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Interaction of Rhythm with Phrasing and Tempo Choice in
Aaron Copland’s Piano Sonata

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Abstract

This thesis will explore the interaction of rhythmic patterns containing irregularly-sized beats with various aspects of piano writing. The purpose of this study is to offer possibilities for interpretation that are gained through an understanding of how rhythmic patterns coincide with such things as linear, thin-textured piano writing verses dense chords that contain many notes. A detailed knowledge of rhythmic patterns and how they relate to phrasing can help the give the interpreter ideas about such aspects of interpretation as articulation and tempo choice. Only the first two movements of the Sonata are included in this study because they offer a rich variety of passages that employ irregular meter and patterns of irregular beats. The method of analyzing rhythm used by Peninah Kanovsky in her PhD dissertation entitled “Metric Hierarchy in Music by Bartók, Copland, and Stravinsky” is the model that is followed in this thesis.
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INTRODUCTION

At least one or two sections that contain fast moving rhythmic patterns in irregular meters are found within most of Aaron Copland’s compositions. The music becomes very animated because of the frequent change of meter, and as a result, beats are often felt as different in size from one another. The form that these lively rhythmic patterns take is also influenced to various degrees by the pianistic texture. Homophony containing various degrees of chordal density is often freely alternated with leaner textures that mostly contain a single monophonic line. This influences the various degrees of rhythmic energy and forward motion. For example, if a section of a piece contains mostly chords, most of which contain many notes that cover a wide range, then the resulting heaviness and vertical orientation of the chords tends to add weigh to the pulses. As a result, the pulse becomes quicker because the natural reaction of the performer is to emphasize or accent these chords in some way, especially if they are marked “forte” and accented in the score. Likewise, if a line of single or double notes moves along in faster note values within the context of an irregular pulse and there are few or no accents, then one tends to feel the sub-divisions of the pulses with less emphasis. The tendency of the performer would instead be to follow the curves in the line, and, as a result, larger groupings of notes are felt as pulses. With irregular meter, rhythmic patterns often go beyond the measure line. The following thesis uses the first two movements of Aaron Copland’s Piano Sonata to show how Copland utilized jazz-like rhythmic patterns containing durations of different sizes to serve as a part of the
architecture. This thesis will also explore how the texture of the piano writing influences the quickness of the pulse.

The playwright Clifford Odets commissioned Copland’s only published Piano Sonata in January of 1939. It was completed in Latin America while Copland was there on a tour that was sponsored by the State Department in 1941. Copland performed it for small gatherings while in Latin America, and John Kirkpatrick gave the New York premiere in January of 1943. Between 1939 and 1941 there were a few events that interrupted the composition, including film score work in Hollywood. In mid 1941, when the Sonata was almost finished, two valises containing the manuscripts were stolen in Havana, Cuba when Copland left them by his car in order to retrieve luggage from his hotel room. The thief was apprehended and Copland was able to recover some of the other items that were in the bags, but the Sonata manuscripts were never to be found. He had to write out the piece from memory with the help of manuscripts and with the help of Kirkpatrick, who had seen the piece previously. The Sonata is in three movements, the first of which is a Moderato tempo, the second is a fast scherzo, and the third is slow again. The Piano Sonata is one of the more traditional of Copland’s piano works, both harmonically and in terms of form. Copland’s view of Sonata Form went back to the time when, as a teenager, he studied with Rubin Goldmark. This accomplished but musically conservative teacher believed strongly in Sonata-Allegro form as being the most important endeavor in composition.¹

A primary influence on Copland’s use of fast rhythmic energy was the jagged rhythms found in jazz and blues. In the early part of his career he experimented with the use of jazz and blues in compositions such as his Piano Concerto (1926), but soon after, he turned away from

using jazz as the main style of his compositions. At a Harvard University interview with the pianist Leo Smit in 1977, he admitted to the influence of jazz on his keyboard works. Copland’s assimilation of jazz and blues rhythms into his compositional voice had become increasingly subtle by the time of his best-known piano works. Each of the first two movements of the Piano Sonata contains sections that vary widely in tempo and degree of rhythmic energy. This is because the forms of each movement approximate traditional forms. In the first movement, most of the faster sections contain irregularly-sized pulses that thwart expectations of a regular beat with the help of various kinds of accents. This is particularly true of the middle section from the development, which is marked “Allegro.” The second movement consists entirely of irregularly-sized beats, with the exception of its middle section.

In this thesis, patterns of irregularly-sized beats found in the first two movements of Aaron Copland’s Piano Sonata and their interaction with the piano writing will be analyzed. The main goal of this analysis is to give a theoretically-supported option for phrasing and articulation to a listener or performer who might not be familiar with the Sonata. Rhythmic patterns will be analyzed using a method formulated by Peninah Kanovsky in her dissertation. The third movement of the Sonata is not analyzed in this thesis because the tempo is slower and there are no irregularly-sized quarter-note beats. This movement also does not have any section that contains fast beats in irregular meter.

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Smit, Leo, Interview with Aaron Copland, liner notes from the LP recording: Aaron Copland: The Complete Music for Solo Piano, Leo Smit, pianist, CBS Masterworks, 1979.
The method of examining rhythmic patterns containing beats of differing length that is followed in this thesis was influenced by that used by Peninah Kanovsky in her dissertation entitled, “Metric Hierarchy in Music by Bartók, Copland, and Stravinsky.” Toward the beginning of her dissertation, Kanovsky summarizes concepts gleaned from other research focusing on the listener’s perception of pulse and of rhythmic periodicities. Kanovsky also consults research that focuses on how musicians can deviate from rendering a rhythm exactly as written. This research is the basis for her views on how rhythmic regularity is found at various levels in the metric hierarchy in sections of music that contain irregular meter. In examples where the meter changes frequently it is often apparent that regular pulses are often unconstrained by the bar line. In her dissertation, it is shown through various examples that pulses within a rhythmic pattern can vary in size without affecting the regularity of the rhythmic pattern. Kanovsky also provides evidence that beats larger or smaller than the main pulse size do not necessarily need to fall on the same beat number each time a pattern of unevenly-sized beats is repeated. Music composed by Bartók, Copland, and Stravinsky from the early to middle part of the twentieth century was chosen by Kanovsky because of the variety of irregular meters found in any given passage, for example: five-eight, seven-eight, and the resulting unequally-sized beats. Kanovsky has created a method of labeling beats of differing lengths in order to fit
them into a regular pattern of beats formed often according to the shape of musical phrase, which includes accents, high notes, rests, etc.\textsuperscript{3}

When utilizing the labeling system used in Kanovsky’s dissertation, one can specify whether the size of a beat is the same as that of the comfortable beat, or if it is larger or smaller. The comfortable beat is the default beat size that is most easily felt; it is neither too fast nor too slow. This system also shows the number of beats in a rhythmic pattern containing irregular beats, which is called the “X-beat meter.” This grouping of “X” flexible beats, the pulses within which must be felt comfortably by the performer, is arrived at through a “transformation scheme” where the “X-beat meter” is derived from a “metric prototype.” A “metric prototype” is rhythmic pattern containing regular meter from which the X-beat meter is derived by either the addition or subtraction of a rhythmic value from any one of the flexible beats.\textsuperscript{4} A “b” stands for the beat from the metric prototype that is felt by the performer and listener, and its note value is specified at the beginning of each of Kanovsky’s analyses. A small number placed down to the lower right side of the letter is the beat number within the pattern. A beat that is lengthened is marked with the “b” double-underlined, and a beat that is shortened is marked with a line drawn through the “b.” This “b” can only be lengthened by an additional value of one-half its original

\textsuperscript{3}Kanovsky, Peninah, “Metric Hierarchy in Music by Bartók, Copland, and Stravinsky” (Ph.D. diss., The City University of New York, 2002).

\textsuperscript{3}Ibid., 46-49.

\textsuperscript{4}Ibid, 53-54.
size. For example, quarter note pulses cannot be lengthened more that a dotted quarter note or else it would be felt as two pulses instead of one.  

Research by Candace Brower on three different levels of memory and their roles in the listener’s perception of rhythmic patterns of various tempi is precisely summarized by Kanovsky. This research serves as a basis for Kanovsky’s ideas on both the listener’s and performer’s perception of pulse and rhythm at differing levels of the structure. These levels of memory summarized in Kanovsky’s dissertation are: echoic memory, working memory, and long-term memory. In the echoic memory, rhythms at the sub-beat level such as eighth and sixteenth notes are perceived in groupings of two’s or three’s in an immediate, sensory manner without regard to their placement within a larger pulse context. This is the short-term memory that lasts only about two seconds because rhythms are sensed on an individual basis without there being any time for an understanding of rhythmic context. The working memory, or short-term memory, is where rhythms at the sub-beat level first sensed in the echoic are now arranged into patterns. The foreground and middle-ground beat levels are sensed by the working memory. According to Brower’s research, the listener entrains to certain accents in the music in order to perceive the beats at the foreground level. For this to be possible, the downbeat has to remain in the echoic memory by recurring at predictable intervals. At the middle-ground level where beats are grouped into larger units such as measures and phrases, the listener uses a “counting strategy.” While using this approach, the listener does not feel larger beat groupings of varying length as syncopations. Instead, these are counted as expansions of the larger metric pattern. Long-term memory is where rhythmic patterns understood by the working memory are

\[5\text{Ibid, 53-54.}\]
remembered in such a way that long-term connections between larger sections of a musical work are made. \(^6\)

In this thesis, the first two movements of the Sonata will be analyzed in large sections using Kanovsky’s system of labeling beats of irregular lengths, but my approach diverges in a few ways from the one she uses in her dissertation. Kanovsky usually analyzes short phrases from various compositions as examples that support her ideas about the nature of rhythm. Larger sections from the Sonata movements will be analyzed in a broader scope for this thesis. This is for the purpose of showing how the rhythm interacts with texture. This interaction gives the performer and listener insights regarding lengths of phrases, size of pulse, and ways to shape phrases. It will be necessary to analyze multiple beat patterns that make up a large section as a means to the above ends. At times the individual patterns within a large grouping will have differing numbers of beats. Kanovsky’s beat labeling system is used as a tool to make it easy to see how rhythmic patterns are one of the important aspects of phrases.

\(^6\)Ibid., 19-25.
CHAPTER 1

MOVEMENT 1

Two five-measure phrases, each of which appears to slow down in pulse and tempo, constitute the first ten measures of the first movement. Both of these phrases are identical in rhythmic pattern, but the chords in the second phrase are denser. This means that the chords in the latter phrase contain more notes, and they also cover a wider range. The first two measures have three slow equally-sized quarter-note beats each. In the third measure, both the second and the third beats are lengthened by an eighth note, which creates a built-in ritardando. This measure is now in 4/4 time, but the three chords approximate the three beats of the previous measures, and the ritardando effect is enhanced by the last dotted quarter being tied over through the next beat. As shown in Ex. 1, these chords in measure three are three unevenly-sized beats.

Ex. 1

\( b = \text{quarter note} \)
An interesting rhythmic reprise of the first measure is created at the fourth measure. A longer emphasized note falls on the second beat, as in the first measure. The first beat is not a chord, but is only felt as a silent quarter beat because of it being tied over from the previous measure. This is the same note value as that found in beat one of the first measure, so the rhythm in both measures is almost the same. In other words, the phrase begins and ends with the same rhythm.

During the course of the first five measures, evolution of note arrangements within chords corresponds to the slowing down of the rhythm. The dyads in the first two measures move in the same downward direction. On the first beat, the same minor third is played by both hands an octave apart. This intriguing spacing of notes allows this chord to ring with an energy that propels it down to the next chord. A minor third that is doubles an octave apart reinforces the intensity of sound created by two notes placed so closely together. Neither hand plays a more widely-spaced perfect interval, so this simultaneity is resonant from the same chord being spaced an octave apart, and this complements the more raw sound of the bare minor third. It is like a B-flat minor triad without the fifth. The chord on beat two lasts longer and is slightly more dissonant. The combination of chords in the first measure sets up the arrival down on the lower chord in the second measure. Then in measure three the chords for both hands move in symmetrically opposite directions by a minor third, then by a second. The top note of the right hand chord and the bottom note of the left hand chord move up and down respectively by minor third. In the third measure, the left hand chord doubles the bottom note of the minor third in beats two and three. This increase in dissonance and the change in direction coincide exactly with the where the lengthened beats begin. The increase in density coupled with the contrary motion of the outer notes adds expressive weight to the slower chords.
The increased chordal density in the second phrase, along with the wider spacing of notes, creates a sound in measures seven and eight that makes these measures more climatic than the corresponding measures three and four. In measure three the ear is drawn to the perfect fourths in the right hand, while in measure eight, the individuality of each simultaneous chord is more audible. These perfect fourths are narrower in range, and they are separated from the left-hand chords by approximately an octave. In measures seven and eight the melody notes in the right hand are doubled into an octave. The same minor third/octave voicing is found in the left hand of measure eight, so the two hands in these latter measures are separated this time by about two octaves. On both the second and the third “beats” of measure eight, the chords of the left hand are also dissonant with those of the right as is the case in measure three, but there is a clanging resonance that results from these simultaneities. This is because of the two-octave separation, the contrary melodic motion, and the octave doubling of the outer notes in each chord. For these reasons the interpreter can approach the perfect fourths of measure three with a crescendo that creates forwardly-directed, linear motion, while the measure eight chords can be more weighty and climatic, which is appropriate for the end of the second phrase.

There are a couple of small set classes that first appear within the first two lines of the piece. These four-note set classes generate subsets appear frequently throughout the movement to serve several different functions in regards to pianistic texture. In the opening line of the piece, the \((0257)\) set class is not present until measures four and five of the first phrase. In fact, the note values of the chords are very long at both measures four to five and nine to ten. These two chords consist of the set class \((0257)\) with the G doubled. The sense of solidity these chords
convey may have something to do with the fact that, when put into normal form, all of the intervals are symmetrical with each other. This is shown in Ex. 2.

**Ex. 2**

![NORMAL FORM OF (0257)]

A major second separates both the F-G and also the B-flat-C. The middle two notes are separated by a minor third, which is an interval that absolutely pervades this piece. In the fourth and ninth measures, the upper three notes are placed a perfect fourth apart, the C and F being the same right-hand fourth played in the middle of the phrase, yet within the context of a different set class. In measure two, all four notes constitute the set class (0237). The subset (027) is found within a variety of contexts throughout the piece. Another derivative from this chord, (037), is the minor triad B-flat, D-flat, and F. One would expect that the triad-based qualities of this chord would give it sufficient solidity for it to be placed at the end of the phrase, but the dissonance gives the chord a more transient quality. The C wants to resolve either up or down.

At the “meno mosso” in measure eleven, one can make an argument that the meter has shifted from a three-pulse measure to a sort of two-pulse phrasing. Actually, the time signature at this point continues to call for four quarter-note pulses per measure until the bottom of the page, but the half-note is proving to be a pulse that is more consistently felt. The chords in the left hand arrive on the half-note beat with regularity, and the melody also demarcates the half note. In measure thirteen the melody consists of two quarter notes and then a quarter-note triplet.
Of course, this triplet is not a beat of unequal length because it covers exactly the length of a half-note, and in measure fourteen, there is a syncopation that reinforces the half-note beat. This syncopation reappears in measures eighteen and twenty. In measure fifteen the half-note pulse is strongly reinforced by the highly-ranged right-hand octaves accompanied by septuplet arpeggios. These arpeggios completely eradicate the quarter-note pulse because of their uneven numbers of notes. The quarter-note pulse is most convincingly undermined in measure twenty-one. Here, the right hand has two groups of three quarter-note triplets and under the second of these, the left hand has eighth-note off-beats to the triplets in the right hand.

This argument for feeling the pulse at the half-note from measures eleven through twenty-one is challenged somewhat by the “meno mosso” marking. The question is whether this marking refers to the half-note pulse or quarter-note pulse. The performer has to figure out how much “meno mosso” is possible before the tempo becomes too slow. A tempo that is too slow would make shaping of phrases impossible. The main interpretive challenge lies in balancing the weightiness of the half-note chords with the need to render the melody in a linear shape that moves forward toward goal points. Bernstein played this section at the same tempo as that of the first ten measures. This aspect of the interpretation makes sense because he choose the quarter-note pulse in the first ten measures to be about sixty to the quarter note, which is on the low side, since in the score, Copland’s metronome marking says “about eighty” to the quarter note. Bernstein gave each melody note in the first phrase at measures eleven and twelve a weightiness, but in the second phrase, which is an extension of the first, he gave the quarter notes less weight and allowed the quarter-note triplet to propel the phrase to the downbeat of measure fourteen. Since the performer is reminded in the score to be “freely expressive,” there is often some push
and stretch of the tempo. Bernstein used this freedom in his recording to aid in the shaping of phrases.

In the section lasting from measures twenty-six through thirty-two, the location of the comfortable beat is influenced by the direction “pressing forward,” which is found above measure twenty-six. The tempo assumes that of the first page as its starting point since we are not told in the score to change tempo, aside from the “pressing forward” directive. Simultaneously with the direction to accelerate, facilitated by the upward arch of the first three phrases, the second and third beats of measure twenty-six become larger note values. When using Kanovsky’s system, as shown in Ex. 3, b=the quarter note. Measure twenty-six contains three beats, and the half-note chords are pulled magnetically upwards toward the high chord on the following downbeat. Normally the half note and the quarter note would not make sense together as two beats of unequal length since the half note is more than one and a half times as large as the quarter, which is the referent beat. The speeding up directly toward the downbeat of measure twenty-seven renders the two half notes more on equal terms with the first quarter. The second pulse of each half note is not felt as much due to the accelerando, and this is how these half notes become beats two and three.

An argument can be made for the number of beats in the second ascending phrase, measures twenty-eight to thirty, to be felt as three, giving it the same number of beats as the first phrase. The first three phrases and their flexible beat patterns are shown in Ex. 3. This three-beat phrasing is made possible because measure twenty-nine can be felt as a single beat divided evenly by two dotted half-note chords. Measure twenty-eight starts with the quarter note and

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half note as single pulses, just like in measure twenty-six. Keep in mind that the tempo can accelerate even more in measure twenty-nine because of the higher range of the chords.

Ex. 3

A sensitive musician would most likely make the arrival on the higher B-flat chord more dramatic without taking too much time. If too much time were to be taken measure twenty-nine, then the function of the ritardando at the third phrase, measure thirty-two, would be ruined because it would have to go even slower than that in the second phrase. The sense of arrival at the climax of the third phrase would be lost. It makes more sense for this third beat in measure twenty-nine to be stretched only very slightly, since the beat is evenly divided by the two chords.

Under more normal rhythmic conditions, the dotted quarter-note chords in measure twenty-nine would be equal in length to an entire measure of two beats such as measure twenty-eight. Within the context of the quick accelerando, these two dotted quarter-note chords together can be perceived as a sleight expansion of the half-note chord that precedes it. In other words, the
accelerando gives them a feeling of two eighth notes that are being pulled back in a rallentando before an important arrival point.

The pulse pattern outlined in Ex. 3 seems to allow the performer a coherent plan for the shaping of these three phrases. Both Leo Smit and Leonard Bernstein take varying approaches. A contrasting approach to these later two phrases would be to feel all of the inner beats in each note value as a way to “pull in the reins.” Leo Smit took this interpretive approach, and each note value is heard more accurately as a result. To feel every quarter-note pulse found inside each half note creates more rhythmic tension as the climatic high chord is approached. The slight accelerando still occurs, but the magnetic pull upward toward each high accented chord has less of a snap effect. This is because Smit plays each chord with a downwardly-oriented heaviness that is similar to the way one would play the high accented chord, which is the arrival point. The non-accented chords are not felt as much as upbeats that are rhythmic subordinates rushing up to the high accented chords. This is partially because they are held back by the accurate counting of the inner beats. A similar approach would be to feel measures twenty-eight through twenty-nine as having two beats each. This way, the drama lies in the quicker, snap-like arrival to the high chord. Bernstein takes this approach, and measures twenty-eight and twenty-nine are felt in four beats, one beat per chord. Unfortunately, almost all of the chords in this “pressing forward” section are equalized in pulse by Bernstein. The beat structure outlined in Ex. 3 renders regular beat patterns that seems to produce a shaping of these three phrases that is most orderly in that it gives each of the three phrases its own character and function. Each of these phrases has a clearly-defined role in relation to one another. The first two phrases have two groups of three beats each, and the lengthened beats always fall in the same spots. This beat
arrangement makes the second phrase go faster than the first. The third phrase comes to the real climax of the group via a repetition of the same three flexible beats.

The above interpretive considerations bring into question the function of measures twenty-seven and thirty. These measures function as demarcation points between the phrases, and they also serve to bring the acceleration to a halt until the start of the next phrase. The two measures are identical rhythmically and both measures also have the sforzando and accent in the same place. The second-beat sforzando carries more weight than the accented first beat, even though the first beat is an arrival point. With this arrangement of articulations, these high first-beat chords are transformed into upbeats that lead to the low f minor chord. This naturally slows down the forward motion and causes the performer to start the next upwardly-moving phrase at a slower pace with room to speed up. For this reason, both measures have three quarter-note beats in Ex. 3. It would not make sense to constantly speed up from measure twenty-six all the way until measure thirty-two. If the accent over the first beats and the sforzando over the second beats were absent, a pianist might be at a loss as to where the goal points and structural points of the phrase are located. For the above reasons, it makes sense that there should be a separate accelerando for each of the three phrases.

By the arrangement of notes on the page of the sforzando chords in measures twenty-seven and thirty, the pianist is caused to approach them with a heavy attack that is less sharp in sound than that of the first measures of the movement. In these measures the chords on the second beats marked with the sforzando are both made up of a doubling of two dyads, this time the F and A-flat. As on the first beat of measure twenty-six, these two dyads are doubled an octave apart. It is interesting how these notes are arranged on the page. Copland could have
either coupled the A-flat with the F in the upper clef, since the top two notes are so close, or he could have just placed the A-flat over the F to make one chord in the lower bass clef line. Either arrangement of the chord would have caused some pianists to play the top dyad with the right hand and the bottom dyad with the left hand. This arrangement of the hands would have given the chords a quicker attack, making them sound sharper and more ringing. With the top A-flat in the upper line, the left hand comes down with all its weight on to the F, A-flat, and F while the right hand comes down on the A-flat with its full weight. This technical approach results in the chord being given a heavy, downbeat quality, providing a convincing ending to the upward motion of each of the phrases.

