group, just as measures 1-6 implied an eight-bar group. Notice again that at the midpoint of this group, measure 9, there is a change in dynamic level and a change in design, now in both the

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<sup>2</sup> Edward Lowinsky describes Mozart's avoidance of mechanical symmetry in his article "On Mozart's Rhythm." "Symmetry and variation, order and freedom, similarity and difference are joined in a highly sophisticated pattern." *Musical Quarterly* 42 (1956), 167.

left and right hands. This new group is elided at its final, "fourth" measure by its own repetition. The unexpected return to the dominant chord of measure 7 avoids the cadential tonic chord, linking the two groups as parts of a single phrase.<sup>3</sup> This repetition is similarly elided by the beginning of the transition section (bar 13). The listener hears the phrase as tonally complete at this point, by virtue of both the presence of  $\hat{1}$  over the root-position tonic chord and the perceivably different function of the transition section (note the new triplet rhythm), which begins by prolonging the tonic chord for five measures.

Mozart allows us to hear the passage in another way. The return to a soft dynamic level at measure 9 may suggest that measures 7-8 are an insertion, that is, have been inserted in the middle of the soft second half of the original eight-bar phrase. This is but one instance of many in which Mozart provides the listener with two possible rhythmic interpretations of a passage. Mozart most often resolves such ambiguity soon after he has created it. Here the repetition of measures 7-9 at measures 10-12 reinforces the unity and separate cadential tendency of this group. From a tonal standpoint measures 7-8 are indispensable to the entire phrase, as they contain scale steps  $\hat{4}$  and  $\hat{3}$  of the melodic descent. The ascending sixth e-c in the the bass

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<sup>3</sup> See bar 4 of example 1-1, where the appearance of the tonic chord at the moment of elision has the opposite effect.

also unifies these three measures, and recalls the ascending sixth  $a-f^{\sharp}$  in the middle voice in measures 3-6.

The second key area in the first movement of the Sonata in C, K. 330 contains a complex phrase having three separate groups (see example 2-2).

Example 2-2. Sonata in C, K. 330/I.

Allegro moderato

-4-

-2- hidd. ell.

-5-

-4-

+d.b.

Measures 19-22 are not part of the complex phrase, but are an antecedent phrase for which the entire complex phrase serves as the consequent. The first-inversion dominant

chord at measure 21 and the arrival of scale step  $\hat{5}$  on the downbeat of measure 22 call for another phrase providing more complete tonal closure. This four-bar antecedent phrase is also the prototype for the first elision within the complex phrase (bar 25). After measures 23-24 begin with a varied repetition of measures 19-22, the following two measures hardly provide the tonal closure the listener expects of a four-bar consequent phrase. Measure 25, like measure 21, begins over a first-inversion dominant chord, and in measure 26 the melodic ascent ( $b^1-c^2-d^2$ ) and the change of design in the left hand imply continuation.

The elision at measure 25 is hidden because of the tonal and rhythmic ambiguity of measures 25-26. These two measures do provide the expected dominant and tonic chords, completing the four-bar group implied by the antecedent phrase. Yet, because they do not provide full tonal closure, the listener tends to hear them as a new gesture, denying the implied eight-bar group (4+4). The elision is further disguised because it does not entail a drastic rhythmic reinterpretation. Measure 25 is rhythmically accented as the beginning of a two-bar pulse regardless of whether it is the "third" measure of the implied four-bar consequent phrase or the "first" measure of the eliding group. Elisions are more immediately apparent when they entail the reinterpretation of an even-numbered measure within the preceding group as the downbeat measure of the

new group. Notice, however, that the shift to mezzoforte at the third measure of the antecedent has prepared the more dramatic shift to forte at measure 25. Together these two dynamic accents suggest the possibility of reinterpreting a "third" measure as a downbeat measure.\*

The listener's tentative separation of measures 25-26 from the preceding group is supported by the subsequent repetition of this two-bar pattern. The listener retrospectively groups measures 25-26 with the similar two-bar segments that follow it (the segment at bar 29 is incomplete), since these five measures sound like a harmonically static beginning of a new active group. Thus the two-bar segment at measures 25-26, rather than completing a four-bar group, prolongs an initial tonic chord of a new group. The listener hears the dominant chord of measure 25, like the subdominant chords of measures 27 and 29, as a neighbor chord of this initial tonic chord.

The ultimate confirmation of such a retrospective reinterpretation is the symmetrical structure and cadential closure of the new, eliding group. The central group of this complex phrase does not provide this confirmation, however. Measures 25-29 can be heard as the beginning of an eight-bar active group, yet this implication is extremely subtle, allowing the listener to form only a tentative expectation. There are no new features to distinguish measure 29 as the

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\* See bars 63-71 of example 1-4 and footnote 19 of Chapter 1.

midpoint of such a group, and the group is elided before any motion toward a cadence is heard.

The elision by which the final group of the complex phrase enters is no less obvious because of this subtle implication of an eight-bar group; it is based only on the expected completion of a two-bar segment, for which measures 25-26 and 27-28 have served as prototypes. The elision belongs to the category of elisions in which an expected even-numbered measure is immediately reinterpreted as a downbeat measure, resulting in a surprising shift of rhythmic emphasis that did not occur with the elision at measure 25. The melodic contrast of measure 30 with measures 26 and 28 makes the elision immediately apparent. Notice that the shift to forte within the second two-bar group (bar 28) has prepared the listener for this second elision, much as the dynamic emphasis at measure 21 prepared the first elision. The final group of the complex phrase confirms its rhythmic independence by unfolding as a symmetrical four-bar structure and cadencing in an added downbeat measure. Contrasts in melodic direction and dynamic level mark the midpoint of the four-bar group, and there is an obvious cadential motion in the second half of the group.

The roles of the three groups within this complex phrase and the particular rhythmic effects of the elisions connecting them can best be understood in terms of the postponement of cadential motion that characterizes the phrase. The eli-

sion at measure 25 involves a reinterpretation of the tonic chord as the first chord of a new active group rather than the tonal goal of a four-bar consequent phrase. As the listener perceives this new group the moment of tonal closure seems farther away than it had at measure 23. The unfolding of the second group thus serves to postpone the final cadential motion of the phrase. The final group interrupts the second group while it is still prolonging its initial tonic chord. The surprising rhythmic effect of the elision at measure 30 underscores the new tonal function of the final group. It seems to enter impatiently in order to move quickly toward tonal closure.

The melodic content of this passage clearly articulates the separate roles of the three groups in the complex phrase. The melody of the antecedent phrase (and of the consequent) begins by prolonging  $d^2$ , implying that tonal closure will involve a melodic descent to  $g^1$  (see example 2-3). The leap to  $d^3$  in measure 21 and the arpeggiated descent to  $g^2$  in measure 22 seem out of place within the concise antecedent-consequent structure that seems to be taking shape. The antecedent's opening up of this register is critical, however, for the articulation of the entrances of both eliding groups in the complex phrase. Each of these groups distinguishes itself from the preceding implied group by ascending into this high register before returning to the implied register of tonal closure. The ascent to  $c^3$  at

## Example 2-3. Sonata in C, K. 330/I.

measure 25 is inappropriate for the implied four-bar consequent, but assists in articulating the new group. It also begins a gradual melodic descent within this register,  $c^3$  lying a scale step lower than the  $d^3$  of measures 21-22. An ascent into this register also articulates the final eliding group at measure 30. This ascent extends to  $b^2$ , the next step in the gradual descent from  $d^3$ . The uninterrupted descent to  $a$  in measures 30-32 then balances and unifies the contrasting registers of the passage.

A melodic motive stated by the upper voice is essential to the second group's role of postponing tonal closure and the final group's role of providing it. The melodic ascent  $b^1-c^2-d^2$  implying continuation at measure 26 is part of a longer melodic motive that begins with the elision at measure 25:  $d^2-c^2-b^1-c^2-d^2$ . This motive, repeated again in measures 27-28 ( $c^2-b^1-c^2-d^2$ ) and begun a third time in

measure 29, postpones cadential descent and prolongs the pitch  $d^2$ , the opening pitch of the antecedent and consequent phrases.

When the final group enters by elision at measure 30 it interrupts this motive at its lowest point, states the entire motive in inverted form ( $b^1-(c)-d^1-c^1-b$ ), and then continues to descend to  $a$ .<sup>2</sup> The rapid descent from  $b^2$  to  $d^1$  in measures 30-31, replacing the ascending third of this inverted motive, not only calls attention to the elision, but stresses the final group's role of providing cadential descent. The last part of the inverted motive, heard in measure 31, provides a pronounced contrast with the ascending thirds in measures 26 and 28. The listener hears the entire inverted motive as a forceful contradiction of the motive's previous function of prolonging scale step  $\hat{5}$ . The  $d^1$  of measure 31 is emphatically the last appearance of  $\hat{5}$ .

The second key area of the first movement of the Sonata in B-flat, K. 281 consists of a single complex phrase and a final static section prolonging the cadential tonic. Mozart does not use elision as consistently here to connect the groups within the complex phrase, yet the rhythmic indepen-

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<sup>2</sup> I am more concerned here with the listener's perception of cadential descent in this final measure group than with identifying the structural tones of descent according to Schenkerian analytic principles. The descent from  $d^1$  to  $a$  in bars 31-32 seems especially significant from the first perspective, though  $c^1$  of bar 31, lacking consonant harmonic support, does not qualify as a structural  $\hat{4}$ . Example 2-3 shows the structural descent from  $\hat{5}$  occurring at bars 32-34.

dence of groups within complex phrases is still evident. The tonal interdependence among the three different groups in the phrase is particularly interesting (see example 2-4).

Example 2-4. Sonata in B-flat, K. 281/I.

Allegro

15

18

22

25

28

*p*

*f*

*tr.*

*el.*

*simile*

## Example 2-4, continued.

The musical score consists of three systems of piano accompaniment. The first system (measures 31-32) begins with a piano (p) dynamic and features a static beginning with a repeated two-bar segment. The second system (measures 33-34) shows a phrase with alternating forte (f) and piano (p) dynamics, including trills (tr.). The third system (measures 35-37) continues the phrase with a final trill and a cadence. The score is marked with measure numbers 31, 34, and 38, and includes dynamic markings (p, f), articulation (tr.), and phrasing slurs.

Measures 18-21 are a harmonically static group prolonging scale step  $\hat{5}$  over the tonic chord. I refer to such a group as a static beginning, in order to differentiate it from the static groups described in chapter 1, which prolong a tonal goal. Static beginnings often appear at the start of second-key-area themes. They usually consist of a repeated two-bar segment, as in measures 18-21. This allows them to function as the first halves of symmetrical eight-bar phrases, in which the second halves introduce the motion toward a cadence. The first four measures in this phrase, however, do not show a symmetrical relationship with the active group that follows (it is longer than four bars), and

thus must be considered a separate group. While this group is rhythmically isolated in this sense, it has the tonal function of stating scale step  $\hat{5}$  and the initial tonic chord for the rest of the phrase.

The elision that is characteristic of complex phrases occurs between the second and third groups here. Measures 22-26 are rhythmically similar to the middle group in example 2-2 (the Sonata in C, K. 330/I). One can hear them as the first five measures of an eight-bar phrase (extending the tonal sequence begun at bar 22 would yield  $\hat{1}$  at the eighth bar), but the elision that curtails the group is again more obviously based on the listener's expectation of a third two-bar segment. The expected arrival of  $g^2$  at measure 27 disguises the elision for only an instant; the left-hand accompaniment pattern and the sudden lyrical quality of the melody immediately suggest that this is the first measure of a new group. As in our first two examples of complex phrases, the final group here progresses in symmetrical fashion to the cadence. Yet measures 27-30, by virtue of their expressive contrast with the preceding part of the complex phrase, stand out more clearly as a separate four-bar phrase. The particular beauty of this passage stems from the fact that this both is and is not a separate phrase. This beauty would largely disappear if measures 27-30 stood alone, requiring no rhythmic reinterpretation.

The tonal elements of this complex phrase are evenly

distributed among the three groups (the repetition of the third group at bars 31-33 showing only slight tonal differences). Each group is distinguished by its first chord: the first group begins with the tonic, the second with the subdominant, the third with the dominant. In this chapter's first two examples of complex phrases, the initial groups (group in K. 280) prolong scale step  $\hat{5}$  over the tonic chord, so that the final group must execute the descent to  $\hat{1}$  by itself (see examples 2-1 through 2-3). In this passage, the second and third groups both participate in a single, gradual descent. Measures 22-26 provide scale steps  $\hat{4}$  and  $\hat{3}$  (at bars 23 and 25); measures 27-30 provide  $\hat{2}$  and  $\hat{1}$ . The elision at measure 27 places an unexpected rhythmic emphasis on  $g^2$ . It now initiates and predominates in the final group. Notice that the sequence of tenths between the bass and the upper voice (bars 22-26) is interrupted precisely at this point, the bass moving conspicuously to the root of the dominant chord. Measures 27-29 prolong  $\hat{2}$  over the root-position dominant by neighboring motion ( $g^2-f^2-f\#^2-g^2$  in bars 27-29) and motion to an inner voice ( $e^2$ , bar 29).

The elision at measure 34 of the final group's repetition results in a greater sense of tonal closure than at measure 30. At measure 30 the arrival of the cadential tonic in the final measure of a four-bar group receives

little rhythmic emphasis.<sup>6</sup> The cadential tonic at measure 34, however, occupies a downbeat measure by virtue of the elision. The static character of the following three measure groups confirms tonal closure at measure 34. Measures 34-35 and 36-37 are active groups in the sense of stating a cadence, yet their function, like so many similar groups at the ends of exposition sections, is clearly prolongational. There are also slight tonal differences in measures 31-33 that may contribute to their sounding more final than measures 27-29. The repetition, reversing the roles of scale steps  $\hat{2}$  and  $\hat{7}$  at the start of measure 27 and the end of measure 29, descends to the tonic ( $\hat{2}-\hat{1}$ ) instead of ascending ( $\hat{7}-\hat{1}$ ).<sup>7</sup>

The first movement of the Sonata in A, K. 576 provides two very similar examples of Mozart's use of hidden elision within complex phrases. This compositional technique can be observed clearly in this movement, as each of the two complex phrases appears elsewhere in the movement without the eliding groups, that is, as a straightforward symmetrical phrase. The straightforward versions of these phrases do not function as prototypes for the complex phrases, however.

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<sup>6</sup> As explained in Chapter 1 (pp. 33-34), this arrival does not coincide with the listener's counting of broader measure-pulses within the symmetrical group (two-bar pulses here), nor with the downbeat of a new group.

<sup>7</sup> Chapter 3 discusses the extent to which Mozart reserves the descent  $\hat{2}-\hat{1}$  for last whenever he repeats a final portion of a phrase.

In one case the complex phrase occurs earlier in the movement than the simpler version. And although the other complex phrase does occur later in the movement than its simpler version, this earlier phrase is not crucial to the listener's perception of the elisions within the complex phrase. A comparison of the simpler and complex versions of these phrases confirms the special function of complex phrases: to postpone and dramatize the moment of tonal closure. Mozart's placement of the complex phrases within the movement clearly indicates this function.

Example 2-5 reproduces the second key area of the exposition (bars 34-58). The first eight-bar phrase reappears at the end of recapitulation as a complex phrase (bars 144-154, reproduced in example 2-6). The complex phrase at measures 46-52 of example 2-5 functions as the consequent for the antecedent phrase at measures 42-45 (just as bars 25-34 function in the Sonata in C, K. 330/I, example 2-2). This complex phrase reappears at the beginning of the second key area in the recapitulation as a straightforward four-bar consequent phrase. The two ideas comprising the second key area of the exposition thus trade places in the recapitulation, and each of these ideas is dramatically extended only when it closes the section.

The antecedent phrase at measures 42-45 is the prototype against which one hears the expansion of the consequent phrase. The elision at measure 48 remains hidden until the

## Example 2-5. Sonata in D, K. 576/I.

Allegro

31

35

39

44

49

54

-8-

-4-

-3-

-2-

-6-

-2-

tr.

dolce

hidd. el.

tr.

tr.

tr.

f

second half of the measure. At this point one still expects the consequent to cadence within four measures, the bass

ascending to the root of the dominant chord at the second half of the measure, scale step  $\hat{1}$  and the tonic chord arriving at measure 49. This is essentially what occurs in the simpler version of this phrase in the recapitulation.<sup>9</sup> In the complex phrase, however, the second half of the measure repeats the entire content of the first half, prolonging the first-inversion tonic chord. As at measure 25 of example 2-2, the new group begins to distinguish itself from the preceding group simply by repeating an idea first heard as belonging to that group. The higher register of the melody in measures 48-50 also distinguishes the new group (as in the eliding groups in examples 2-1 and 2-2).

The new group asserts a symmetrical structure very clearly. The midpoint of the group (bar 50) is marked by the pronounced arrival of the cadential subdominant chord. This chord seemed to have appeared briefly in the "third" measure of the previous group (on the third eighth of bar 48), but the listener has since reinterpreted that chord as a neighbor to the tonic chord. This is thus the first appearance of the cadential subdominant chord in the phrase. Melodically, this new group seems to have ascended to a high point at the  $f\#^2$  of measure 50, so that the following pause

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<sup>9</sup> The melody in the corresponding measure of the simpler version (bar 128) allows the descent  $\hat{3}-\hat{2}$  to occur in the second half of the bar. The complex phrase implies the restatement of  $\hat{5}$  at the second half of the bar, which would require a more rapid melodic descent in order to reach  $\hat{1}$  by the next bar.

and the changes in design and melodic direction in this measure all imply that tonal closure will occur after the completion of a four-bar group. The listener expects the dominant chord at measure 51 to last a full measure, the tonic arriving in an added downbeat measure or by transference to a static group.

Instead the dominant is extended to two measures, forming a separate group and appropriating the implied fourth measure of the previous group. This is the smallest possible eliding group in a complex phrase, occurring at the last possible moment (with the arrival of the cadential dominant chord). The factors involved in the listener's recognition of this elision are nevertheless the same factors involved in the recognition of any elision: the appearance of material that cannot be interpreted as a continuation of the implied symmetrical group, and the subsequent coherence of the new group. As with the elision at measure 48, Mozart disguises this elision for half a measure. The first contradiction of the implied four-bar group occurs at the second half of measure 51 when  $a^2$  fails to resolve to  $g\#^2$  and the bass begins a chromatic ascent. The motion of the tenor voice in measures 51-52 is important in articulating this two-bar symmetrical structure. The goal of this voice's ascent ( $e^2$ ) occurs at the midpoint of the group, after which the descent to the dominant seventh ( $d^2$ ) clearly implies the tonic chord at measure 53. Notice that Mozart

has employed this classic melodic contour to unify two successive measure groups. Appearing in the upper voice at measures 48-51, it unfolds within an implied four-bar group; in the tenor voice at measures 51-52, it fills out a two-bar group.

The complex phrase near the end of this movement, although based on the first eight-bar phrase in example 2-5, has the same rhythmic structure as the complex phrase just discussed. The final two-bar group of the later complex phrase simply transposes the final group of the earlier one. There are, however, several aspects of the later phrase that make it especially appropriate to end the movement (see example 2-6).

Measures 144-147 are an example of a static beginning that fills out the first half of a symmetrical active group. The role of such a static beginning is even clearer at measures 34-37, which do not switch to a higher register as at measure 146 (see example 2-5). The first half of such a group simply prolongs the the opening tonic chord with a repeated segment (two or four bars in length), after which the appearance of heightened melodic activity and cadential chords in the second half imply the length of the group. Thus the listener begins to expect an eight-bar group when the melody at bar 38 (and bar 148) breaks from the two-bar pattern of the previous four measures, and the listener certainly expects such a group when the cadential subdomi-

nant function (II<sup>o</sup>) arrives in the next measure.

Example 2-6. Sonata in D, K. 576/I.

144

147

150

153

157

-6-

-3-

-2- [p] tr.

-2-

-6- -2- tr. -2-

hidd. el.

hidd. el.

tr.

tr.

tr.

The sense of finality conveyed by the complex phrase in example 2-6 results from the fact that both eliding groups prolong the cadential dominant chord, the last chord before tonal closure. In the other complex phrase in this movement (example 2-5), the first eliding group appropriates and prolongs the first-inversion tonic chord. The two eliding groups in example 2-6 resemble a cadenza, dramatizing the moment of tonal closure by postponing the resolution of the cadential six-four chord. This short cadenza is all the more effective because of the wit of its rhythmic structure.

The eliding group at measure 150 immediately differs from the seventh measure of the simpler version of this phrase in the exposition (example 2-5, bar 40). It is possible that the listener may remember the earlier phrase well enough for it to serve as a prototype, signalling the possibility of an elision at this point. Yet the listener can also hear measures 150-151 1/2 as an alternate ending to the earlier phrase. The melody could still descend and the six-four chord resolve in the second half of measure 151, scale step  $\hat{1}$  and the tonic chord arriving at measure 152. The cadential tonic, arriving after the completion of an eight-bar group, would receive a stronger rhythmic emphasis than at measure 41, an emphasis appropriate here at the end of the movement.

There is an element of wit in many of Mozart's hidden elisions. Here the wit is based on the length of time dur-

ing which the elision remains disguised, and on the listener's sense at measure 151 1/2 that there is only one tonal possibility for the phrase, resolution of the six-four chord and closure on the tonic. The second half of this measure contradicts the implied eight-bar group and suggests a new group beginning at measure 150, yet for this half-measure the listener has no idea of what the rhythmic structure of this new group might be, or of what new tonal content it could introduce. The events occurring in the second half of the new group (bars 152-53) then reveal its rhythmic and tonal structure. Mozart employs the same means of implying a four-bar structure here as in measures 48-51 of the complex phrase in the exposition (see example 2-5). The melodic ascent reaches its highest point at the midpoint of the group, after which there is a pause, a change of design (no left hand), and a descent to scale step  $\hat{2}$ . The pronounced arrival of the diminished seventh chord has the same rhythmic function as the arrival of the cadential subdominant chord at measure 50, implying the appearance (or reappearance in the later phrase) of the cadential dominant chord in the "fourth" measure. The hidden elision at measure 153, again apparent only in the last half-measure of the preceding implied group, compounds the wit of the earlier elision.

#### Complex Phrases Ending with Half Cadences

There are several instances in Mozart's piano sonatas of

complex phrases that end with half cadences. These phrases resemble the phrases already discussed in this chapter in their articulation of rhythmically independent measure groups sharing a common tonal goal. They contain fewer of these groups, however, and serve a different function within a movement.

These complex phrases occur only when the half cadence sets the stage for a thematic section or for a new active group within a thematic section. They generally appear before the second-key-area theme, either in the transition section of the exposition or the secondary development of the recapitulation. The role of these phrases within the pacing of a movement can thus be understood in terms of their basic transitional function. The rhythmic complexity resulting from the emergence of an eliding group (there is only one eliding group before the appearance of the dominant chord) creates a greater sense of structural distance between the sections that precede and follow the complex phrase in the movement.

The following two examples of complex phrases ending on the dominant chord do not require extended discussion. The means by which Mozart creates an expectation of a symmetrical group, contradicts it, and then builds a new expectation are familiar enough from the preceding examples. Example 2-7 reproduces the transition section from the third movement of the Sonata in C, K. 309. A complex phrase can be



Mozart's piano sonatas, does not modulate but ends with a half cadence in the principal key.

The complex phrase (bars 28-39) begins as a consequent but ends, like the antecedent phrase (bars 20-27), with a half cadence. While the antecedent phrase is a clear prototype, enabling the listener to recognize that the following phrase is expanded, the elision at measure 32 is hidden, the eliding group emerging only with the varied repetition of a two-bar segment that sounds at first like the expected fifth and sixth measures of the implied eight-bar phrase. The two two-bar segments serve as a static beginning within the new eight-bar group, prolonging the initial tonic chord of this group. The cadential subdominant function ( $II^{\ominus}$ ) and a new melodic design then appear at the midpoint of the group (bar 36), implying the length of the new group.

An analytic alternative to hearing a single, symmetrical group beginning at measure 32 would be to explain one by one this complex phrase's deviations from the prototype. One could consider measures 34-35 as an insertion (an echo of bars 32-33), and measures 36-37 and 38-39 as expansions of chords that last for a single measure in the prototype (bars 26 and 27). Such an analysis ignores what I believe the listener actually hears in this passage, namely, an eight-bar group resembling an independent phrase, gradually emerging at measures 32-39.

Measures 88-103 of example 2-8 are the secondary

development in the first movement of the Sonata in A Minor, K. 310. Since this passage remains in the key of A minor, the elision at measure 94 has an important role in providing a sense of structural distance between the principal theme at the start of the recapitulation (bars 80-87) and the second-key-area theme at measure 104. Comparison with the

Example 2-8. Sonata in A Minor, K. 310/I.

Allegro maestoso

87

91

95

99

102

tr.

f

-6

hidd. ell.

ca.

-3-

ell.

-2-

lento

p

-2-

-3-

p

p

modulating transition at measures 9-22 of the exposition reveals that the eliding group at measures 94-96 provides a degree of rhythmic complexity not present in the earlier passage.

Typical components of an eight-bar phrase are audible beginning at measure 88. Two similar two-bar segments comprise the first half of the phrase, and two one-bar segments create a sense of acceleration in measures 92-93. Measure 94 introduces changes of design that the listener can interpret as the beginning of the cadence. The left-hand seems to have arrived early at *e*, the goal of its gradual descent from the beginning of the phrase, but the listener can still expect at this point a restatement of the six-four chord on the downbeat of measure 95 and a resolution of this chord on the third beat. The same changes of design, continued in an implied four-bar group (two one-bar segments in the first half, the cadential subdominant chord and cadential melodic motion at the second half), reveal the elision retrospectively. The eliding group can proceed no further toward the dominant in a tonal sense; it prolongs a family of chords that share the cadential subdominant's rhythmic function of preceding the dominant (VII of V, II, IV, V of V).

This chapter has focused on complex phrases that end with full cadences, describing their role of postponing tonal closure of thematic passages. Chapter 3 discusses another compositional technique by which Mozart postpones

full cadences and thereby increases the listener's sense of tonal closure. This technique, too, is based on the listener's ability to perceive symmetrical measure groups. As with complex phrases, Mozart employs this technique most often and in most extended fashion in the second key areas of sonata-form movements. The dramatic emphasis that these two compositional techniques place upon tonal closure is appropriate for the establishment of the secondary key in the exposition and for the corresponding assertion of the tonic key at the end of the movement. Mozart also uses these two techniques in direct succession in order to extend a single phrase. Several examples of this combined technique appear at the end of Chapter 3.

## Chapter 3

## PARTIAL REPETITION OF ACTIVE GROUPS

Mozart often uses the technique of repeating a final portion of a symmetrical measure group that is clearly progressing toward a full cadence. This technique, appearing most often in second key areas of sonata-form movements, enables Mozart to postpone the arrival of the closing cadence while maintaining the listener's sense of the group's symmetrical structure. The partial repetition occurs after an initial attempt to close the group has been made. Such initial cadential gestures vary in terms of the sense of finality they convey, but most often they lack some aspect of tonal or rhythmic completeness. Tonal incompleteness results when melody and harmony fail to converge in a full cadence ( $\hat{1}$  over a root-position I). This lack of tonal completeness, creating a demand for more thorough closure, is thus the circumstance requiring the partial repetition. Rhythmic incompleteness results when the partial repetition elides the expected length of the symmetrical group, beginning in place of the final measure in which the listener expects to hear the cadential tonic chord. After such a tonal or rhythmic rationale, the partial repetition returns to an earlier point in the final phrase (if there is more than one in the group), most often the beginning of its

second half, in order to proceed once again toward closure. The cadence of the partial repetition may provide closure, or, if it does not, may be followed by another partial repetition.

Partial repetition makes demands of the listener that full repetition, such as antecedent-consequent phrasing, does not. A consequent phrase of the same length as its antecedent can be heard additively, forming together with the antecedent a large symmetrical group. The structure of such a group is reflected in its actual duration, as measured by a clock or by the listener's continued counting of the measures in the group. A partial repetition following such a group requires the listener to relocate an earlier moment within the consequent phrase just heard, and then hear the phrase move forward again from this point. The listener must hear the repetition as a substitution for the preceding cadential gesture, assuming its tonal and rhythmic function of concluding the entire symmetrical group. The listener's counting of the group's measures must revert to an earlier point (typically the thirteenth bar of a sixteen-bar group), and thus no longer reflects clock time but rather the structural position of the measures within the group.

The alternative to hearing the new measures in this way is hearing them merely as a concluding appendix or an extension, lying structurally outside of the symmetrical group.

This hearing more readily suggests itself when a group of measures appearing in the position of a partial repetition bears little melodic resemblance to its counterpart in the original group. The examples of partial repetition discussed in this chapter vary considerably in terms of their resemblance to the counterpart. Most of the examples show varied repetition; in some of the examples, however, the repetition (if it may be called repetition) is quite nonliteral. In such cases it is only the general rhythmic structure and tonal function of the counterpart that is repeated.

These more nonliteral repetitions emphasize the need to describe more completely the musical causes that prompt the listener to hear any partial repetition as a return to an earlier point in a symmetrical group's structure. The most musically satisfying explanation for one's hearing a partial repetition in this way is one's gradual perception of the symmetrical group and the importance one consequently attributes to its closure. The gradual unfolding of a symmetrical group prompts the listener to expect that rhythmic closure of the group, occurring after a specific number of measures and a specific amount of clock time, will somehow coincide with tonal closure. The cadence of a symmetrical group, the final confirmation of the listener's rhythmic and tonal expectations of the group, is thus potentially a point of dramatic focus. After the failure of the initial cadential gesture to fulfill these expectations, closure becomes

an obvious issue. A dramatic denial of closure, such as an elision, draws the listener's attention to the issue of closure with particular clarity.

A partial repetition, if it is to provide the rhythmic and tonal closure missing from its counterpart in the original group, cannot be completely literal. It must at least be complete in whatever respect the initial cadential gesture is incomplete. It must, for example, provide scale step  $\hat{1}$  over the root-position tonic chord, if the counterpart has ended with a deceptive cadence. Yet Mozart's partial repetitions generally vary from their counterparts well before the final chord. After recalling the start of the counterpart in some way, and thus identifying its rhythmic position within the symmetrical group, a partial repetition generally sounds more final than its counterpart in several respects. It may show, for example, a more deliberate harmonic rhythm, a dramatic movement through a higher register, or a more obvious melodic descent to  $\hat{1}$ . These differences, underscoring the partial repetition's role of closing the entire symmetrical group, can be heard in the most nonliteral repetitions.

#### Examples of Partial Repetition

In the second movement of the Sonata in B-flat, K. 281, the cadence of the second key area is postponed by a series of partial repetitions of the opening eight-bar phrase (see example 3-1). This phrase resembles most of Mozart's sym-

metrical eight-bar phrases in its structure. The first half of the phrase, a two-bar segment and its complementary response, prolongs the initial tonic chord. The shifts in register and dynamics at the fifth measure begin a continuous motion toward a cadence in the second half of the phrase.

Example 3-1. Sonata in B-flat, K. 281/II.

Andante amoroso

24

31

-8-

= 5<sup>th</sup> bar

36

t.a.

= 7<sup>th</sup> bar

41

t.a.

= 7<sup>th</sup> bar

ell.

-4-

The element of tonal incompleteness requiring the first repetition is the deceptive cadence in the eighth measure of

the phrase. This repetition begins, as is most often the case, from the second half of the phrase. Aside from the contrast in dynamic level (now piano instead of forte), it is a literal repetition. For three measures the repetition sounds as if it will quietly close the phrase (contradicting the generalization that partial repetitions sound more conclusive than their counterparts in the original phrase).

This quiet close is a ruse, however. Closure is again denied at the end of this repetition, in a more dramatic way than the preceding deceptive cadence. The sudden changes in register and dynamics at measure 39, by so forcefully denying closure, make closure a dramatic issue. In spite of its forcefulness, this measure does not elide the ongoing eight-bar phrase, but has the same rhythmic status within it as measure 35 (an "eighth" bar). Each of these measures functions as a turn-around, filling out the eight-bar group but at the same time implying the following partial repetition by providing a smooth voice-leading connection with it. Even a measure providing scale step  $\hat{1}$  over the cadential tonic chord may function as a turn-around if a continuing melodic motion denies a sense of closure and leads into a repetition. Here, however, the turn-around at measure 39 (like the one at bar 35) takes the place of the cadential tonic chord. It leads smoothly, and inexorably, into another partial repetition, now from the "seventh" measure of the original phrase. Notice that both of these partial

repetitions begin from points within the phrase that the listener has already heard as initiating broader pulses (the second four-bar pulse of the phrase, and the fourth two-bar pulse). The second partial repetition, like the one that follows at measure 42, is no longer literal, and in fact states a melodic descent from  $\hat{3}$  that is not present in measures 34 or 38.

In passages like this one, in which the melody of the original phrase does cadence on  $\hat{1}$ , the partial repetition usually emphasizes the cadential descent to a greater extent.<sup>1</sup> A partial repetition stating  $\hat{3}-\hat{2}-\hat{1}$  after an initial cadential gesture stating  $\hat{1}-\hat{7}-\hat{1}$  is typical. This passage shows this contrast to a certain extent ( $\hat{3}-\hat{4}-\hat{2}-\hat{1}$  as against  $\hat{1}-\hat{2}-\hat{7}-\hat{1}$ ). I do not mean to imply that the emphasized scale steps  $\hat{3}$  and  $\hat{2}$  in the partial repetition are the structural tones in this passage's protracted descent to  $\hat{1}$ . If the listener hears a partial repetition in the way I have described, as a return to an earlier point in the preceding phrase, then an analysis locating structural step  $\hat{3}$  or  $\hat{2}$  at a single point seems inappropriate. If the  $c^2$  of measure 34 is heard as the structural  $\hat{2}$ , for example, then measures 35-42 merely prolong  $\hat{2}$ . Choosing the  $c^2$  of measure 42 as the structural  $\hat{2}$  implies a prolongation of  $\hat{3}$  from measures 31-42. Cadential motion toward the tonic is the essential

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<sup>1</sup> The Appendix of this study lists all of the partial repetitions found in Mozart's piano sonatas. The generalizations made in this chapter are based upon these passages.

characteristic of bars 32-34, 36-38, 40, and 42. The tonal equivalence of these cadential gestures, the inappropriateness of specifying one of them as being of greater tonal significance than the others, is supported by the listener's successive expectations that each of them will close the same eight-bar phrase. I am therefore suggesting merely that the literal appearances of  $\overset{\wedge}{3}$  in measures 40 and 42, the final two "seventh" bars, make these measures sound more conclusive than the preceding two "seventh" bars.

When the long-awaited cadential tonic chord arrives in measure 43, it assumes the rhythmic function of a beginning rather than an ending, initiating a four-bar static group. The change of design in the right hand together with the sudden shift in dynamic level immediately suggest that the expected "eighth" bar of the original phrase has been replaced by the start of an eliding measure group. There have been similar shifts in dynamic level at measures 39 and 41, at the corresponding point in the original phrase (the eighth bar). These earlier emphases prepare the forceful entrance of the eliding group at measure 43. The symmetrical structure of measures 43-46 (2+2) confirms the elision retrospectively.

The elision at measure 43 enhances the listener's sense of tonal closure at this point. As already described with regard to measure 34 of example 2-4, tonal closure can occur across an elision. The surprising effect of an elision

occurring at a final (even-numbered) measure is particularly suitable here after the repeated denials of closure at the same point in the eight-bar phrase. And since the listener immediately reinterprets measure 43 as a "first" measure (or downbeat measure), the tonic is emphasized far more strongly than if it had simply occupied a final "eighth" measure. The critical consideration for hearing tonal closure, aside from the brief arrival on  $\hat{1}$  over the root-position tonic chord, is the obvious function of the eliding group. It acts as a border or margin, prolonging the cadential tonic, but also providing contrast, by virtue of its static character, to the preceding active group. The moment of closure in Mozart's second key areas characteristically coincides with the beginning of such a static group.<sup>2</sup>

The second key area of the second movement of the Sonata in F, K. 332 contains a partial repetition showing little literal resemblance to its counterpart in the preceding phrase (see example 3-2). The symmetrical group consists of the antecedent and consequent phrases beginning at measures 9 and 13.<sup>3</sup> Here it is essential to realize that the movement is notated in compound meter, each notated measure actually

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<sup>2</sup> See examples 1-9 (bar 54), 2-4 (bar 34), and 2-5 (bar 53).

<sup>3</sup> The first phrase's termination on  $\hat{3}$ , avoiding the expected descent to  $\hat{1}$ , calls for repetition. The full repetition of the phrase that follows, that is, its beginning again from the first measure, identifies the phrasing as antecedent-consequent.

Example 3-2. Sonata in F, K. 332/II.

Adagio

9 *p* -8-

11 *sfp* *sfp* *sf* *p* *tr* -16-

13 *sfp* -8-

15 *sfp* *sfp* *sf* *p* *t.a.* *tr* *tr* *tr*

= 5<sup>th</sup> bar *p* *sfp* *tr*

19 *tr* *tr* *p* -4-

containing two measures. Both the antecedent phrase and the implied consequent phrase are thus eight measures in length. The first half of each phrase is a static beginning consisting of a repeated dominant-tonic pattern, in which the pronounced arrival of the tonic chords suggests two-bar segments. The implied arrival of the cadential tonic chord at the second halves of measures 12 and 16 makes the compound meter most obvious.

The antecedent and consequent phrases together comprise a single symmetrical measure group not only by virtue of their symmetrical structure (8+8), but also by virtue of their common tonal goal. Although the partial repetition directly concerns only the final phrase, the listener's expectation of simultaneous rhythmic and tonal closure begins to develop from the start of the antecedent phrase. The partial repetition thus provides closure for the entire group.

The partial repetition beginning at measure 17 is very nonliteral. There are several factors, however, that suggest to the listener that measures 17-18 are a varied restatement of measures 15-16. The first is the dramatic turn-around that replaces the cadential tonic chord in the final measure (= half-bar) of the consequent phrase (bar 16 1/2), denying closure with the same contrasts in dynamics and register heard at measure 39 of example 3-1. From measure 17 on there are melodic and harmonic similarities:

the melody at measure 17 descends and reascends as in measure 15 (see especially the second beat), and at measure 18 the melody moves from  $d^2$  to  $c^2$  as at measure 16. The subdominant function again arrives in the "sixth" measure of the phrase (bar 17 1/2); the melody of the repetition even recalls the tonicization of  $II^6$ .

Several factors contribute to the partial repetition's sounding more final than its counterpart in the original symmetrical group. The melody's three ascents into a higher register and its continuous line of thirty-second notes (bar 17) create a more urgent sense of closure. The loud dynamic level of the partial repetition, introduced by the turn-around, contrasts with the quiet close implied at measure 16 and is a logical expression of the latent energy created by the many sforzato-piano markings in the original group. The temporary lowering of the dynamic level in the "sixth" and "seventh" measures of the partial repetition (bars 17 1/2-18 1/2), followed by a loud close emphasizing a final descent from  $\hat{2}$ , seems to underscore this relationship. Notice also that the cadential descent here, as at measure 43 of example 3-1, follows an ascent to scale step  $\hat{1}$  in the initial cadential gesture ( $\hat{1}-\hat{7}-\hat{1}$  is implied at bar 16 1/2).

Another crucial rhythmic difference in the partial repetition is the broadening of the dominant function in measure 18. In the original phrases, harmonic motion is very rapid from this point, occurring at the rate of one chord every

eighth-note. The cadential tonic chord arrives (or, in the consequent, would arrive) in the final ("eighth") measure. In the partial repetition, the cadential formula ( $V(\frac{4}{4}-\frac{3}{4})$ ) resolves with a half-note rhythm. The cadential tonic must now fall outside of the expected eight-bar group, either in an added downbeat measure or, as here, in the first measure of a new group (transference). Since the following four-bar group prolongs the cadential tonic, this cadence provides the maximum sense of tonal closure for the entire symmetrical group. As in example 3-1, the moment of closure coincides with the beginning of a static group. Here, however, the broadening of the cadential motion implies this rhythmic emphasis well before it occurs. The static group's retransitional function (reinterpreting F major as the dominant chord) does not diminish the listener's sense of closure.

In the second key area of the slow movement of the Sonata in A Minor, K. 310 (bars 15-31), there is again a balance between the elements of the two partial repetitions that recall the counterpart in the original phrase and the elements that make them sound more conclusive. The section is based on a single eight-bar phrase (as in example 3-1), the first half of which is a static beginning. The partial repetitions at measures 22 and 25, in contrast to those discussed above, are introduced by elision (see example 3-3).