Measures thirty-one and thirty-two demonstrate how elasticity of pulse is used for the purpose of phrasing in this section. Each measure has three beats that are unequal in duration. For reasons described above, the tempo of measure thirty-one speeds up so that the two dotted quarters become increasingly urgent. Instead of climaxing on the first-inversion C major chord as is the case in measures twenty-six to twenty-seven, measure thirty-two functions as a rhythmic extension that leads to a higher climax. This rhythmic extension of three unequal beats-a quarter note and two dotted half-notes, is identical in rhythm to measure thirty-one, but it slows down as a preparation for the climax on measure thirty-three. The density of notes is thicker in the latter measure. Each chord in measure thirty-two also has a wider span that elicits more weight from the hand and arm. This rapid increase of heaviness, along with the outwardly-expanding range on the piano, makes the crescendo and ritardando markings more effective and obvious. Even though both measures share the same rhythmic pattern of three unequal beats and lead to the climax as pair, each measure serves a different function in the transition toward the climax.
Measures twenty-six to thirty-two also offer an example of how Copland used increasing levels of chordal density to intensify the push toward each goal point. The three phrases, measures twenty-six to twenty-seven, twenty-eight to thirty, and thirty-one to thirty-three, each start with the same chord, which consists of two dyads doubled an octave apart. This is the same doubled dyad as the very first chord of the piece. During each of the three phrases the chords move outwards in opposite directions and as a result, each successive chord widens in range. Each chord also contains more notes than the one preceding. With each successive phrase the chords ascend in range in the right hand and descend in the left hand. This rapid outward expanse of range causes the pianist to lend more and more emphasis to each chord. Further, it is evident here how the regular patterns of flexible beats provides a grounding for the variance in chord density and range. An understanding of pianistic texture and beat pattern allows the pianist to more easily phrase these types of passages in a coherent manner.

Beginning at measure thirty-three, the music continues towards a series of increasingly climactic high points in range, rhythm, note density, and note activity before the transition to the second thematic area is complete. Measures thirty-three to thirty-eight contain a variation of the opening motive of the piece. At this point, the tempo has increased, and this is apparent in the recordings of both Bernstein and Smit. If the tempo were to remain identical to that taken at the beginning of the piece, the music would sound monotonous and plodding. The first beats of measures thirty-three and thirty-five are pillar-like because the chords in each hand have reached opposite extremes of range. Measures thirty-eight through forty, as well as measures forty-four through forty-eight, have this same pillar effect, only this time, the left hand is also in a higher range. Also, these chords are reiterated more effectively because of their falling on consistent
down beats. In addition to the increasing height of the range, the note values are also consistently shortening. The stretch of musical material commencing at measure thirty-three and lasting until measure fifty is designed to push the music ahead, and an increasing urgency on the part of the performer is required for the music to have shape and direction. The final climax, which is a descending scale covering four octaves, is reached at the last moments before the music winds down into the gentle, flowing, and rhythmically regular second theme.

Measure thirty-three is the first climax, and this section mimics the opening two measures of the piece rhythmically and thematically, yet with added note density and with varied phrasing that serves a different purpose in the form. Instead of slowing down in the manner of the first two phrases of the movement, this phrase repeats in measure thirty-five and immediately moves ahead to the second arrival point at measure thirty-eight. The increased number of notes in this first chord of measure thirty-three sends a signal to the performer to treat it as an arrival point rather than as the beginning of the initial statement. The notes are also spaced more widely apart, and this creates heaviness. This heaviness suggests a momentary slowing down of forward motion. The last chord of measure thirty-five can be felt as a syncopation because of the regular quarter-note pulse established from measure thirty-three and because of the regular pulse of the chords in the following two measures. This chord, which is tied over to the next measure, also has a sort of appoggiatura effect. The right-hand perfect fourth is a half step higher than the chord in measure thirty-four. This chord is approached by leap and in measure thirty-six this higher chord is resolved down by step into the same right-hand perfect fourth as was found in measure thirty-four. In a hemiola-like rhythmic gesture, the chords in measures thirty-six and thirty-seven demarcate two pulses per measure instead of three pulses indicated by the time
signature. This insistent rhythm effectively serves to push toward the climax. These chords have to move ahead just enough so that this goal-oriented phrase shape is not lost.

At measure thirty-eight, there is a second point of arrival, and this time the rhythmic pattern becomes regular at two pulses per pattern. There are no longer any beats of differing length at the quarter-note level for a few pages. Because of increase in tempo, each measure can be felt as a comfortable beat at this point. The feeling of the pulse stopping and starting that was encountered in the previous measures is largely eliminated here. In the first two measures of this pattern, the first chords of each measure stay consistently higher in range and there is also more singularity of chord-texture. In these chords the notes are divided evenly between the hands. Each hand plays three notes, two of which are an octave apart. This note arrangement within chords creates heaviness that helps demarcate phrases. In Ex. 4, the music from measures thirty-eight to forty-three breaks down into three patterns lasting two measures each. Melodically, the first two of these patterns foreshadow the shape of the second theme, which will first appear in measure fifty-eight.

Ex. 4

b=dotted half note

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<table>
<thead>
<tr>
<th>pattern 1</th>
<th>pattern 2</th>
<th>pattern 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAR 38 39</td>
<td>40 41</td>
<td>42 43</td>
</tr>
<tr>
<td>b₁</td>
<td>b₁</td>
<td>b₁</td>
</tr>
<tr>
<td>b₂</td>
<td>b₂</td>
<td>b₂</td>
</tr>
<tr>
<td>OR: b₁----b₂</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```
It is easy to see in the score how the high chords in measures thirty-eight and forty demarcate the two phrases. As shown in Ex. 4, there is ambiguity in regards to beat length in the second phrase. Even though the first beat is clearly presented metrically as a half-note, it can also be heard to include the lower quarter-note chord in measure forty-one. This is because of the expectation of a three-quarter-note beat that was established at the beginning of this phrase.

A similar solid chord is played on each downbeat of measures forty-four through forty-eight, but the notes of this chord are spread farther apart in range than was the case in the preceding rhythmic pattern. The strategy used here for placement of notes within these downbeat chords, used frequently by Copland in this piece, involves the placement of notes close together at one or both extremes of range. For each downbeat chord in measures forty-four through forty-eight, the top “C” of the left-hand chords is a twelfth below the higher right-hand chords. The right-hand chord contains a perfect fourth in the first two of these chords. At the bottom range, which is right in the middle of the piano, there is a minor third, “C” and “E-flat.” The result is a chord that has strength and resonance at the same time. This solid marking of the first beat by these chords, along with a repetitive rhythmic pattern in the left hand that de-emphasizes beats two and three, creates a pulse of “one” for each of these measures. Also, there is less density of notes on the second and third beats of each measure. As Ex. 5 shows, the pattern can be divided into three groups of two hyper-beats each, the last beat being shortened. Another aspect of the climactic effect results from the addition of notes that are increasingly of smaller value. This enhances the forward motion by the illusion of acceleration toward the climactic scale passage at measure forty-eight. Underneath this speeding up, the tempo stays the same.
The final transition to the second thematic area begins at measure fifty and features a built-in slowing down and shortening of the pulse. This is achieved via the thematic material that was found at the beginning of the piece. Measure fifty slows down suddenly and quickly enough so that the pulse is felt at the quarter note. The presence of accent markings on all three beats can be viewed as evidence that this slowing down was Copland’s intention. So far, no other version of this opening theme has all three chords accented. Another factor that slows down the pacing in addition to the accents is the high chord that is tied over into measure fifty-one. Measures fifty-two and fifty-three are the same as the previous two measures in notes and rhythm, with the addition of a dotted-half-note chord that divides measure fifty-three evenly. Rhythmic values are lengthening, which also slows down the pulse. In measure fifty-two, the right-hand perfect fourth of the high chord is a half-step higher than the corresponding chord in measure fifty. An appoggiatura-like effect very similar to that of measures thirty-five to thirty-
six takes place here, only this time the function of the appoggiatura is to bring the forward motion to a halt. The rhythm is the same as that of measures thirty-five to thirty-six, but in measure fifty-three, the resolving chord is accented. Measure fifty-four is a kind of a play on the rhythm because the notes are exactly the same as the previous measure, but the note values are shorter. These quarter-note-sized pulses at measure fifty-four reinforce the hemiola of the surrounding measures. This rhythmic pattern, of course, has been a constant aspect of the first thematic area. The hemiola of the last three measures serves to further slow down the pulse because the dotted half-notes play off of the quarter-note centered rhythmic pattern of measure fifty-four.

**Second Thematic Area**

After a short fermata the second thematic area begins at measure fifty-eight. All writers on this piece that were cited in the bibliography concur that this is the second thematic area within this Sonata-Allegro form movement. This section fundamentally contrasts with what came before because of its almost hypnotic rhythmic regularity. The motivic material in the left hand, which is based on a repeating minor-third motive, remains constant throughout the section. This second thematic area consists of five sections that each have slightly different textures. The first section lasts from measure fifty-eight until measure sixty-six and moves in constant quarter notes. In measure sixty-seven, the second section begins, and the lower note of each right-hand third is doubled and placed down an octave. The rhythmic content is the same as before.
Eighth-notes pervade in the third section, which lasts from seventy-four until seventy-nine. The fourth section lasts from measure eighty until measure eighty-five, and the range of the right hand is expanded. Hemiola rhythms also occur when the dotted half-notes slightly give a feeling of six-eight time. In the fifth section lasting from measure eighty-six until measure ninety-five, the right hand consistently moves in octaves as a transition is made to the heavy texture of the first thematic area. Throughout this second thematic area the quarter-note pulse can always be felt as the comfortable beat, and there are no flexible beats present at the metric level. The dotted-half-note pulse is also felt in every measure. For this reason, each measure can consistently be felt as a hyper-beat, and these measures can be grouped into two and three-beat phrases. In his recording of the work, Leonard Bernstein takes this section at a faster pace and this phrasing is made clear by the faster tempo. Each hyper-beat is too slow to be felt as a comfortable beat, but instead, each of these bigger beats serves as an important point in the phrase.

The beginning of the first large grouping of phrases comprises the two swaying gestures at measures fifty-eight and fifty-nine, which lasts from measure fifty-eight until measure sixty-six. These initial two measures have the least amount of forward motion because, in each measure, the second note is longer in duration. The only time that quarter-note motion is absent is during these half notes. Quarter notes are heard on every beat from the next measure until measure ninety six. These initial two measures begin to be felt as a single pulse because of their identical rhythm, and a two-measure phrase/hyper-beat grouping results. The short phrases in each measure fit together to form a complete entity. In the first of these measures the melody descends by step and in the second measure the melody ascends by step from a slightly lower
range. Measures sixty and sixty-one comprise the second phrase/beat grouping, also lasting for two measures. A third two-measure grouping is found in measures sixty-two and sixty-three, where the constant flow of quarter-notes in both hands further increases the forward motion. This phrase rises to the same minor third, G and B-flat, that was found at the very beginning of this section of the piece. As a highpoint within this pulse grouping, this minor third functions as a spring-board-like pulse that leads up to the highest point of the entire phrase at measure sixty-four, which is the beginning of the fourth and last pulse group lasting until measure sixty-six. This grouping consists of three beats. Interestingly, this high third in the right hand can be seen as the higher part of the g-minor triad emphasized in the previous three phrases. The thirds in the left-hand phrase lengthen in note value again as the phrase gently descends. Because of this, this final hyper-beat grouping brings the first phrase to a close as a denouement.

Essentially, a gradual gaining of forward momentum during the first phrase takes place. When the first and second hyper-beat groupings are compared, there is slightly more forward motion in the second group. The quarter notes of measure sixty make the phrase slide down and forward into the second hyper-beat in measure sixty-one. The third hyper-beat group, because of it being comprised entirely of quarter-notes, has no point within its two-measure phrase that can be felt as repose. The G/B-flat minor third in the right hand of measure sixty-three is not convincing as a high-point of the overall phrase because of it having also been the first chord of each of the previous groupings. It is only the highest point of the third grouping, and, therefore is put into the role of springboard to the highpoint on the downbeat of measure sixty-four. In the last hyper-beat grouping, measures sixty-four to sixty-six, the left hand has a hemiola rhythm moving in half-notes against the other hand. This helps bring the phrase to a close. The forward
motion increases during the rest of the second thematic area beyond this first phrase due to the increase in eighth-note motion, the hemiola rhythms found in measures eighty-one and eighty-three, and shortened hyper-beat in measure sixty-nine. Also, the rest of the thematic area closely reflects the phrasing of measures fifty-eight through sixty-six.

During the last variation, marked “poco piú mosso,” the transition back to the character of the opening theme of the movement commences. Quarter-note motion gradually replaces the eighth-note motion. There have been constant eighth-notes since measure seventy-four, but the sudden quarter-note rhythm causes a built-in rallentando beginning in measure ninety-three. This measure leads back to the Tempo I at measure ninety-six, where the first theme of the movement returns. Copland uses increased note density within chords to emphasize the quarter notes and this is as consequential a factor in the transition back to Tempo I as merely the shift in note value. Right-hand octaves fall on most quarter-note beats from measures eighty-six to ninety-five. As is typical in this piece, Copland places the resonant octaves above the left-hand minor thirds by two octaves or more. This unusual spacing of notes creates a sound that conveys each beat as sturdy and grounded. The “poco piú mosso” keeps to this manner of note spacing until the Tempo I.

A three-note sub-set of the set class found in measure four, (025), is very prominent in this “poco piú mosso” section. The combination of this set class with heavier chords, higher range, and the quicker tempo marking make this section into a climax point in the second thematic area. This section is also a transition toward the more vertical chord-centered feel of Tempo I. The set class (025) lends a heaviness to the chords that puts a drag on the forward motion. In the “poco piú mosso” section starting at measure eighty-six, the (025) sonority is on
almost every quarter-note beat for the first five measures. Ex. 6 shows the chords from measures eighty-six and eighty-seven reduced down to three-note normal form of the set class.

![Ex. 6](image)

The texture of each chord is thin and the doubling of notes that belong to these set-classes is kept to a minimum with the exception of the octave doublings in the right hand. The minor third is always on the bottom in order to create a grounded heaviness in its combination with the right-hand octave. This aspect works in combination with the “poco piú mosso” tempo marking in such a way as to create a sense of tug-of-war between the need for forward motion and the heaviness of the chords. This is the section where the second thematic area completes its evolution from the lighter-textured flowing thirds into the vertical heaviness of the Tempo I material.

**Development Section**

There is disagreement among the various writers listed in the bibliography as to the starting point of the development. Some of the analysts believe that the development begins at
Tempo I.\textsuperscript{8} Others find the Development to begin at measure 123.\textsuperscript{9} Some of the authors do not give a reason for their opinion as to where the important sections of the Sonata-Allegro form begin, but one interesting exception is Gui Sook Lee. On the page cited in footnote two, Lee finds a parallel between the Tempo I of the Copland and the manner in which the opening introductory material of the Beethoven “Pathetique” Sonata returns in the dominant key at the beginning of the development. In my opinion, there is some truth in this reasoning, but I disagree with Lee’s idea that the opening ten measures of the first movement of the Copland Sonata serve as introductory material and that the first theme does not begin until measure ten.\textsuperscript{10}

The theme from the first ten measures of the Sonata returns emphatically at measure 196 with the same thematic and harmonic material, but it is different in texture from the other two appearances. In this sense one can say that the placement of this thematic material in varying ranges, voicing of chords, and chord density is in constant development. One can also say that the return of this thematic material at both measure ninety-six and at bar196 serves as an easily recognizable way to divide major sections of the form.


\textsuperscript{10}Lee, “Aspects of Neoclassicism,” 44.
At the first four measures of Tempo I, beginning at measure ninety-six, the rhythmic pattern and thematic material are derived from measures one through three, but the range is lower and the chord voicing on this page serves a different purpose. From measure ninety-six to measure 109, the texture evolves from heavy and dense to a much lighter texture. The melodic and rhythmic pattern that lasts from measures one to four is repeated twice in the Tempo I, the first time from measures ninety-six to ninety-nine, and then from measures one hundred to 103 an octave higher. This repeat in the higher range adds brightness to the sound of the chords and is less resonant than the depth of sound found at the beginning of the Tempo I. Also, both the melodic as well as the quarter-note-plus-two-dotted quarter-note rhythmic pattern originating in measures three and four is repeated with minimal variation in rhythm from measure 102 until measure 111. This rhythmic pattern repeats five times while the texture and resulting color changes drastically. At first the lower note range is the main feature that distinguishes this section from the opening measures of the piece. The initial measures of the Tempo I lie mostly in the middle and lower part of the piano until the sudden flip-flop of left hand line above the right-hand chords in measure 106.

Measure two at the very beginning of the movement and the corresponding measure ninety-seven both contain a single chord. Both chords contain four notes that belong to the set class (0237). This comparison of the two chords shows how much contrast is possible despite the fact that both chords contain notes that belong to an identical set class. The main difference between the two chords, apart from the differences in melodic direction of each thematic instance, is the manner in which the notes are distributed between the hands. This is illustrated in Ex. 7.
In measure two, and also continuing in measure three, the right hand moves along in parallel perfect fourths. These fourths are higher in range than the left-hand dyad, creating a stark angular sound as they are singled out by their higher range. At measure ninety-seven the notes are arranged in a manner very similar to that of measure two. A factor that changes the quality of the sound is the placement of the minor third two octaves lower in range than the right hand, whereas the hands are only separated by about an octave in measures one through three. Another factor that contributes to the heavier sound is the doubling of the “G” so that it is both the lowest note in the left-hand and the lowest right-hand note. Within the right-hand chord, the “G” creates an interval of a perfect fifth with the high “D.” Because the perfect fifth is singled out two octaves above the left-hand notes, this right-hand chord has a resonant and full sound. This sound is not quite incisive as the bare perfect fourths found in the right hand of measures one through three. The low left-hand minor third creates heaviness. It is a less common practice in piano writing to write a chord with notes that are so close together in a very low range. Normally they would sound muddy if not done with careful thought. A more common approach
to the spacing of notes within chords is to space the tones that are low in range farther apart, which is more in keeping with the overtone series. This is found frequently in the piano music of great piano composers such as Chopin, Liszt, and Brahms. Resonance and fullness of sound is the result. Copland also achieves resonance in measure ninety-seven, but low minor third lends the chord a sense of deep anchoring as well as that of arrival.

A more fundamental difference between Tempo I and the beginning of the piece is that (027), a sub-set of (0237), is beginning to be separated by range during sections of contrasting tone color. This contrast can be found in the Tempo I and in the “crystalline” section starting at measure 106. As can be seen in Ex. 7, the notes “G,” “A,” and “D” from measure ninety-seven make up this sub-set. Notice that the notes of the set are placed in close position as a way of being separated from other notes. This three-note chord is resonant and gives the theme depth of sound during the first line of Tempo I before the texture lightens. The chords are felt more vertically, and this is especially true for the first few measures of Tempo I. The accented chords seem to call for a technical approach that utilizes physical weight through the arm. Leonard Bernstein takes the unusually slow tempo of sixty to the quarter note at the beginning of this section. Copland’s metronome marking is approximately eighty to the quarter note. This sudden return to the slower tempo strongly distinguishes this section in the Bernstein recording because this tempo is exactly the same one that he takes at the beginning of the piece. At such a slow tempo the dense chords are allowed to become heavier.

Articulation and dynamic markings also play a role in the degree of heaviness or lightness within the Tempo I section, and these markings serve as cues for the performer as to how the phrases could be shaped. The range is at its lowest in the first four measures of the
section, which is marked fortissimo, and the chord in measure ninety-seven is accented. At this point, the chord at measure ninety-seven is more of a momentary arrival point than is true for the corresponding chord in the second measure at the beginning of the piece. In terms of the larger phrase structure, this measure ninety-seven chord is a convincing goal point because of the lack of accentuation of the chords in measure ninety-six, as well as its upward melodic direction from the chord preceding. The first dyad in measure ninety-six is played only in the right-hand and is not doubled like its counter-part on the first beat of measure one. In contrast, the equal distribution of notes between the hands and the downward direction of the theme from measure one to measure two serve to lend more emphasis and power to the first chord of the piece. The lack of left-hand doubling at the beginning of measure ninety-six, and the voicing of the chord in the next measure, discussed above, shifts the emphasis forward. It is true that the direction to play the first two chords “marcato” coupled with the “fortissimo” marking will cause the performer to approach these chords very sharply. But in the next measure depth of resonance is added to the sharpness. In measure ninety-nine, which is the end of the first four-measure phrase, the chord is not accented most likely because it is leading melodically upwards to the higher range. The top note of the chord, which is a “D,” is melodically connected by an implied half-step (actually a minor ninth) to the E-flat of the down beat chord at measure 100. This doubling between the hands of E-flat and C commences the repeat of the theme an octave above at only a “forte” dynamic level, one notch lower than before. From measures 102 onwards none of the chords are accented. This lack of accentuation enables the more nebulous tone color of the “crystalline” section.
Since the tempo is slower again at Tempo I, a repetitive pattern of uneven beats can be found throughout this section at the level of the quarter-note beat, and certain beats seem to be attached to specific parts of each phrase. This repetitive beat pattern lasts until measure 111. The first two phrases of the Tempo I share an identical rhythmic pattern, and the last two measures, or last half, of this pattern is itself repeated three more times. Measures 104 to 105 are a repeat up a half-step of measures 102-103. There are fewer beats in measure 103, which is the end of the second phrase. A part of the reason for this subtraction of one quarter pulse in this measure seems to be the close linkage of the end of the second phrase to the two-measure repetition that stays constant through the transition to the “crystalline” section. Again, the “D” at the top of the right-hand chord in measure 103 leads upward to the “E-flat” of the following measure, and this half-step relationship serves as an instant key change. So far, the third measures of both the first and the second phrases contain three quarter-note chords of differing length, and these measures are identical in flexible beat pattern to the pattern found in the third measure of the piece, shown in Ex. 1. If the quarter note values in measures 102-103 are to be counted according to the time signature, then these two measures are six beats long in combination. There are also six beats in the first two measures of both the first and second phrases of Tempo I, even though there are no flexible beats in either instance. This draws attention to the role of the dotted-half-note chords at the ends of each of the two longer phrases, measures ninety-nine and 105. There are metrically a total of seven quarter pulses contained in the last two measures of each of these two phrases. The extra one beat beyond the regular six beats serves to delineate the two main phrases by way of a written-in pause placed at the ends of both phrases. The dotted-half-note chords in measures ninety-nine and 105 both serve as book-
ends, so to speak, for each phrase. Each of these chords is preceded by two longer beats, which creates the illusion of a ritardando, or at least a pause, at the ends of both phrases.

Measure 106 is the beginning of the section marked “crystalline,” and during this section there are groups containing three notes each that make up set classes (027) and (025). These set classes are used to create a shimmering, delicate quality. Chords that are given the “crystalline” sound through chord voicing last for two phrases, and each phrase is two measures long. The first phrase lasts from measure 106 through 107, and the second phrase lasts from measures 108 until 109. During these two phrases the composite note range of each chord is higher. The left-hand plays single notes above the right-hand chords, but in Ex. 8 these notes are placed directly above the right hand chords on a single staff so that the note arrangements can be viewed more clearly.