Measures 22-24 and 25-28 are considerably different melodically from measures 19-21, yet rhythmic and harmonic

## Example 3-3. Sonata in A Minor, K. 310/II.

Andante cantabile

13

p crescendo f p

16

19

tr fp fp fp fp

= 5<sup>th</sup> bar

22

fp fp fp fp fp

crescendo f

25

fp fp fp p

= 5<sup>th</sup> bar

27

f p

-7-

e/f.

e/f.

tr.

## Example 3-3, continued.

similarities indicate that these measures, too, function as second halves of the original phrase. At measures 22 and 25, the sixteenth rest and the leap to  $c^3$  immediately recall the first beat of measure 19. The particular rhythm with which measures 19-21, 22-24, and 25-28 all begin--a sixteenth rest followed by continuous sixteenths--derives from the initial statements of this rhythm in the first half of the phrase (bars 15 and 17). All three of these second halves then show a characteristic contrast with the segmentation of the first half, maintaining continuous melodic motion toward the cadence. These similarities, together with the harmonic parallelism (I, IV or II, and V), prevent the listener from hearing the partial repetitions at measures 22-24 and 25-28 as new phrases.

Each of the two partial repetitions introduces elements that make it sound more conclusive than the preceding cadential gesture. Measures 22-25 use both dynamics and register in a more dramatic way than measures 19-21. The dynamic accents heard on the beats in measures 19-20 are displaced to the second sixteenth note of each beat in measures 22-23,

and there is a crescendo in measures 23-24 not heard at measures 20-21. An expansion of register in both hands occurs at the same time as the crescendo. The second partial repetition, again entering by elision, broadens the cadential descent as in measures 17-18 of example 3-2. The dominant function now extends from the "seventh" to the twice elided "eighth" measure, closure coinciding with the beginning of a three-bar static group. The thirty-second-note lines in measures 26-27 create a greater sense of acceleration toward the cadence, and allow a further expansion of register in both hands.

The second key area of the first movement of the Sonata in G, K. 283 contains a partial repetition that places new demands on the listener's ability to relocate a moment in the original symmetrical group. This partial repetition does not begin, as the previous examples in this chapter have, from either the last half or the last quarter of a phrase. As example 3-4 indicates, it returns to the eleventh measure of an implied sixteen-bar active group.

The word phrase has been used with so many various meanings that I am here referring to measures 23-37 as an implied symmetrical group rather than an implied symmetrical phrase. One might refer to measures 23-26 and 27-30, for example, as four-bar phrases. It should be recognized, however, that the harmonic and melodic content of measures 23-37 is distributed over the entire group much as in the

## Example 3-4. Sonata in G, K. 283/I.

Allegro

21

tr

p

-/5-

27

m. d.

f

31

p

f

p

f

p

f

36

el. = 11<sup>th</sup> bar

p

f

40

el.

-2-

44

tr

p

f

= 13<sup>th</sup> bar (?)

el. = 13<sup>th</sup> bar (?)

Detailed description: This image shows a page of musical notation for a piano sonata. It consists of six systems of music, each with a treble and bass clef staff. The first system starts at measure 21 and includes a trill (tr) and a piano (p) dynamic marking. The second system starts at measure 27 and includes a mezzo-forte (m. d.) and forte (f) dynamic marking. The third system starts at measure 31 and features alternating piano (p) and forte (f) dynamics. The fourth system starts at measure 36 and includes a piano (p) and forte (f) dynamic marking, with a handwritten annotation 'el. = 11th bar' above the staff. The fifth system starts at measure 40 and includes a piano (p) and forte (f) dynamic marking, with a handwritten annotation 'el.' above the staff. The sixth system starts at measure 44 and includes a piano (p) and forte (f) dynamic marking, with handwritten annotations '= 13th bar (?)' and 'el. = 13th bar (?)' above the staff. The tempo is marked 'Allegro' at the top. The page number '93' is in the top right corner. There are two page numbers at the end of the systems: '-/5-' and '-2-'. The score is reproduced with permission of the copyright owner.

Example 3-4, continued.

eight-bar phrases already discussed in this chapter. The first half of the group is a static beginning, prolonging the initial tonic chord. Instead of two two-bar segments there are two four-bar segments. The second half of the group continues to prolong the initial tonic chord (as is often the case in eight-bar groups as well), but the new melodic and dynamic elements introduced at the midpoint of the group (bar 31) begin to imply a motion toward a cadence. The continuity of melodic motion characteristic of the second halves of active groups develops gradually in measures 31-34, and the appearance of continuous sixteenth notes at the final quarter of the group creates a further sense of acceleration toward the cadence.

The first partial repetition enters by elision, replacing the cadential tonic at the sixteenth bar of the group (bar 38). This repetition is literal, as it must be, for it draws the listener back to the eleventh bar of the group (bar 33). There are only a few examples in the piano sonatas of partial repetitions that do not begin with either the

last half or the last quarter of a phrase.<sup>4</sup> The elision involved here belongs to the category of elisions most startling in their rhythmic effect: an expected even-numbered measure (the "sixteenth" bar) is replaced by an odd-numbered measure (the "eleventh" bar). Compare the effect that would result if the partial repetition were to begin with measure 39 (omitting bar 38). A continuity of two-bar pulses would be maintained. The rhythmic reinterpretation involved (a "twelfth" bar replacing a "sixteenth" bar) would not assert a broader level of pulse than the listener expects.

The listener's perceptual adjustment here is both possible and effective because it is grounded in the size and symmetrical structure of the original group. The crucial factor is that the first half of the group is not affected by the partial repetition; the listener can still hear the group as having progressed halfway toward closure at the point of the return to measure 33. The partial repetition might have returned to measure 31. Instead Mozart chooses asymmetry; the partial repetition cannot be paired against a similar segment in the original group. Yet this asymmetry is heard against the symmetrical framework of the original group.

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<sup>4</sup> This unusual type of partial repetition appears several times in the second movement of the Sonata in C, K. 279, discussed below (example 3-5). See also the third movement of the Sonata in B-flat, K. 333, bar 89.

There are, I believe, two more partial repetitions of the last quarter of the phrase, at measures 45 and 48. The upper voice does descend to  $\hat{1}$  over a root-position tonic chord at measure 43. Yet the two-bar group that begins at this point, replacing once again the final "sixteenth" measure, does not prolong  $\hat{1}$ ; it is not a final static group like those that conclude the previous examples in this chapter, but is transitional in function, reascending to  $\hat{3}$ . Measures 45-47 then attempt to complete a descent from  $\hat{3}$ . Measures 48-50 prevent closure on  $\hat{1}$ , replacing the expected final bar at measure 48 and descending once again from  $\hat{3}$ . The static group that enters at measure 51 by elision indicates tonal closure by prolonging  $\hat{1}$ .

This last example may prompt the question of whether there are limits to what can be heard as partial repetition. The last two partial repetitions here are separated from the first, longer repetition by two transitional measures that do not correspond to any segment of the original sixteen-bar group. Moreover, measures 45-47 do not specifically recall the last quarter of the original group (bars 35-37). The alternative to hearing measures 45-47 and 48-50 as partial repetitions, however, is hearing these measures in rhythmic isolation, without the function of providing more emphatic closure for the symmetrical group. If the listener does hear these measures as having this function, it is because of the inadequacy of measures 43-44 as a confirmation of

tonal closure. Notice also that measures 45-47 are motivationally related to the original group, recalling the syncopated opening at measures 23-24.

In a more general sense, I would assert that all of the examples in this chapter have demonstrated that Mozart is vitally concerned with the limits of the listener's ability to hear partial repetition. The complexity in each passage, whether it involves the nonliteralness of the repetition, the method of its introduction, or the point in the preceding phrase that the listener must relocate, presses the question of what the listener can hear as repetition. The symmetrical measure group that begins each passage is the basis for the listener's perceiving the partial repetitions. Symmetry is thus an indispensable means in these examples, rather an end in itself.

#### Combining the Techniques of Partial Repetition and the Complex Phrase

The final two examples of this chapter illustrate Mozart's practice of combining the techniques of partial repetition and the complex phrase. In these passages, the elements required for partial repetition appear first. An active symmetrical group unfolds, its cadence showing some aspect of tonal or rhythmic incompleteness. One or more partial repetitions follow, each of which implies a cadence conforming to the symmetrical structure of the original group. Before arriving at the cadential tonic chord, howev-

er, the final partial repetition (if there is more than one), gives way to a new, rhythmically independent measure group. The new group may enter by eliding the partial repetition, or it may be disguised for several measures as a partial repetition, subsequently revealing an independent rhythmic structure. As in complex phrases, the new group generates a new expectation of length, replacing the listener's expectation of the preceding symmetrical group's length.

The second key area of the second movement of the Sonata in C, K. 279 illustrates Mozart's combination of these two compositional techniques. The entrance of the final, rhythmically independent group is typical of such passages in its dramatic contradiction of the listener's expectation of a partial repetition. This final group is especially surprising after the first part of the passage has implied an elaborate and nonliteral sequence of partial repetitions.

The opening seven-bar phrase fits the description of truncation I've given in Chapter 1 (see example 3-5). Symmetry is implied by a static beginning that prolongs the tonic chord for four measures (bars 11-14) and leads smoothly into melodic and harmonic motion toward a cadence. The completion of the cadence within three more measures does not complete the implied symmetry. Though the phrase is tonally incomplete (missing the root of the tonic chord at bar 17), the sense of rhythmic incompleteness caused by

## Example 3-5. Sonata in C, K. 279/II.

Andante

10

14

19

24

-7-

=5<sup>th</sup> bar

=6<sup>th</sup> bar

-4-

-3-

truncation is particularly evident here.

This sense of rhythmic incompleteness may have a function here, as the following partial repetition compensates for it. The left hand's ascending line in measure 17, recalling measure 14, prepares the listener to hear the second half of the phrase once again. Measures 18-20 then expand the second half of the phrase so that the cadential subdominant and dominant chords arrive in the "seventh"

measure, implying the arrival of the cadential tonic in an "eighth" measure. The redistribution of the tonal content of measures 15-16 in measures 18-20 makes it clear that the later measures are an expanded repetition. The descending line in the right hand in measures 15-16 ( $a^2-b^1$ ) reappears within a longer descending line in measures 18-20 ( $c^3-b^1$ ).

The closure expected in a final, "eighth" measure is denied at measure 21 by a varied repetition of the "sixth" measure stated at measure 19. It is thus the expanded repetition at measures 18-20, rather than corresponding part of the original phrase, that serves as the basis for this repetition. The similarity of the right hand in measure 21 to the right hand of measure 19 is sufficient to lead the listener to expect the final quarter of the phrase at measure 22.<sup>5</sup> If measure 21 did not so clearly recall measure 19, it would more closely resemble a turn-around than an elision in its rhythmic function. Rather than initiating a broader level of pulse, as elisions characteristically do, it seems to fill out the expected final bar of the phrase and lead into a repetition of its last quarter.<sup>6</sup> Because of its specific identity as a "sixth" measure, however, the listener

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<sup>5</sup> This is precisely what occurs in the recapitulation. The "seventh" bar appears at this point, and is followed once again by a "sixth" bar (bars 62-63). The passage then continues as at bar 22 of the exposition.

<sup>6</sup> Compare the rhythmic effect of the partial repetition at bar 38 of example 3-4, which returns to an odd-numbered bar within the symmetrical group.

cannot hear measure 21 as filling out an eight-bar group. At measure 22 the listener expects exactly two more measures. Measure 21 is therefore an elision, albeit a very rare type of elision.<sup>7</sup>

The appearance of a rhythmically independent four-bar group at measure 22 dramatically contradicts the listener's expectation of hearing the last quarter of the phrase. Several factors make the elision immediately apparent: the isolated eighth-note figure on the downbeat of measure 22 (on the first upbeat in bar 20), the soft dynamic level, and the new accompaniment pattern. The listener has now been required at two successive measures (bars 21 and 22) to relinquish an expectation and accept a new one. Nevertheless, the complex structure of this passage is, I believe, completely audible. The final group here, like the final groups in many complex phrases, confirms the elision by asserting itself as a separate, symmetrical phrase (see examples 2-2, 2-4, 2-7, and 2-8). Tonally, of course, it consists of only the three essential cadential chords.

Measures 135-151 of example 3-6, from the first movement of the Sonata in B-flat, K. 333, illustrate the disguising of an independent measure group as a partial repetition. The passage appears in the middle of the second key area in

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<sup>7</sup> This unusual type of elision occurs repeatedly in this movement, each time within a different context and with a different function. See bars 4, 21, 35, 46, 61, and 63.

Example 3-6. Sonata in B-flat, K. 333/I.

Allegro

The musical score consists of six systems of piano and grand staff notation. Measure numbers 135, 138, 141, 144, 147, and 150 are indicated at the beginning of their respective systems. The score includes various dynamic markings such as *fp*, *f*, and *p*, as well as performance instructions like *tr* (trills) and *ell.* (elegant). Section markers *-8-*, *-6-*, and *-3-* are placed between systems. A specific instruction *hidd. ell. (≠ 5th bar)* is noted above the right-hand staff in the third system. The notation includes slurs, ties, and trills, with a key signature of one flat (B-flat).

the recapitulation.

Measures 135-41 are yet another static beginning of an eight-bar phrase. Obvious changes of design occur at the midpoint of the phrase (bar 139), yet the cadential subdominant chord does not appear until the final quarter of the phrase (bar 141). The motion toward the submediant chord in measures 139-40 thus has the same rhythmic function that a prolongation of the initial tonic chord in these measures would have. The final quarter of the phrase provides a full cadence, yet the right hand of measure 142, entering on the first upbeat and introducing the flattened seventh, denies a sense of closure. This is an example of a measure that functions as a turn-around in spite of its containing the root-position tonic chord and scale degree  $\hat{1}$ .

Measures 143-44 begin a nonliteral repetition of the second half of the phrase. The similarities with measures 139-40 are both rhythmic and tonal. The right hand continues the eighth-note rhythm played by the left hand in measures 139-40; the left hand plays the half notes formerly in the right hand. The third quarter of the phrase (bars 143-44) now prolongs the initial tonic chord, which appears at the end of measure 144. The listener expects the cadential chords to follow at measure 145, as they did at measure 141. This is precisely what happens at measure 49 of the exposition, tonal closure of the phrase occurring at measure 50 when the next closing idea of the exposition elides the

partial repetition at its final, "eighth" measure. This closing idea appears here in the recapitulation only at measure 152.

The listener begins to realize at measure 145 that measures 143-44 did not initiate a partial repetition but, rather, an independent measure group. The element of wit involved here is similar to that heard at measures 150-152 of example 2-6 (Sonata in D, K. 576/I). In both cases the listener hears a good portion of a new group before realizing that it is a new group. The changes introduced here at measure 147 imply that this new group has a symmetrical eight-bar structure. The right hand's motive occurs more forcefully (on the beats), and more frequently than the measure-long pattern repeated in measures 143-46. The bass surrounds the root of the dominant chord with neighbors.

The doubling of melodic and harmonic activity at measure 149 can be heard as the beginning of the cadence of the new eight-bar group. The listener can still expect at the fourth beat of measure 149 to hear a root-position dominant chord, the cadential tonic chord following at measure 150. Instead, the accelerated motion proves to be a change of design distinguishing another new measure group. The six-four chord at measure 149 assumes the role of the initial tonic chord within this new group, and is prolonged until the second half of measure 151. Tonal closure of the phrase begun at measure 135 finally occurs with the elision of this

symmetrical four-bar group by the next closing group of the second key area (at bar 152).

## Chapter 4

## THE ROLES OF SYMMETRICAL MEASURE GROUPS IN MODULATION

The full cadences postponed by complex phrases and partial repetitions indicate tonal closure within a single key area, most often the second key area of a sonata-form movement. The most important cadences of transition and development sections also appear at the end of the section, yet these cadences have a different function. They are generally half cadences, which alert the listener to the arrival of a new key (or a returning key). Charles Rosen has pointed out that the presence of these cadences in works of the Classical period is a characteristic that distinguishes Classical style from Baroque style. Focusing on the modulation to the second key area in the exposition, he describes the pause on the dominant of the new key as a means of dramatizing this tonal movement. It is this dramatization of the new key's arrival that Rosen recognizes as an innovation of Classical style.<sup>1</sup>

In Mozart's piano sonatas the arrival of the dominant chord indicating the new key is usually itself a point of dramatic focus. The listener can hear the arrival of this chord as the culmination of a gradual movement toward the

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<sup>1</sup> The Classical Style (New York: Norton, 1972), 70-71.

new key if this movement makes use of one or more symmetrical measure groups. The final dominant chord then becomes the focal point of the listener's rhythmic and tonal expectations of the preceding passage.

This chapter discusses two different ways in which this dramatization occurs in the piano sonatas. Each of these compositional techniques involves a symmetrical modulating group, that is, a symmetrical measure group that moves toward the dominant chord of a new key.<sup>2</sup> In one of these techniques the group is active, clearly progressing toward a half cadence within an implied number of measures. In the other technique the group is transitional; it moves to the dominant chord of the new key, but has little cadential energy of its own. I will discuss each of these techniques in turn in this chapter.

#### Active Modulating Groups

An active symmetrical measure group need not begin and end in the same key. One's recognition of the particular key to be articulated by the group's cadence can form gradually, simultaneously with one's perception of the group's symmetrical structure. This is what occurs in symmetrical groups usually referred to simply as modulating phrases. Measures 5-8 of the second movement of the Sonata in F,

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<sup>2</sup> Modulating phrases having a symmetrical structure and ending with a full cadence could be included as members of this category, but this chapter is specifically concerned with groups ending on the dominant chord of the new key.

K. 332 are such a phrase, beginning as a consequent to measures 1-4, but ending with a full cadence in the key of the dominant (see example 4-1).

Example 4-1. Sonata in F, K. 332/II.

-8-

Adagio

-3-

This phrase ends with a full cadence, and thus is not typical of the modulating groups discussed in this chapter. I present it here only to stress a basic point: that one hears

a modulating phrase as a single, unified group primarily because it has a coherent rhythmic structure. Theoretical texts generally stress the role of a pivot chord. In this example the b-flat minor chord has this crucial tonal role, being reinterpreted at bar 7 as a subdominant chord. Yet the symmetrical structure of measures 5-8 is equally as essential in allowing the listener to hear a single phrase moving toward a cadence. The first half of the phrase consists of two similar segments.<sup>3</sup> The midpoint of the phrase is marked by contrasts of dynamics and register, and is followed by continuous motion toward the cadence. The tonal reinterpretation at measure 7 is dramatically effective because of the strong rhythmic structure within which it occurs.

The transition section in the first movement of the same sonata presents an equally strong symmetrical structure at measures 23-36 (see example 4-2). The symmetry is implied rather than literal; a static group prolonging the final dominant chord elides an implied sixteen-bar group at its penultimate measure (bar 37).

Here the melodic material is more technical than thematic in character, and the keys in which the group begins and ends (D minor and C minor) are more distantly related than the keys in example 4-1. Nevertheless, symmetrical struc-

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<sup>3</sup> Since the movement is in compound meter (as pointed out with regard to example 3-2), each of these segments is equivalent in length to two bars in 2/4 meter.

## Example 4-2. Sonata in F, K. 332/I.

Allegro

The musical score for Example 4-2 is presented in four systems. The first system (measures 18-25) features a treble clef with a melodic line and a bass clef with a rhythmic accompaniment. The second system (measures 26-31) continues the melodic and harmonic development. The third system (measures 32-36) shows a change in the bass line's rhythmic pattern. The fourth system (measures 37-40) concludes the group with a cadence. Dynamic markings include *sf* (sforzando) and *p* (piano). Rehearsal marks '-14-' and '-4-' are placed above the second and fourth systems, respectively.

ture unifies this group just as it unifies the modulating phrase in example 4-1. The first half of the group consists of two similar four-bar segments. The second half introduces a contrasting design, and proceeds in two-bar segments, which provides a sense of accelerated movement toward a cadence. As the second half of the group continues, the listener forms a rhythmic and tonal expectation: that the group will be sixteen measures in length, and that it will

end with a cadence in C minor.

The modulating group here is larger than the preceding measure groups in the movement. This factor is crucial in imparting dramatic weight to the arrival of the half cadence in the key of the dominant. As with active groups in a single key, the period of time over which a modulating group engages the listener's attention determines the structural importance that the listener attributes to its cadence. An eliding static group like the one at measures 37-40 retrospectively underscores the importance of the half cadence, just as a static group emphasizes the importance of a full cadence in a single key. The crucial difference with a modulating group is that, as it unfolds, it requires the listener to interpret not only its rhythmic structure, but its tonal orientation as well. The question of the group's tonal goal assumes greater dramatic significance if the group is larger than the preceding groups in the movement.