Ex. 8

It is evident that these higher single notes leap while the lower chords stay in the same range, and each of these chords has the same bottom note. The upper notes of these chords move mostly by step, and the higher left-hand notes have a ringing quality due to their separation in range over the lower three-note chords. Likewise, the lower chords played by the right hand are given a sound that is similar to a whisper. During the course of each of the two measures, the single notes in the upper left-hand line descend into the half-note chord that ends each of the two
phrases. Measure 109 is the end of the “crystalline” tone color because lower notes in the bass register reappear in the next measure.

In this “crystalline” section, certain set classes are manifested in some chords that only consist of members of that particular set class. These “pure” versions of set classes are expressed in both a chordal and linear manner. Set class (027) implies note groupings that contain a perfect fifth with an inner note that is a major second away from either the top or bottom note of the perfect interval. As shown in Ex. 7, this set class is found in the right-hand chords of Tempo I. Set class (025) contains an outer perfect fourth with an inner note that is a major second away from either note of the perfect fourth. These interval contents of both sets described above reflect the prime forms of these sets. Later on in the Sonata the notes belonging to these sets will be more frequently spread out to cover a wider range on the piano, but the closer position has been more common thus far. During this “crystalline” section, the right-hand chords contain notes that are spaced more closely together. As seen in Ex. 8, the right-hand chords that fall on the first beats of measures 106 and 108 contain notes that are spaced into the normal form of set class (027). The “D-flat” is doubled an octave above by the left hand. Next is a chord with notes spread out in such a way as to make it seem like an outline of a minor seventh chord, but the E-flat, G-flat (doubled) and A-flat make up a (025). In the third chord in measure 106, the (025) set class is represented by the C-flat, D-flat, and F-flat. The three top notes in measure 106 played by the left hand belong to set class (027), as do the three left-hand notes in measure 108.

As has been described before, notes that belong to set class (027) have a solid sound that is neutral enough to sound differently in a variety of contexts. An example of this is the
comparison of the heavy right-hand chord from measure 97 with the light and airy chord on the first beat of measure 106. In measure ninety-seven, none of the tones in the chord have any tendencies up a step or down a step. The right-hand chord in measure 106 is in normal form like the one in measure ninety-seven, but the major second is on top of the chord. If heard alone, this chord resembles a major or minor triad in a four-three suspension. The D-flat wants to resolve down by step to make the chord either major or minor. In measure 106, the doubled D-flat being placed in the upper note negates this tendency because of its being higher in range than the chord. Also, the leaping nature of the upper notes clears the tendency for downward resolution from our ears quickly. Instead, the chord has an airy, suspended quality that gives it a sound quite contrasting from the chord in measure ninety-seven.

The Middle Section of the Development Marked “Allegro”

After ten measures of resonant octaves at the “Più Largamente,” the eighth-note motion increases in speed in preparation for the Allegro that commences at measure 133. This section contrasts with the rest of the piece because of the quick eighth-notes rhythms that pervade. These eighth-note rhythms are grouped into irregularly-sized beats. The meter changes almost every measure, yet the notes are grouped in such a way that the first two phrases can be felt as a pattern of four flexible beats. These two phrases are identical in rhythm, including the placement of the larger
and smaller beats. The first phrase lasts from measure 133 to measure 136, and the second phrase lasts from measure 137 to measure 140. Ex. 9 shows the beat patterns of these phrases in detail.

![Ex. 9](image)

Since the metronome marking is for 152 to the quarter note, the more comfortable beat is the half note, which would be seventy-six on the metronome. Nonetheless, the quarter pulse is also felt strongly as an inner beat due to the dense combination of accents and rests. In both phrases, each first beat is lengthened by an eighth note, and each fourth beat is lengthened by a quarter note. The first beat each time is lengthened by one-fourth of the comfortable beat, and the fourth beats are lengthened by one half.

Alexander McLane discusses the first two phrases of the Allegro section beginning at measure 133 in his “pulse organization” section of the sixth chapter of his dissertation. This example is used by McLane to illustrate how Copland uses mixed meter and accents in order to make beat groupings clear. Two hypothetical notations of these two phrases are shown by McLane as examples of how one could use metric regularity to make the rhythm clear. One is
with the same triple-quarter-note time signature for each measure, and the other notation
alternates between five and seven eighth notes per measure in such a way as to cause each accent
to fall on the beat. It is immediately obvious how the pulse structure of these two phrases is
changed by both of these alternatives. McLane states that the meters change because it is not the
intention of the composer to allow every accented note to fall on a downbeat. Copland’s own
notation is most clear in showing the most important beats, accented or not. McLane hints at the
presence of a repetitive pattern of beats but falls short of revealing how both of these phrases
contain beats of differing lengths, each of which fall in the same places in both phrases.\textsuperscript{11}

\textsuperscript{11}McLane, Alexander B, “The study of African rhythm as a model for understanding rhythm in two
representative twentieth-century American works” (D.M.A. diss., University of Illinois at Urbana-Champaign,
1992), 95-96.
In the Allegro section, the choice of the half note as comfortable beat is reflected in the placements of accents in the score, and this can be seen in Ex. 9. The methodic placement of accents, octaves, and rests is the main factor that chisels these rhythmic phrases into a rhythmic shape that is easy to recognize. In measure 133 the tripled “A” is the only accented octave until it returns at the beginning of the next measure. This note is doubled three times and covers a wide range, while the two other notes are not only lower on the piano in range, but doubled only once without being accented. Otherwise, it would seem natural to feel the “E” of measure 133 as the next strong beat since. The “F#” eighth-note immediately following the “E” is higher and is followed by an abrupt eighth rest. This measure is felt more naturally as a half-note pulse plus one eighth note because of the emphasis on the first eighth-note beat. Measure 134 begins in the same manner as the previous measure, but this time there are only four eighth-note pulses in this measure, as is also the case in the next measure. Over the course of measures 134 and 135 there is a melodic and rhythmic expansion of the “A” “E” “F#” pattern from measure 133. At this point the tripled “A” is beginning to be felt as a regular rhythmic accent. The placement of four eighth notes in a row over the measure line orients the listener toward regular division of the half-note pulse into quarters. This regularity of pulse causes us to feel the third tripled “A” in measure 135 as a syncopated offbeat, and the third half-note pulse would have to be placed at the beginning of measure 135. In addition, the figure of four eighth notes rises to its highest point at the beginning of this measure. Measure 136 seems to lead with upbeat-like motion toward the second rhythmic phrase. This is because, for the first time, there are no accents, and the measure is lengthened by one half of a pulse (a quarter-note) as well. This extra one-half pulse can be felt at the end and serves as a quick upbeat to the second four measure rhythmic phrase. The effect
of an upbeat is caused by the eighth-note figure rising during the first two quarter beats. This
makes the appearance of the tripled “A” of the next measure more sudden, as does the wider and
higher range of these three notes that initiate the second phrase of this section.

The second phrase of the Allegro section, which lasts from measure 137 until 140, is the
same as the first with two exceptions. Now each of the tripled “A’s” is marked with a
sforzando. From an interpretive point of view, this difference seems to imply a more solid and
vertical approach to these octaves. By contrast, merely accenting the tripled “A’s” in the first
phrase would prompt the attentive performer to take a lighter approach to the non-accented
eighth notes. At the end of measure 135 the “A” is on the offbeat for the first time. This extra
emphasis has the illusion of throwing a curve ball at the pulse and enhancing its quality of
syncopation. The second difference between the two phrases is the inclusion of all three-notes of
the eighth note figure at the beginning of the second phrase in measure 137. These three-notes
give strength and energy to the first half-beat, and in this way the figure works in concert with
the sforzandos to give this phrase a heavier thrust.

Two main differences between the phrases beginning at measure 141 and those that came
before are the expanded range and the predominance of equally-sized pulses. This is shown in
Ex. 10.
The accents on the highest and lowest notes automatically set parameters for the listener. From measure 141 onward the short rhythmic phrases tend to build on each other and the music gains momentum this way, yet the rhythm is still anchored by the half-note pulse. Beginning at measure 141 there are four equal half-note pulses which last until measure 144. The low “F” octave is the obvious beginning of each phrase because it is the lowest note. For the first two measures the notes work their way up to middle C. Then momentum is gained in measures 143 to 144 by there being six eighth notes placed together in a row instead of one being placed on each quarter-note pulse. By measure 144 the phrase has reached the B-flat above middle C. Note the difference between the single accented “F” in measure 143 and the low accented “F” octave two measures later. This means that this single “F” and the “E-flat” that is found in measure 144 get equal status as the beginnings of the two half-note pulses. In contrast, the low “F” octave of measure 145 is an obvious demarcation point for a single expanded pulse that leads without pause to the next beat. Indeed, this low “F” octave is also the beginning of a new, sort of expanded rhythmic pattern. All notes found in measures 143 to 144 are played in six successive
eighth-notes without any intervening rests, and as a result all six of these notes lead straight up to the high accented “A” in measure 146.

Measures 145 through 148 are a grouping of ascending note patterns that divide into two measures each and also can be seen in Ex. 10. These four measures become a rhythmic entity because this note and rhythmic pattern is only repeated once. This phrase is similar to, but rhythmically denser, than the previous ascending phrase groupings starting at measure 141. The pulse suddenly encompasses three quarter notes while the second and fourth of these measures are reduced by one eighth. It is difficult to view these four measures as irregular beats because of the immediate repeat. Towards the beginning of her dissertation Kanovsky addresses this issue as a part of her disagreement with the opinions held by certain researchers that unequal beats always need to appear in the same spots in the measure/rhythmic pattern. At measure 145 the ascending figure of six eighth-notes is exactly the same as that found in measures 143 to 144, but its pulse has transformed from the half-note into the dotted half. This is because the figure leads straight up to the high “A” at the very beginning of the next measure. The change to a three-four meter in measure 145 from the previous 2-beat meter is another factor that gives measure 145 the feeling of being a single beat. The two-measure couplets at measures 145 to 146 and measures 147 to 148 reveal that the sense of forward propulsion from bottom to top was always frustrated in the second of these measures. The accentuation of the low “F” in measures 145 and 147 and of the high “A” in measures 146 and 148 is further enhanced by the shortening by one eighth note of the second and forth measures of this phrase. Note values in these two measures also become longer. Suddenly, these two measures are somewhat awkwardly divided

into a dotted quarter rhythm (quarter note followed by an eighth note) and a quarter note. This brings the six eighth notes that were rocketing up through more than three octaves to a halt, yet at the same time, the last quarter notes of measures 146 to 148 become like sudden upbeats.

Measures 149 and 150 expand on the motivic outline of measure 148. During these measures, the music takes on an increasingly linear and forward-moving character because it is gaining energy and momentum. During these two measures, the music is now confined to a more fixed range, and the high accented “A” is constantly repeated and almost always comes at the beginning of the measure. One way in which the music builds in forward-moving energy at measures 148 through 150 is the increase of eighth-note values in each of these measures. The result is an increase in upbeatt motion. Measure 149 contains one more eighth-note than the previous measure, and measure 150 contains two more eighth-notes than measure 149. The high accented “A” followed by lower notes that arch up to this high note is the motivic shape that is common to all three of these measures. It is as if measures 148 through 150 are struggling to unravel this confusion of basic pulse and move ahead. Notice that the time signature pattern of three-four/five-eight found in measures 145 to 146 is reversed in measures 148 to 150.

At measure 150, the accented “A” is, for the first time, not at the very beginning of the measure. In measures 149 and 150 it is not clear whether the pulse is a half note or a dotted half note. There are a few logical alternatives for the rhythm in measure 150 that could possibly have occurred to Copland. First of all, the “A” could have come at the very beginning of the measure without an intervening rest. If the first “A” of the measure were to be turned into an eighth-note as seen in Ex. 11a, then this measure would contain the same meter as that of the previous measure. In this case, the syncopation effect, which is caused by the offbeat “A” as well as by
the one extra quarter beat, would be lost. If the rhythm of the notes of measure 150 were to be kept the same only with the eighth-note rest removed from the beginning of the measure, then the number of eighth notes in measure 150 would increase by one. This is shown in Ex. 11b with measure 149 preceding.

Ex. 11a

Measure 150 would now contain seven eighth notes, which is one more that the number of the previous measure. This lack of eighth-note rest at the beginning of measure 150 would render the upbeat-like quality less effective. The first beats in both measures of Ex. 11b being quarter notes causes the rhythmic contour of bar 150 to change. The change is too abrupt.

Instead of these two possibilities, the syncopation in measure 150 causes the rhythm to be felt ambiguously in two possible ways. These possibilities depend on whether the strongest pulse comes before the accented “A” or after it. The first possibility is for the measure to be divided into two even half note pulses in such a way that the silent downbeat is felt the strongest, the syncopated “A” lighter, and the “D” of the measure is given the second strongest emphasis. The other possibility is where the second quarter-beat of the measure is felt as the strongest and the other notes follow in such a way that the flow of the music leads right to first beat of the next measure. Beats two through four would be the main pulse of the measure with the first beat plus syncopated “A” being an added sort of half pulse that propels the music forward. This is
conceivable because the notes from “C” to “A” are rhythmically the reverse of the previous measure. In the previous measure, the quarter note comes at the beginning and is followed by four eighth notes. In measure 150 the dotted half-note pulse, beginning with the second quarter-note beat, is four eighth notes followed by a quarter.

Measures 151 through 157 contain the motive from measure 141 to 142 in the left hand part, and this motive interacts with the right hand eighth notes as a sort of rhythmic counterpoint, gathering energy toward the climax at measure 162. With the exception of measure 151, the meter is two quarter-notes per measure, which causes the pulse to be felt at the half-note. This left-hand motive, transposed up a major third from its first appearance in measure 141, abruptly enters on the offbeat of measure 151. In a way, the low “A” in measure 151 cuts short the motive from measure 137, which is found in the right hand, in such a way that this right-hand motive is changed from a five/eight measure to a motive with four eighth notes. In other words, the accent grouping causes it to behave more like a half-note pulse. This pattern is illustrated in Ex. 12.
Even though the low “A” is on the offbeat, its distance in time from the F#, and, in turn, the distance of the F# from the next note, etc., parallels the motive that lasts from measure 141 until 142. By measure 154 the rhythmic ambiguity is gone when the motive enters on the downbeat in the left hand. The rhythmic pattern is dictated by the low range of the accented “A” that repeats at the beginning of every other measure. Here the complete motive that lasts from measure 141 to 144 is heard in the left hand until measure 157 where an accented “A” enters on the last eighth note of the measure. In like manner with measures 151-152, the two accented eighth notes placed next to each other in measures 157-158 seem to cancel each other out as far as either one convincingly initiating the pulse. The accented offbeat “A’s” that appear in measures 157 and 159 are within the context of a clearly established half-note beat. At the earlier measure the motive is flexible because of it lasting for five eighth notes instead of four.
After having worked up by step to the octave C# at measure 162, the music resembles the section lasting from the beginning of the Allegro until measure 141 thematically and rhythmically, but the measure 162 section differs in the way the pulse is felt. The main pulse of the music, which has been the half note since the beginning of the Allegro section, is showing signs of becoming the quarter note. In measures 163, 165, and 170, the two chords fall on each quarter beat and are accented. One other factor that contributes to the feeling of quarter-note pulse in these measures is the separation in range. The tripled octave falling on the first quarter-note beats are significantly higher in range than the chords that fall on the second beats. It seems that a possible reason for this slight modification is that the pace of the music is gradually being weighted down. An increase in note density on each quarter-note pulse also contributes to each half of the beat being emphasized. Before measure 162, the Allegro section has proceeded mostly in single notes with the occasional octave doubling. Now from measure 162 onwards, every note is doubled and there are increasing numbers of heavily accented chords. This begins in measures 163 and 165 where the second half of the beat/measure is a four-note chord that is lower in range than the previous chord by more than an octave. Ex. 13 shows the different beat groupings lasting from measure 162 until 174.

As can be seen in Ex. 13, the two phrases lasting from measures 162 until 174 reflect the transition to a smaller beat size. The reasons for this transition would be to bring the Allegro section to a weighty, emphatic climax so as to prepare for the return of the Tempo I recapitulation at measure 196. At this recapitulation, the pulse is felt in quarter notes. Measures 162 to 168 consist of a pair of two-beat rhythmic patterns followed by three-measure group of three half-note beats. The two patterns starting at measure 162 can almost be felt in the
following quarter note beat pattern: dotted quarter, two quarters. In the third pattern, the second and third of the half-note beats contain no accents.

This pattern contrasts with the pair of two-beat phrases that came before because of the uniformity of range and octave. Measures 166 to 168 are less jagged and more step-wise. These octaves work back up to the “C#” tripled octave. Another sign of the quarter-note pulse becoming evident is the approach upward to the measure 167 down beat and the placement of eighth-note rests in measures 167 to 168. The eighth-note rest in the latter measure gives the “C#” the effect of an upbeat.

For the first three measures, the second pair of phrases, beginning at measure 169, is similar to the first pair thematically and has a nearly identical rhythm, yet within this second pair of phrases each quarter note beat is given more emphasis through the placement of accents. This
second phrase lasts from measures 169 until 174 and contains an abridged version of the couplet of two beats each that is found at measures 162-165. In the first phrase of the pair, there is a quarter-note beat abbreviated off of the rhythmic pattern beginning in measure 171, and in contrast, there are two quarter beats in the corresponding first-phrase version at measure 165. One quarter note after the accented “F#” of that measure, there is a high “A” octave marked with a sforzando. In the Boosey&Hawkes edition, measures 172 to 174 are placed directly underneath the corresponding measures 166 to 168, and the differences between the two phrases that contain three half-note pulses are immediately visible. This can be seen in Ex. 13 as well. In measure 173 the first note is accented and in measure 174 both quarter-note pulses receive accents. This more frequent accentuation further weighs down the texture, as the accented chords beginning at measure 175 do even more so. Another aspect that lends weight and a more vertically oriented heaviness to measures 172 through 174 is the piano writing. The right-hand octaves in measures 166 to 168 without accents send a definite signal to the pianist to approach this passage more lightly. An accomplished pianist would naturally use a light wrist to play octaves that go this quickly. Since each hand gets only a single line of notes from measures 172 to 174, the pianist is likely to respond to this passage by giving a more vertical downward motion, especially when several of the quarter-beats are accented.

There are three phrase/pulse groupings between measure 175 and measure 195 of this movement which create the final transition to the more heavy and chordal recapitulation. At measure 175 the quick eighth-note motion ceases for the first time and heavily accented chords appear. Since each chord is given an accent from measures 175 until 182, uneven pulse patterns emerge containing quarter notes and dotted quarter notes. These pulses are also emphasized in
the two phrase pairings described in the above paragraph, but the thicker, more vertical chords beginning at measure 175, as well as the repeating pulse patterns, serve to make the texture even more vertical. Similar repetitive rhythmic and melodic figures are also found in the six measures beginning at measure 183. Here the eighth-note motion, and with it the sense of regular half-note pulse, is frustrated by left-hand notes that are uneven and shorter in length than a half-note. The “meno mosso” at measure 189 contains chords and rhythms that are the most similar to those at the recapitulation. At this point the texture of the music has contained that frustrated forward moving eighth-note energy sufficiently enough for the heavy Tempo I recapitulation to commence.

The first chord pattern lasts from measure 175 until measure 182 and is divided into two rhythmic patterns that last for four measures each. Eighth notes are added in the top voice of chords in the second phrase that begins in measure 179. The quarter-note receives the main pulse because of the repetitiveness of the vertical chords. In Ex. 14 these patterns of uneven beats are shown using Kanovsky’s method.

Ex. 14

<table>
<thead>
<tr>
<th>b=quarter-note</th>
<th>Second phrase:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bar 175</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b₂ b₃ b₄ b₁ b₂ b₃ b₄ b₁</td>
</tr>
<tr>
<td>176</td>
<td></td>
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<tr>
<td>177</td>
<td></td>
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<td>181</td>
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<tr>
<td>182</td>
<td></td>
</tr>
<tr>
<td>b₂ b₃ b₄ b₁ b₂ b₃ b₄ b₁</td>
<td></td>
</tr>
</tbody>
</table>

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In each four-measure phrase, the rhythm of the first two measures is identical to the rhythm of the last two measures. During the course of each pattern, tension is built up in three ways: the chords in the right hand repeat within the exact same range, the left hand descends as an arpeggio containing notes of the same chord as that of the right hand, and the dynamics increase to fortissimo both times. Each four-measure phrase begins with a chord marked sforzando. This chord is followed both times by the second chord marked mezzo-forte. This repetitiveness of rhythmic pattern causes a build-up of tension both times that leads only to the fourth measure of each phrase. There is no definite arrival point in these four measures except for measures 178 and 182. The music does not work up to any goal point; it only begins again in the second phrase exactly the same way that it did in the first. The only line that moves is the left hand, which works its way down to the low F# octave only to start again on the same note with the same descending arpeggio in the second phrase.

In these eight measures, the notes are arranged within the chords in such a way as to cause the pianist to approach them with an angular and sharp sound. The first chord of each of the two phrases, at measures 175 and 179, make use of the set class (027) in such a manner as to enhance the vertical aspect of the chord with a sharp, almost bitter sound. An A minor triad with an added B-natural is the only harmony present between measures 175 and 182. This combination of notes is set-class (0237), which is the same as that of the chord from the second measure of the piece. During some of the chords, one of the four notes is left out, depending on which note of the A minor arpeggio the left hand is playing, but the harmony is obvious. Ex. 15 shows the chord and its set class. As is shown in this example, the important subset (027) is
almost like the skeleton of the chord. Usually the function of perfect intervals would be to create a sound that is more resonant and ringing than dissonant. All three of the notes in Ex. 15 are equidistantly spaced apart by perfect fifths, but any potential resonance is negated.

Ex. 15

First chord of bars 175 and 179:

```
   \begin{music}
   \begin{Staff}
   \newStaff {g2} \underline{\newStaff {a2}} \underline{\newStaff {c2}} \\
   \newStaff {f2} \underline{\newStaff {a2}} \underline{\newStaff {c2}} \\
   \end{Staff}
   \end{music}
```

The three above notes are subset (027)

Instead, the ear is focused on the dissonant major seventh created by the bottom and top notes of each chord played by the right-hand. As the left-hand arpeggio descends, these right-hand chords become more and more singled out to the ear because they stay in the exact same octave on the piano. The jerkiness of the uneven pulses also supports an interpretation that lends a strident, jazz-like rhythmic approach to these chords.

The eighth-note motion returns in the second grouping of melody and uneven beats lasting from measure 183 until measure 188, but this time the right hand has a constant stream of eighth notes which wind their way up through a two-octave range. At the end of the phrase the highest point is reached in terms of dynamics and range at measure 188. At first these accents logically fit together with the arpeggiation in the right hand, but this manner of correlation between hands has changed completely by measures 186 and 187. This happens when the three-beat pattern is extended and stops repeating. The right-hand A minor arpeggios no longer change with the left-hand notes by measure 185. Correlation between beat patterns and arpeggios is reflected by the presence of accent marks at the beginning of the right-hand
arpeggios in measure 184. This is the only measure that contains these accents in either hand.

There is a complete lack of accentuation in the remaining four measures. This absence of
accents, extension of the rhythmic pattern, a rapidly ascending volley of eighth-notes, and the
sudden halt at measure 188 all suggest a built-in ritardando. At the end, the three longer dotted-
quarter-note beats naturally lend weightiness to the texture.

Groupings of uneven beats created by the left hand accent patterns are shown in Ex. 16.
The first left-hand beat pattern contains three uneven beats and lasts from measure 183 to the
first quarter of measure 184. Two dotted quarter notes followed by a single quarter note
comprise this pattern, which is immediately repeated starting at the second quarter note of
measure 184. Beginning in measure 183, there are two groupings of notes in the right hand that
both outline root-position seventh chords. These groupings are attached to the left hand beat
groupings so that the accented bottom notes of each grouping correspond to the first two beats.
On the second quarter note of measure 184, the right-hand note pattern changes when the left-
hand pattern repeats. The right-hand figuration does not line up with the left-hand pattern
anymore as it did in the first pattern. From measures 185 through 187, the same pattern of notes
and rhythm repeats in the right hand. Even though the notes in the right hand are the same for
these three measures, there is a built-in syncopation effect. The left-hand pattern of uneven beats
acts independently of the measure line, yet the right-hand patterns do conform to the limits of the
measure line starting at measure 186.
A palindrome that dovetails with the last beat of the second repeating left-hand rhythmic pattern can be used by the performer as a way to slow down the pace of the music at the climax. This also is shown in Ex. 16. The repetitiveness of the figuration and the four longer beats placed side by side could be a signal to the performer to slow down in order to not make the two repetitions sound the same. The palindrome begins with a version of the beat pattern mentioned above that is in retrograde and that begins on the second quarter pulse of measure 185. It overlaps with the second beat pattern because it begins on the second quarter note in measure 185, which is the same quarter that ends the repetition of the first pattern. Since the twice-repeated pattern of uneven beats contains two dotted quarter notes that precede the quarter note, obviously the retrograde of this pattern placed back-to-back with the regular version will produce a string of four repeated dotted quarters. This repetition, coupled with the repeated melodic figures of the last two measures, is another illustration of the use of repetition for the purpose of slowing down as the climax is reached. A sensitive performer would be inclined to slow down the last two measures as a result of the repetition of rhythm and melody in both hands. This is particularly true of measures 186 and 187, which are the last two measures before the measure of rests. Employing a ritardando at these two measures will emphasize the arrival at the high point
of both dynamics and range. More importantly, this slowing down can also make the final left-hand quarter note of measure 187 more similar in tempo to that of the “Meno mosso” two measures later.

The “Meno mosso” begins at measure 189 and is preceded by a measure of two quarter-rests. This silent measure effectively serves as a rhythmic transition to the more “pesante” quarter-note pace. Every quarter-note chord is strongly emphasized by the use of homophonic chords that are mostly placed a quarter beat apart from one another. An accent is placed over every chord that somehow delineates the quarter-note pulse. For this reason, this section has much less forward motion than the preceding sections. The heavy accented chords that are low in range become almost like a heavy anchor that lends a downward feel to each pulse. These lower chords are, in fact, a repeat of the exact same chord, and they appear on the down beats of every measure. The higher chords, which themselves stay in the same range, always appear on the second quarter beats of each measure. For this reason, measure 188, the measure of two quarter-rests, is a silent upbeat preparation for the “Meno mosso.”

It makes sense that the two measures of rests that frame the “Meno mosso” section serve the purpose of preparing both the performer and listener for the vertical and chordal texture of the recapitulation. Upon playing the passage without measure 188, the tempo change is too sudden even if the last two measures of the preceding eighth-note passage are slowed down. There was a difficulty in feeling the right tempo of the “Meno mosso” without the intervening measure of silence. Since the “Meno mosso” is a self-contained entity, it needs to be set apart in sound from what came before. The “Meno mosso” can be effectively anticipated by continuing
the slight ritardando started in measures 186 and 187 through measure 188. One factor that facilitates this process is the fact that the last pulse of measure 187 is a quarter-note pulse.

The “Meno mosso” section lasts for six measures. Within these measures there are two metric schemes that last for three measures each. In these two patterns of uneven beats, the quarter-note receives the main unit of pulse. Both metric schemes begin with measures in three/four meter. In the first three measures, the measure of three quarter-note-sized beats is followed by a measure of two beats of the same size, and then the third measure, which is number 191, is a version of the first two measures condensed into eighth notes. The first half of measure 191 has three eighth notes and the second pulse of the measure is a quarter note (two eighth notes). The upbeat quality of this latter quarter-note chord is enhanced because it is displaced by the preceding eighth-note chord, and the effect turns both higher register chords into an extended upbeat. This upbeat has a feeling of almost being suspended in space. In measures 189 and 190, a heavy accented chord has always fallen on the second quarter beat, but, in measure 191, this same chord on the second quarter-beat is turned into an eighth-note without an accent. Moving the final quarter-note chord over by one eighth note enhances its forward pull to the next downbeat, and this results in a clearer delineation between the pair of three-measure patterns. The second three-measure metric scheme of the “Meno mosso,” beginning at measure 192, features two identical measures of seven/eight heard after the initial measure of three/four. A pattern of one eighth-note chord followed by two quarter-note chords is heard twice in the same way. The eighth-quarter pattern from measure 191 is extended in both these measures. The eighth-quarter rhythm, previously upbeat in nature, now serves to end the phrase and create a somewhat drawn-out upbeat motion. Since much of this “Meno mosso” material is repetition,
one way to bring this section to a close would be to gradually slow down these identical last two measures in such a way that lends increasing emphasis particularly to the last two quarter-note chords. Still another reason to slow the pace is the resonance resulting from the perfect fourths being doubled between the hands. The only other perfect fourth that is uncluttered by other notes is the final quarter note of measure 191.

As described in the paragraphs above, the slower quarter-note pulse of the recapitulation beginning at measure 196 is prepared ever so gradually by the material on the previous page of the Sonata. It takes a carefully prepared transition to go from a section of fast eighth notes at metronome marking seventy-six to the half note to a section with the quarter note pulse at sixty on the metronome. From the Allegro at measure 133 to the recapitulation at measure 196, the nature of the pulse has gradually transformed into one that sticks consistently to the quarter note beat. The pulse has made its transformation from one that is varying in size and somewhat unpredictable. This transition has taken place through a series of short phrases/rhythmic patterns that use the placement of accents to increasingly emphasize the quarter beat. Through this method, the regular half-note pulse is reduced to the dotted-quarter-note pulse, and this is first seen in measure 162. Then the dotted-quarter-note is placed with the quarter note, as seen in the pattern at measure 175. After this section, both endings of the sections beginning at measures 183 and at the “Meno mosso” section have built in ritardandos that lead seamlessly back to the measure 196 recapitulation.

As noted above, Copland uses a measure of rests as a sort of upbeat preparation for the “Meno mosso” and recapitulation. This measure of rests, which is measure 195, is placed after the “Meno mosso” and serves to enhance the final tempo preparation for the recapitulation. This
measure contains five eighth rests, written as two quarter rests followed by an eighth rest. The rhythmic values of these rests comprise the retrograde of the rhythmic values of the final right-hand chords of the previous measure. These two quarter rests are placed after the two quarter-note perfect fourths that have become very familiar through reiteration. Even though these two rests are obviously not heard, the continuation of a notated quarter pulse gives the performer a point of reference to hold onto. This way, the rallentando is continued in such a way that the “Meno mosso” tempo is seamlessly linked to that of the recapitulation.

**Recapitulation**

Even though the recapitulation contains the same thematic material as that found in the exposition, it contrasts with the exposition in almost every other way. Both sections begin in the key of b-flat minor with the same theme, but the first four-measure phrase of this theme is not repeated in the recapitulation. Instead, the second half of the theme, which is the curving motive from measure three, is expanded upon with denser chords that cover wider registers of the piano. This takes place from measures 196 until 203. It can also be said that the direction of the theme is the opposite in the recapitulation. No longer is the very first chord the highest in range. On the second eighth-note chord of measure 197, the third chord of the theme is doubled in the higher octave, so the first two chords of measure 196 serve as an upbeat impetus that leads upward to the higher chords on the following downbeat. This eight-measure sequence consistently remains in the higher range. At the beginning of the piece, the motive contrastingly makes a downward motion and stays in the lower register for the next four measures. The
dynamics are increased in the recapitulation, which is marked triple forte at measure 196 despite the fact that this first measure of the section begins with the two chords identical to those found in measure one. There are also accent markings on every single chord that were missing at the beginning of the piece.

The most curious combination is that of the accents with the triple forte in measure 196. A performer is left with little choice other than to approach these notes very harshly because there are not enough notes present in the chord to create resonance. Since the chords in measures 197 through 203 contain more consonant intervals, this leaves the first two chords as the most percussive. Another factor that contributes to the harshness of measure 196 is the preceding measure of rests mentioned above. More specifically, it is the order of the rests that influences the performer to give the first chord of the recapitulation an incisive beginning. It is mentioned above how the performer can use the two notated quarter rests to continue the rallentando past the end of the “Meno mosso.” The fact that the last rest in the measure is an eight rest instead of a quarter rest influences the approach to the first chord of the recapitulation on a psychological level. To count only five eighths instead of three quarter beats, which is the meter of measure 196, the measure has a feeling of being cut short, and this first recapitulation chord can have the feeling of coming in early.

After the initial measure of the recapitulation, the chords in the next measure are very resonant in comparison to the corresponding chords in the first measures of the exposition. Obviously, a higher density of notes contributes to the resonance. This resonance is also partially due to the manner in which certain parts of vertical chords containing perfect and triad-based intervals are separated out from other notes in the chord that are dissonant with these
triadic intervals. In Ex. 17, the four clefs of measures 197 and 198 are reduced to two clefs so that the distance between notes can be illustrated more clearly. As the passage gains many more notes and their range widens, the chords in these two measures are not pure triads. Notes in some of the chords contain several dissonances.

Ex. 17

This results in the chords becoming resonantly clangorous as they gain in the intensity that comes with dissonance, particularly in measure 198. The three right hand notes are related by the interval of a perfect fifth in measure 197, and these notes are separated from the left-hand third containing B-flat and D-flat, the first note being doubled. The first two beats of this measure correspond exactly to the chord found back in the second measure of the piece in terms of both set class and actual pitch class. Between the hands, the notes are more equidistantly separated, and the bare fifth/octave in the right hand is separated out by the ear due to the octave doubling and also due to its being one octave higher in range. Octaves reduce harshness because notes related within the overtone series are more resonant. In the next measure, the last two chords each time are two different incomplete minor triads separated by an octave. Both chords

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move in opposite directions during the last three beats. Each hand has in common an octave
doubling of a note paired with another a minor third above or below. In the last two off-beats of
measure 198, there is a different incomplete minor triad in each hand. This almost produces the
sound of large clanging bells because of their separation in range.

Varied articulation markings and repetitive beat patterns guide the performer in the
shaping of phrases in the first four measures of the recapitulation. The pervading eighth-note
offbeat rhythm of the opening of the recapitulation enhances the bell-like resonance of these
chords. Back in the third measure of the exposition the same syncopating rhythmic pattern is
present. As noted above, this creates a built-in ritardando at the ends of each of the first two
phrases of the piece. The beginning of the recapitulation takes the form of three and a half short
rhythmic patterns. Measures 196 through 198 make up the first three-measure rhythmic pattern.
The beat pattern of measures 197 and 198 is repeated twice in the next two measure couplets
almost verbatim. In measures 199 to 200, the beat pattern is focused on a C major triad, the one
in measures 201 to 202 is focused on a B-flat major triad, and then a D-flat triad pervades the last
pattern of this first section of the recapitulation. Every chord in these measures is on the offbeat
with the exception of the chords that fall on each downbeat. Musically, this lends forward-
moving buoyancy to the chords, as does the motion upward toward the higher octave that takes
place on each downbeat. Interestingly, each of the two articulation markings found in this
passage seem to be associated with chords in a different range. While each of the low chords is
marked with a sforzando and an accent, every single chord played by both hands in the higher
register is marked with only an accent. This uniformity of articulation marking for the higher
register, coupled with the constant offbeat rhythm, is a cue for the performer to approach the
higher chords more expansively and in a more linear manner. Crescendo markings in measures 198, 200, and 202 make a linear, forward sense of direction to the next downbeats even more clear.

The chord on the second beat of measure 197 is the only chord, other than each downbeat, that is not a syncopated rhythm. This is the low chord in the left hand that is marked with a sforzando. The corresponding low-register chords in measures 199, 201, and 203 do not land directly on beat two. There is a linkage between the first two measures of the recapitulation because both second-beat chords are emphasized in these first two measures by longer note values as well as by some kind of accent. It is as if these first two measures are a self-contained unit that it brought to an abrupt end by a low chord that emphasizes what would normally be a weaker beat. Copland could just as easily have made the rhythm of the low-register chord in measure 197 the same as that of the others, and the four beats of this measure would have been less disturbed. This calls for a comparison of the rhythm of measure 197 with that of the second measure of the piece. Since there is only one three-beat chord in the second measure of the piece, it is obvious that the double sforzando marking in measure 197 initiates a shifting of emphasis to beat two, because, first of all, the first beat is a definite goal point in the phrase, as it was in the beginning of the piece. The low-register chord with a double sforzando on the very next pulse created a sense of something very heavy dropping in a sudden manner. This is in large part due to the sudden drop in register, but, again, if this second beat is compared to those of measures 199, 201, and 203, the chords on the second beats in the latter measures are more buoyant. Due to their placement on the second half of beat two, the sense of accentuation is lightened, despite the double sforzando.
Since the same exact rhythmic pattern is repeated three times and because of the slight change in rhythm in the low-register chord in latter measures, it can be perceived that the irregular beat pattern subtly evolves from four uneven beats to three irregular beats per measure during the course of these eight measures. Also, the uniformity of the accents coupled with repetition of the rhythmic pattern enhances this evolution of the quarter-note pulse into a more irregular beat pattern. Measures 197 through 203 all consistently begin with two accented eighth-note chords, the second of which is tied into a silent second beat. During the course of the repetitions, this makes each first beat begin to feel like a dotted quarter note. At first, of course, we have been conditioned to feel these as syncopations by the very solid emphasis on the first two beats found in measures 196 and 197. The syncopation effect begins to gradually weaken as the beats expand. In Ex. 18 this pattern of three uneven beats is written below the note values of measures 201 and 202.

Ex. 18

\( b = \text{quarter note} \)

For our purposes, measure 201 would be a good place to start tracking the change. From measures 201 to 202 this three-beat pattern is repeated once. A pairing of a quarter note with a dotted quarter in either order can be imagined on the low chords with the double sforzandos because these chords are held for over a half note’s length. It makes sense that this beat pattern
be felt on measures 199, 201, and 203 partially for the reason that it would make sense for the performer to feel the quarter notes as upbeats to the following measures each time. In fact, a written quarter note is found in measure 203, which is the upbeat to the meno mosso theme first found back in measure eleven.

One of the main considerations that the pianist needs to keep in mind in order to shape the beginning of the recapitulation is the possibility for subtle variety in pianistic approach to each chord. Ideas discussed above concerning rhythm, range, and placement of accents can influence the interpreter to play certain chords with a sharper sound, while other chords can be played with more resonance. The arrival of the recapitulation is a climatic, almost cathartic moment because of the frustrated stop-start quality of the Allegro. There is a forward sweep to the beginning of the recapitulation that can easily become stifled if every chord is approached with the same heaviness. This is a temptation because of the homogeneity of range separation and note spacing from one chord to the next. In each hand, chords contain an octave between the outer parts and either a minor third, perfect fourth, or perfect fifth between the middle note and one of the outer notes. This combination creates a heaviness that can become monotonous if the pianist fails to ponder these subtle differences in sound.

The low chords in measures 197, 199, and 201 would benefit from a heavier approach because of the low range and the spacing of notes. It is in this way that they contrast in sound from the more pointed, upbeat-like chords in measure 196. These two minor thirds placed an octave apart are identical in note spacing to that of both the first chord of the piece and the first chord of the recapitulation. Copland notated the chord notes so that the bottom three notes are taken by the left hand while the top note is taken by the right. First of all, it would be awkward
for a pianist to play the upper F and A-flat with the right hand because of there being a relatively short amount of time to make a leap down this far in range. Instead, the left hand is free to drop more weight into the left–hand chord, which stretches that hand more widely over an octave range. This creates an almost dull, heavy sound. Likewise, the right arm is more freely able to drop its weight into the single A-flat. Because of the low range, the notes are automatically more resonant. For this reason, the role of the fingers for these low chords in the above measures is subtly different than that of the higher chords in measure 196. The higher chords lead to the downbeat in the next measure, so there is more energy from the fingers, which go into the keys faster when executing these higher chords. This creates an upward motion in sound which contrasts with the heavy-arm approach to the low chords, which are like displaced arrival points.

This evolution of the rhythmic pattern into three uneven beats can be interpreted as a way to begin broadening the pace throughout the rest of the movement. Of course, there are no meter changes or tempo markings placed within the first eight measures that serve as direct indicators of there being three beats per measure, but interpreters of this work can use this illusion as a viable way of broadening these measures. The wider range of the notes within each chord and the rhythmic pattern of uneven beats both enhance this sense of expansiveness. After these initial eight measures, the pulse shifts to the half note again. The actual quarter-note pulse slows down very little, if at all, but the pacing of the following phrases is more effectively felt at the half-note. As a result, this string of two-measure rhythmic patterns with repeating motives is given shape. In fact, there is not a single tempo marking for the remainder of the movement in spite of the return of the theme that is marked “meno mosso” in measure eleven. This theme, which returns at the pickup to measure 204, will be fresh enough in the memory of an alert
interpreter that a reminder of the mood change is unnecessary. In contrast with its measure eleven appearance, the “meno mosso” theme is approached very gradually by the broadening of the pulse of the first eight measures. There is less of a sense of presenting a new idea this time because there is less of a pause before its commencement. Instead, via the pickup note on the fourth beat, the theme has the effect of growing out of the large chords of the first eight measures of the recapitulation.

The theme commencing at measure 204 is an expanded version of that found at measure eleven because of the overall expansion of the form in the recapitulation. It lasts for eleven measures instead of the more concise four-measure statement lasting from measures eleven to fourteen. In both the exposition and recapitulation, a version of the theme with rolling left-hand septuplets follows the initial statements of this theme, and the left-hand septuplets force most of the emphasis onto the half-note pulse. The left-hand chords punctuate each short phrase in the measure eleven and measure 204 themes, and the half-note pulse is subdivided into quarters in the right-hand. At the ends of these phrases, in both the exposition and the recapitulation, the succession of half-note chords also comes to a pause. Since the first eight measures consist of one long phrase instead of the two short ones found at the beginning of the movement, the theme at measure 204 needs to be expanded to create balance. Otherwise, the four-measure version of the theme found at measure eleven would seem to have come to an end too quickly. Since the quarter-note pulse feels more like a pattern of irregularly-sized beat in measures 196 through 204 of the recapitulation than is the case at the beginning of the piece, the sense of a regular half-note pulse needs more time to be established. In fact, the pulse remains at the half note until the
entrance of the second theme at measure 220, and there are no more patterns of uneven beats for the rest of the movement.

The measure 203 version of the “meno mosso” theme is expansive in range in such a way that relates it to the eight measures that immediately precede, and this is one of the ways in which the recapitulation contrasts with the corresponding section in the exposition. At the beginning of the theme at measure 204, the two hands are placed farther apart than is the case at measure eleven. The right hand melody is an octave higher in measures 204 to 206 than is the case at measure eleven, and the measure eleven and the measure 204 versions of the theme are both harmonized by chords in the low range. The main difference lies in the fact that the measure eleven version of the theme is immediately in a lower range than measures one through ten. In this way, the sudden depth of sound produced by this low range in the theme at measure eleven is an immediate change of character. In contrast, the first left hand chord at measure 204 is found in the same range on the piano as the chord in the previous measure.

A mixture of major-minor is present in the low chord at measure 203. This makes the chord exceptional among the other low-range chords in these measures, which are all octaves with a minor third above the bass. Placed a major third and two octaves above the top note of the left-hand chord, the “D-flat” is separated by a ninth from the “C” of the chord in the left hand, but the distance of a major third between the top note and the two “A’s” in the left hand is more audible. There is a muddy sound to the chord because of its extremely low range. The effect is almost like that of pounding a random cluster of notes, but the sound is resonant because of the consonance of the outer interval, which is a major tenth. The low chords that follow cover
a wider range and are given more resonance by the grace note arpeggios, which begin in the lowest range on the piano.

**Shortened Second Thematic Area**

Since the gradual evolution of pulse from quarter-note to that of half-note takes place more gradually throughout the first page of the recapitulation than is the case in the exposition, then it makes sense that the version of the second theme found in the recapitulation, beginning at measure 223, would not be as large a section as it was before. This version of the second theme is condensed and functions in the recapitulation primarily as a summary of itself as it was in the exposition, instead of being a larger set of variations. This version of the second theme is just one further point in the slowing of the pulse which is taking place until the end of the movement. It can be helpful for the interpreter to feel each measure of this second theme as a dotted-half-note hyper beat. This is true in part because, metrically, the quarter-note pulse remains constant to the point that literally all beats are marked by quarter notes. There are no more irregularly-sized beats at the quarter note level at this point. As was the case in the exposition, the performer needs to be very careful not to give the quarter note pulses too much emphasis in order for the phrases to be shaped in a musical manner.