The modulating group in example 4-2 has a clear beginning, following the full cadence that closes the first key area. In this case the modulating group with its eliding static group constitutes the entire transition section.<sup>4</sup> In longer transition and development sections the modulating group follows one or more groups in the section. In these

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<sup>4</sup> Symmetrical modulating groups with equally obvious beginnings are found at bars 9-22 of the first movement of the Sonata in A Minor, K. 310 and bars 11-22 of the first movement of the Sonata in B-flat, K. 333. Both of these transitions begin as counterstatements of the opening theme.

passages the final modulating group must draw the listener's attention to a greater extent than the preceding groups. This allows the listener to perceive its function of concluding the section and preparing the following key area. The final group is thus longer than the preceding groups in the section. Quite often the final group begins by eliding the previous group. The elision, involving a contradiction of the listener's tonal and rhythmic expectations of the previous group, draws the listener's attention to the modulating group in a dramatic way. This is roughly analogous to the entrance of a rhythmically independent group within a complex phrase. Here, however, the entrance of the modulating group begins a movement toward a new key, abandoning the key implied by the previous group.

This kind of elision occurs in the transition section in the recapitulation of the second movement of the Sonata in B-flat, K. 281 (see example 4-3). The section begins simply with a theme in the subdominant key, but the theme and its key are left behind with the entrance of a symmetrical modulating group at measure 80. It is possible to hear the modulating group as eliding an implied eight-bar phrase in A-flat major; at measure 80 one can still expect to hear two more measures providing a half cadence in this key (V of V, V). Yet the implication of such a phrase, and the resulting sense of an elision, is not particularly strong here. Measures 78-79, initiating the second half of such a phrase, do

not strongly suggest motion toward a cadence, merely continuing the pattern of two-bar segments begun at measure 74.<sup>2</sup> The left hand's accompaniment pattern continues without pause in the modulating group, unifying the section.

Example 4-3. Sonata in B-flat, K. 281/II.

Andante amoroso

The musical score consists of two systems. The first system begins at measure 74 and ends at measure 79. The second system begins at measure 80 and ends at measure 85. The left hand provides a consistent accompaniment pattern throughout. The right hand features a melodic line with dynamic markings of *f* and *p*, and articulation such as slurs and accents. Above the first system, there is a marking "-6-" and "e.l.". Above the second system, there is a marking "-8-".

This subtle implication of symmetrical structure is familiar from the discussion of complex phrases in Chapter 2. As in many elisions in complex phrases, the eliding group here begins before the previous phrase has shown a definite motion toward a cadence. Cadential motion is thereby reserved for the final half cadence of the modulating group. The modulating group is nevertheless immediately obvious. Measures 80-81, tonicizing F minor, deny the possibility of an eight-bar phrase in A-flat major, and introduce a new

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<sup>2</sup> The ascent to  $c^3$  at bar 78 is a single factor suggesting the midpoint of an eight-bar phrase.

two-bar melodic pattern. The listener then gradually perceives the symmetrical structure and tonal goal of the modulating group as it unfolds. These emerge very clearly in the second half of the group.

The modulating group at measures 72-78 of the Rondo in F, K. 494 elides the previous group in an equally subtle manner. The subtlety of the elision stems, once again, from the previous group's weak implication of a symmetrical structure. Hearing the group in the context of the movement, however, the implication of symmetry and the resulting sense of an elision seem quite strong.

The modulating group occurs at the end of the second episode in the movement and precedes the third appearance of the rondo theme at measure 83 (see example 4-4).<sup>6</sup> The first half of the episode consists of a pair of antecedent and consequent phrases in the submediant key, D minor. A two-bar group elides the consequent phrase at its eighth measure (bar 66), replacing the cadential tonic chord with a modulation to the subdominant key, B-flat major. This is a hidden elision, since the listener expects the c#<sup>2</sup> at measure 66 to resolve upward to the tonic precisely at midbar, the phrase ending quietly in a final, eighth measure. Instead, the melody becomes animated and begins to ascend, adding the

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<sup>6</sup> The form of the movement is A B A C A D A B coda (which quotes A). A and B function like the first and second key areas in a sonata form movement. The modulating group discussed here appears at the end of C.



Example 4-4, continued.

The musical score shows two systems of music. The first system is marked with a tempo of 80 and a dynamic of -4-. It features a complex melodic line in the right hand with many slurs and a simpler bass line. The second system is marked with a dynamic of p and continues the melodic line in the right hand and the bass line in the left hand.

pitch  $e\flat$  that indicates the new key. This is a last-moment type of modulation that Mozart employs repeatedly--last-moment in the sense that the final measure or measures of the phrase, instead of providing closure and relaxation, must suddenly be reinterpreted as the beginning of a new group turning toward a new key.<sup>7</sup>

This dramatic turn toward the key of B-flat major prompts the listener to expect some sort of thematic statement in the new key. Measures 68-71 follow, sounding like a static beginning of a symmetrical eight-bar phrase in this key. One can hear such a phrase until measure 73; the deliberate ascent to  $d^3$  in measure 72 seems to imply a melodic climax of the phrase in the next measure. Instead of continued motion toward a cadence, however, measure 73 completes a two-bar segment, and its tonicization of G minor indicates a movement toward a new tonal goal. The similar segment at measures 74-75 begins to imply an eight-bar modulating phrase, and allows the final key of that phrase to

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<sup>7</sup> This is an example of a transitional modulating group, the subject of the second half of this chapter.

appear at its midpoint. Dramatic elements signalling closure appear in the sixth measure ( $f^{\sharp}$  and  $\flat VI$ ), and there is a single, continuous motion toward a cadence in the second half of the phrase. Note the structural similarity between the modulating phrase and the implied phrase in the subdominant, especially the melodic climax in the sixth measure.

The hidden elision at measure 72 is unusual in that it occurs at the midpoint of the implied phrase. Ironically, the first measure of the eliding group is essential in implying this phrase. The elision here may seem too early to justify speaking of the abridgment of an eight-bar phrase. I would nevertheless stress that the active character of measures 68-72--their implication of a cadence in B-flat major--is essential to the passage. The moment at which the modulating group contradicts this implication, drawing the listener's attention to itself in a dramatic way, can be specifically located at measure 73. The alternative to hearing a hidden elision at measure 72 would be to hear at measures 68-71 four measures simply marking time in the subdominant key, followed by the modulating phrase.

Implications of key centers within development sections often follow one another so quickly that the listener has only a tenuous sense of a specific key. The implications of key shown by the successive measure groups in a development section can be essential, however, in terms of the rhythmic pacing of the section. Consider the short development sec-

tion of the third movement of the Sonata in F, K. 280 (see example 4-5). The listener can hear the G-minor chord of

Example 4-5. Sonata in F, K. 280/III.

Presto

78 -8-  
86 hidd. el.  
94 -16-  
101 -2-  
108

measure 85 as the tonal goal of measures 78-85, and can thus retrospectively hear measures 78-85 as an active group in the key of G-minor. After the close of the exposition in C major, one hears measures 78-81 as prolonging the tonic minor chord in this key. The strong dominant seventh-tonic

progression in measures 82-85, however, allows the listener to reinterpret the preceding four measures as providing the subdominant function within an eight-bar group in G minor. Thus, while the key of G minor appears only fleetingly in the movement, it does allow the listener to hear measures 78-85 as a single, active group.

Measures 86-93 are similar in structure to measures 78-85, prompting the listener to hear another eight-bar group, now in the key of F major. A sixteen-bar modulating group beginning at measure 90 gradually emerges, however. The left hand in measure 93, instead of resting as in measure 85, links measures 90-93 with a similar four-bar segment moving to the key of D minor. At measure 98, changes in dynamic level and design imply the mid-point of a sixteen-bar group. The appearance of  $\text{VII}^{\flat}$  of D minor at this point indicates the final key of the group.

Because of the prototype at measures 78-85, the listener's first interpretation of measures 90-93 as the second half of an eight-bar group is particularly strong. The listener's subsequent reinterpretation of these measures as the beginning of a movement toward an important cadence has a correspondingly strong dramatic effect.<sup>9</sup> Floyd K. Grave has

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<sup>9</sup> Notice once again Mozart's preparation of a loud eliding group by a similar dynamic accent at the same point in the prototype (forte at bars 82 and 90). The changed dynamic level does not impair the coherence of the prototype, but, continued in the eliding group (at bars 94-97 here), it characterizes and thus identifies the new group.

noted that elision can act as "a springboard for tonal transition."<sup>7</sup> Grave's springboard metaphor aptly describes the psychological effect that an elision by a modulating group can have. By requiring a tonal and rhythmic reinterpretation, the eliding group draws the listener's attention to itself in a unique way. Thus, while the key centers implied in measures 78-85 and 86-93 have only subsidiary tonal importance, the technique of implying these key centers within coherent measure groups does have an important rhythmic function.

Measures 106-107 are a separate transitional group, though they seem at first to offset the symmetry of the preceding group. The two-bar group, consisting mostly of silence, provides a common-tone modulation allowing the recapitulation to begin in F major at measure 108. The group thus reverses the tonal implication of the preceding modulating group. Although there is no elision here, this last-moment reversal is similar to the sudden modulation at measures 66-67 of example 4-4. The effect here seems witty rather than dramatic, however, no doubt because one retrospectively hears the modulation as having occurred during the silence of measures 106-107.

An active modulating group need not begin by eliding the

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<sup>7</sup> "'Rhythmic Harmony' in Mozart," Music Review 41 (1980), 98-99. Grave discusses only the type of elision in which the eliding group coincides with the cadential tonic chord of the previous group.

previous group. In the development section from the second movement of the Sonata in G, K. 283, the connection between the group at measures 16 1/2-18 1/2 and the final modulating group (bars 18 1/2-21) occurs by transference (see example 4-6).<sup>10</sup> As with the initial chord of the first group in example 4-5, the listener initially hears the D-minor chord of measure 16 1/2 as a tonic chord. It has been preceded by a three-bar transitional group tonicizing D-minor, and it now begins a four-bar group imitating the opening theme of the movement. As with the first group in example 4-5, a dominant seventh-tonic progression at the end of the group requires a reinterpretation of the group's initial chord as having a subdominant function within a new key. Here, however, the cadential tonic chord of C major falls outside of the four-bar group, coinciding with the repetition of the melody with which this group began.

This kind of connection by transference between modulating groups occurs frequently in the development sections of Mozart's piano sonatas. Most often there are two parallel four-bar groups. The initial chords, first heard as tonic chords, assume a subdominant function as the groups approach completion.<sup>11</sup> The active character of these groups--the

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<sup>10</sup> The movement is notated in compound meter, as is obvious from the location of cadences and eliding groups with respect to the barline.

<sup>11</sup> See the Sonata in C, K. 279/III, bars 77-86; the Sonata in D, K. 284/I, bars 52-60; and the Sonata in C, K. 545/I, bars 29-36. Passages like example 4-6, in which

Example 4-6. Sonata in G, K. 283/II.

Andante

14<sup>b</sup>  
12. -3-

16 -4-

18 tr. -7- e.l.

20 -4-

22

Mozart suggests a parallel modulating group of the same length but then continues with a larger group, occur in the Sonata in G, K. 283/III, bars 103-14; the Sonata in F, K. 332/I, bars 113-22; and the Sonata in F, K. 547a/I, bars 94-103.

## Example 4-6, continued.

listener's sense of their moving toward a cadence--is weak, yet the repeated melodic pattern and subdominant-dominant-tonic progression are sufficient for the listener to hear the individual groups. A succession of two or more such groups creates a broad and regular rhythm of measure groups within a development section.<sup>12</sup>

The repetition at measure 18 1/2 of the opening idea of the previous group briefly suggests such a rhythm. The larger modulating group here emerges more dramatically because of this expectation. The leading tone of A minor is the first deviation from the pattern of the preceding group, followed by the left hand's repetition of the preceding two-bar segment, now in A minor. After the midpoint of the group (bar 20 1/2), the repetition of a fragment of this segment creates a sense of accelerated motion toward a cadence, while the Italian chord of A minor confirms the final key of the group. The eliding static group at the

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<sup>12</sup> The same broad rhythm of measure groups occurs when four-bar groups sustain a cycle of fifth-related dominant-seventh chords. See the Sonata in A Minor, K. 310/I, bars 58-69; and the Sonata in F, K. 332/III, bars 96-111.

final measure of the implied eight-bar group (bar 22) emphasizes the structural importance of its half cadence.

As at the end of example 4-5, there is musical irony at the end of this passage. One expects materials in A minor to follow the four-bar static group, yet the tonally ambiguous chromatic scale in measure 23 leads into the recapitulation in the key of C major. As in example 4-5, the modulating group has nevertheless prepared the listener for the recapitulation in a rhythmic sense.

#### Transitional Modulating Groups

A second technique by which Mozart dramatizes the arrival of important half cadences involves a sudden and surprising movement away from a well-established key area. A hidden elision occurs after an active symmetrical group in the established key has either begun or actually completed its cadence. The eliding group then appropriates a part of the apparent cadence as a segment within its own structure, and modulates to the dominant chord of the following key area.

The eliding group in this technique cannot be described as active, since it does not itself generate an expectation of a cadence. Rather, since its primary function is to prepare the following active group (by providing a modulation), the eliding group belongs to the category of measure groups I have described as transitional. Like static groups, transitional modulating groups usually consist of a

repeated melodic pattern. While in a static group such a repeated pattern emphasizes the group's tonal function of prolonging a final cadential chord, in this type of group it emphasizes the group's tonal function of modulation. The group can consist of a single new chord, or a sequence of chords.

Transitional groups can appear in many contexts within a movement, and need not, like static groups, be connected by elision or transference to a preceding active group. They are as often asymmetrical as symmetrical in structure.<sup>13</sup> The transitional groups appearing within the technique of modulation discussed here, however, begin by hidden elision and are symmetrically structured. They thus constitute a specific type of transitional group.

A transitional group of this type occurs at measures 63-66 of the first movement of the Sonata in F, K. 280. A characteristic role of this compositional technique within the pacing of a movement can be observed in example 4-7, which reproduces the development section.

The first seven measures of this development section imply a symmetrical eight-bar phrase ending with a half cadence in its final measure. At measure 61 the louder dynamic level, fuller texture, and more continuous appear-

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<sup>13</sup> The group at bars 15-16 1/2 of example 4-6 is a three-bar transitional group. It begins with the arrival of the pitch c<sup>#1</sup>, the lower neighbor of d<sup>1</sup> (heard in the preceding and following groups).

## Example 4-7. Sonata in F, K. 280/I.

Allegro assai

-6-

57 p

61 f hidd. ell. -4- p

67 f -4-

72 f -4- -3- p f p

77 f ell. -2- -3- p

83 f tr p

ance of the dotted motive distinguish the midpoint of the

implied phrase. The listener expects the final  $c^2$  of measure 63, like the corresponding sixteenth notes in measures 58, 60, 61, and 62, to ascend, now to  $d^2$ , the fifth of the dominant chord of C major. Instead, the melodic descent  $b\flat^1-a^1$  and the A-dominant-seventh chord of measure 64 thoroughly contradict the implied eight-bar phrase in C major. The repetition of measures 63-64 at measures 65-66 underscores the surprising new tonal direction, and is necessary to confirm the separate identity and function of the eliding group. Perceiving the new group, the listener retrospectively hears measure 63 as having an appoggiatura-like function with respect to the dominant chord of D minor.

The symmetrical structure of the group at measures 63-66 becomes apparent only after the fact. Like most symmetrical static groups, this group does not imply a specific symmetrical structure as it unfolds; the two-bar segment might have been repeated further, resulting in a six-bar or an eight-bar group. As seen in this example, however, this type of symmetrical structure can be important in providing cohesiveness for the modulating group and thus confirming the elision. Even when eliding transitional groups would seem to cohere well enough by another repetitive scheme (3x1 or 3x2, for example), these groups consistently show a confirming symmetrical structure.

The modulation at measures 63-66 functions as a dramatic preparation for the large, active group in the submediant

key, D minor. As has already been seen in examples 4-5 and 4-6, the submediant key is consistently a point of dramatic focus in Mozart's development sections. In those examples, the materials in the submediant key implied by active modulating groups never appear. A transitional group like the one here, however, features the same sleight-of-hand modulation that in those examples avoids the submediant key at the last moment. Here, the transitional group suddenly avoids the dominant key, C major; materials in the newly implied key therefore must follow.

Although the group in D minor is triple-ordered at its broadest level (3x4), one nevertheless hears the static group at measures 78-79 as entering by elision, and thus emphasizing the large group's half cadence. The static group, introducing an immediate change of design, replaces the implied fourth measure of the large group's third segment. The three-bar transitional group at measures 80-82, cohering by virtue of its repeated melodic design, provides a last-moment detour to the principal key of the movement and the recapitulation. The wit here is of the same variety as that found in examples 4-5 and 4-6: the half cadence of a large active group proves to be a false lead.

A four-bar transitional group entering by hidden elision provides the modulation to the second key area in the second movement of the Sonata in F, K. 533. While this modulating group is symmetrical, the implied group that it elides is

not (see example 4-8).

Example 4-8. Sonata in F, K. 533/II.

The listener's sense of an elision here is based on a prototype, the ten-bar phrase (4+6) that opens the movement. The phrase beginning at measure 11, presumably a consequent phrase, duplicates the opening phrase exactly until measure 19, at which point one expects the final two measures of

another ten-bar phrase. Here the secondary dominant chord and the first two eighth notes of the right hand briefly seem to continue, as at measure 9, toward a half cadence. Notice that the remainder of the melodic descent in measure 9 is also heard in measure 19, but now accelerated within an octave descent that alerts the listener to the eliding group. The sequential repetition of this measure at measures 20 and 21 confirms the new group and its tonal function of modulation. The group arrives at the dominant of the dominant key within four measures that cohere strongly as a symmetrical structure (note the melodic continuity in bar 21). This symmetry compensates for the elision's contradiction of expected structure.

The modulating group in the development section of the third movement of the Sonata in C, K. 330 also enters by a hidden elision based on a prototype. This group unfolds in a more subtle manner, however, the listener only gradually becoming aware of its tonal function (see example 4-9). The eight-bar phrase at measures 69-76 serves as the prototype. Measures 79-80 seem at first to complete a repetition of the first half of this phrase. The sequential repetition of this two-bar segment within a symmetrical eight-bar group causes the listener to reinterpret these measures as beginning a modulating group.<sup>14</sup>

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<sup>14</sup> The prototype here allows an elision of an implied eight-bar phrase after only two bars. Thus it is impossible in the rhythmic analysis to place the actual number of bars



Measures 79-80 differ significantly from their counterpart in the prototype only by virtue of the fortepiano accent at measure 80, an accent that unifies the eliding group by re-appearing at measures 82 and 84. The new left-hand texture begins, not with the eliding group, but with the repetition of the prototype at measure 77. Thus this new texture plays a role in disguising the elision, even though the greater sense of animation it provides becomes essential in underscoring the tonal significance of the eliding group. The most subtle aspect of Mozart's technique here is his use of the simplest of means--the prolongation of a single chord in two-bar segments--to ensure the listener's rhythmic and tonal reinterpretation of measures 79-80. With the appearance of  $f^2$  at measures 82 (and again in bar 84), the listener reinterprets measures 79-80, the first segment of the emerging group, as stating the dominant chord of the returning principal key of the movement.<sup>18</sup>

Although the remainder of the development simply continues to prolong the dominant chord of C major, it provides a further sense of structural distance before the recapitulation. The two-bar groups at measures 87-88 and 89-90 serve as prototypes for the eliding group at measures 92-95. Measures 87-95 resemble measures 63-71 of example 1-4 (Sonata in G, K. 283/I), having the same rhythmic structure and the

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<sup>18</sup> The conflicting presence of  $f^{\sharp 1}$  in the left hand in bars 82 and 84 seems to emphasize the dramatic significance of the natural seventh in these measures.

same role of slowing the pace of the movement before the recapitulation.

The development section of the third movement of the Sonata in D, K. 311 contains two consecutive examples of transitional groups emerging by hidden elision from the cadences of active symmetrical groups (see example 4-10). The first transitional group (bars 111-118) appropriates a cadence in the subdominant key in order to modulate to the submediant key; the cadence of the following group in the submediant key is similarly appropriated by a second transitional group (bars 133-138), which modulates back to the subdominant key.