During the course of its three phrases, the second theme of the recapitulation is transformed into a new theme. This new theme is superimposed at first on the tops of the
vertical chords. A fragment of the second theme from measures fifty-eight and fifty-nine accompanies the upper melody in the first phrase. Also, the repeating left-hand thirds from the measure fifty-eight statement of the theme appear in the left hand. As can be seen in the diagram of the three phrases, the rhythm gathers momentum in concert with the shapes of these phrases. At the beginning of the first phrase, the uppermost melody in the right hand is the primary element that gives the music a sense of forward motion. In earlier parts of the Sonata the basic shape of this right-hand theme has developed in a few places, for example, in measure eighty-six, as well as at the beginning of each phrase of the octave section starting at measure 123. In terms of interval content, this material begins with a descending minor second followed by a descending major third. This intervallic material originates in the top notes of the upper three chords of measures fifty-eight and fifty-nine. Beginning in measure 223, each measure in the first phrase has a quarter note on the third beat that moves the pulse forward. The phrasing and beats are shown in Ex. 19.
Momentum picks up in the last two measures of this first phrase because of the descending phrase in the upper voice that is initiated by the upbeat quarter in measure 224. In phrase two the quarter note activity increases as the undulating right hand thirds turn into a moving second
voice that moves mostly in contrary motion to the top line. This second phrase, in keeping with this characteristic of the first, is introduced by a quarter-note upbeat. The highest note of the phrase is the last quarter in measure 229 and it leads down by half-step to the climax of the phrase, which is the first and strongest beat of measure 230. On this beat the climatic point coincides with the left-hand third that is lowest in range. Measures 229 and 230 employ perfect contrary motion between the hands. Phrase three works its way by steps and skips up to the highest note in the theme, which is at measure 234. These high cascading thirds work their way down to a final statement of the opening theme.

A built-in ritardando is takes place in the second half of the third phrase because of the addition of a beat in the last measure and change in articulation markings. The third phrase reaches a climax at measure 234 and from here until measure 236 there are three measures of quarter-note thirds played by both hands. These quarter notes begin the transformation of the pulse from dotted-half-note hyper-beats back to quarter-note beats. The second half of the third phrase lasts from measure 234 until measure 236. A forte marking and accents over the first four chords give measure 234 the sense of being an arrival point. These accents are a signal to approach these first quarter notes more expansively, and this is enhanced by the step-wise motion from the third beat of measure 234 to the first beat of the next measure. A performer might be inclined to highlight this step-wise motion, and this is enhanced by the harmony change on the first beat of measure 235. From the second beat of measure 235, each chord is given a tenuto marking, and this marking in combination with the diminuendo delineates each half-note pulse in measure 236. The minor third descent between the first and second chords helps
delineate the half-note pulse. At this point, the transition to the expansive last line, which serves as a coda, is complete.

Measures 237 and 238 seem to resolve the ambiguity of syncopation for the first movement. These measures contain the same notes and chords as those found in measure 197, but the low chord is shifted over to the third beat in measure 238. The syncopation of measure 237 is erased by the second beat of measure 238 being completely silent. As can be recalled, this type of off-beat rhythm has been very common in the earlier part of the recapitulation. The second beat and the third beat chord of measure 238 are both given extra emphasis by this slight shift in rhythm. In measure 239, a final syncopation is heard on the downbeat. There are three beats in this measure, and perhaps this is the reason that the preceding chord is also three beats in length. The F minor chord missing its fifth changes on the first beat of measure 239 to a B-flat tripled at the octave. From this point to the end of the movement four measures later, there is no syncopation and there are also no more irregularly-sized pulses. For the last three measures of the movement we are left with the rhythm of a single quarter note beat that is followed by a two beat half note. Most telling is rhythm of the last measure. Copland shortening of the first quarter beat shifts the emphasis to the second beat.
**Conclusion**

The delineations of major sections of this Sonata-Allegro movement are fairly easy for the performer and listener to recognize, but the biggest challenge in performing this piece convincingly is the shaping and pacing of smaller sections within the larger ones. This includes choosing the right tempo. Changing the tempo when no tempo change is indicated in the score has also been shown to be a necessity at times, such as during the second page of the movement. On this page, the performer needs to figure out how long the “pressing forward” in tempo takes place. As we have seen, choice of inner dynamics used for phrase shaping and also for tempo choice and variance is influenced by the size of the pulse, which is often not the same as the pulse size as dictated by the time signature. Changes in note range, note density, and dynamic and articulation markings, found in the score or not, have been shown to be the main factors that can influence the sizes of each pulse. Pianistic approach has been shown to be an important factor in the shaping of phrases, and a cue for how to approach various passages has proven to be the density or lightness of the passages. This is why the set class (0237) and its subset (027) has been traced throughout the movement. The variety with which the notes belonging to this set class are spaced within chords yields contrasting varieties in texture along with the resulting sound textures and pulse sizes.
CHAPTER 2

MOVEMENT 2

A short wedge-like motive is the primary building block of the second movement. This short motive is present in some form in all sections of the movement, and its rhythmic and intervallic properties are used in a great variety of ways. Even though certain motives and small sections repeat in one way or another, none of the sections in this movement repeat exactly verbatim. The use of the motive is so varied that Benjamin Woods was prompted to describe the form of the movement as “continuous variation form.”\textsuperscript{13} There are, however, two primary textures in regards to the manner of note distribution and density, and the pulse is felt differently in each of these sections. Cues are present in all sections of the movement that lead the attentive performer to vary the sound and attack of the notes of each section in fundamentally contrasting ways. At the beginning of the piece, as well as at many other points, the texture is linear in nature. The textures of these linear sections are very sparse, and as a result, the melodic contours are made freer because the texture is not weighed-down by chords. A floating quality results because the inner rhythm is less clearly defined in these sections and the comfortable beat tends to contain more notes with fewer indications for accents. The other texture is very homophonic and dense, so chords that are thick with notes lend more weightiness to the rhythm. As a result, quarter note and dotted quarter note pulses are emphasized more in these heavier sections.

There are two main motives that evolve both rhythmically and in terms of note content during the build-up to the “meno mosso” at measure fifty-four. The inner rhythm of the first six-

\textsuperscript{13} Woods, Benjamin, “The North American piano sonata in transition from tonal to atonal style” (D.M.A. diss., University of South Carolina, 1991), 32.
note motive of the movement consists of a quarter note pulse followed by that of a dotted-quarter note pulse, then a quarter note pulse again. Ex. 1 shows the fourth measure of the movement because the rhythmic pattern in the measure is the one most frequently associated with the motive.

**Ex. 1**

For the first two pages of the second movement, the linear texture gradually evolves into the contrastingly dense and chordal “Poco Meno Mosso,” which begins at measure fifty-four. Repetitive statements of this Ex. 1 motive are linked together during the first one and a half pages of the movement in such a way that the intensity increases. A motive that is divided evenly by number of inner pulses is first introduced in measures eight and nine and shown in Ex. 2. This motive is found throughout the piece in varying forms.

**Ex. 2**

BARS EIGHT AND NINE
In measures eight and nine it serves as a second half to the Ex. 1 motive. Various versions of this basic minor third outlining germinate throughout the movement, and versions of Ex. 2 are frequently coupled with the Ex. 1 motive. From measure forty until measure fifty-two, the minor third of Ex. 2 is expanded upon in a series of longer phrases. These phrases reach a climatic point in such a way as to prepare for the smaller beat sizes of the Poco Meno Mosso at measure fifty-four.

The lengths of most pulses in these first two pages are usually around five or six eighth-notes because of the fast tempo and lack of inner articulation. Whenever the first five-notes from the Ex. 1 motive are repeated on these first pages, there are no accents, staccatos, nor slurs on any of the notes. In fact, the general instruction to play “half-staccato” is found over measure one. Copland gives a metronome marking of 208 to the quarter note. This is too quick to be felt as a comfortable beat, so the half-note is a better choice in this regard. The metronome marking for this half note would be 104, and this is a beat that is easier to feel since it is neither too fast nor too slow. It is somewhat telling that Copland chose the quicker quarter note pulse for his metronome marking. Energetic jerkiness results from the stringing together of these unevenly sized beats and pianists can bring this out to varying degrees. Leonard Bernstein plays each group of five and seven eighth notes as one big sweep, while in Leo Smit’s reading, one can feel the inner pulses a little bit more precisely with minute accentuation of the quarter and dotted quarter note groups. Since the size of the beat groupings constantly changes, it is helpful for the performer to be constantly aware of all quarter-note and eighth-note subdivisions.
The Evolution of Pulse Structure during the First Two Pages and How this Relates to the Evolution of Motives

The placement of the pulse during the first one and a half pages depends on the constantly varying ways in which the motives repeat. For example, the six notes lasting from measures one to two and the identical six notes found in measure four have a differing placement of strong beats. In measure two, the G# is placed on the downbeat. This gives the G# more emphasis in measure two than it receives in measure four. Ex. 3, found below, shows a complete chart of the pulse groupings from measure one until right before the “Poco meno mosso” of measure fifty-four. In this chart there is a divergence from Kanovsky’s approach in that the beats are neither numbered nor grouped into even patterns until measure forty-one. It is this author’s opinion that until the last beat of measure forty-one, the numbering of beats would be besides the point in terms of how the music is put together. This is because of the absence of beat patterns that repeat verbatim more than twice. At first, the beats are approximately five eighth notes in length. The first three measures contain beats of the same five-eighth-note length, and the same five-eight meter is also present in these measures. As the “Poco Meno Mosso” is approached, the pulse groupings gradually coalesce into increasingly repetitive motives which contain smaller beats. Before then, each version of the Ex. 1 and Ex. 2 motives
comprises rhythmic patterns with different numbers of beats. At measure forty-one, there are three long phrases where a repeating rhythmic pattern serves as a foundation for the repeating motive. This motive is based on the minor third motion of the motive shown in Ex. 2, but unlike the evenly-divided version found in measure eight, the version at measure forty-one contains pulses of unequal sizes.

In measures four and five, a kink is thrown into the five-eighth-note pulse groupings established in the first three measures because an additional quarter note is added at the ends of both these latter measures. In measure four, the meter is now seven-eight, but since our ears have been conditioned by the first three measures to hear the first five notes as a single pulse, the last quarter-note G# is felt as a very short upbeat. Kanovsky uses an example from Copland’s Appalachian Spring to illustrate this concept of using intrinsic aspects of articulation and melodic contour as a guide to choosing pulse placement, regardless of any disparity in the size of individual pulses. Figure number 3.25 from her dissertation shows a passage with two half notes felt in each measure as the main pulses, and the first three quarter notes consist of repeated eighth note “C’s.” These repeated notes comprise the first beat. Kanovsky chooses the note that goes up one step only on the last quarter note of the measure as the second beat. This higher note is also accented. Kanovsky refers to the second beat as being a “cut off” and too small to be considered a flexible beat since the ration between the beats has to be at least 1.55 to 1. Melodic ascent on the last quarter note and its accentuation are the two reasons for Kanovsky’s choice of longer beat followed by a shorter beat in this measure. In the second movement of

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14 Kanovsky, Peninah, “Metric Hierarchy in Music by Bartók, Copland, and Stravinsky” (Ph.D. diss., The City University of New York, 2002), 73.

15 Ibid., 72-73.
the Piano Sonata, the G# is not accented in measures four and five, but both measures are identical to each other with each measure beginning with the five-note motive from measure one, which we have become accustomed to hearing as one pulse. What results is the addition of a short beat as a tag on the end of the five-note group already established.
Ex. 3

\( \text{b} = \text{half note} \)

Bar

\begin{align*}
\text{1} & : \quad \text{b} \quad \text{b} \\
\text{2} & : \quad \text{b} \quad \text{b} \\
\text{3} & : \quad \text{b} \quad \text{b} \\
\text{4} & : \quad \text{b} \quad \text{b} \\
\text{5} & : \quad \text{b} \quad \text{b} \\
\text{6} & : \quad \text{b} \quad \text{b} \\
\text{7} & : \quad \text{b} \quad \text{b} \\
\text{8} & : \quad \text{b} \quad \text{b} \\
\text{9} & : \quad \text{b} \quad \text{b} \\
\text{10} & : \quad \text{b} \quad \text{b} \\
\text{11} & : \quad \text{b} \quad \text{b} \\
\text{12} & : \quad \text{b} \quad \text{b} \\
\text{13} & : \quad \text{b} \quad \text{b} \\
\text{14} & : \quad \text{b} \quad \text{b} \\
\text{15} & : \quad \text{b} \quad \text{b} \\
\text{16} & : \quad \text{b} \quad \text{b} \\
\text{17} & : \quad \text{b} \quad \text{b} \\
\text{18} & : \quad \text{b} \quad \text{b} \\
\text{19} & : \quad \text{b} \quad \text{b} \\
\text{20} & : \quad \text{hb} \quad \text{hb} \\
\text{21} & : \quad \text{b} \quad \text{b} \\
\text{22} & : \quad \text{b} \quad \text{b} \\
\text{23} & : \quad \text{b} \quad \text{b} \\
\text{24} & : \quad \text{b} \quad \text{hb} \\
\text{25} & : \quad \text{b} \quad \text{b} \\
\text{26} & : \quad \text{hb} \quad \text{b} \\
\text{27} & : \quad \text{b} \quad \text{b} \\
\text{28} & : \quad \text{b} \quad \text{b} \\
\text{29} & : \quad \text{b} \quad \text{b} \\
\text{30} & : \quad \text{b} \quad \text{b} \\
\text{31} & : \quad \text{b} \quad \text{b} \\
\end{align*}
After the first interjection from the left hand dyads at measure six, the opening motive of the piece is expanded by the minor-third motive that was shown in Ex. 2. This first entrance takes place from measure eight to measure nine. Articulation is another way in which this new motive is distinguished from what came before. The third eighth note of each dotted-quarter-note beat is always connected by slur to the following staccato quarter note. This same articulation is present each time this motive in compound-meter returns, and it almost presents a dilemma when it comes to choosing how many pulses there are in measure eight and later in measures eleven and twelve. The uniformity of the articulation, with staccatos accenting the
A reason for interpreting two of these dotted quarter note rhythmic patterns as a single pulse is the staccato marking on each quarter note. These staccato quarter notes are always at the beginnings of each of the dotted quarter note pulses (refer to Ex. 2), so they influence the performer to approach the notes with a lighter touch. Remember, pulse size can just as easily be interpreted as a dotted quarter note, since the main pulse is felt as the half note. In this context, the line would be weighted down if the performer were to emphasize each dotted quarter as a beat in measure eight and other similar measures. Also, this Ex. 2 figure of even compound rhythm is merely one eighth note longer than the wedge-like figure found in measure seven (and in measure one). In this way, measures seven and eight are almost identical beats. As explained above, this opening five-eighth-note figure has been established as a beat through repetition during the first three measures. The resulting beat length in measures eight, eleven, and twelve consists of six eighth notes that are divided evenly. In measures eleven and twelve the Ex. 2 figure is expanded. The melodic shape is focused around G#, which is the first and last note, and the first note of measure twelve is only one step down. This F# is approached by a leap from above, and the final G# is approached by a leap from below. These two notes a step apart serve as melodic and rhythmic focus points. A “hair-pin” crescendo-decrescendo is suggested by this melodic shape. It would seem that too much emphasis on each dotted quarter beat would hamper the free flowing quality of this line, and it would also blur the melodic shape.

Starting in measure fourteen, the rhythmic emphasis in the Ex. 1 figure is shifted from the first note to the last note. This is achieved through a sort of equalization of pulse size to around
six eighth notes. As shown in Ex. 3, measure thirteen is divided into a half note pulse followed by a dotted quarter note pulse. Despite there being seven eighth notes present in the measure instead of the six of the measure before, measure thirteen can almost be felt as a single pulse. This is because of the step-wise motion of the chords and also because there is no accent on the second beat. More significant in regards to pulse structure is the juxtaposition of the last dotted-quarter-note sized pulse of measure thirteen with a version of the Ex. 1 figure placed in compound meter. Now measure fourteen is a single pulse the size of those found in measures eleven and twelve. Each dotter-half-note inner pulse is equalized without accentuation. The Ex. 1 figure is also fit into this compound rhythmic structure in measure fourteen. For the first time in the movement, the accentuation is taken off of the first note of the wedge-like figure of Ex. 1 in measure fourteen, because the first part of the beat is taken by the left-hand chord. Formerly on the downbeat, the first note of the Ex. 1 motive is now placed on the relatively weak second eighth-note beat. The high G#, which held a weak role in the pulse structure earlier on the first page, is given melodic as well as rhythmic prominence by being placed at the very beginning of measure fifteen. It is also the highest note in the motive, so the previous five notes in measure fourteen now take on the role of upbeat. This metric arrangement of the motive is most prominent on the second page of the movement.

Beginning on the second quarter-note beat of measure fifteen, the opening five-note motive of the movement is coupled with an expanded version of the Ex. 2 motive. Here, questions arise regarding the placement of pulse groupings. As a result of the directions “poco accel.” and “poco rit.,” the melodic contour and rhythm of measures sixteen through eighteen illustrate the direction “delicate, restless” that is placed at the beginning of the movement. This
rubato composed into the passage makes it difficult to decide where each pulse falls within this right-hand phrase. Due to the accelerando, each dotted quarter note pulse (the quarter notes followed by eighths in the music) moves along too quickly to be felt as a comfortable beat, especially since we have been accustomed to hearing larger note groupings as beats. Measures sixteen and seventeen contain rhythmic patterns that are identical to those found in measure eight (Ex. 2), but the direction is to push the tempo in these two measures. The pulse of measure sixteen tumbles ahead, and the predictability of the arrival on measure seventeen is somewhat weakened as a result. Even the group of six eighth notes in this measure is too fast. The accelerando has the effect to that of tripping forward while one is walking.

From measures sixteen through eighteen, a viable plan for the placement of beats can be determined by important points in the shape of this extended phrase. An aspect that helps keep the music tumbling forward is the downward direction of the phrase followed by a short upward motion. The repetitive rhythm also aids in this forward motion. During these measures, eighth notes are always slurred to the following quarters, and this figure facilitates the accelerando. In measures sixteen to seventeen, the C# leading down by step to the B-natural lends a certain melodic demarcation to the pulses because of the recent memory of the G# repetitively ascending to the B in the initial Ex. 2 figure. This limited demarcation makes it possible for the weakened pulse at measure seventeen to seem like the second half of the pulse at measure sixteen. In these two measures the C# is heard as a delay of the expected B-natural, and this makes the forward-pull to the B-natural stronger. The demarcation of a second pulse can be felt at the point where the line scoops down to the lower C# at measure eighteen. At this point, the arch of the line has completed its descent, and the ritardando at measure eighteen helps it to get back up to the G# in
a manner that brings the phrase convincingly to a close. This figure, with only minor variations in notes and some transpositions, returns throughout the movement in the more linear sections.

Measures sixteen through eighteen can be viewed as two uneven beats on the hyper beat level, the second of which is shortened. This is shown in Ex. 3. A reason for the use of the label “hyper beat” is to convey the fact that in order for the phrase to have a flexible linear shape, beats of shorter size should not weigh down the phrase. Because of the “poco accelerando” marking, measures sixteen and seventeen turn out to be approximately equal in length to the slowing ascending phrase in measure eighteen. As pulses, and in terms of number of eighth notes, measures sixteen and seventeen are both expansions by one half of the basic half-note pulse of the movement, which is the same as a six-eight meter. In the above paragraphs we noticed how frequently the six-eighth-note beat and the closely related five-eighth-note beats have been reiterated so far. In the last paragraph it was shown how the regularity of the beat is compromised by the composed-in rubato. In order for measure eighteen to be felt as a shortened hyper beat, the quarter note-eighth note rhythmic groupings, which remain constant, need to be viewed as sub-divisions of the big hyper beat. The hyper beat comprising measure sixteen through seventeen, for example, contains four of these quarter-eighth mini rhythmic units. The grouping at measure eighteen only contains three of these.

In Ex. 3, there is a discrepancy between the grouping of beat lengths found in measures nine and ten and the grouping found in measures twenty-two and twenty-three. Both pairs of measures have an identical meter and rhythm, but the sequence of beat lengths in each pair is different. This difference is determined by differing versions of the five notes of the Ex. 1 motive in measures ten and twenty-three. The five notes from the Ex. 1 motive, which begins on
the second beat of measure ten, are identical to those found in the first two measures of the piece, so these notes are felt as one beat. In measure twenty-three, the last three eighth notes are separated up into a higher range. A pianist performing this piece has to move his or her hand higher on the keyboard in order to span the major ninth interval. As this takes place, the higher “A” beginning on the last dotted-quarter beat has to be played by the thumb. This fingering combined with the hand movement up into a higher range inevitably creates a bump on the last dotted-quarter beat.

A version of this motive that is identical to the one in measure twenty-three is found in measure twenty, but only the version in measure twenty receives one beat in the Ex. 3 chart. The difference in rhythm in each measure is the reason that each identical note grouping is felt with a differing pulse structure. In measure twenty-three, the motive is set off by the first quarter beat of the measure, while in measure twenty, it begins only after the first eighth-beat of the measure. The falling of the first note of the Ex. 1 motive on the weaker beat has its recent precedent in measure fourteen. In measures fourteen and twenty, the inner pulses of the motive are transformed into the context of a six-eight meter. This means that, in terms of notation, the motive is divided evenly in half by two dotted-quarter pulses in both measures. In each of these measures the inner dotted-quarter pulses are not felt because of the quick tempo and the fact that we have become accustomed to feeling the five-note motive in one pulse. The rhythm of measure twenty-three, a half-note followed by a dotted-quarter note, has its precedent in the left-hand parts of measures thirteen and nineteen. In measure twenty-three, the motive begins halfway through the first half-note of the measure, which is the comfortable beat. This even
division of the comfortable beat makes it more natural to feel the next dotted-quarter note pulse in measure twenty-three, which is also higher in range, as a separate pulse.

After the two-hyper-beat phrase found in measures sixteen through eighteen is repeated almost verbatim in measures twenty-four to twenty-six, a build-up begins on the top of the second page of the movement. Starting at measure twenty-nine, the momentary interjections of left-hand dyads that were so often found on the first page have ceased. Momentum begins in this measure when the Ex. 1 motive is repeated in an imitative fashion between the hands. The texture begins to thicken as Ex. 1 motives are repeated back to back and doubled between the hands. This doubling between the hands starts in measure thirty-three. Also, the phrase groupings are becoming more regular in regards to beat number, but the lengths of the beats shorten beginning at measure forty-one. In these last twelve measures, a sequence of repetitions of a longer motive begins. This motive is a combination of the rhythmic makeup of Ex. 1 and the motivic makeup of Ex. 2. An embryonic version of this motive is first heard in measures thirty-six and thirty-seven. Starting at measure forty-one, this motive appears in three long phrases, each of which contains a group of three beats followed by a group of four beats. These phrases are demarcated at the end of Ex. 3. The first two phrases are completely identical to each other, even though the meter changes in order to accommodate this repetitiveness. This is good example of how the rhythmic patterns often do not coincide with meter. In Ex. 3, notice how the first note of each of these two longer phrases lands on different parts of the measure. All three of these phrases are four measures long. The third phrase, lasting from measure forty-nine until measure fifty-two, contains two identical phrases that contain four beats each.
Starting at measure forty-one, the pulse size becomes that of a quarter note. This is shown toward the end of Ex. 3. Octaves are doubled, and there is a lack of articulation. A lack of articulation is found on the first page as well, but the performer is encouraged toward a steady build-up of intensity at these later measures by the repetitiveness of the phrases and the direction to gradually crescendo. The two short phrases that repeat from measures forty-nine to fifty-two occur simultaneously with the final crescendo to fortissimo. This is akin to repeating a word or short phrase twice and giving it more emphasis the second time. The right-hand motivic material becomes doubled at the octave with the exception of the G#’s. This helps to punctuate the uneven quarter-note beats, and can be seen as a cue for the pianist to take a more rhythmically strident approach. Another factor that contributes to this increased emphasis on the smaller pulses is the upward motion of the left-hand notes. The left hand ascends by thirds and fourths, and these notes are the same in all three phrases. As a result, the second beats in each of these four phrases are reinforced, and now the pianist is finally able to get into a brief “grove.” This is because these phrases feature the longest repetitions thus far simultaneously of both motives and rhythmic patterns.

The reason for the grouping of the four rhythmic patterns/phrases found at the end of Ex. 3 is that this grouping most clearly reveals the manner in which the phrases repeat and shorten as the climax is reached. This phrasing also shows that the pulses should still be felt as smaller beats within a larger phrase. First of all, there is no marking in the score indicating a change of tempo. The pulses, in the author’s opinion, should be felt more as skeletal markers that serve to increase energy as the phrases move forward toward the fortissimo climax, hence the “grove” that is achieved. Each of the first two identical phrases can actually be divided into one short
three-beat phrase followed by a longer four-beat phrase, and in Ex. 3 the beats placed under these phrases are numbered accordingly. The Ex. 2 motive is given a quarter note/dotted quarter note rhythm in each repetition of the first three-beat phrase. The very same notes repeat at the longer four-beat phrase immediately following. These two phrases are repeated, and the linking of these two phrases together both times makes this repetition and the manner in which it reaches the climax easier for the listener to follow. With this view of these two phrases, a build-up can be achieved more convincingly because the second phrase has more crescendo than the first. The final two shorter identical phrases contain an identical rhythmic pattern to the last four beats of each of the first two phrases. The sudden cutoff at measure fifty-three is made more sudden by the combination of crescendo to fortissimo with the repetition of shorter phrases.

**Recurring Left-Hand Dyads and How They are Used to Frame the Contrasting Middle Section of the Movement**

The first verticality of the movement happens in measure six, and this idea is used throughout the movement as an accompanying pattern as well as delineator of the irregularly-sized phrasings of the Ex. 1 motive. An expanded version of this step-wise parallel sixth idea is also found before and after the contrasting middle section of this movement. In this way, it functions like a frame to this section. In measure eighty-one, which occurs immediately after the
second thematic area, the first of the two dyads is displaced by an octave. For the first time, one of the two dyads is broken into two eighth-notes in measure eighty-nine. This idea, in combination with the octave displacement, is found in the left-hand accompaniment to the contrasting middle section theme, which begins at measure 204. In these above-mentioned measures a gradual evolution of this simple idea can be seen. The first stage is octave displacement (measure eighty-one), followed by arpeggiation (measure eighty-nine), then as a combination of the two in measures 187-190, and this combination is also found in the left-hand accompaniment to the measure 204 theme in the middle section.

The two long phrases of the middle section provide fundamental contrast to the rest of the movement because the quarter-note pulse here is not lengthened or shortened. In fact, the inner pulses of these two phrases become quarter notes in much the same manner in which the eighth notes are the inner pulses in the phrase of Ex. 1. The opening measure of the movement gets five eighth notes, and at the beginnings of both phrases, measures 204 through 210, the meter is five quarter notes per measure. Measures 204 to 208 and measures 210 to 211 are divided into a group of two quarter notes, then a group of three quarter notes. In this way, these two phrases become rhythmic augmentations of those heard in the first two lines of the movement. Regularity of rhythm is made most tangible to the listener by the placement of the left-hand eighth note accompaniment always at the same points of the right-hand melody. This placement creates the groupings of two, then three, quarter-notes in most measures of this phrase.

In measures 204 to 213, pulses can be divided into five irregular beat patterns containing four beats each. These phrases and their beat patterns are shown in Ex. 4.
From measure 204 until 207 the first two of these rhythmic patterns cover the first phrase. There is an extension to this phrase in measures 208 and 209. In the first of these two measures, the right-hand trails off in a single line that comes to rest on a tied B-flat. In measure 209, the lower accompanying figure momentarily goes into the right hand. These two measures contain four beats and this is the third rhythmic pattern. The second phrase begins at measure 210 and lasts...
until measure thirteen, and the total number of beats in this pattern can be divided into the last two rhythmic patterns. The comfortable beat is still best felt at the half-note during this middle section. Prior to this section there has been an arrival at a recapitulation of the motivic material as it is found at the beginning of the movement. As a result of the recent return of the linear version of the first section of the piece, the half-note has since been reestablished as the comfortable beat, and no indications for tempo change have appeared in the score.

Dotted lines are placed vertically in the middles of most measures between measures 204 and 211, and the placement of these lines seems to be for the purpose of suggesting exactly where the beats fall within the melody. The half-note beats in the first two measures of both phrases are flexible beats, and some are enlarged by one half of their value (a quarter note). Experience gained from the performance of this piece brings up some contradictions regarding the placement of the dotted line, because it is easier to feel the beat in a two plus three pattern in many of these measures. For example, in the first two measures of both phrases, Copland seems to suggest that the melody should be felt as a dotted-half-note followed by a half-note. The dynamic marking for the right hand melody is “mezzo piano,” but it is “pianissimo” for the left hand. The left-hand eighth notes are meant to have a feeling of being light off-beats, since none of them begin on the first beat. These markings, along with the placement of the dotted line after the half-note beat in measure 204, can be interpreted as a cue to the pianist to feel the second beat on the tied quarter note in this measure and the next.

The main reason that the pulses in most measures of these two middle section phrases are more convincingly felt as first a group of two quarter notes, then a group of three is because of the higher range of the third left-hand quarter-note pulse in each measure. If the third and
fourth eighth notes in measures 204 and 205 were moved down an octave, then both of these
dyads would be a step apart. In this way they would closely resemble the left hand dyads that
begin at measure six. This comparison is seen in Ex. 5.

Ex. 5

As can be seen in the left measure of Ex. 5, a light, upward gesture results from this arrangement
of these left-hand dyads. Despite the octave separation, the upward motion by one step is heard
on the third quarter. Since the basic half-note pulse is still relevant throughout this section, the
sudden change in range is an audible delineation point between pulses. Also, no note falls on the
fourth quarter note; there is only a tie on this beat. Any sense of pulse on this fourth quarter note
is weakened as a result. The higher left hand dyad is the last note heard until the last quarter-
note of the each measure, so the composite of rhythm during the last three quarter beats of these
measures is two eighth notes, quarter rest, and quarter note. This grouping of rhythmic values
convincingly outlines a triple division of the last beats of measures 204, 205, 207, and 210.

Another reason for the two-three division of these measures is the precedent set in
measures 202 and 203. In the two measures that lead up to the entrance of the melody, the
recurring eighth-note figure analyzed in Ex. 5 divides the measure into two equally-sized half-
note beats. These two measures are also identical in rhythm and figuration to that of measure
209, which is a dividing point between the phrases. Since the initial eighth-note figuration
remains the same in most measures between measure 202 and measure 212, the rhythm in measures 202 and 203 introduces a recurring pattern as to the placement of each of the second beats. At measure 206, the right-hand melody itself has a rhythmic figure that more definitely delineates the second dotted half-note beat. Interestingly, the dotted line divides the beats differently for each hand in measure 206, and the delineation suggested by the dotted line in the left hand sticks to the same three-two division of the quarter notes that has been suggested since measure 204. Since the right-hand melody is the more prominent part in measure 206, the beat is more convincingly divided into two, then three quarter notes, which is a half-note beat followed by a dotted-half-note beat. As is shown in Ex. 4, the shorter beats constantly alternate with the longer ones within the four-beat rhythmic patterns that are at the beginning of each phrase, and so a regularity of pulse is defines the shape of both phrases.

**The “Poco meno mosso” Area**

For the first time in this movement, the Ex. 1 motive is transformed at measure fifty-four from eighth-note groupings into vertical chords that mirror these same groupings in large quarter and dotted-quarter-note chords. This section begins in measure fifty-four and the tempo indication is “Poco meno mosso.” There are various factors that aid in setting these larger chords of the “Poco meno mosso” apart from the previous section. The build-up on the previous page helps to bring the explosive and exclamatory nature of these chords into relief. A measure
of rests, which is measure fifty-three, is the primary element of timing that separates the “Poco meno mosso” from the preceding build-up, and this measure of rests is exactly the same meter as the preceding measure. This silent measure has the effect of a cut-off to the build-up of activity, and it is also the same meter as measure fifty-four. Another factor that sets this new section apart is the sudden tempo change after the measure of silence. The rhythmic stridency of the build-up to the new section has been increasing on the previous page. After the silent measure, the entrance of the “Poco meno mosso” is made more effective by the suddenly slower inner eighth-note pulse. This slower tempo is one factor that allows each chord to be convincingly felt as a beat.

At the “Poco meno mosso,” the texture is suddenly very chordal, and many of these vertical chords are very thick with notes. This starkly contrasts with the first page and a half of the movement, where the texture moves along mostly in single notes. Accents are also placed over most of these chords, especially the ones that cover the widest range with the most notes. This chordal density coupled with the slower tempo marking and accents cause the pulse to be felt as an uneven quarter-note beat. This section would be considered the second thematic area within the form of the movement if it were not for the fact that the chords at measures fifty-four through fifty-six are just a vertical version of the Ex. 1 motive from the beginning of the movement. In fact, the Ex. 1 motive is heard quite repetitively in this section of the movement. The only difference is the parallel movement of these opening chords, as the wedge shape of the Ex. 1 motive is missing in these first three measures. Therefore, the texture of the piano writing is contrasted with the previous material, and this contrast, more than an introduction of a new theme, is what makes this section new. Also, the quarter-note-sized pulse is the other main
factor that sets this section off from the first two pages. Another version of this section appears at measure 252 with a repeat of the exact notes of the dense chords at measures fifty-four and fifty-five. This later version of the material at the “Poco meno mosso” section grows out of another very vertical, chord-oriented section, so at measure 252 it has a different relationship with the surrounding material.

Even though the first chords of the “Poco meno mosso” cover a two-octave range, certain notes within these chords tend to be coupled closely together in such a way as to give each chord a similar feeling of solidity. The resonant sound that would be produced by the consonant intervals within these chords is somewhat obscured by dissonant intervals placed in the lowest range. In measure fifty-four the major second dyads are placed somewhat equidistantly apart within the chord. It is this kind of balance that creates sturdiness in these first three chords. The interval between the lowest left-hand notes and highest right-hand notes in each chord in measures fifty-four through fifty-six is always a major seventh plus an octave, and likewise, the lowest two notes of the three chords also move by ascending parallel, step-wise major seconds. In these first three measures, two parallel octaves with a minor third in the middle are played by the right hand after the first chord. This sound is separated out by the ear because the left-hand seconds, though dissonant, are an octave lower. These right-hand chords are like triads with the root doubled and the fifth missing, which is an idea that relates back to the very first chord of the first movement. The major seconds in the left hand that are placed almost an octave below the right hand chords give these chords a solid grounding.

As a result, dissonant intervals separated widely apart in range create what can be described as heavy chords that have a combination of resonance and strength in this “Poco meno
mosso” section. This is almost as if dissonance is combined with resonance in each chord. However, the pianist cannot approach all of these chords in exactly the same way. Instead these chords should best be approached in a variety of ways in order for the phrases to have direction; otherwise they can very easily become heavy and plodding. The technical approaches fall between the extremes of harsh and resonant. A heavy-armed downward approach would be more appropriate for certain parts of the phrase, as various approaches that involve quicker, more energetic fingers that send the arms upward would be appropriate elsewhere in the phrase. This latter approach gives certain chords an energetic harsh ringing quality, since triad-based consonance is combined with very dissonant intervals. A chord approached in this energetic manner can more convincingly move ahead toward the climax of the phrase.

In measures fifty-four through fifty-six, each chord has a different length, and this is what can directly influence the attack that each chord receives. The length of each chord increases somewhat regularly as the melodic line moves up consistently by major second. Ex. 6a illustrates the underlying irregular beat pattern of these first three chords. Measure fifty-four contains the same number of eighth notes as the first measure of the Ex. 1 motive, and these eighth notes are grouped in the same manner as was the case in Ex. 1-namely two, then three. These first three chords in measures fifty-four and fifty-five contain four beats, and the lengthened beats are the second and fourth. A case can be made for the fourth chord to be considered the arrival point because it is the longest.
chord. Its length might influence the performer to give it more emphasis. It also gets three fourths the number of beats as the previous pattern.

There is no contrary motion between the lowest and highest notes of each chord, because the lowest notes of each chord ascend in the same step-wise direction as the highest right-hand notes. This parallel direction, along with the homogeneity in voicing of each chord discussed above, further necessitates a clear idea on the part of the performer regarding the shaping of this three chord gesture. It would be very easy to approach each of these chords with a similar downward attack, if one were to be influenced by the fortissimo dynamic and identical articulation markings. In this case, shaping would be focused on each vertical chord rather than on the full gesture. The first chord is the shortest, being a quarter beat in length. As shown above, it is a little bit different than the others because the voicing of this chord consists of three major seconds that are spaced apart at dissonant intervals. An exception to this is the doubling of the “A” and “B” in the right hand, and the doubling and separating of these major seconds an octave apart creates resonance similar to that of the following incomplete right-hand triads.

Nonetheless, this chord can be approached with a quick upward motion that originates more from finger energy than from the arm itself. The same approach could be taken for the next chord, but it could be given a little more arm weight so it can ring a little more than the first
chord. This is because of the octave and third in the right hand and also because this chord is one eighth note longer than the second beat of measure fifty-four. These two chords can be felt as being part of one gesture. This is the initial gesture that leads melodically up to the third and highest D# found in the top of the third chord. More emphasis through arm weight can be given to this last chord to achieve the sense of arrival at the third chord.

A leaner variation of the measure fifty-four chords is found at measure sixty-one. This version contains the same notes as those found in the three big chords, but with less density of notes per chord. This leaner version of the measure fifty-four chords lasts until measure sixty-two. In these two measures, all three chords have the same highest and lowest notes as those in the opening three measures of this section, but the range between these notes this time is only a major seventh. The same parallel ascending motion is present as well. These chords are not as sharp in sound partially because accents are missing from the first two chords. An exact replica of the Ex. 1 motive is found in the right hand consisting of the same wedge-like separation of lines into opposite directions. The resulting right-hand dyads are joined together into quarter notes for the first time in the movement, again with the same two-three groupings of the eighth-note sub-pulses.

Because of the pairing into vertical dyads, the two lines moving in opposite directions out from the initial major second are visible to the pianist, and therefore, could be made audible. The crescendo through the ascending three-note melody is facilitated by this wedge-like movement out in opposite directions in the right-hand chords. At the beginning of measure sixty-one, the dissonant interval, which is the major second, is at the top part of the chord. Notes in the middle chord of this pattern are separated almost equidistantly. This middle chord is
slightly more resonant than the preceding chord because of the perfect fourth in the right hand.
The sound is somewhat unsettled due to the major seventh between the outer notes and the tritone between the lower two notes. In measure sixty-two a repeat of the final chord occurs. This time, the consonant interval, a major sixth, is on the top. So, as the right-hand range widens, the intervals become increasingly consonant. This happens while the melodic line rises by step. During the progression of this phrase, the right-hand dyads become increasingly consonant, and this seems to aid the crescendo. Also, the dissonant major second at the top of the first chord is separated in range from the bottom note, and by the last chord, the major second is in the bottom of the chord, enhancing its strength.

Evidently, the function of measures fifty-eight, sixty, and sixty-four is to serve as sudden vertical cessations to each beginning of the linear versions of the Ex. 1 motive. These three measures are identical to each other in note content, rhythm, and accentuation, and each is dense with notes that cover a wide range on the piano. Each linear version of the Ex. 1 motive that leads up to these dense accented measures begins at measure fifty-seven, fifty-nine, and sixty-three. The goal of each of these wedge-like motives is rhythmically pointed toward the final D#. This is because the D#'s are accented and they are also the highest notes in the motive. They function as goal points in much the same way as was found in the first section of the piece. In measures fifty-eight, sixty, and sixty-four, accents are placed on all three pulses each time, and the longest of these pulses is the middle chord. In Ex. 6b, the resulting rhythmic pattern is shown.
The notes on these lengthened middle beats are spaced apart the most widely in range, and these
beats have the densest chords. An almost lop-sided emphasis on this middle chord is implied by
this density, as the pianist would most likely be influenced to drop into these middle chords with
a lot of arm weight. The left hand plays three notes that comprise the set class (027), and they
are each spaced a perfect fifth apart. This spacing seems to imply weightiness in this Sonata.
Each time the Ex. 1 motive is heard directly preceding these three above-mentioned measures, it
is more convincingly felt in two beats because of the resulting heaviness. Of course, this
heaviness results in part from the higher dynamic marking, the slower tempo, and the fact that
each time it is heard, it is paired with measures fifty-eight, sixty, and sixty-four in exactly the
same rhythmic pattern. True to its original character on the first page, the Ex. 1 motive has no
accents, but it is more rhythmically grounded because it always starts on the first beats of the
measure in measures fifty-seven, fifty-nine, and sixty-three. This repetitiveness of rhythmic
pattern becomes the norm in the middle section as the movement develops, as can also be seen in
the ritornello section that immediately follows.
At the “A tempo” section lasting from measures seventy-one through seventy-eight, there is what can be called a short ritornello section which returns one other time in measures 265 through 273, although the version in these latter measures serves a slightly different purpose because of its transitional role. In the first ritornello that begins in measure seventy-one, a disjunctive version of the Ex. 1 motive is heard on each measure and this repetitiveness makes it possible to feel two beats in each measure. In both hands, the leaps between notes become progressively wider, and this gives the motive more drive up to the highest note. The last note of the Ex. 1 motive, which is the last and highest note in each measure, is accented each time. Even though these accents fall on the quarter beat, each of the accented dyads are eighth-notes followed by an eighth-rest. This influences the way the note is approached by the pianist each time. If the note were to be written as a full quarter, the pianist might be influenced to linger on it in such a way that this last quarter beat would lose its sense of being an upbeat to the next measure.

The Ex. 1 motive is cut in half in the right hand. It can be separated into an ascending step-wise line and a step-wise line that descends, and in these measures, the ascending motive is an octave higher than the descending motive. This separation makes the passage one of the most difficult in the Sonata to execute. The final accented note is approached in the right hand by the widest leap, but there is an ascending step-wise line in the top part of the left hand that mirrors and supports the ascending line in the right. There is no descending line in the left-hand, and the notes that ascend in a step-wise manner in the left hand are placed before the corresponding right-hand notes that ascend. These ascending notes are the B-flat, C, D, and E. A sort of rhythmic counterpoint results from two lines, each one played by each hand, that move in the
same direction but are not quite together, the notes of each being intertwined almost in the manner of hocket. This aspect gives the first five notes energy, but the return of the tempo from the beginning of the piece coupled with the uniformity of the linear direction give these first five notes a feeling of being one pulse. In summary, the first beat in each measure is the initial group of five notes, and the second beat is the high accented note. Since the piece is back in the same tempo as found at the beginning of the movement where the half-note is the flexible beat, the first half-note beats of each measure are expanded by one eighth-note, and the second half-note beat is therefore shortened by one half.

The section that was described in the above paragraph as a mini ritornello has slightly differing roles at both appearances. Both times this section immediately follows both versions of the “Poco meno mosso” material, the first of which begins at measure fifty-four, and the latter of which begins circa measure 252. From measures 265 to 273, the ritornello leads back to the final section at the end of the piece, which is a somewhat varied version of the first page of the movement. In this latter version, the dynamics are tapered off a bit starting at measure 270 in order to transition into the mezzo piano dynamic beginning at measure 274. For this reason, it is evident that measures 265 to 273 serve a transitional purpose. In contrast, there are no dynamic markings to be found at the measure seventy-one “A tempo.” This absence shows that the role of the first ritornello this time is not to link a loud, vertical, and chordal section with a linear section, as is the case at the second appearance, but to lead instead to a slightly more vertical version of the Ex. 1 theme that is marked “forte.” Interestingly, the measure 265 ritornello is not marked “A tempo” in the score. In fact, the last big formal “A tempo” marking is that found at measure seventy-one, the first ritornello.
Vertical Harshness and Smooth Linearity: The Section Marked “Crudely” placed in Close Proximity with The Section Marked “with suppressed excitement”

Later in the movement, right before the return of the second thematic material, chords that contain exactly the same right-hand notes as those of measures sixty-one and sixty-two are more jagged in both sound and rhythm. This jaggedness is evident in chords containing dissonances that are created by certain notes placed in close proximity. At measure 233, Copland uses the word “crudely” to give the performer a descriptive idea for the approach to each chord. This section lasts from measures 233 through 250 and is characterized by four phrases, each of which is cut off abruptly by rests of different sizes. High, widely-spaced chords marked with double-sforzandos are also placed in offbeat positions after the second, third, and fourth phrases. At this point, the pulse suddenly can be felt to the quarter-note beat instead of to the half-note beat. There are no indications in the score for the tempo or beat to change, but the jagged, episodic nature of the phrases helps reduce the pulse size. Another reason for this shorter beat is because of the dissonant intervals being placed closer together within each chord, and the range of notes is smaller and more focused. The left-hand note pattern repeats the same chords, but while moving from one chord to the next the interval content is more varied than in the section immediately preceding. Also, notes in the left hand leap not by the smooth octaves of the preceding section but by more jagged intervals that create dissonance with notes played by the
right hand. Another contributing factor to the smaller pulse is the frequent alternation between even and uneven beats. Because of the constant fluctuation in the lengths of the chords and rests, there is less regularity over which to feel a consistent half-note pulse. The beat patterns of measures 233 through 250 are illustrated in detail in Ex. 7.