Measures 105-112 (beat 1) first appear in this movement as an unambiguous eight-bar phrase in the tonic key (at bars 19-26). This first appearance of the phrase serves as a prototype, leading the listener to hear measures 111-112 as the conclusion of a familiar eight-bar phrase. The first, loud repetition of the two-bar pattern asserts itself as a continuation, however, prompting the listener to hear a motion toward a new key as having begun at measure 111. The arrival of the dominant chord of B minor within eight symmetrically patterned measures confirms the new group begun at measure 111.

The strength of the arrival of the submediant key at measure 119 stems directly from the unity of this eight-bar group. In selecting a pivot chord for this modulation, it

Example 4-10. Sonata in D, K. 311/III.

Allegro

102

107 -6- hidd. ell.

113 -8- B minor: VI

119 -8- tr p

123 [tr] f

127 -6- tr f

131 hidd. ell.

## Example 4-10, continued.

The musical score shows two systems of piano music. The first system, labeled '135' at the beginning, contains measures 135, 136, and 137. Above the first measure of this system is a '-6-'. The second system, labeled '138' at the beginning, contains measures 138, 139, 140, and 141. A 'p' (piano) dynamic marking is placed below the first measure of the second system. The music is written for piano with a treble and bass clef, and a key signature of one sharp (F#).

seems logical to return to the beginning of the modulating group, recognizing at measures 111-112 a tonicization of VI in B minor. This would not imply that the listener initially hears measures 111-116 in B minor, but that the listener soon recognizes the movement away from G major as having begun at measure 111. Recognition of the modulating group retrospectively erases the listener's sense of a cadence in G major.

The transitional group at measures 133-138 elides the consequent phrase in B minor implied at measures 127-133. The left-hand melody of the consequent, even after it deviates from the melody of the antecedent in measure 131, implies a symmetrical eight-bar phrase in the same way as the antecedent: two two-bar segments are followed by two one-bar segments and more continuous motion toward the cadence. The elision becomes apparent only at the end of the measure with which it occurs. The left hand in measure 133 sounds as if

it will yield its melodic role and provide the harmonic bass for a full cadence, yet the root of the expected dominant chord at the end of the measure sounds an octave higher than expected. In the right hand  $b^2$  resolves to  $a^2$  instead of the leading tone  $a\#^2$ . Over the next three measures it becomes apparent that measure 133 has begun, not a cadence, but a descending octave progression in tenths. In the course of this octave progression  $c\#$  gives way to  $c\flat$ ; the g-major triad in measure 133, the VI chord of B minor, gives way at the end of measure 136 to a g-major triad that sounds like a tonic chord.

This group is not, like the transitional groups in the previous examples, symmetrical. The half cadence completing the group's motion toward the new key occurs here in an additional two-bar segment. Nevertheless, the dramatic function of the group--its last-moment modulation to a new key--is the same.

#### Further Examples of Active and Transitional Modulating Groups

The three final examples of this chapter illustrate the combined use and varied application of the two compositional techniques discussed in the chapter. The principles involved are familiar, yet their unique application in these examples merits discussion of the passages.

In the development section of the first movement of the Sonata in D, K. 311, a transitional modulating group elides

an active modulating group (see example 4-11). The active

Example 4-11. Sonata in D, K. 311/I.

Allegro con spirito

The musical score is presented in five systems, each with a grand staff (treble and bass clefs). Measure numbers are indicated at the beginning of each system: 40, 44, 48, 51, and 54. The tempo is marked 'Allegro con spirito'. The key signature is D major (two sharps). The score includes various dynamic markings: *p* (piano), *fp* (fortissimo piano), *f* (forte), and *ff* (fortissimo). There are also performance instructions: 'hidd. el.' (hidden pedal) and 'd' (accents). Bar lines with repeat signs are used to indicate phrasing. The notation includes eighth and sixteenth notes, rests, and slurs.

modulating group (bars 48-54), like those discussed earlier in this chapter, draws the listener's attention to a greater extent than the shorter active groups that precede it. This group differs in ending with a full cadence in the new key. The transitional modulating group appropriates the tonic chord of this cadence (bar 55), repeating its melodic pattern sequentially within a symmetrical four-bar structure. Measure 58 fills out the group, providing the anacrusis to the development's next active group.

The exposition of the third movement of the Sonata in A minor, K. 310 has both a second key area (C major) and a third key area (E minor). Example 4-12 reproduces the materials in C major and the eight-bar group that modulates to E minor. The "springboard" effect of this modulating group stems from its being briefly disguised as a turn-around.

The second key area, based on the symmetrical sixteen-bar group at measures 29-44, is prolonged by partial repetitions of the last half of the group (bars 45-52) and the last quarter (bars 53-55). The c#-diminished-seventh chord of measure 52 is a turn-around, substituting for the cadential tonic chord in the final "sixteenth" measure of the group, and leading smoothly into the second partial repetition. When this chord reappears at measure 56, the listener again hears it as a turn-around. This time, however, it is connected with the following measure as a new, two-bar segment, and the listener quickly recognizes the function of

## Example 4-12. Sonata in A Minor, K. 310/III.

Presto

-16-

28

37

46

55

*f* *pp* *f*

*pp*

*t.a.* = 13<sup>th</sup> bar

hidd. (= *t.a.*) *el.* -8-

= 9<sup>th</sup> bar

this segment within an eight-bar modulating group.

Although it provides the type of last-moment modulation typical of transitional groups, this group is active, implying its own cadence and symmetrical structure as it unfolds. Heard in the context of the larger symmetrical groups that surround it, however, the group's movement toward the new key occurs quite suddenly.<sup>16</sup>

In the development section of the first movement of the

<sup>16</sup> The third key area at bars 64-86 is a varied transposition of the second key area, lacking only the partial repetition of the sixteen-bar group's last quarter.

Sonata in F, K. 332 a transitional modulating group follows shortly after an active modulating group. Here the transitional group elides a static group prolonging the cadential dominant chord of the active group. Both modulating groups require the listener to reinterpret the music's rhythmic and tonal structure (see example 4-13).

The four-bar static group at measures 109-112 elides an implied eight-bar phrase at its final measure, but quickly assumes an introductory function. At measure 113 a passage resembling measures 16 1/2-21 of example 4-6 begins, a passage in which the listener must distinguish a succession of modulating groups by virtue of their melodic patterning and tonal coherence within temporary key centers. By measure 115 the listener has reinterpreted the c-minor chord of measure 113 as the subdominant chord of G minor, yet the end of the group begun at measure 113 remains ambiguous until measure 119. The listener can reasonably expect the c#-diminished-seventh chord of measure 118 to be followed by the dominant chord of G minor, the group ending with a half cadence. The d-minor chord at measure 119 prompts the listener to hear measure 117 retrospectively as the beginning of a new group. This group begins by transference, appropriating the g-minor chord as the subdominant chord of D minor, and repeating the harmonic progression of measures 113-116 in this key. Measures 113-116 now serve as a prototype suggesting that measures 117-120 will also be a four-

## Example 4-13. Sonata in F, K. 332/I.

Allegro

-4-

109

114

119

-6-

124

hidd.  
ell.

-8-

129

bar group ending by transference. The Italian sixth chord at measure 122 reverses this expectation, indicating the

continuation of the group toward a half cadence in D minor.<sup>17</sup>

Measures 123-126 appear earlier in the movement (at bars 67-70) as a static group prolonging the dominant chord of a half cadence in C minor. The section in C minor that this earlier group brings to a close first introduces the distinctive rhythmic texture heard at measures 109-122. Thus the listener is initially quite certain that measures 123-126, too, are a single static group. The chromatically altered repetition at measures 127-128 then suggests that measures 125-126, rather than completing a static group, begin a modulating group. The symmetrical structure resulting from the fourfold repetition of the two-bar pattern confirms the listener's perception of the elision.

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<sup>17</sup> Although bars 117-120 do not strongly imply a symmetrical structure, I nevertheless hear these measures as an implied eight-bar group elided by the static group beginning at bar 123. It is extremely rare for the dominant chord of a half cadence to arrive after the completion of a symmetrical group (that is, by transference or an added downbeat measure). Here the alternative to hearing an elision at bar 123 would be to hear the dominant chord as arriving after the completion of a six-bar group.

CHAPTER 5  
TRIPLE-ORDERED MEASURE GROUPS

I have stated in Chapter 1 that the analytic approach followed in this study is not based upon a normative idea of measure-group structure (see page 3). While this study has stressed the roles of implied symmetrical groups in several compositional techniques, it has not been my intention to present symmetrical structure as the norm from which all of the asymmetrical groups in Mozart's music are derived. In the foregoing discussions of musical examples I have attempted to approach the more subtle implications of symmetrical structure with objectivity. One's hearing of implied symmetry in such cases can only be based upon the particular passage, not upon an assumption that symmetrical structure is normative.

A chapter devoted to the subject of triple-ordered measure groups may seem incongruous in a study describing the roles of symmetrical groups. Yet a brief description of Mozart's use of triple-ordered groups may serve to underscore the purposefulness with which Mozart employs a particular type of measure-group structure, symmetrical or otherwise. Symmetrical measure groups are certainly predominant, and have, as has been seen, a special role in engaging the listener's sense of musical structure. Yet triple-ordered

groups can serve several different roles as well, and can provide relief in a movement that would otherwise consist of a succession of implied and literal symmetrical groups. Mozart's use of triple-ordered groups indicates most clearly his concern for variety in measure-group structure.

There are certainly many passages in the piano sonatas in which measure-group structure seems either ambiguous or arbitrary. In passages employing a polyphonic texture, the separate entrances and cadences of individual voices can all but eliminate the sense of distinct measure groups that prevails in homophonic textures.<sup>1</sup> There are also passages in which a group of measures functions as a short, written-out cadenza. The number of measures in the group seems arbitrary, as befits a cadenza.<sup>2</sup> I mention these passages here only to stress that they should not discourage a more exacting analysis of passages in which measure-group structure seems more purposeful.

#### Triple Ordering in Static Groups

Static groups show triple ordering almost as frequently

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<sup>1</sup> Edward Lowinsky has pointed out, however, the tendency in Mozart's Fugue in C major for piano, K. 394 for a regularity of phrase grouping to take priority over the ostensible independence of the voices. "On Mozart's Rhythm," The Musical Quarterly 42 (1956) 162-63. Contrapuntal passages in the piano sonatas vary in this respect, showing both this regularity of structure (see the Sonata in F, K. 533/I, bars 194-206) and a more fluid, genuinely polyphonic texture (see the Rondo in F, K. 494, bars 152-158).

<sup>2</sup> See the Sonata in B-flat, K. 333/III, bars 158-161; and the Sonata in C Minor, K. 457/I, bars 149-153.

as they show symmetrical structure. The repetition of a pattern (usually 3x1 or 3x2) is sufficient to unify the group, allowing the listener to distinguish it from the preceding active group. The three-bar static group closing the first key area in the first movement of the Sonata in F, K. 332 coheres by virtue of repetition of a one-bar pattern. The first measure of the group sounds at first like the final measure of a four-bar phrase (see example 5-1).

Example 5-1. Sonata in F, K. 332/I.

Here the listener retrospectively recognizes the three-bar group solely on the basis of its homogeneous design. I hear an element of wit in the passage, stemming from the fact that the eliding group becomes apparent through simple repetition. The alternative reading of the passage, to hear the four-bar phrase completed in measure 20, would miss this element of wit and isolate measures 21-22 as a weak appen-

dage. This alternate reading would result in two symmetrical groups (of 4 and 2 bars), but ignore the motivic unity of the three-bar group.

Three-bar static groups usually begin more obviously and end with a measure breaking the pattern of the first two measures (see bars 23-25 of example 5-2). This type of group is still a three-bar group, rather than a two-bar group with an added downbeat measure. As in example 5-1, the cadential tonic chord falls with equal weight on the downbeat of each measure within the group.

Example 5-2. Sonata in D, K. 576/III.

Allegretto

The musical score for Example 5-2 is presented in three systems. The first system, starting at measure 19, shows a treble staff with a melodic line and a bass staff with a rhythmic accompaniment. The second system, starting at measure 17, features a treble staff with a melodic line and a bass staff with a rhythmic accompaniment. Annotations '-2-' and '-1-e||.' are placed above the treble staff. The third system, starting at measure 21, features a treble staff with a melodic line and a bass staff with a rhythmic accompaniment. Annotations '-3-' and 'e|.' are placed above the treble staff.

Six-bar static groups doubling the proportions of a three-bar group (3x2) also appear frequently. Example 1-7

ends with such a six-bar group. Only a single instance occurs in the piano sonatas of a six-bar static group consisting of two three-bar segments (see example 5-11, a). It hardly seems coincidental that this group appears in a movement containing numerous triple-ordered groups. I will discuss this movement further later in this chapter.

A six-bar static group consisting of three two-bar segments can begin with a hidden elision, just as the three-bar group in example 5-1 does. The eliding static group appropriates the last two measures of the previous active group, containing both the cadential dominant and tonic chords, and simply repeats this two-bar segment in varied fashion (see example 5-3).

Example 5-3. Sonata in E-flat, K. 282/III.

The musical score is for the third movement of the Sonata in E-flat major, K. 282, by Franz Schubert. It is marked 'Allegro' and begins at measure 24. The score is written for piano in E-flat major, 3/4 time. It consists of three systems of music, each with a treble and bass staff joined by a brace. The first system (measures 24-30) shows a melodic line in the treble and a supporting bass line. A bracket above measures 28-29 is labeled '-8-'. The second system (measures 30-35) features a more active melodic line. A bracket above measures 32-34 is labeled '= 5th bar', and a bracket above measures 34-35 is labeled 'hid. el.'. The third system (measures 35-40) continues the melodic development. Brackets above measures 37-38 and 39-40 are labeled '-6-' and '-2-' respectively. The piece concludes with a final cadence in measure 40.

The eliding static group here interrupts a partial repeti-

tion of the last half of an eight-bar consequent phrase. Just as in example 5-1, the eliding group emerges retrospectively by virtue of its repeated design. An alternate analysis would consider measures 36-37 and 38-39 as partial repetitions of the last quarter of the phrase, yet this analysis would ignore the tendency of the similar two-bar groups to cohere as a single group. Although this six-bar group begins with and repeats the cadential dominant chord, it nevertheless has, like static groups beginning with the cadential tonic chord, a prolongational function separate from the preceding active group.<sup>3</sup>

#### Internal Repetition

In discussing triple ordering within active groups, it is important to distinguish between groups that seem to be derived from symmetrical groups and groups in which Mozart genuinely seems to be experimenting with triple ordering. Groups of the first kind, triple-ordered only in a literal sense, can arise through internal repetition of a segment of a symmetrical group. The opening of the Sonata in B-flat, K. 333, for example, seems to be derived from a symmetrical eight-bar phrase (see example 5-4). The repetition of measures 5-6 at measures 7-8 results in the phrase having a

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<sup>3</sup> See also the Sonata in C, K. 330/I, bars 1-15, and K. 330/III, bars 9-20. The static groups begin by hidden elision at bars 11 and 15, respectively.

second half that is literally triple-ordered.<sup>4</sup>

Example 5-4. Sonata in B-flat, K. 333/I.

Allegro

- 8 -

1 = bars 5-6

Internal repetition occurs often enough in the piano sonatas to merit a brief digression from the subject of triple-ordered groups. Mozart applies this technique in various ways, repeating different segments of the underlying symmetrical phrases, and combining this technique with other means of expansion.<sup>5</sup> The effect of an internal repetition on

<sup>4</sup> An active modulating group having the same rhythmic structure occurs at bars 18-27 of the third movement of the Sonata in B-flat, K. 281.

<sup>5</sup> At bars 5-12 of the first movement of the Sonata in C, K. 279, repetition of both the first and second halves of the underlying phrase results in a group of doubled proportions. The second-key-area theme in the first movement of

the listener's sense of symmetrical structure is very different from the effects of the techniques described at length in this study. Internal repetition requires the listener to recognize the repetition as parenthetical, a temporary suspension of the symmetrical group's progress toward the cadence.<sup>6</sup> The listener resumes counting the measures of the symmetrical group in a vital sense only after the repetition. One does not hear an eliding group within a complex phrase or a partial repetition as parenthetical, since both of these techniques establish (or reestablish) movement toward a cadence.<sup>7</sup>

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the Sonata in C, K. 309 (bars 35-54 1/2) repeats only the first half of the underlying eight-bar phrase, expanding the second half by partial repetitions. The second-key-area theme in the first movement of the Sonata in C Minor, K. 457 (bars 36-59 1/2) echoes each of the two two-bar segments in the first half of the underlying eight-bar phrase, expanding its second half by a partial repetition that gives way to an eight-bar cadenza.

<sup>6</sup> The fact that bars 7-8 of example 5-4 provide the ascent to the high register of the last two bars of the group does not alter the listener's sense of their being superfluous in a rhythmic sense.

<sup>7</sup> The technique of internal repetition was described a generation before Mozart by the theorists Johann Philipp Kirnberger and Heinrich Christoph Koch. These theorists, especially Koch, describe it as a primary means of expanding the four-bar phrase, which they consider to be normative. The technique has only a limited role in Mozart's piano sonatas, which show a very different and more thoroughgoing approach to symmetrical structure. See Kirnberger, The Art of Strict Musical Composition, translated by David Beach and Jurgen Thym (New Haven and London: Yale University Press, 1982), 409; and Koch, Introductory Essay on Composition: The Mechanical Rules of Melody, Sections 3 and 4, translated by Nancy K. Baker (New Haven and London: Yale University Press, 1983), 41-45, 129-141.

The listener's recognition of an internal repetition depends both on the obvious parenthetical character of the repeated segment and the sufficient articulation of the active symmetrical group within which it occurs. Sequential repetition of a segment, as heard at measures 7-8 of example 4-8 (the Sonata in F, K. 533/II), is essential to the continued unfolding of the group, and cannot be heard parenthetically. In such cases it seems fruitless to deny the presence of triple ordering.<sup>9</sup>

The second movement of the Sonata in F, K. 280 seems to reverse the relationship between internal repetition and symmetrical structure. The movement begins with an eight-bar phrase that can be heard as deriving by internal repetition from a six-bar phrase (see example 5-5). The phrase, lacking the characteristics by which an active symmetrical group implies a specific length, has only a literal symmetry. It leaves the listener uncertain whether measures 5-6 are to be heard parenthetically within a six-bar phrase, or as a rhythmically essential segment within an eight-bar phrase. The recapitulation retrospectively suggests the first interpretation when it begins by stating this theme without the internal repetition.

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<sup>9</sup> Koch also describes sequential repetition of a two-bar segment as a means of expanding a four-bar phrase. At this point in his discussion, however, Koch abandons his concern for the listener's ability to hear a segment as parenthetical. He seems more concerned to describe a compositional method that can account for phrases longer than four bars. Op. cit., 43-45, 157-158.

## Example 5-5. Sonata in F, K. 280/II.

-6- or -3- ?  
1 (= bars 3-4)

Triple Ordering in Active Groups

Mozart's use of triple ordering seems most deliberate and is most apparent in active groups containing one or more three-bar segments. The first movement of the Sonata in F, K. 547a begins with antecedent and consequent phrases of this type (see example 5-6).<sup>7</sup> The phrases, although eight measures in length, cannot be divided into two equal segments. The articulation within each phrase of segments of three, two, and three measures prevents the listener from hearing a level of pulse higher than the measure. Thus one cannot describe the final dominant chord of measure 8 (or the tonic chord of bar 16) as arriving at a relatively accented or unaccented point within the phrase, as one can

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<sup>7</sup> Although this movement is considered to be an anonymous arrangement of the second movement of the Piano/Violin Sonata, K. 547, both versions show equally well the aspects of rhythmic structure under discussion.

with a symmetrical group.

Example 5-6. Sonata in F, K. 547a/I.

The combination of one or more three-bar segments with a final symmetrical segment allows the accentual strength of the cadence to be defined in terms of the symmetrical segment. Measures 3-7 of the first movement of the Sonata in C, K. 309 are an active group with this kind of structure (see example 5-7). The movement's opening two-bar motto, while providing the root-position tonic chord, seems rhythmically independent. The lyrical three-bar group at measures 3-5, on the other hand, seems to imply an eventual cadence and is thus a segment within an active group. Measures 6-7, clearly distinguished from the preceding segment by a change of design, are symmetrical in structure. The

arrival of the cadential tonic chord after the completion of this symmetrical segment (that is, by transference) defines the accentual strength of the cadence for the entire active group. The symmetrical segment has much the the same function in this respect as the final eliding group in a complex phrase.<sup>10</sup>

Example 5-7. Sonata in C, K. 309/I.

Allegro con spirito

<sup>10</sup> Bars 43-47 of the first movement of the Sonata in F, K. 280 are identical in rhythmic structure to bars 3-7 of this example. Bars 6-10 of the second movement of the Sonata in A, K. 331 are similar in structure, but the cadential tonic chord arrives at the last bar of the group. The opening of the minuet of Symphony No. 40, K. 550 combines two three-bar segments with a an eight-bar symmetrical segment.

Example 5-7, continued.

Mozart's tendency to contradict the listener's expectations of phrase structure becomes evident once again when one examines the reappearances of the three-bar group, both at measures 10-12 and at the recapitulation (discussed later in this chapter, and shown in example 5-10). At measures 10-12 the group seems to begin a repetition of measures 3-7. The listener expects to hear measures 6-7 once again at measures 13-14. Instead a two-bar transitional group turns in a new direction at this point, preparing a new active group at measures 15-17. The pitch  $c\#^2$  heard at measure 6 reappears at measure 13 in a new guise, emphasizing a new development. Measures 13-14 are an example of a transitional group that doesn't modulate (in contrast with the transitional groups discussed in chapter 4). Measures 10-20 cohere as a single active group by virtue of moving toward a single cadence, yet measures 13-14 have a separate, preparatory function within this group.<sup>11</sup> Measures 15-17 (and 18-20) then imply a four-bar symmetrical group, allowing the

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<sup>11</sup> Similar two-bar transitional groups within active groups occur at bars 43-44 of the first movement of the Sonata in G, K. 283 (see example 3-4), and at bars 37-38 of the second movement of the Sonata in F, K. 533.

listener to expect cadential closure at measure 18 (and 21).

### Elision of Triple-Ordered Measure Groups

Given Mozart's frequent use of elision to contradict the listener's expectations of implied symmetrical groups, it is not surprising to find passages in which the same technique is applied to triple-ordered groups. There are only several such passages in the piano sonatas, yet they are a further indication of Mozart's interest in exploring the possibilities of triple-ordered groups.

It is difficult for a triple-ordered group to generate a specific expectation of its length. This can be achieved more easily with groups that are triple-ordered only at the broadest level, repeating two- or four-bar segments. A group of this kind is heard in the first movement of the Sonata in C Minor, K. 457 (see example 5-8). The earlier

Example 5-8. Sonata in C Minor, K. 457/I.

Molto allegro

Example 5-8, continued.

segments serve as prototypes, leading the listener to expect the completion of the third segment. The chromatic intensification implying a half cadence at measure 126 identifies the third segment as the final segment.<sup>12</sup>

Elision of a triple-ordered group not based on the listener's expectation of a duple-ordered segment requires a prototype. The elision at measure 19 of example 4-8, for instance, is based on the six-bar phrase segment stated at measures 5-10. In the first movement of the Sonata in F, K. 332 the closing theme at measures 71-86 begins with a six-bar antecedent phrase that serves as the prototype for the prolonged consequent phrase. The consequent phrase is elided at its final (sixth) measure by an expanded repetition of its fifth measure (see example 5-9).

Here Mozart has applied the technique of partial repetition to a six-bar phrase. The partial repetitions at measures 82-83 and 84-85 return to the last third of the phrase. The right hand's melodic descent in these measures expands the cadential descent of measure 81, so that the

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<sup>12</sup> Bars 48-57 of the third movement of the same sonata double the proportions of this example (4 + 4 + 2 elided).

## Example 5-9. Sonata in F, K. 332/I.

Allegro -6-

71 p

78 p

ell. = 5th bar

84 f

+d.b.

tr

cadential dominant chord arrives only in the final, "sixth" measure of the group. The cadential tonic chord consequently arrives at measure 86 as an added downbeat measure, and thus has greater rhythmic emphasis than its expected arrival at measure 82.<sup>13</sup> As discussed in chapter 3, this expansion of a partial repetition for the sake of a more emphatic cadence occurs frequently in the partial repetitions of symmetrical groups.<sup>14</sup>

The three-bar group at measures 10-12 of example 5-7,

<sup>13</sup> The left hand's *f* on the last beat of bar 81 (and 83) implies some kind of continuation, and thus diminishes the listener's expectation that closure will occur in the following bar.

<sup>14</sup> See examples 3-2, 3-3, and 3-5.

discussed above, serves as the prototype for an elision occurring at the twelfth bar of the recapitulation (compare examples 5-7 and 5-10). The recapitulation proceeds as at the beginning of the movement until the switch to the minor mode at measures 101-102. Measures 103-104 continue in minor, yet they are still recognizable as a varied repetition of measures 96-98 (as were bars 10-12 with respect to bars 3-5). At measure 105 a new group with an implied symmetrical structure (2+2) begins, eliding the expected three-bar group. The unexpected changes of harmony, dynamic level, and melodic contour (the leap to  $d\flat^3$ ) make the elision at measure 105 immediately obvious. Yet a familiar unifying technique is present here as well, as the eliding group begins by incorporating part of the expected melodic continuation within its initial motive. The new group appropriates the expected quarter-note descent  $f^2-e\flat^2$ , transforming it into the eighth-note figure  $f^2-e\flat^2$ .

The elision at measure 105 is dramatically appropriate in terms of what the listener has already heard at the opening of the movement. The two-bar transitional group at measures 13-14 was itself a contradiction of the listener's expectation of an immediate cadence, leading to the new groups at measures 15-17 and 18-20 and thus delaying tonal closure. The reappearance of the transitional group in the recapitulation would not have the same surprising effect. The elision at measure 105 occurs a measure before the

## Example 5-10. Sonata in C, K. 309/I.

Musical score for Example 5-10, Sonata in C, K. 309/I. The score is in C major and 2/4 time, consisting of six systems of piano and bass staves. It includes dynamic markings (f, p, pp, crescendo), articulation (tr, el.), and fingering (e.g., -2-, -3-, -5-).

System 1 (Measures 90-95): Measures 90-95. Dynamics: *f*, *p*, *pp*, *f*. Fingering: -2-.

System 2 (Measures 96-100): Measures 96-100. Dynamics: *p*. Fingering: -3-, -5-, -2-.

System 3 (Measures 101-105): Measures 101-105. Dynamics: *f*, *p*. Articulation: *tr.*, *el.*. Fingering: -2-.

System 4 (Measures 106-109): Measures 106-109. Dynamics: *f*, *p*, *f*, *p*, *pp*. Fingering: -5-, *el.*, -2-.

System 5 (Measures 110-113): Measures 110-113. Dynamics: *crescendo*, *f*, *p crescendo*, *f*. Fingering: -3-, *el.*, *tr.*.

System 6 (Measures 114-117): Measures 114-117. Dynamics: *f*. Fingering: -3-, *el.*, [1].

listener can expect this group, and the two new groups at measures 105-107 and 108-109 provide a greater sense of structural expansion before the return of the closing groups at measures 110-112 and 113-115.<sup>15</sup>

An equally ambitious elision occurs in the third movement of the Sonata in F, K. 332. The six-bar static group closing the exposition serves as the prototype for an elision occurring near the end of the movement (compare examples 5-11 a and b). The later passage duplicates the prototype until measure 227, at which point only a final sixth measure is needed to complete the structure of the prototype (3+3). Measure 227 instead moves harmonically

Example 5-11. Sonata in F, K. 332/III.

a)

Allegro assai

<sup>15</sup> The function of the two-bar group at bars 108-109 can be described as both static (prolonging the dominant chord of a half cadence) and transitional (leading into the following active group). See also bars 129-130 of example 5-8.

## Example 5-11, continued.

b)

toward the subdominant chord, implying continuation and an additional cadence. The listener, hearing the two-bar segments of the new active group, retrospectively recognizes its beginning at measure 226.<sup>14</sup>

Examples 5-10 and 5-11 are the only instances I have found in the piano sonatas of the elision of implied three-bar groups. The inherent difficulties of the technique would seem to account for the infrequency with which Mozart employs it. The necessity of using a prototype to create the expectation of a three-bar group contrasts with the ease

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<sup>14</sup> Since the eliding group at bars 226-231 does not strongly imply a symmetrical eight-bar group, I have labelled it as a six-bar group giving way to the following transitional group by transference. On the other hand, the changes in rhythmic design and dynamic level at bar 230 may be sufficient to imply two concluding bars of tonic resolution.

with which a symmetrical group can imply a specific length on its own.

#### Broadening of Triple-Ordered Groups into Symmetrical Groups

In several movements in the piano sonatas, a triple-ordered measure group is followed, immediately or later in the movement, by a larger symmetrical group of similar melodic content. This does not suggest that the two groups share an underlying triple-ordered or symmetrical structure, but merely that the recasting of materials within a larger, symmetrical group provides a particularly satisfying sense of broadening.

The third movement of the Sonata in F, K. 332 (just discussed) contains several instances of this broadening procedure. The movement opens with a six-bar antecedent phrase, which is answered by an eight-bar consequent phrase. A three-bar phrase at measures 24-26 is expanded at measures 29-31 into an implied four-bar phrase elided at its final measure. The opening three-bar segment of the closing theme at measures 65-67 (and 74-76) becomes a four-bar segment at measures 200-203 (and 210-213) of the recapitulation. In the third movement of the Sonata in F, K. 280, the six-bar static group closing the exposition (see example 1-7) is expanded to an eight-bar group at the end of the movement.

The opening thirty measures of the Rondo in F, K. 494 provide a striking example of this broadening of triple-ordered groups into symmetrical groups (see example 5-12).

## Example 5-12. Rondo in F, K. 494.

Allegretto

*p*

5

9

14

18

23

28

= 5th bar

-3-

-6-

-3-

-6-

-3-

The first key area consists of six-bar antecedent and consequent phrases, each of which employs three-bar segments (3+3 + 3+3). The internal repetitions at measures 3 and 9 do not imply underlying symmetrical structures, as they are necessary to balance the nonrepetitive three-bar segments that conclude the phrases.

The second key area, beginning immediately at measure 13, likewise consists of an antecedent and consequent pair of phrases, but these phrases move gradually toward symmetrical structure. The six-bar antecedent phrase introduces two-bar segments (3x2), repeating its first segment at measures 15-16. In another context, this internal repetition might be heard as a parenthetical insertion within a four-bar phrase. The similar repetition of a two-bar segment at measures 19-22, however, assumes the familiar function of filling out the first half of a symmetrical eight-bar phrase. The repetition at measures 15-16 thus represents a stage in the gradual emergence of the eight-bar consequent phrase. The symmetrical structure and the greater breadth of this consequent phrase are further emphasized by the partial repetition at measures 27-30.

The variety of measure-group structures heard in this succession of four active groups is unique in the piano sonatas. The deliberateness of the passage's transition from one kind of structure to the next supports the assertion made at the beginning of this chapter: that no single

type of structure has priority as a norm. The question of how the triple-ordered groups arise is less crucial than the end result that the two types of triple-ordered groups (3+3 and 3x2) are plainly audible. The passage affirms the effectiveness of symmetrical structure in unifying a large active group and maximizing the listener's sense of tonal closure. Yet the triple-ordered groups are equally as indispensable to the gradual broadening of measure-group structure that characterizes the passage.

## CHAPTER 6

## IMPLICATIONS CONCERNING APPROACHES TO RHYTHMIC ANALYSIS

The principal objective of this study has been to describe several compositional techniques that appear repeatedly in Mozart's piano sonatas, and that are based upon the listener's perception of symmetrical measure groups. In discussing the foregoing musical examples I have tried to demonstrate these techniques convincingly enough to prompt the reader to locate further examples in works by Mozart in various genres. The present chapter has a separate purpose: to review the analytic approach that allows one to recognize the operation of these compositional techniques, and to describe in more detail the analytic criteria that distinguish this approach from several others presented in the recent theoretical literature on rhythm. The active symmetrical measure group is a central focus in this discussion, as it has been in this entire study.

Reservations concerning the Concept of Hypermeter

I would like first to distinguish between the listener's gradual perception of an active symmetrical group--a perception of duple-ordered pulses on several levels--and a conception of the listener's experience that is more purely based on the idea of meter. Several theorists have recently

clarified that the perception of meter depends upon the existence of at least two levels of regularly occurring pulses.<sup>1</sup> This is most obvious with respect to the traditional notion of meter as the grouping of beats into measures. There must be a regular succession of both the beats themselves and the pulses that articulate their grouping into measures. The succession of beats alone would constitute only an undifferentiated stream of pulses. Since only the first beats of the measures articulate the broader succession of pulses, these beats are commonly referred to as metrically accented, or strong, in comparison with the remaining beats in the measures.<sup>2</sup> Strictly speaking, it is only the point in time initiated by a given beat, rather than its entire duration, that can be described as strong or

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<sup>1</sup> See Maury Yeston, The Stratification of Musical Rhythm (New Haven: Yale University Press, 1976), 65-67; Fred Lerdahl and Ray Jackendoff, "On the Theory of Grouping and Meter," Musical Quarterly 67, no. 4 (1981), 486-489; Lerdahl and Jackendoff, A Generative Theory of Tonal Music (Cambridge, Mass.: MIT Press, 1983), 18-25; and Joel Lester, The Rhythms of Tonal Music (Carbondale and Edwardsville: Southern Illinois University Press, 1986), 45-52. Carl Schachter reasserts this basis of metrical structure in the essay soon to appear in The Music Forum 6, "Rhythm and Linear Analysis: Aspects of Meter."

<sup>2</sup> Lerdahl and Jackendoff stress this idea: "Fundamental to the idea of meter is the notion of periodic alternation of strong and weak beats." A Generative Theory of Tonal Music, 19. Schachter also stresses this strong/weak metrical relationship in his unpublished essay. Yeston does not, op. cit., 65-67.

weak in this sense.<sup>3</sup>

The interest of recent theorists in clarifying the nature of meter has been kindled by the question of whether, and to what extent, measures are similarly grouped by a broader succession of regular pulses. Given the duple ordering that is predominant above the level of the basic meter in music of the period of common practice, the question is whether a given movement or passage consistently articulates groups of two, four, or eight measures. If so, it is possible that the listener hears a broader hypermeter. Depending on the consistency with which a passage articulates groups of these lengths, writers have referred to hypermeasures of two, four, or, more rarely, eight measures. The beginning of a hypermeasure is metrically accented in comparison to the remaining measure-pulses in the hypermeasure; it provides the pulse necessary for the listener to hear the continuing hypermeter.

It is not difficult to determine the extent to which hypermeter is literally present in a given passage, and it is possible to generalize about the tendency for hypermeter to emerge in compositions of various style periods. Edward Cone first coined the term hypermeter in order to describe a tendency he noticed in Romantic music. Cone's remarks are worth repeating here, both for his description of the kinds

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<sup>3</sup> See Lehrdahl and Jackendoff, A Generative Theory, 18-19; and Joel Lester's description of metric accents as points of initiation, op. cit., 16-17.

of passages in which he notices hypermeter, and for his contrasting observations about music of the Classical period:

The metrical unit in Romantic music continues to be the measure, as it was in the Classical period; and the measures are combined into more or less regular phrases. Nevertheless, there has been a subtle but important change in orientation. In the Classical period, as we have seen, the measure was usually the largest metrical unit. Its steadiness served as a constant support for--or counterpoint to--the variety of motif- and phrase-construction. When measures combined to form phrases, they did so not in any regular metrical way but as components of freely articulated rhythmic groups whose structure depended on their specific musical content. In Romantic music, on the other hand, one can find long stretches in which the measures combine into phrases that are themselves metrically conceived--into what I call hypermeasures. This is especially likely to occur whenever several [hyper-?] measures in succession exhibit similarity of motivic, harmonic, and rhythmic construction. These almost demand to be counted as units. The desire of the measure to behave as a single beat, already noticeable in very fast Beethoven scherzos, is here intensified--and not only in very fast tempos. As a result, the groupings are often irresistibly drawn into a regular four-measure pattern. It is here, and not in the preceding style, that we can justly speak of the tyranny of the four-measure phrase!<sup>4</sup>

Mozart's piano sonatas contain few examples of this kind of hypermeter. Successions of four-bar groups of the same length and pattern do occur briefly in development sections.<sup>5</sup> Yet a succession of this kind usually leads to a

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<sup>4</sup> Edward Cone, Musical Form and Musical Performance (New York: Norton, 1968), 79.

<sup>5</sup> See, for example, bars 58-69 of the first movement of the Sonata in A Minor, K. 310; bars 96-111 of the third movement of the Sonata in F, K. 332; and bars 83-94 of the first movement of the Sonata in C Minor, K. 457. These passages illustrate Mozart's tendency to maintain a regularity of harmonic rhythm in sections of tonal instability, and, conversely to use more diverse, accelerating patterns

half cadence signalling the arrival of a new key, and thus has a rhythmic function of allowing momentum to build before a structural point in the movement. Such a passage is not "metrically conceived" in the sense Cone intends.<sup>6</sup>

Theorists have also pointed to the presence of several levels of meter in passages that I refer to as active symmetrical groups. The tendency of the eight-bar phrase (or period) to articulate pulses of both two and four measures was first discussed by German theorists of the nineteenth century, and it continues today as a controversial topic of discussion.<sup>7</sup> The term hypermeter assumes a very different meaning, however, when it is applied to a single active group. Instead of referring to "long stretches" of music articulating measure-group pulses in sequential fashion, this type of analysis recognizes broader levels of pulse

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of harmonic rhythm in sections of tonal stability. See Shelley Davis, "Harmonic Rhythm in Mozart's Sonata Form," Music Review 27, no. 1 (1966), 25-43.

<sup>6</sup> Joel Lester discusses the opening of Bruckner's Symphony No. 4 as an example of a passage that does seem to be metrically conceived. "After the two opening measures, the measures group into fours, and the four-groupings themselves are in groups of fours. Even at this hypermetric level (where the pulse is four measures of music), the structure is akin to beats within a measure." Op. cit., 166.

<sup>7</sup> An article by Robert P. Morgan provides a clear summary and chronology of the theoretical discussion of this topic. Morgan, taking a Schenkerian approach, criticizes the purely metrical approach as a way of locating points of accent in a phrase, focusing instead on the points at which structural motions originate and terminate. "The Theory and Analysis of Tonal Rhythm," Musical Quarterly 64, no. 4 (1978), 435-73.

within a group that evolves in various ways as it approaches a cadence. This kind of analysis can of course be widely applied to Mozart's music.

I find certain principles embodied in this analytic approach to be invaluable. Indeed, this study has asserted that the listener's expectation that an active symmetrical group will last a specific number of measures often depends upon the group's articulation of several levels of pulse. On the other hand, references to a metrical hierarchy governing the group, and to strong and weak beats at various levels of that hierarchy, seem somewhat misleading, not adequately representing the listener's experience of hearing and interpreting the structure of the group. I will explain my reservations concerning this metrical approach by discussing the first eight measures of the variations theme from the Sonata in A, K. 331.

Example 6-1 uses a graphic notation devised by Fred Lerdahl and Ray Jackendoff to represent metrical structure in a given passage. Since the authors provide the metrical analysis for only the first phrase of Mozart's theme, I have taken the liberty of extending the analysis through the consequent phrase.<sup>2</sup>

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<sup>2</sup> Extending the analysis through the second phrase necessitates placing a fourth dot under the first beat of the passage, representing a level of pulses four notated bars in length. The authors do not consider this metrical level in their discussion of the Mozart theme (see their example 2.21 on p. 33), but they do recognize this level in two other graphs of antecedent and consequent phrases (see

Example 6-1. Sonata in A, K. 331/I.

Andante grazioso

Lerdahl and Jackendoff assert that their use of dots to indicate the different levels of pulse in a passage is an improvement over the system of poetic accents (e.g., - and ∨ for strong and weak beats) used by many previous writers. The use of a single symbol (the dot) emphasizes both that beats are points in time, and that the listener's perception of strong and weak beats results from the interaction of two levels of pulse. The strong beats on a given level are those which also appear on the next broader level.<sup>7</sup>

It seems misleading, however, to refer to a particular beat's articulation of both a measure and a group of measures as strong in the same way. The first beats of mea-

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examples 2.12 and 2.15, pp. 26 and 28). Lerdahl and Jackendoff, A Generative Theory of Tonal Music.