Beats are numbered according to the grouping together of chords in each phrase, and usually these chords tend to be clustered into phrases that are four or eight beats in length. This means that the first chord of each grouping always falls on beat one. The reason for this manner of attaching beat patterns to phrases is because each phrase begins as a variation on the three-note ascending motive that has been prevalent throughout this movement. In this section, this motive commences in measures 233, 236, 241, and 245, as shown in Ex. 7.
The first phrase is a declamatory announcement of this sudden change of sound texture and rhythm and is followed by a dotted quarter rest. This rest is in immediate contrast to the strongly accented quarter-note beat, so a jerky unevenness results. There are three beats of chords before this fourth-beat rest, but the first two chords fall within the first lengthened beat. The first of these chords is an eighth-note value and the second one is a quarter-note in length. The first phrase contains the same chords as the other phrases, but the almost trumpet-call-like declamation of the first phrase has a lot to do with the fact that it is cut off by a strong accent after only three beats. In contrast, the group of chords in the second phrase lasts twice as long, but it too is suddenly curtailed by an accented eighth-note chord. The two beginning chords of
measure 236, which contain identical notes to the chords in measure 233, are now two quarter-notes. Since these two chords of the same shorter length are heard soon after the more jagged beginning of the measure 233 phrase, this slight alteration of rhythm has the effect of lending the beginning two chords of the second phrase extra emphasis and clarity. The first beat of the third phrase at measure 241 also contains two quarter notes, and this is the only difference between the third phrase and the first phrase. As can be seen in Ex. 7, the second and fourth phrases are also identical. It is the variation in numbers of beats in the silent measures surrounding the phrases that keep this section on edge rhythmically.

After the second phrase, there are two shorter groupings of beats that surround the third phrase. These groupings are like short extensions that serve as buffer zones before the third and fourth phrases. The pair of beats before the third phrase (measures 240-241) begins with rests and ends with a huge chord marked with a double sforzando. The second grouping begins at measure 243 and consists of two beats of rests followed by the very same huge chord. In Ex. 7, these extra beats start over at “one” in the numbering of beats. This way, the rhythmic analysis of the phrases can single out the chord groupings as being spaced apart at varying distances in time from one another. Both the third and fourth phrases are approached from the big double-sforzando chord by way of syncopation. Someone who is listening to the music without a score will immediately notice how this third phrase is surrounded by silence. Also audible to someone without a score is how the high double-sforzando chords directly precede these phrases by only quarter pulses. Potentially less obvious to the listener is the number of rests placed between the phrases as well as their lengths at measure 240 and at measures 243 to 244. That aspect is up to the interpreter.
The recordings of Bernstein and Leo Smit differ in the degree of contrast between this section marked “crudely” and the section that precedes it, where the interpreter is instructed to play “with suppressed excitement.” In this passage, Leo Smit makes the lengths of the uneven beats and rests clear to the listener. In his recording, one can easily hear the difference between the quarter note pulse and that of the dotted quarter. It seems that the way to achieve this exactitude would be to constantly subdivide the inner eighth-notes of the beat and count these out exactly through chords and rests. The two rests at measures 243 to 244 can be felt by the listener as a dotted, and then quarter rests in Smit’s recording. Leonard Bernstein, on the other hand, is less exact with the inner subdivisions of the beats. In Bernstein’s recording, the tempos of both this section and the smoother one at measure 223 that is marked “with suppressed excitement” are more equal. The tempo is increased at the beginning of the earlier section. In Bernstein’s interpretation there is less contrast in energy between the section marked “with suppressed excitement” and that marked “crudely.” This is because there is less differentiation between beat lengths of each of these sections in Bernstein’s recording. The section beginning at measure 223 is viewed by Bernstein as leading to the “crudely” section, whereas Smit emphasizes the contrast between the two sections.

The first rhythm of the “crudely” section, an eighth-note followed by a quarter, also comprises the first beat of the section beginning at measure 223, which is more smooth and linear in nature. Step-wise parallel sixths in the right hand keep the texture smooth, and consonant intervals in general are more pronounced in both hands. Smoothness also results from the regular alternation between shortened beats and those that are regular in size. The resulting repetitive rhythmic pattern is an aspect which directly contrasts with the less predictable
juxtaposition of irregular beats in the “crudely” section. The left hand has not only the same rhythmic pattern each measure, but it also has repeating octave “D’s” most of the time. In Ex. 8, these patterns are compared to the phrasing, which can be divided into groupings of varying length, each of which always contains a shorter dotted quarter-note pulse followed by a half-note pulse.

Ex. 8

Each two-beat group has a heart-beat like feel. This is what allows the pianist to create Copland’s idea of “suppressed excitement” by reining in the pulse while at the same time building up the dynamics.

In addition to the “poco a poco crescendo” starting in measure 228, momentum is gained by length of each phrase being increased gradually. The first two phrases are short gestures that each contains two beats. These two phrases establish the two-beat rhythm that underlies each phrase, regardless of the length. The next phrase lasts for four beats and is heard this way for two reasons. First, there is a slur in the score that connects all four beats in measures 225 and 226. Second, this phrase contains notes that are identical to measures 223 to 224, yet with the
second beat of measure 225 increasing the forward momentum by not coming to a rest on a half-note. This way, all of these chords are linked together as one phrase. Next, measure 227 contains a phrase that only lasts for two beats. The first of these beats is a new start, so to speak, because the chord is higher and the dynamic marking has increased in a manner that is sudden. Also, the slur covers only the two beats. An E-major chord results from the mixture of notes on the first beat, which is the highest chord in range thus far. Measures 228 and 229 are linked together in the same manner as measures 225 and 226: by changing the half-note into a quarter note. The two chords (and two beats) of measure 230 are identical to those of measure 227, but measures 228 to 230 contain six beats because of the lack of half notes. All notes in these two measures divide the half-note pulse via quarter-note momentum, and this is what creates the forward momentum over the break in slur on measure 230. The same principle links the four beats of measures 231 to 232, which finally ends with a half-note. So far, most of these phrases conclude with a half-note rhythm before the commencement of the next phrase. The exception is the end of the six-measure phrase that begins in measure 228, since the two half notes comprising beat six leads directly into the next phrase. This measure is the apex of the section in terms of forward momentum. Measure 231 is recognizable as the start of the final phrase because the three note motive begins on the first beat.

The section beginning at measure 223, marked “with suppressed excitement,” and that which begins at measure 233, marked “crudely” are separate examples of the Sonata’s linear, smooth facet placed in close proximity to its more chordal, jagged, and harsh facet. In the latter facet, first introduced at measure fifty-four, the beat patterns tend to be shorter as well. Close juxtaposition of two sections so contrasting in this manner is unusual for this movement, and this
placement creates a resulting climactic effect. What takes place in the Sonata from measures 223 through the next page is a summary of both the long-term build-up and development of the linear Ex. 1 theme as it leads gradually to the chordal second thematic area at measure fifty-four. As was described above, it takes two pages for the rhythmic and thematic material found at the beginning of the movement to organize into a regular, and shorter, pulse. Also, the chordal section at measure fifty-four lasts for a page and stays mostly homophonic through measure ninety-eight. The section to be played “with suppressed excitement” at measure 223 is immediately preceded by the measure 204 right-hand melody. This middle section contrasts with the rest of the movement because the right-hand melody has no motivic relation to any other part of the movement. It instead foreshadows a theme which comes toward the beginning of the third movement. This placid, unrelated theme, in turn, is reached by a build-up of rhythmic momentum that takes about four pages.

**Development: Combination of Vertical Chords with Linearity**

From measure seventy-nine onwards, varying degrees of chordal heaviness are increasingly combined with linear aspects to create a sort-of developmental section in two parts. The first part of this development, which lasts from measure seventy-nine until the key change at measure 125, mirrors the buildup that takes place before the measure fifty-four second thematic area. This first part of the development is motivically and rhythmically similar, but not exactly
the same as the earlier section. There is a resulting buildup of energy and momentum as the
movement takes approximately four pages to arrive at the linear and sparse middle section at
measure 204, discussed above. Measures 126 through 176 comprise the second section of this
development. Before measure 204, the build-up becomes increasingly episodic in nature,
especially after measure 126, because there are short, repetitive rhythmic patterns that emphasize
beats smaller in size than those found in the opening part of the piece. The motives and textures
in each short “episode” tend to be repetitive as well. From measure seventy-nine through the
climax at measure 176, thirteen of these short, episodic sections comprise both parts of this
developmental section.

The first part of the developmental section can be seen as being a slight variation of that
of the opening section of the movement up to measure fifty-four. The first version of the
opening Ex. 1 theme of the piece to be marked “forte” appears at measure seventy-nine. The
first two of these measures make a good point of departure from the “A Tempo” ritornello
section because of the direct beat pattern relation. In the second episode, measure ninety, there is
an imitative treatment of the Ex. 1 theme where every two-notes of the theme become a vertical
dyad. The uneven beat consists of a quarter note followed by a dotted quarter until measure
ninety-five, then for the next four measures the pulses in the pattern switch to dotted-quarter beat
followed by a quarter beat. A sforzando emphasizes the beginning of each grouping, so that the
three-note theme is heard very clearly. In measures ninety-six through ninety-eight of episode
two there is found a variation of the Ex. 2 double sixths theme. Episodes three and four, which
last from measures ninety-nine until 125, are transitional in nature because they seem to serve the
same function as that of measures twenty through fifty-three. This function is to create
intensification by way of dynamic intensity and energy to a section of the movement that has a higher dynamic marking, more note density in the texture, and more vertical chords that cover wider ranges and that are denser with notes. These two episodes increase in dynamics from piano to forte. Measures 112 through 117 of episode four are similar to measures twenty-eight through thirty-six in the imitative use of the Ex. 1 motive and the coming together of the hands for the Ex. 2 motive. In a similar fashion, measures 118-125 are similar to measures forty-one through fifty-two. Here, both uses of the Ex. 2 thirds doubled in right-hand octaves and the single bass note in the left-hand are almost exactly alike rhythmically and motivically, but they are both in slightly different keys. The rhythmic patterns, the motives, and the notes themselves become increasingly repetitive in episode four in preparation for this sort of concentration of rhythm and motive in the episodes that follow.

Energy builds in the second part of this developmental section mostly as a result of the episodes being shorter, and the beat patterns, in keeping with the shortness of the episodes, tend to be more repetitive. Energy also builds through increase of both note range and density of notes within a chord. Measure 126 is an arrival point, and the rhythm of the Ex. 1 motive is increasingly manifested in a less linear manner from here until the measure 176 climax. Therefore, it is evident that the function of the music here is to keep up rhythmic energy by emphasizing smaller quarter-note sized beats. This is achieved first of all by placing on the quarter or dotted quarter beats chords that contain many notes covering the range of an octave or more. Accents are also frequently placed on these large chords or octaves. The smaller beats are often placed in positions within each beat pattern where they get reiterated due to the repetitiveness.
Episodes five through thirteen comprise this second section. In each of the six measures of episode five beginning at measure 126, there are found versions of the Ex. 1 motive that become increasingly expanded in range. This is accompanied by a left-hand version of the transitional material that is found the right hand part of measures 118 through 125, derived from Ex. 2. By measure 132, the left-hand octaves move lower in range as episode six is reached. Here, the left-hand motive derived from Ex. 2 is moved into the right hand and accompanied by resonant single bass notes. These bass notes ring because of their being two or three octave lower than the material in the right hand. In episode seven beginning at measure 137, only the ascending part of Ex. 1 is present in the right hand, but every other note is displaced at the octave. A version of the Ex. 1 motive that is focused in a more linear manner and more narrowly confined in range is played by the left hand in the middle of the piano. This focus of notes within a more limiting range characterizes measures 143 to 145, which make up episode eight. Dense chords in the right hand are repeated over a repetitive version of the Ex 1 theme that is in the left hand. It is during these middle episodes that the use of accents becomes more frequent. The ninth episode lasts from measure 146 through measure 154 and is almost an exact transposition down a half-step of the notes and rhythm of episode seven. This repetition is followed by a three-measure descending pattern that starts at measure 152. Episode ten, measures 155 to 156, contains exactly the same beat pattern as episode eight minus one measure. It also contains the same left-hand pattern, but in a “different key.” Episode eleven, which lasts from measures 157 to 163, has a palindrome as a beat pattern. This rhythmic pattern is longer, and there is no accentuation of any kind placed over any single note. The octaves in the left hand ascend the entire time, while the right hand notes descend in a step-wise manner with the notes
displaced by the octave. Linear and vertical aspects begin to be blurred because the forwardly-directed phrasing is given a very solid pillar-like rhythmic foundation with the left-hand octaves. Since octaves fall on each quarter-note beat in episode twelve, lasting from measures 164 until 169, and because of the repetitiveness of each of the three short motives, this shorter beat is emphasized even more as a climax is reached. This climax is the high-point at measure 169 with a dissonant chord that covers a wide range.

Episode thirteen of this developmental section is a perfect transitional elision with the linear material that follows. This is because the linear version of the Ex. 1 motive is made vertical from measures 170 until 176 by way of accents that are placed on each quarter beat. At measure 178 is found the same version of the Ex. 1 motive without any accents as is found at the beginning of the movement. This version of Ex. 1 motive found at measure 178 is the beginning of the transition to the contrasting middle-section theme. The last note of episode thirteen, a pedal F#, is to be held indefinitely throughout the first statement of the Ex. 1 theme in the right hand. Episode thirteen is a culmination of both the vertical and linear aspects of the movement that have been gradually united throughout the previous four pages of the movement. A study of the rhythmic patterns of the two developmental sections and the resulting evolution of the feel of the pulse will reveal subtleties in Copland’s use of size of rhythmic pattern and how it influences energy build-up. Over the course of these two development sections, Copland uses offbeats and irregularly-sized beat patterns in such a way as to force the beats to shrink to around the size of a quarter-note.

The Ex. 1 theme found from measures seventy-nine until eighty-nine constitutes episode one. This episode can be seen as a return of the more linear opening thematic material of the
piece, but is also influenced by the more vertically felt pulse of the “A tempo” section that comes immediately before. Measures seventy-nine through eighty-one each continue verbatim the beat pattern of each measure of this “A tempo” section, which is a half-note pulse increased by one eighth-note followed by another half-note pulse cut in half. This way, there is an elision via pulse pattern, the only difference being the lack of accent on the second beats of each measure.

On the second beat of measure eighty, the G# goes an octave lower than was the case on the previous measure. This variance of range also serves as an articulator of beats, as does the “forte” marking. In both of these measures the second beat is felt almost as an upbeat because of its shortened quality in comparison to the preceding beats. These two measures are followed by measure eighty-one which contains the left hand pattern consisting of double sixths that first appeared in measure six. In Ex. 9, the beat patterns are shown for episode one.

Ex. 9

The first three-measure phrase of rhythmic pulses consists of five beats of varying length, the first two measures having a regular pattern. Measure eighty-one can be heard as a single beat because the last quarter-beat chord is placed in a position of less prominence than that of the first
one. There are five eighth-notes total in this measure, the same number as that of the first beats of the previous two measures. This first phrase is followed by a second three-measure phrase, measures eighty-two through eighty-four, that also ends with the left hand double-sixths.

In measures eighty-three and eighty-four the motive in minor thirds, which is shown in Ex. 2, is tagged onto the end of the Ex. 1 motive. The group of six eighth notes in measure eighty-three, for the same reasons as is true for the first version motive back in measures eight to nine, is one pulse. This grouping of six eighth notes is immediately preceded by one lengthened beat of five eighth notes. Since the main beat here at the beginning of the development section goes back to the half-note due to the linear, non accented quality, measure eighty-three is an expansion by one half of the main pulse value. This measure can almost be felt as two dotted-quarter-note-sized beats because of the “forte” marking and also because of the repeated rhythmic pattern within the measure, but there are no accents marked in the score, and the range in this measure is very narrow. There are no wide differences in range that demarcate the beats as are found in measures seventy-nine and eighty. Because of these factors, it makes more musical sense to feel this version of the Ex. 2 motive as an unbroken extension to the Ex. 1 motive that has precedent in measures seven through ten. The last note, a “G#,” of the Ex. 2-derived motive, however, is a single beat that is suddenly cut off by the commencement of the left hand sixths. They begin a quarter note after the right hand melody note. Therefore, these left hand dyads are rhythmically in the same relation to the right hand as was the case in the first phrase. For these reasons, the listener would naturally hear the first two left-hand dyads of measure eighty-four, plus the first quarter beat of the third dyad in measure eighty-five, as a beat.
This beat, which is number four as shown in Ex. 9, consists of five eighth notes, just like the first version at measure eighty-one.

In a way, episode one can be seen as a concise summary of the motives and rhythms found on the first page of the piece. The last five eighth notes of measure eighty-five until measure eighty-nine are rhythmically identical to its measures fifteen through nineteen, so they can be felt with the same pattern of uneven beats as was outlined in Ex. 3. Upon perusal of the beat patterns outlined in Ex. 9, it is immediately evident that after the initial three measures of repetitive beat patterns, the beat patterns begin to become irregular again, in keeping with the linear section at the beginning of the movement. In this way, this initial lack of regularity is a good starting point for a development section. This is because the use of irregularly-sized pulse patterns first, then regular pulse patterns later on, is what is developed in combination.

Episode two lasts from measure ninety through measure ninety-eight and keeps to more consistent pulses that are each five eighth-notes long. For the first four measures, each pulse lasts for a measure, and they can be felt as being subdivided into a quarter pulse and then a dotted quarter pulse. Then suddenly from measure ninety-five, this inner subdivision of the pulse suddenly reverses. The subdivision of the pulse is convincingly delineated by the consistent placement of two-note chords on each subdividing rhythmic value. Notes that comprise the Ex. 1 motive are divided into three vertical two-note chords and each of these groups of chords is shared between the hands. The statements are alternately stated by the right, then left hands repetitively in such a way as to place the beginnings of each statement on the first pulse of each measure. A sforzando being placed at the beginnings of each statement is the main reason that one pulse per measure can be felt. High and low chords respectively further
demarcate the measure-lone pulses at measures ninety-six and ninety-seven. As a result, the
progression of dyads is less streamlined in a linear manner, and the vertical rhythm is felt more
strongly because of the more jagged nature of these measures. The jaggedness combined with
the extra eighth note dyad creates a certain rhythmic verve that can be highlighted and even
exaggerated by the performer. It is revealing that Copland even places a “forte” marking under
the high dyad in measure ninety-six. The “forte” marking that is back in measure ninety would
seem to be enough of a sufficient cue to the performer to play all of these measures within this
dynamic.

In contrast to the previous episode, the first five measures of episode three are suddenly
quite linear in nature, but the repetition of rhythmic pattern is a factor that this episode shares
with the one preceding. At first an ambiguity can be felt in regards to whether each beat begins
on the first quarter beat of the measure, or whether it begins on the first eight of each group of
five eighth notes. Because of the placement of the subito “mf” in measure ninety-nine, the
repeating rhythmic pattern most likely begins on the eighth note. This can be heard in the
recordings of both Bernstein and Smit. This repeating pattern consists in its totality of a group of
five eighth notes followed by a quarter note, and it lasts until measure 104. At this point, the Ex.
2-derived motive appears again. Interestingly, in the middle two statements, the motive is the
same in that the last two eighth notes rise up to an “F#” via neighbor tone motion. The “F#”
quarter note always is placed on the downbeat, but the interpreter can either emphasize the
quarter-note downbeat, or phrase away from it by giving the first of the eighth-notes in each
pattern some emphasis. Leonard Bernstein, who in his interpretation of this movement
emphasizes the big beats with less exactitude accorded to the smaller inner beats, gives both the
beginnings and endings of each motive almost the same emphasis. He does, however, approach the final quarter notes melodically by making a sleight decrescendo. Leo Smit emphasizes the first eighth notes of each motive in an even more pronounced manner that Bernstein.

In episode three, the lack of emphasis on the last quarter note in each statement implies that in measures ninety-nine through 103 each beat lasts for the length of seven eighth-notes. As these five statements repeat, there is a kind of suspended animation in these measures because of the floating quality, as if the music is in a holding pattern not sure what to do next. After all, this is an episode that is transitional in nature. I would make this the exception to Kanovsky’s conclusion that a beat can only be expanded by one half of its original time value and still be felt as a beat. The main reason for this is that particularly for the duration of episode two and even earlier, the beat has always been large and it has consistently had a strong sense of being subdivided. In fact, from the beginning of the movement, the Ex. 1 and Ex. 2 motives have always been constructed rhythmically as a group of two eighth-notes followed by a group of three. The subdivisions are mostly underneath the surface because of the linear quality and lack of accentuation of the Ex. 1 motive from the beginning section of the piece. At the “Poco meno mosso” in measure fifty-four, these two subdivisions are felt as two beats. Then after the “A tempo” at measure seventy-one, where the larger beat is followed by a shorter upbeat-like beat, the episode two beat is subdivided into two beats that are more equal in duration. Therefore, the listener is prepared by plenty of precedent for feeling the last quarter note of the beat pattern of episode three as a subdivision of a huge beat rather than as a separate beat.

From measure 103 through the rest of episode four, the size of the beat evolves from that of a larger group of five or six eighth notes into a smaller quarter-note-sized unit because of the

16 Ibid, 26-31.
placement of doubled octaves at these smaller beats. The rest of episode three is similar to that of measures twenty through twenty-seven from the first page of the movement, only this time in a new “key.” Starting at episode four, measure 112, the linear flexibility of the six and seven-beat rhythmic pattern/motives is reigned in as the pulse size is reduced. The Ex. 1 motive followed by a single quarter note is repeated here five times: twice in the right hand, measures 112-113, once in the left hand along in measure 114, and twice with both hands together in measures 115-116. First, the Ex. 1 motive is without accentuation of any kind. Then from measures 113 to 114, the motive ends with an octave marked with a tenuto instead of a single quarter note. In the next measure, the left hand version of the motive is separated in half by the octave in the same manner as in the previous “A tempo” section. These leaps automatically imbue the passage with more energy because of the effort required to execute them. As a result, the tenuto quarter notes are made into more convincing stopping points. At measure 118, the motive from Ex. 2 is doubled at the octave at every quarter and dotted quarter beat. Here, the repeating rhythmic pattern is exactly the same as that found back in measures forty-one through fifty-two, though slightly shortened in number of repetitions at measures 118 through 125. The rhythmic values of the left-hand notes tend to be single quarter and dotted-quarter notes that ascend for a higher range, which is in contrast to the corresponding left hand pattern of measures forty-one through fifty-two. In the latter section, the resulting left hand motive is less constricted, and, as a result, it couples two rhythmic phrases together as a forward moving pattern. In contrast, the corresponding section two pages back tends to be felt as one beat pattern/phrase at a time because of the more repetitive and constricted range of the left hand.
The change in key signature from five sharps to none for the first time in the piece at measure 126 signals that there will be more harmonic, as well as rhythmic variety. Episode five lasts from measure 126 until measure 131. Later on, accidentals fall away seemingly at the last moment after the transition from the busy development into the placid middle section theme at measure 204. Despite this, the “C major” key signature remains until measure 223, which is the measure explained above that is marked “with suppressed excitement.” This second development section is more chromatic and exploratory harmonically while, on the other hand, the motivic rhythmic patterns become shorter and more concentrated. It is at this point that the beats have completely evolved into quarter note size. Underneath the direction to play “forte” and “half-staccato” in measure 126, there is an instruction to play the Ex. 2 motive “marcato” with the left hand. As was the case at the end of episode four, notes on the dotted quarter and quarter beats of the Ex. 2-based motive in the left hand are doubled at the octave. The repetition on most measures of the Ex. 2-based motive with the Ex. 1 motive creates fast flexible beat patterns that often create a syncopation-like effect via accentuation and misalignment of rhythmic patterns.