<sup>7</sup> See the authors' explanation of their dot notation, ibid., 18-20.

asures establish a meter by stating some sort of accent that enables the listener to differentiate them from the following beats in the measures. Dynamic, melodic, agogic, and harmonic accents can all serve this function. Symbols of poetic accent thus seem to accurately represent the way in which a basic meter becomes audible. Various accents in the music may not conform to the meter, occurring in syncopated fashion against it. Yet this should not obscure the fact that the meter itself is established by a series of audible accents. Perception of pulses at broader levels results from the listener's ability to recognize the grouping of measures into larger units, not from an audible accent distinguishing the first beat of such a unit from the downbeats of its remaining measures.

Before using Mozart's theme to clarify this distinction, I must state that in my opinion the theme is notated in compound meter, the actual meter being  $3/8$ . This notation seems to serve a function described by Kirnberger: to assure that the performer will play the second half of each notated measure more lightly than the first half. The performer thus avoids emphasizing every downbeat of the underlying meter, acknowledging the organization of the theme in two-bar segments. The characteristic feature of compound meter, the arrival of cadences at the second half of the measure,

is evident here.<sup>10</sup>

The first level of dots in example 6-1 thus represents what I consider to be the basic meter. Agogic accents on the first beats of the actual measures enable the listener to perceive this meter. In what sense does the opening beat of the theme also articulate the next broader level of pulse (the notated measure = two bars)? In order for this to occur in the same way as with the basic meter, the opening beat would have to be more strongly accented than the downbeat of the second (actual) measure. If it were so accented, the notated meter would be the actual meter.<sup>11</sup> Even if one believes this to be the case--possibly hearing the dotted motive as an accent distinguishing a first beat of a two-beat measure, the same logical contradiction occurs at the broader levels of pulse. In what respect is the opening of the theme more strongly accented than the second notated measure, so that it might be said to articulate a two-bar pulse? In what respect is it more strongly accented than the third notated measure, articulating a four-bar pulse?

There is no reason to describe a particular beat as metrically accented (i.e., strong), simply because the listener is able to recognize it as the initial point of a

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<sup>10</sup> Kirnberger, The Art of Strict Musical Composition, 398-399.

<sup>11</sup> Compare the phrases in simple 6/8 meter at bars 15-21, 50-64, and 112-119 of the third movement of the Sonata in F, K. 332, where dotted quarter notes on the downbeats are repeatedly tied to the second half of the bar.

broad pulse. The listener does not hear the beat in this way at the moment at which it occurs, but rather realizes its initiating role only retrospectively. Example 6-2, altering the system of dot notation used in example 6-1, attempts to represent more accurately the listener's perception of the broader pulses in the passage.

Ex. 6-2. Sonata in A, K. 331/I.

Andante grazioso

1 2 3 4 5 6 7 8 9 10 11 12

level 1 . . . . .

2 (•) ← ————— ↓ ————— → . . . . .

3 (•) ← ————— ↓ ————— → . . . . .

4 (•) ← ————— ↓ ————— → . . . . .

13 14 15 16

. . . .

. . . .

————— →

The parentheses around the lower dots under the first beat of the passage indicate that at this moment the listener hears only the downbeat of a single measure. The dots on level 1 represent the accents by which the basic meter of the theme becomes apparent. The continued repetition of these accents after the second (actual) measure continues to reinforce the meter, yet at this point the listener can also

consider the possibility of two-bar pulses. Only as the third and fourth (actual) measures prove to be a sequential repetition of the first two measures can the listener interpret the third downbeat as the second of two two-bar pulses. On level 2, the arrows pointing in both directions from this downbeat indicate that the listener retrospectively attributes a broader downbeat status to the first beat of the theme (•) only as the second two-bar pulse nears completion. The precise moment at which this attribution occurs cannot be specified, as it requires a recognition of the parallel relationship between the two-bar segments.

The listener perceives broader levels of pulse by the same interpretive process, considering and then recognizing the existence of a level of pulse as the second segment at that level unfolds. After two pulses on any level, the question of whether further pulses on that level will occur is subsumed under the question of whether the next broader level of pulse will be confirmed by a second segment. The relationship between the levels of pulse in the theme--a geometric progression (1, 2, 4, 8, 16, 32, etc.)--makes this possible. One cannot expect this doubling of the broadest level of pulse to continue for long; several more levels would require as many measures as one expects in an entire movement.

The nonmetrical character of the broader levels of pulse in this theme becomes apparent at level 3, where the rela-

tionship between the two four-bar segments is not parallel but complementary. It seems inadequate to say merely that the listener begins at (notated) measure 3 to hear the possibility of four-bar hyper-measures in the theme. Since the theme clearly begins with an active group, moving deliberately toward a cadence, the listener senses at this point that the group may be symmetrical. As described so often in this study, the contrast of design introduced at the second half of this group and its more continuous (nonsegmented) motion toward the cadence imply this symmetrical structure. The terms meter and hypermeter imply a continuing articulation of regular pulses. The cadence at the the end of (notated) measure 4 confirms only the role of two complementary four-bar pulses within a completed symmetrical group.

The half cadence indicates that this phrase is part of a larger active group, and the identical beginning of the consequent phrase immediately implies that this larger group will also be symmetrical. The full cadence at the end of the consequent phrase confirms the two eight-bar pulses heard within the larger group, but it does not imply any further pulses--of whatever length. At this point the movement might end, or, more probably, might continue with a passage that no longer states eight-bar or four-bar pulses. Regardless of what may follow, the listener can recognize the complementary rhythmic and tonal functions of the two eight-bar phrases within this completed group.

Example 6-3 extends the analysis of example 6-2 through the entire theme. This analysis shows a still broader level at which the listener can consider the possibility of a symmetrical structure. The beginning of the theme's third phrase, showing both new and familiar elements and thus

Example 6-3. Sonata in A, K. 331/I.

Andante grazioso

1 2 3 4 5 6 7 8 9 10 11 12

(•) ← ————— → etc.

(•) ← ————— → etc.

(•) ← ————— → etc.

(•) ← ————— →

7 13 14 15 16 17 18 19 20 21 22 23 24

————— → etc.

19 25 26 27 28 29 30 31 32 29 30 31 32

————— →

————— ←—————

sounding like a continuation, allows the listener to consider this possibility. A thirty-two-bar symmetrical group becomes increasingly probable as this phrase shows the same symmetrical structure as the previous two phrases (2+2 + 4), and as the final phrase begins in a familiar manner.

Points of Emphasis in the Listener's Counting of an Active Symmetrical Measure Group

The numbering of the (actual) measures in examples 6-3 represents in the most complete sense the listener's recognition of a single active group. The listener continues counting the measures of the group while perceiving the various levels of pulse within it. Since the final measure of the group is the ultimate confirmation of its symmetrical structure, this counting of measures becomes more critical, more psychologically accented (. . . 29, 30, 31, 32), as the group nears completion. The partial repetition with which the theme ends allows the listener to count its last four (actual) measures a second time, emphasizing further the completion of its symmetrical structure. A similar but lighter emphasis occurs at the end of the antecedent and consequent phrases (approaching actual bars 8 and 16), as these symmetrical groups near completion. To the extent that the listener interprets the third phrase as part of a larger symmetrical structure, the listener does not count the ending of this phrase (approaching actual bar 24) in the same emphatic way.

While I have criticized the notion of metrical accents initiating higher levels of pulse, it seems reasonable to say that the listener mentally accentuates the downbeats of these pulses in an active symmetrical group. After hearing two two-bar segments of an eight-bar group (as in Mozart's theme), the listener can expect to hear further two-bar segments. As a symmetrical group becomes a likely possibility, the listener anticipates two more two-bar pulses and thus emphasizes the downbeats of these pulses while counting the measures of the group: 1 2 3 4 5 6 7 8. Such counting is a kind of shorthand, allowing the listener to keep track of the group's unfolding structure more easily. As with most of Mozart's eight-bar phrases, the second halves of the phrases in this theme feature continuity rather than separate two-bar segments. Thus it is the listener who emphasizes the final two-bar pulse at the seventh measure; the music is merely compatible with such an emphasis.

To say that the listener is aware of two-bar pulses (or of broader duple-ordered pulses) does not imply that the measures within those pulses are, respectively, strong and weak. It implies only that the listener focuses on the downbeats of these pulses in an effort to apprehend the structure of the unfolding group. Applying the counting sequence 1 2 3 4 5 6 7 8 to the opening phrase of Mozart's theme still recognizes the independence of all eight measures articulated by what I consider to be the actual

meter. If one hears the even-numbered measures as audibly less accented than the odd-numbered measures, then one counts only the four notated measures (1 2 3 4 ), all of which are necessary in order to establish a level of two-bar pulses. The first reading acknowledges the listener's ability to hear the "eightness" of the phrase, even while hearing a broader level of pulse.<sup>12</sup>

I have now discussed two hypothetical notions of the way the listener mentally accentuates certain downbeats while counting the measures of an active symmetrical group. Both kinds of accentuation are important to the listener's evolving perception of the group's symmetrical structure. An emphasis on duple-ordered pulses corroborates the group's structure as it unfolds, while an emphasis on the downbeat of the final measure confirms the structure at its completion. The realization that these two kinds of emphasis are supplied by the listener, rather than dictated by audible accents in the music, may help to dispel the ongoing controversy concerning the description of measures within phrases as either strong or weak. My observations, of course, pertain only to active groups that are symmetrical in structure, but in general theorists have chosen to discuss just such groups.

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<sup>12</sup> The question of compound meter is not crucial to the observations just made. The same two readings are possible with respect to bars 88-95 of the second movement of the Sonata in B-flat, K. 281 (example 3-1), notated in 3/8.

In my opinion, both kinds of emphasis are compatible and essential aspects of the listener's hearing an active symmetrical group. It will be helpful here to review an analytic perspective from which these two types of emphasis seem to be at odds. Edward Cone, discussing the first two phrases of the same Mozart theme, objects to the metrical approach in the following way:

If we try the conventional alternation of strong and weak measures we meet with little success. An initial light measure contradicts the firm opening tonic. An initial strong measure weakens the cadences excessively. They are, to begin with, structurally feminine; i.e. the final dominant or tonic enters on a relatively weak beat. To make the entire cadential measure weak in each case would create doubly feminine cadences--nay, in the first phrase, because of its postponed resolution, a triply feminine one!<sup>13</sup>

If one hears the notated meter as the actual meter, as Cone does, then the entire first phrase is necessary to establish a level of two-bar pulses in the theme. One could only describe the half cadence as feminine in the traditional sense, delaying the normative arrival of the final cadential chord at the downbeat of a measure. If the passage is heard in 3/8, however, the listener can be expected to hear (or supply) two-bar pulses at (notated) measures 3 and 4. The notion that the measures filling out these pulses are alternately strong and weak would then result in the final caden-

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<sup>13</sup> Cone, op. cit., 28-29.

tial chord's arrival on a weak measure (actual bar 8).<sup>14</sup> Cone objects that the arrival of this chord is inherently an accented event, since it is the goal of the phrase's motion.<sup>15</sup> Cone therefore considers the final measure of such an eight-bar phrase as strong.

The two conflicting views can be reconciled by recognizing, as described above, that the listener accentuates the downbeats of (actual) measures 7 and 8 in two different but compatible ways. These measures need not be described as strong or weak, either in a metrical sense or in Cone's sense of containing an important tonal event of the phrase. Instead the two downbeats can be heard as providing the maximum articulation of a symmetrical structure.

It may be objected, however, that the arrival of a final cadential chord at the last measure of an eight-bar phrase is feminine in terms of broader levels of pulse already established in a passage. This arrival seems to be more emphatic when it coincides with the beginning of such an expected pulse. Yet, if one is speaking of a symmetrical phrase, the point at which this emphasis occurs is critical. If tonal closure occurs before the final measure--at the seventh measure, or even the fifth measure--tonal and rhyth-

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<sup>14</sup> Although Cone mentions the view that measures alternate weak/strong, the metrical approach suggesting beginning-accented groups (strong/weak) predominates today. Hugo Riemann was the principal advocate of weak/strong alternation. See Morgan, *op. cit.*, 437-444.

<sup>15</sup> *Op. cit.*, 27.

mic closure of the group no longer coincide in an effective way. Instances of such early closure are extremely rare in Mozart's piano sonatas, and indeed in the Classical literature in general. When it occurs, the remaining measures have only the rhythmic function of filling out the group, and the listener is apt to perceive this prolongation of the final chord as a separate static group.<sup>16</sup>

Arrival of the final cadential chord in the last measure of an active symmetrical group is thus essential to the listener's sense that the group consists of a specific number of measures and is symmetrical. For the same reason, an elision at the final measure of the group always has the effect of denying its symmetry. If a new group appropriates the cadential tonic at the seventh measure of a possible eight-bar group, the listener may hear a completed six-bar group rather than elision of an implied eight-bar group.<sup>17</sup>

The only position in which tonal closure can simulta-

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<sup>16</sup> See example 1-6 (Sonata in D, K. 284/I, bars 44-51), where the cadential tonic arrives in the seventh bar. The early arrival here may arise from another bit of wit involving symmetrical structure. Bars 44-46 seem to begin a four-bar group that will end by transference or with an added downbeat measure, but instead the group is expanded to an eight-bar group, doubling the proportions of the implied group. Both the four-bar and eight-bar versions of the phrase appear at the end of the movement (bars 116-127). At bars 8-15 of the second movement of the Sonata in B-flat, K. 281, it may be possible to hear the cadential tonic as arriving at the fifth bar of an eight-bar group. It seems more likely, however, that one hears a four-bar active group giving way by transference to a four-bar static group.

<sup>17</sup> See example 1-7 (the Sonata in F, K. 280/III, bars 66-71).

neously confirm the symmetrical structure of the group and coincide with a broader level of pulse is after completion of the group, that is, by transference or an added downbeat measure. In this case, the listener counts the entire group in anticipation of tonal closure, realizing as the group nears rhythmic closure that the final cadential chord will fall on a downbeat measure outside of its symmetrical structure. As seen in examples 3-2 and 3-3, this type of closure can dramatically distinguish a final partial repetition from an earlier cadential gesture (or gestures). A similar rhythmic emphasis occurs in a complex phrase when the final cadential chord arrives after the last eliding group has completed an independent symmetrical structure (see examples 2-2, 2-4, and 3-5). In this case the final group provides a cadential emphasis for the entire phrase, even though the phrase as a whole is not symmetrical. The final group may even be a two-bar group broadening the dominant chord, as in example 2-5. The critical factor is that the group clearly articulates its symmetrical structure as it moves toward tonal closure.

#### Symmetrical Structure as the Framework against which All Events in the Group Are Heard

The analytic approach employed in this study can be seen to differ from the metrical approach (or, rather, the hypermetrical approach) in focusing on the self-evident, organic character of active symmetrical groups. From the listener's

perspective such groups do indeed seem to grow, gradually implying a certain length as they unfold, and realizing this length with a cadence. I have stressed that movements by Mozart do not consist merely of a succession of active symmetrical groups. Yet when they do occur, it seems essential to recognize their uniquely self-evident structure.

This self-evident structure provides the rhythmic framework against which the listener hears all of the tonal and rhythmic events within the group. As just discussed, tonal closure seems more or less emphatic depending on the point in (or beyond) the group at which it occurs. It seems inaccurate to describe all final cadential chords as inherently accented without considering the differences in emphasis that are heard against a framework of symmetrical structure.

When a suspension seems to contradict a broader level of pulse in an active symmetrical group, the listener continues to monitor the group's symmetrical structure, hearing the suspension in a very different way than the normal suspension. Strict counterpoint requires a suspension to occur on a downbeat, the resolution following on a weak beat. When the suspension and resolution of a cadential dominant chord each occupy a measure, these two measures usually coincide with an established two-bar pulse. In the rare instances when these two measures contradict such a pulse, occurring, for example, in the sixth and seventh measures of an eight-bar phrase, the listener nevertheless emphasizes the two-

bar pulse at the seventh measure that is implicit in the phrase's symmetrical structure.<sup>10</sup> The cadential suspension occurs in this way at measures 22-23 of the third movement of the Sonata in G, K. 283, shown in example 6-4. The suspension and its resolution occupy the fourteenth and fifteenth measures of a sixteen-bar group. This irregular

Example 6-4. Sonata in G, K. 283/III.

position of the suspension allows the left-hand voices to imitate the right-hand voices in measures 13-16 (compare

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<sup>10</sup> Schenker recognizes this breach of strict counterpoint in bars 33-40 of Chopin's Waltz in C-sharp Minor, Op. 64, No. 2. The suspension and its resolution occur in the sixth and seventh bars of the phrase, which Schenker describes as weak and strong, respectively. Free Composition, translated and edited by Ernst Oster (New York: Longman, 1979), 121.

especially  $c^3-b^2$  at bars 13-14, and  $c^1-b$  at bars 21-22).

Edward Cone has recently argued that the beginning of a two-bar hemiola preceding the final cadential chord of a phrase is also an inherently accented event.<sup>19</sup> The articulation of three half-note beats within two measures in 3/4 implies that the downbeat of the second measure is not audibly accented. Cone therefore hears a strong/weak relationship between the two measures. Discussing several Mozart passages in which the two-bar hemiola contradicts an established two-bar pulse, Cone argues that the strong first measure of the hemiola negates the usual metrical approach recognizing an alternation of strong and weak measures. Example 6-5 reproduces one of these passages, the opening sixteen measures of the second movement of the Sonata in C, K. 545. The passage has a clear symmetrical structure.

Cone's analysis focuses on the problem of designating measures as either weak or strong, employing various kinds of accent--melodic, harmonic, and rhythmic--as the criteria for this designation.<sup>20</sup> While Cone's description of these various accents is intended to negate the idea of metrical accents above the measure, Cone seems to have adopted from the metrical approach the assumption that measures must be

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<sup>19</sup> Edward Cone, "Musical Form and Musical Performance Reconsidered," Music Theory Spectrum 7 (1985), 150-156.

<sup>20</sup> Cone's analysis appears under the staff in example 6-5. The symbols under bars 1 and 16 represent, respectively, Cone's concepts of "initial downbeat" and "cadential downbeat." Ibid., 150.

## Example 6-5. Sonata in C, K. 545/II.

Andante

4 -8-

7 -16-

10 -8-

13

either strong or weak. One might acknowledge the hemiola here as a kind of accent, although Cone admits that it is not particularly obvious in this passage. Yet the crucial question, from the analytic standpoint of this study, is whether this accent would prevent the listener from mentally supplying the final two-bar pulse necessary for completion of the group's symmetrical structure. I would answer that such hemiola, like the two-bar suspension in example 6-4, is heard as creating tension against the unfolding symmetrical structure, and is thus heard in terms of that structure.

Symmetrical Structure as an Analytic Basis for Determining Measure-Group Boundaries

A final analytic issue, one for which a consideration of symmetrical structure seems indispensable, is the determination of the boundaries of measure groups. The boundaries of measure groups in Mozart's piano sonatas, and in works of the Classical period in general, are not always so unambiguous as the boundaries of the groups discussed so far in this chapter. Theorists often have opposing views concerning the beginning and ending points of a measure group, resulting in very different hearings of a passage. In some cases, different hearings of a passage seem to make equally good musical sense, and must be carefully compared in order to evaluate their overall rhythmic effects on the movement.<sup>21</sup> In

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<sup>21</sup> As discussed in chapter 1, the two possible readings of bar 62 of the first movement of the Sonata in G, K. 283 result in very different ways of hearing this development

many passages, however, recognition of the principle of retrospective hearing and of the techniques of hidden elision and partial repetition clearly indicates a particular set of measure-group boundaries.

This study has stressed the listener's ability to retrospectively recognize the beginning of a symmetrical measure group. Such retrospective recognition occurs whenever a hidden elision disguises the beginning of a new group. On the other hand, the principle of retrospective hearing is just as crucial when a strong accent seems to signal the beginning of a new measure group. No single accent, or combination of accents occurring at a single moment, can be accepted as the analytic basis for determining the start of a new measure group. The listener cannot be certain of the meaning of such an accented event, but must determine whether it belongs to a new group on the basis of what is subsequently heard.

A passage from the third movement of the Sonata in D, K. 311 illustrates how easily a strong accent can be misinterpreted as the beginning of a new measure group. Mozart seems to have intended this mishearing, which can only be unravelled as one hears the following phrase (see example 6-6). Several kinds of accent at measure 56 seem to indicate the beginning of a new group, eliding the eight-bar consequent phrase begun at measure 49 at its final measure.

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section (see example 1-4).

## Example 6-6. Sonata in D, K. 311/III.

Allegro

-16-

-8-

47

53

58

62

67

71

el. = 5<sup>th</sup> bar

el.!

-2-

## Example 6-6, continued.

The loud dynamic level, the energetic accompaniment pattern, and the wide melodic leap in this measure all contrast with the quiet second-key-area theme. Measures 56-57 can be heard as a typical tonic-dominant alternation beginning a new group.

Measure 58, however, suggests a dominant-tonic alternation beginning at measure 57, and this two-bar segment is then repeated to form the first half of a symmetrical eight-bar phrase. The apparent beginning at measure 56 (and again at bar 64) is a final, eighth measure. If its ambiguity is intentional, as I believe it is, this accented measure might be referred to as a false elision.<sup>22</sup> The rhythmic wit of the passage is concluded at measure 75, a measure very similar

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<sup>22</sup> I have not found other examples of this kind of ambiguity in the piano sonatas. Many final bars of symmetrical phrases introduce the accompaniment pattern of the following phrase, yet elision is not so forcefully implied in these cases.

to measure 56 that now seems to elide the previous group. It replaces the final, "eighth" measure of the partial repetition at measures 72-74, and begins a static group prolonging the cadential tonic chord.<sup>23</sup>

I will end this study with a discussion of two passages by Beethoven that illustrate the techniques of partial repetition and hidden elision used so frequently by Mozart. I discuss these passages not only to suggest that these techniques are present in Beethoven's works, but also to illustrate that a recognition of the presence of these techniques dramatically affects one's rhythmic analysis of the passages. Two published analyses of these passages, the first by Schenker and the second by Lerdahl and Jackendoff, suggest measure-group boundaries different from those I recognize in the passages. One's final hearing of these passages depends on whether one considers the techniques of partial repetition and hidden elision to be at work.

In his rhythmic analysis of the beginning of the first movement of Beethoven's Piano Sonata in D, Op. 28, Schenker does not consider the possibility that the first key area may end with a partial repetition (see example 6-7):

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<sup>23</sup> My hearing an elision at bar 75 is influenced by the wit I hear in the passage, bar 75 finally reversing the effect of the false elisions at bars 56 and 64. Bar 75 can also be heard as a final, "eighth" bar, two-bar groups beginning at bars 76 and 78, and the eight-bar group eliding the second of these at bar 79. Notice the added wit of bars 85-86 (bar 86 not shown), where Mozart allows silence to fill out the eight-bar group before the anacrusis to the rondo theme.

The first 10-measure group . . . closes with the I in the unaccented measure 10, and, in the repetition, at measure 20. The succeeding 8-measure group ends with I in measure 28, again an unaccented bar. The repetition of this group begins in measure 29, but now it lasts only seven measures; for measure 36, which should have been the eighth measure, is interlocked with a 4-measure group, measures 36-39. Thus the final I appears in measure 39, again the unaccented measure of the 4-measure group.<sup>24</sup>

Example 6-7. Beethoven, Sonata in D, Op. 28/I.

The musical score is presented in four systems. The first system (measures 1-10) is marked 'Allegro' and 'p'. The second system (measures 11-20) includes a 'cresc.' marking. The third system (measures 21-30) features a 't.a.' marking and a '-8-' bar grouping. The fourth system (measures 31-39) includes 'sf', 'cresc.', and 'fp' markings, along with a '= 5th bar' annotation. The score concludes with a final cadence in measure 39.

The eight-bar phrase at measures 21-28 belongs to the unusual type in which the cadential tonic chord arrives at the seventh measure. Schenker's statement that the group "ends

<sup>24</sup> Schenker, Free Composition, 121.

with I in measure 28, again an unaccented bar," is misleading, ignoring the resulting difference in cadential emphasis at measure 27 as compared with the two earlier phrases.<sup>20</sup> More important to the present discussion is Schenker's interpretation of the corresponding "eighth" measure of the phrase's repetition (bar 36) as the beginning of a new, four-bar group. It is certainly possible to hear this group, which would begin with the arrival of a<sup>2</sup>, and would show considerable motivic unity.

Although the cadential tonic chords at measures 27 and 35 are rhythmically emphasized by virtue of coinciding with a two-bar pulse, there is no melodic closure on scale step  $\hat{1}$  at these points. It would be unusual for this closure to occur in a rhythmically less emphatic ("unaccented") position at measure 39. I hear measures 35-36 as a turn-around, filling out the last two measures of an eight-bar phrase (just as bars 27-28 do), and leading into a repetition of the last half of this phrase. The descending third a<sup>2</sup>-g<sup>2</sup>-f#<sup>2</sup> in measure 36 is a contraction of the same third in measures 31-32, and serves the function of recalling this moment in the phrase. Except for the melodic closure on  $\hat{1}$  and the truncation of the final "eighth" measure, the partial repetition is literal. In contrast with Schenker's new four-bar group, the partial repetition provides emphatic

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<sup>20</sup> Here Schenker is not concerned, however, with the question of cadential emphasis, but rather with the fact that the rhythmic groups enclose their cadences.

rhythmic and tonal closure for the preceding symmetrical group.

Lerdahl and Jackendoff, in their analysis of the opening of the first movement of Beethoven's Piano Sonata in B-flat, Op. 106, do not consider the possibility of a hidden elision that drastically alters the listener's rhythmic expectations of the passage (see example 6-8). The authors discuss the passage in order to illustrate their concept of "structural downbeat."<sup>26</sup> They hear measures 5-17 as a "structural anacrusis," having the function of creating a prolonged tension which is released at the arrival of the cadential tonic chord at measure 17. This downbeat is structural in the sense of beginning an entire section of the movement. Insofar as the preceding measures are heard as an anacrusis, the movement really begins at this point. The authors attribute the strong rhythmic emphasis one hears at measure 17 to the cadential tonic chord's arrival "on a strong hypermetrical beat." Their metrical analysis of the passage (shown under example 6-8) indicates that measure 17 coincides with the beginning of a four-bar hypermeasure.

My analysis indicates that a new group begins at measure 11, in the middle of a hypermeasure heard by Lerdahl and Jackendoff. The listener briefly hears measures 9-12 simply as a varied repetition of measures 5-8, yet with the repeti-

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<sup>26</sup> Lerdahl and Jackendoff, A Generative Theory of Tonal Music, 33-35.

## Example 4-8. Beethoven, Sonata in B-flat, Op. 106/I.

Allegro ( $\text{♩} = 138$ )

*ff* *p* \*

*ritard. a tempo* -4- -2-

*hidd.* *cresc. poco a poco* -6-

*f* *p* \*

tion of measures 11-12 at measures 13-14 the listener begins to dissociate these two measures from their original context and hear them as initiating a new group. As in several of the Mozart passages discussed, the eliding group here becomes apparent simply by repetition of the two-bar segment (see examples 2-7 and 4-9). The chromatic intensification and melodic ascent in measure 15 strongly suggest the second half of an eight-bar group, so that the listener probably hears the loud beginning at measure 17 as eliding this implied group at its seventh measure. As already discussed, this early arrival of the cadential tonic chord implies symmetrical structure less forcefully, even though it provides greater rhythmic emphasis. Measures 11-16 may thus be heard simply as a six-bar group, rather than an implied eight-bar group.

In either case, the effect of a structural anacrusis that Lerdahl and Jackendoff describe seems to derive from the surprising emergence of this group, which has a separate rhythmic function of accelerating toward measure 17. Notice that each successive two-bar segment in this group has a more urgent rhythmic character. Hearing the passage in undisturbed four-bar hypermeasures (emphasizing a four-bar pulse at measure 13) greatly diminishes this sense of acceleration.

This kind of analysis is admittedly subtle. Yet I would emphasize that this subtlety belongs to the compositional

techniques themselves, and that these techniques directly affect the way we hear the music.

APPENDIX  
 FURTHER EXAMPLES FROM THE PIANO SONATAS  
 OF THE TECHNIQUES DISCUSSED IN THIS STUDY

This appendix allows the reader to examine in a large group of examples both the consistency and the variety of Mozart's approach to the several techniques discussed in this dissertation. I have commented on interesting or unusual passages not already discussed, and have given brief analyses of passages in which Mozart's use of several different techniques makes measure-group analysis difficult. The general function of each of the techniques should be kept in mind while examining the examples of that technique.

Elisions within Harmonically Static Passages

Sonata in C, K. 279

third movement: bars 69-76, elisions as bars 72 and 75.

Sonata in B-flat, K. 281

third movement:

1. bars 87-89, elision at bar 88 based on the prototype at bars 16-17.
2. bars 158-162, elision at bar 159 based on the same prototype but extending the wit with a four-bar eliding group. Note the similarity of character between these elisions and the one at bar 75 of K. 279/III.

Sonata in G, K. 283

first movement: bars 63-71. See example 1-4.

third movement: bars 158-171, elision at bar 168. The passage begins with a hidden elision based on two preceding four-bar prototypes (bars 148-151 and 152-155), and then states two four-bar prototypes as the basis for the elision at bar 168.

Sonata in C, K. 309

third movement: bars 53-57, elision at bar 56.

Sonata in C, K. 330

first movement: bars 79-87, elision at bar 84. This passage has the same rhythmic structure and function as the following example.

third movement: bars 87-95. See example 4-9.

Sonata in B-flat, K. 333

first movement: bars 89-93, elision at bar 92. Acceleration of activity implies a four-bar group, as in the following example, which has the same rhythmic structure and function.

third movement: bars 36-40. See example 1-5.

Sonata in C Minor, K. 457

first movement: bars 126-130, elision at bar 129.

Sonata in B-flat, K. 498a<sup>1</sup>

fourth movement: bars 83-89, elision at bar 86.

Sonata in B-flat, K. 570

second movement: bars 41 1/2-43 (in compound meter), elision at bar 43.

Sonata in D, K. 576

third movement: bars 34-43, elision at bar 40.

#### Complex Phrases Ending with Full Cadences

Sonata in C, K. 279

third movement: bars 5-10, elision at bar 7 based on the prototype at bars 1-4.

Sonata in F, K. 280

first movement: bars 1-12. See example 2-1.

Sonata in B-flat, K. 281

first movement: bars 18-33. See example 2-4.

Sonata in C, K. 309

first movement: bars 73-82 1/2, hidden elision at bar 79, eliding an implied 8-bar phrase. This phrase has the

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<sup>1</sup> The Neue Mozart-Ausgabe omits this sonata on the basis that it is an arrangement (borrowing from Mozart) by August Eberhard Mueller. I have included in the appendices passages from this sonata that reflect Mozart's approach to rhythmic structure.

character of a modulating group, yet begins and ends in the same key. The eliding group is truncated, the following passage in compound meter beginning at midbar.

Sonata in C, K. 330

first movement: bars 23-34. See example 2-2.

Sonata in B-flat, K. 333

first movement: bars 54-59, a complex phrase only by virtue of a two-bar eliding group at the cadential dominant function at bar 57. An added downbeat measure follows at bar 59.

Sonata in D, K. 576

first movement:

1. bars 46-52. See example 2-5.
2. bars 144-154. See example 2-6.

#### Complex Phrases Ending with Half Cadences

Sonata in F, K. 280

first movement: bars 17-26, hidden elision at bar 23. One expects the dominant chord at bar 24.

Sonata in C, K. 309

third movement: bars 28-39. See example 2-7.

Sonata in A Minor, K. 310

first movement: bars 88-97. See example 2-8.

Sonata in C Minor, K. 457

second movement: bars 49 1/2-52 (in compound meter). There are two elisions in the phrase, a hidden elision at bar 50 1/2 based on a preceding prototype at bars 47 1/2-49 1/2, and an elision at bar 52 by a two-bar group prolonging the final dominant chord.

Sonata in B-flat, K. 498a

first movement: bars 93-100, hidden elision at bar 98 based on the prototype at bars 9-16. The first group continues long enough to imply a modulation to the subdominant, after which the eliding group returns to the tonic using expressive chromaticism.

Sonata in C, K. 545

first movement: bars 1-12, hidden elision at bar 5. The changes in design and the more animated melody at bar 5 can be heard as the second half of an eight-bar phrase. One can still expect the cadential subdominant function at bar 7.

Sonata in D, K. 576

third movement: bars 26-33, hidden elision at bar 31. One can still expect the cadential dominant function of an eight-bar phrase at bar 32.

Partial Repetitions

Sonata in F, K. 280

third movement: bars 54-65.

Sonata in B-flat, K. 281

second movement: bars 28-42. See example 3-1.

third movement: bars 28-38. Bars 36-37 can be heard as an expansion of bar 33, the sixth bar of the original phrase.

Sonata in E-flat, K. 282

first movement: bars 9 1/2-14 (in compound meter).

third movement: bars 16-33. Example 5-3 shows the consequent phrase, the partial repetition, and the elision of the repetition by a static group.

Sonata in G, K. 283

first movement: bars 23-50. See example 3-4.

second movement: bars 9-13 (in compound meter).

Sonata in C, K. 309

first movement: bars 35-54 1/2. An underlying eight-bar group is expanded by several techniques. The first half is repeated (internal repetition), the second half elided at its final, "eighth" bar (bar 46) by its own repetition. A two-bar transitional group elides this partial repetition after two bars and leads to a new four-bar group that cadences in an added downbeat measure (only a half-measure, since the next section is in compound meter). I hear the new group at bar 50 as a final, nonliteral repetition of the original group's second half; there are similarities in both the melody and bass line.

third movement: bars 1-19.

Sonata in A Minor, K. 310

second movement: bars 15-28. See example 3-3.

third movement:

- 1) bars 1-20.
- 2) bars 29-55. See example 4-12.
- 3) bars 64-86.

Sonata in D, K. 311

third movement: bars 57-74. See example 6-6.

Sonata in C, K. 330

first movement: bars 1-10. The partial repetition is elided by a static group in the same manner as the example cited above from K. 282/III.

Sonata in A, K. 331

first movement: bars 1-18 (in compound meter). See example 6-3.

Sonata in F, K. 332

second movement: bars 9-18. See example 3-2.  
third movement: bars 79-84.

Sonata in B-flat, K. 333

first movement: bars 39-49, the prototype for example 3-6.  
third movement: bars 25-35.

Sonata in C Minor, K. 457

first movement: bars 36-58. The first half of an underlying eight-bar group is expanded from four to eight bars by internal repetition of its two-bar segments. The partial repetition follows a deceptive cadence ending with an added downbeat measure (a unique occurrence in the piano sonatas). It gives way to a cadenza-like group at bars 51-56, in which measure-group structure is less deliberate. The completion of the original eight-bar group here serves as the prototype for the combined technique used in the recapitulation, in which an independent eliding group precedes the partial repetition. This passage is discussed in the next section of examples.

second movement: bars 8-13 1/2 (in compound meter).

Rondo in F, K. 494, bars 19-30. See example 5-12.

Sonata in B-flat, K. 498a

fourth movement: bars 29-40.

Sonata in C, K. 545:

second movement, bars 49-71. The two partial repetitions at bars 65-68 and 69-71 are nonliteral, and each is increasingly more dramatic than the counterpart in the original group (bars 61-64).

Sonata in F, K. 547a:

first movement, bars 64-75.

Sonata in B-flat, K. 570:

first movement, bars 41-69. The partial repetitions of the sixteen-bar group begin at bar 57. The second half is repeated at bars 57-64, the last quarter at bars 65-68. In the coda of the third movement, Mozart uses the same

technique of placing the melody of the partial repetition in the bass (see below under combined techniques). second movement, bars 48-53 1/2 (in compound meter). The repetition of the second half is nonliteral.

Sonata in D, K. 576:  
third movement, bars 163-183.

#### Combining the Techniques of Partial Repetition and the Complex Phrase

Sonata in C, K. 279  
second movement: bars 11-25. See example 3-5.

Sonata in D, K. 311  
second movement: bars 25-38. A two-bar group prolonging the cadential dominant function elides the partial repetition at its "eighth" bar.

Sonata in B-flat, K. 333  
first movement: bars 135-151. See example 3-6.

Sonata in C Minor, K. 457  
first movement: bars 131-155, combining several techniques. The eliding group typical of complex phrases begins at the "seventh" bar (bar 141), interrupting the second half of the phrase completed in the exposition at bars 44-48 (4 + d.b.). At bar 145 the second half of the phrase begins once again (a partial repetition beginning by transference), and is again elided by the new group. A cadenza-like group elides this group after two bars (at bar 49), a final two-bar group at bars 154-155 providing rhythmic stability for the cadence.

Sonata in B-flat, K. 570  
third movement: bars 71-85 (in compound meter). This coda begins with a sixteen-bar symmetrical group. The repetition of its second half is elided at bar 81 (a hidden elision) by an eight-bar group that cadences in an added downbeat measure at bar 85.

#### Active Modulating Groups Ending with Half Cadences

Sonata in F, K. 280  
third movement: bars 90-105. See example 4-5.

Sonata in B-flat, K. 281  
first movement: bars 47-54, beginning by hidden elision based on the prototype at bars 5-8.  
second movement: bars 80-87. See example 4-3.

## Sonata in G, K. 283

second movement: bars 18 1/2-21. See example 4-6.

third movement: bars 115-122, beginning by hidden elision based on the preceding eight-bar prototype at bars 103-110.

## Sonata in C, K. 309

third movement: bars 131-136, beginning by elision and elided after six bars of an implied eight-bar structure.

## Sonata in A Minor, K. 310

first movement: bars 9-15

second movement: bars 44-50, the final and largest active group in the development section, elided by a three-bar static group prolonging the dominant chord.

third movement: bars 56-63. See example 4-12.

## Sonata in C, K. 330

first movement: bars 71-78, again the largest group in the development section, giving way to a final static section prolonging the dominant chord.

## Sonata in B-flat, K. 333

first movement: bars 11-17

third movement: bars 17-24

## Sonata in C Minor, K. 457

first movement: bars 83-99. Bars 98-99, dramatically expanding the motive a $\flat$ -g, are a separate group eliding the implied sixteen-bar group at its final bar.

## Rondo in F, K. 494, bars 72-78. See example 4-4.

## Sonata in B-flat, K. 498a

first movement: bars 21-29. This modulating group has the rhythmic structure of a complex phrase. One expects the dominant function of the half cadence to arrive at its eighth bar (bar 28). Instead, a two-bar eliding group reasserts and prolongs the subdominant chord, postponing the cadential dominant chord until bar 30.

## Sonata in F, K. 533

first movement: bars 33-41. The arrival of the final dominant chord in an added downbeat is unusual.

## Sonata in F, K. 547a

first movement: bars 98-103. Note the similarity of bars 94-103 to bars 113-122 of K. 332/I (example 4-13). The keys involved are the same, as is the movement away from the submediant key implied by the half cadence.

Sonata in B-flat, K. 570

first movement: bars 29-34, beginning by hidden elision based on the four-bar phrase at bars 23-26, and elided after six bars. An eight-bar symmetrical structure is not strongly implied here, but the bass motion in bars 33-34 does imply a cadence. See also bars 87-94 and 161-164.

Sonata in D, K. 576

third movement:

- 1) bars 89-91. Although only three bars long, this group is larger than the preceding two-bar groups at bars 84-85 and 86-87. These serve as the prototypes for the group's entrance by elision at bar 89. At bar 92 a three-bar static group elides the group's expected fourth bar.
- 2) bars 108-113. This group also begins by elision based on two preceding two-bar prototypes (at bars 103-104 and 105-106). The three-bar static group at bars 114-116 elides the group's implied eight-bar structure after six bars.

Transitional Modulating Groups

Sonata in F, K. 280

first movement: bars 63-66. See example 4-7.

Sonata in C, K. 309

third movement: bars 85-92.

Sonata in A Minor, K. 310

third movement: bars 87-94.

Sonata in C, K. 330

third movement: bars 79-86. See example 4-9.

Sonata in F, K. 332

third movement: bars 96-111. This sixteen-bar group is unusually large for a transitional group, yet it consists solely of a repeated four-bar pattern, and leads into the theme at bar 112 without a cadence. The group begins by eliding an implied six-bar group at its final bar (the prototype at bars 1-6).

Rondo in F, K. 494, bars 66-67. See example 4-4.

Sonata in F, K. 533

second movement: bars 19-22. See example 4-8.

Active and Transitional Modulating Groups in Succession

Sonata in C, K. 279

first movement: bars 39-44 and 45-47. One can hear the first group as implying a full cadence in A minor within eight bars. The transitional group immediately changes the design and harmonic rhythm, moving smoothly toward the new key and theme at bar 58.

Sonata in D, K. 311

first movement: bars 48-54 and 55-58. See example 4-11.

Sonata in F, K. 332

first movement: bars 117-122 and 125-132. See example 4-13.

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## INDEX OF TERMS

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