In fact, the misalignment of the rhythmic patterns in measures 128 to 131 in episode five contributes to the pulse being felt more convincingly on the quarter beat. In this episode the left-hand descending octaves create an interesting cross rhythm that moves against the more regular five-eighth-note-plus quarter note version of the Ex. 1 motive. Throughout episode five the rhythm of the Ex. 1 motive is repeated verbatim in each measure by the right hand except in measure 131 where it is shortened. The motive expands melodically upward on the last quarter notes of each measure to successively higher notes. This upward motion compliments the
downward intensification of the left-hand octaves. At measure 128 the left hand sheds eighth notes and moves along in quarters as it moves in sync with the beat divisions in the right hand. By pushing across the measure line to the next downbeats, the quarter-note octaves in measures 128 through 130 negate the pause on the last quarter notes of the Ex. 1 motive that we have become accustomed to feeling. Further, these left-hand octaves are fighting against the quarter-dotted quarter-quarter rhythm in the right hand because the first octaves in measures 129 through 131 are always accented and placed on the middle eighth-note of the dotted-quarter-note figure. The left hand in these last three measures of episode five is in a 3+2+2 division of the seven-eight meter, while the right hand continues in the usual 2+3+2 division of the meter.

Episode six, which is a shortened transposition of measures 118 through 125, consists of three short rhythmic phrases. The first phrase is the length of measure 132, the second phrase spans measures 133 to 134, and the third phrase lasts from measures 135 to 136. During these phrases, the left hand begins on a low C# and works its way up. Resonance is created by the wide separation in range between the hands at measure 132. These three phrases combine linear aspects with shorter, more horizontal quarter-note-sized pulses. The first measure of this episode is an arrival point that is approached by the reiteration in the right hand of the same quarter note octaves played by the right hand in episode five. These three phrases are linear in a sense that the direction of each phrase is forwardly directed due to dynamics and pedaling, in addition to the repetitive rhythmic pattern. Both hands ascend, and the left hand roughly outlines an A major triad while doing so. The “fortissimo” dynamic marking, the accent marking on the first quarter-note beat of measure 132, and the leap up an octave of the C# in the left hand create an agogic effect in regards to approaching the next beat. Another fact that stretches out these first
two beats in a vertical manner is the increased length of the second beat, which is a dotted quarter. In measures 133 and 134, the texture becomes more linear as there is a built-in intensification for the second and third phrase. This intensification is a result of the repeating quarter-dotted quarter-quarter rhythmic pattern along with the almost exact repetition of the notes. In the third short phrase, the last quarter beat goes one step higher than it did in the second phrase.

Episodes seven through ten continue the use of repetition and reiteration to build up energy and intensity, and this time a larger phrase structure is created. Episode seven begins at measure 137 and lasts until measure 142, episode eight begins at measure 143, episode nine lasts from measures 146 until 154, and episode ten comprises measures 155-156. Episodes seven and the first four phrases of episode nine are mostly exact transpositions a half-step apart. Episode ten is also a repetition of episode eight a minor third lower with some variance in the right-hand chords. The manner in which the transitional material at the ends of episodes seven and nine differs is what gives the entire page cohesion and forward motion. Episodes seven and nine seem to relate in a more subtle and less obvious way through the concept of phrase expansion. Just as the small phrases in both episodes seven and nine are expanded by additional quarter note beats, episode nine is also expanded by a descending climatic passage of six beats. The character and function in the ends of these two episodes is different for both.

The pulses of the eighth-note passages in episodes seven and nine seem to be temporarily stretched to the length of five eighth notes because of the step-wise motion and lack of accentuation of these eighth-note groups. The notes in episode seven are displaced by the octave but in a manner slightly varying from the evenly split Ex. 1 motive in the measure seventy-one
“A tempo” section. In aggregation, these notes, though doubled an octave apart most times, simply move up four steps in the right-hand in each phrase. The doubling as broken octaves takes place in measures 137, 138, 140, and 141 in episode seven, and in episode nine measures 146, 147, 149, and 150. Because of this step-wise melodic focus in the right hand and because of the left-hand motive staying similar to the original Ex. 1, the beats covering each of these groups of five eighth notes are not felt as being reduced in size to quarter notes. The ascending melodic step-wise motion is prevalent, and because of this, the quarter and dotted quarter beats are less easily articulated during each eighth-note group. There is always an immediate goal reached in each phrase because the fourth notes of each of the ascending step-wise lines always constitute beat two in each pattern, a quarter-note octave. Episode seven, like its counterpart episode nine, consists of four short flexible beat patterns the second and fourth of which contain a differing number of beats. These four patterns can be experienced as four short rhythmic gestures, which are shown in Ex. 10. Most of these gestures last for two beats each. This is because, episodes seven and nine both ascend in a linear manner just like episode six.

Ex. 10

\[ \text{b=half-note} \]

First four phrases of both Episodes seven and nine:

bars 137-138; 146-147  bars 138-139; 147-148  bars 140-141; 149-150  bars 141-142; 150-151

\[ \frac{5}{8} \quad \frac{7}{8} \quad \frac{4}{8} \quad \frac{5}{8} \quad \frac{7}{8} \quad \frac{3}{4} \]

\[ b_1 \quad b_2 \quad b_1 \quad b_2 \quad b_3 \quad b_4 \]
The additive rhythms at the ends of these phrases introduce ambiguity into the regularity of the pulse at the ends of each phrase. Since the beginning of the movement we have been trained to feel these five-eighth-note groupings as one slightly enlarged half-note beat. As described above, this has even been the case at the “A tempo” at measure seventy-one, the rhythmic pattern of which consisted of a five-eighth-note group followed by a short quarter note. The first phrases of episodes seven and nine also fit into this familiar pattern. Then the beat lengths of the second phrase are almost felt as being more equal in length. Both quarter notes of measure 139 can be felt as a single beat close to the size of the five eighths of measure 138, but emphatically divided in half by the tenuto marks that are placed on both octaves. These two octaves can be considered one beat. But they can almost be considered two beats, as well, because we as the listener have been trained to expect a new beat to begin after the single quarter note. At the end of the fourth phrase, measure 142, the accent markings placed over the last two of the three quarter note octaves, and the octave leap in the right hand, suddenly focus the pulse onto each of these quarter notes. This sudden emphasis on the smaller beats almost has a feel of the syncopation that is found in jazz. What was just explained also applies to episode nine, with the exception of the last phrase, measures 150 to 151.

Measure 151 is the exact counterpart to measure 142 in terms of note values, pulse, and articulation, but visible evidence in the score of its differing melodic function is seen primarily in the difference in direction of the notes between these two measures. In measure 142, the last two octaves in the right hand make a downward leap of an octave, and these last octaves serve as a bookend for episode seven before the immediate commencement of the more vertical episode
eight. In contrast, the octaves leap in shorter intervals in measure 151 and are focused forward and upward melodically. In fact, the intervals increase by one step each time. First, the distance from the first quarter note of measure 151 is a minor third, then a perfect fourth from beat two to three, then up a fifth to the high “F” at the beginning of the next measure. Also, the leaps alternate in direction each time. Furthermore, the E-flat octave on the second beat can be heard as reaching the high “F” by step, even though the octaves are separated. In contrast, the three quarter-note octaves of measure 142 lead downward by three octave G# notes, the third being at the beginning of episode eight. Because of this downward leap preceded by an upward leap of a perfect fifth, it would make more sense to use rather abrupt and energetic “hairpin” dynamics rather than to crescendo through the measure and into episode eight. The large and accented chords in episode eight give further emphasis to the smaller quarter beats. In contrast, the implied dynamics in measure 151 octaves would most likely constitute a crescendo to the following downbeat, even though none is marked in the score.

Measure 151 followed by the extension of episode nine lasting from measures 152 to 154 can be interpreted as containing a built-in rubato. This rubato results from the longer dotted-quarter-sized pulses being placed after the three accented quarter-note octaves. In this extension, the irregular beat can be felt more easily at the quarter-note level because of the consistent placement of accents on quarter beats and because of the single quarter notes in the left hand. A crescendo and a small rallentando in measure 151 seem to make more sense because of the step-wise melodic approach to the three-measure extension beginning at measure 152. Descending step-wise motion in the left-hand leading into measure 152 intensifies the sense of arrival as well. The first dotter-quarter-beat of measure 152 is the highest point in the right-hand range,
and it is also the point where both hands are the farthest apart, so it is the most convincing arrival point. On the first eighth-note, the combination of the G-flat octave with the much higher F octave creates a clangorous resonance. Because of this, the performer can linger on the chord through the first quarter beat of measure 152. The rest of the quarter-note beats have a tumbling effect because of the arpeggiated figure that descends four octaves in the right hand. Within these three measures there are two identical rhythmic patterns. Ex. 11 shows this flexible beat pattern.

Ex. 11

\[
\begin{align*}
\text{b}= & \text{quarter note} \\
\text{bar 152} & \quad \text{153} & \quad \text{154} \\
\frac{3}{4} & \quad \text{b}_1 & \quad \text{b}_2 & \quad \text{b}_3 & \quad \text{b}_1 & \quad \text{b}_2 & \quad \text{b}_3
\end{align*}
\]

The beginnings of each beat are always marked by an accent marking and an octave. Also, the quarter note and dotted quarter note beats are arranged differently in each measure. There is no point of pause between the rhythmic pattern and its repetition, so after the slight rallentando at measure 151 that continues into measure 152, an accelerando is implied by the direct descent down the octaves. One can almost feel each of these three-beat patterns as a single beat because of this lack of pause.

In Episodes eight and ten, the set class (027) is manifested once again within the context of heavy, vertical chords. Episode eight lasts from measures 143 to 145, and episode ten lasts from measure 155 until measure 156. The three-beat rhythmic pattern, which is a quarter note,
dotted-quarter-note, and quarter note again, repeats in each measure. All three measures of episode eight contain identical notes, rhythm, and articulation, as do the two measures of episode ten. In episode eight the set class (027) is found in normal form in the lower part of each right-hand chord. The notes are F#, G#, and C#. These same three notes are each spaced a perfect fifth apart within the same chords. In episode ten, the upper three notes, B-flat, C, and F make up set class (027) in normal form. Accents are different for each of the three chords found in each measure in each episode. The other time that this set class has been used in a similar manner is in measures fifty-eight, sixty, and sixty-four back in the “Poco meno mosso” section. In both episodes, the accent scheme is: accent for the first chord, tenuto mark over the longer middle chord, and accent plus sforzando mark for the third chord. The beat being most convincingly felt at the quarter note is due to this plethora of accentuation, as well as to the repetitiveness of chords that are dense with notes in comparison with the material that surrounds these episodes.

A possible reason for there only being two measures in episode ten instead of three is to create a rhythmic elision between episodes ten and eleven. In episode ten and as a precedent, in episode eight, the last quarter-note pulse in each measure has been heavily emphasized with a thick chord ranging a ninth, marked with both a sforzando and an accent marking. The first measure and the first quarter beat of the second measure in episode eleven has the same beat combination—a quarter note and a dotted-quarter-note—as each measure of the previous episode. Then there are four more quarter-note vertical beats that follow. Therefore, the elision lasts from measure 157 until the first beat of measure 158. Because of the last quarter-beats of episode ten being heavily accented, one has become accustomed to hearing the four quarter notes of
measures 158 and 159 in a more vertical manner. This long string of quarter-note-sized flexible beats becomes almost similar in feel to a string of syncopations as heard in jazz music.

The irregular beat pattern in episode eleven can be broken up into three phrases, and both linear and vertical aspects are combined to a further extent than anything that has been heard previously in these developments. In fact, this episode can be called the longest uninterrupted “line” found thus far because of the continuous step-wise linear motion. This episode lasts from measure 157 until 163, and the flexible beat pattern is shown in Ex. 12. These phrases get progressively shorter. In a manner similar to that of episodes seven and nine, the upper notes in the right hand part move along by step via various interlocking wide intervals such as octaves, ninths, and tenths. This time, the left-hand octaves are ascending by step. The resulting figure places two eighth notes on each quarter beat that are both spaced apart an interval that is wider than an octave most of the time. Quick back and fourth motion in the right hand is what this passage elicits from the pianist, and this serves to further enhance the emphasis on the step-wise higher notes of the right hand. Most of these high notes fall on the beginnings of the quarter-beats, and this is how the beats are emphasized despite the fact that the music is moving forward in a linear manner.

Even though both hands move in continuous scales in contrary motion throughout episode eleven, the episode is broken up into three phrases. These three phrases result from the placement of the dotted-quarter-note beats, each of which serves as the first beats of the second and third phrases. This rhythm is always manifested as a quarter note followed by an eighth note in the left hand octaves, and the illusion of syncopation is created in the subsequent quarter notes. In the first and second phrases, the four quarter note octaves in the left hand following the
dotted-quarter pulse have the same melodic shape. This shape is a downward skip followed by two upward steps, and it can serve as an audible delineator of the three phrases. In the right hand, the eighth notes that fall within the dotted-quarter-beats are always beamed together. The figure that results always contains a wide downward leap followed by a wide upward leap, and the first and third eighth notes being always a step apart. Due to the placement of this dotted-quarter figure, the three phrases grow progressively shorter. As seen in Ex. 12, measures 157 through 159 form what one can call the first rhythmic grouping.

![Ex. 12](image)

Then the second grouping lasts from measures 160 until 162 with the dotted quarter note pulse followed by another grouping of four quarter-note pulses. At measure 163, the third grouping is very short as the flexible beat pattern ends as it began, only backwards. The quarter-dotted-quarter rhythm from measure 157 is reversed in measure 163.

Episode twelve is a series of three phrases that ascend in a sequential manner, and there is ambiguity in regards to the length and placement of the pulses. Each two-measure grouping contains flexible beat patterns that can either be felt as a series of smaller flexible beats at the quarter note or as a coupling of two larger half-note-sized beats. This episode begins at measure
164 and lasts until the double-sforzando chord at measure 169, and the patterns are outlined in Ex. 13.

Ex. 13

The beat patterns per two-measure grouping are practically identical to each other in size, and the octave doublings are also placed at regular intervals. Both hands double the octave in a uniform manner. In the left hand, there is a pedal A# that is reiterated via octave doubling on the same parts of the beat that get emphasized by octave doubling in the right hand. These octave doublings help to delineate a flexible beat division of a quarter note and dotted-quarter-note in measure 164, then two quarter note beats in measure 165. The exact same pattern repeats in measures 166 and 167, and the right hand motive is the same in these later two measures except for it beginning a third higher. Despite the octave doublings, there are no accents on quarter-sized beats. In the third couplet beginning at measure 168, the flexible beat pattern is cut off abruptly by the subtraction of a quarter beat from measure 169. It should be kept in mind that according to Kanovsky’s ideas about irregular beats and flexible beat patterns, when a group of irregularly-sized beats is repeated in the same order, the beats become regular\(^{17}\). This repetition

\(^{17}\) Ibid, 5.
of beat pattern is true to a certain extent in this middle section of the movement, but there is enough variety in pulse pattern from one episode to the next and often within many episodes. For this reason, it makes more sense to view beats in these sections as mostly irregular flexible beat patterns. However, the rhythmic pattern, as well as the motive, in episode twelve is repetitive to the extent that one can conceivably feel the pulse of this episode as being made up of one flexible half-note beat per measure. The use of pedal is not specified in the score, but it can be used to enhance the feeling of the pulse of the larger beats. In fact, the decision of the performer to use pedal or not in episode twelve probably is the determining factor as to whether the beat is felt at the quarter note or at the half note.

There is a steady increase in a linear forward motion that gathers momentum in earnest in episodes eleven and twelve. The linear nature of episode twelve is enhanced further by regularity of motive and flexible beat, as well as by the motive moving up each time. This seems to suggest that the function of these two episodes is to create a build-up of energy. In these two episodes are found none of the rhythmic stops and starts that are encountered frequently in the earlier episodes. The constant eighth-note motion serves to enhance the forward motion in both these episodes even though the presence of smaller quarter-note sized pulses is more consistent in these episodes than before. In fact, if one were to pinpoint the main evolutionary process in these development sections, it would be the eighth-note motion becoming increasingly constant. This builds up energy in concert with the linear direction being more stream-lined over longer periods of time, hence the goal-oriented quality of these phrases. At the end of episode twelve it takes a huge chord with a double-sforzando accent marking to put a halt to the build-up of fast notes.
Throughout episode thirteen, it is most obvious that the quarter note pulse is emphasized, and evidence of this being Copland’s intention is shown by the placement of the accents on the flexible quarter-note beats and also by the arrangement of notes between the staves. The episode lasts from measure 170 until measure 177 at which point the version of the Ex. 1 motive returns over a pedal F#. During these seven measures, it is made obvious in the score which notes are right-hand notes and which notes are to be played by the left hand. The notes are arranged in the score so that each hand alternates in playing every other note. The right-hand notes, over which most of the accents are placed, fall on the first parts of the quarter-note beats. Copland could have easily used one line of the bass clef, and the line derived from Ex. 1 would have still been legible. Instead, Copland ended up making the smaller, more energetic flexible beats more visible to the performer by using two lines of the bass clef so that the performer approaches them in a more percussive manner. The large double-sforzando chords in measures 171 and 174 serve as pillars for the rhythmic structure. In measure 175, at the end of the third pattern, the notes are spread very widely apart in this version of the Ex. 1 motive. The right hand goes more than an octave higher to play the C# octave which begins the dotted-quarter-note beat. As is clear in the score, this second beat of the measure is separated by much higher range from the first beat. This isolation of the “C#” octave enhances its accentuation.

In episode thirteen, there are four rhythmic patterns, each of which contains four flexible beats, and these patterns serve as a structural foundation as they unify the episode into a phrase. Ex. 14 shows the flexible beat patterns as well as how these beats are connected to the rhythmic values and articulations seen on the page. It would seem to make more sense to begin each rhythmic pattern at the beginnings of measures 170, 172, and 175 where versions of the Ex. 1
motive commence on the same note. This makes sense for the first two patterns, the second one beginning in measure 172. As can be seen in Ex. 14, the first two beat patterns are identical to each other.

Ex. 14

Episode 13: Repeating beat patterns.

\( \text{\textit{b}= quarter note} \)

The first assumption would be to view measure 174 as a two-beat extension that is tagged onto the second flexible beat pattern, making this pattern into six beats instead of four. This way, the third beat pattern would begin with the Ex. 1 motive at measure 175. If the beginning of the third beat pattern is placed on the first beat of measure 174, then the sforzandos in measures 174 and 175 both fall on beats two and four in this pattern. These two measures are now linked together, and the rest in measure 174 feels not as much out of place.

In episode thirteen, a strong sense of syncopation quite suddenly presents itself because the large accented chords are all placed on the weak beats with the exception of the final “F#” at measure 176. Within the first four-beat phrase, the big accented chord gives the fourth beat a strong, emphasis in the manner of cut-off syncopation. The listener expects the corresponding
beat in the second pattern to have the same emphasis, and when this big chord is delayed by a few additional beats of rests, it losses its rhythmic connection. Also, for the preceding three pages of the movement there has been a constant stream of quarter beats without any rests in-between, so the rest can feel sudden and awkward if not put in the proper context. This quarter-note rest can also feel awkward if it is not given a stronger spot in the flexible beat pattern. With the quarter-rest falling on the first beat of the pattern, it serves as a convincing silent springboard to the strong accents on beats two and four of the second phrase, as is seen in Ex. 14. These two off-beat accents serve as a structural grid that keeps the pulse placement regular. This placement of off-beats also allows the final double-sforzando “F#” in measure 176 the advantage of falling on a stronger beat. Psychologically, the performer will view this note as falling on a beat that is to be emphasized as a goal point or beginning of a rhythmic pattern. The dynamic markings in the score already point to this. In measure 174 the chord is marked with a double-sforzando, and the fourth beat of this pattern only gets a single sforzando marking. Between this high octave “C#” and the following “F#,” there is a dramatic drop in range. The notes tumbling down by leap also aid in placing that final “F#” in a position of importance rhythmically.

After the four beats of the accented “F#,” the music arrives at a kind of false recapitulation where the texture is suddenly very linear. At the point of the double-sforzando “F#,” the middle developmental section of this movement ends because a linear version of the Ex. 1 motive appears at measure 178 over the “F#” pedal tone. It lasts only until measure 187 where the transition to the middle section theme of measure 204 begins. A condensed version of the opening two pages of the movement is found within these nine measures. At this point, the basic motivic and rhythmic elements of the opening page of the movement are present.
Measures 178 and 179 are similar to measures five and six rhythmically. Measure 178 plus the first quarter note of measure 179 is identical to measure five with the exception of the note order. There are five eighth rests in measure 179, and the note in measure six is held for the length of five eighth-notes as well. Next, measures 180 through 182 are similar in motive and identical in rhythm to measures seven through nine. Since this later adaptation of the opening page functions like a summary of how the Ex. 1 motive grows and changes on the first page, some repetitive material is skipped. The elongation of the Ex. 1 motive lasting from the second beat of measure 183 to measure 187 is similar to that which lasts from the second beat of measure fifteen through measure nineteen. Motives and rhythms sort of come into being through repetition back at the beginning of the movement, and new elements are introduced more gradually. In contrast, the three basic phrases formed back on the first page are grouped closely together at measures 178 through 187, and the earlier at measures seventy-nine through eighty-nine. At both of these short sections, there is one other fundamental variance from the opening page that can have influence on the way the pulse is felt. This difference lies in the change in the direction of the notes in the Ex. 1 motive.

Altering the direction of the notes of the Ex. 1 motive subtly influences the performer to take a different approach to the way in which the inner rhythms are felt. The section beginning at measure 178 is the first point at which the notes of the Ex. 1 motive are inverted within the motive’s original context. This original context refers to the soft dynamic marking, lack of accentuation, and basic contour of the motive found at the very beginning of the movement. Even though the same notes present at measures 178 through 179 are those present in the first
two measures of the movement, the order of every grouping of two notes is reversed, as shown in Ex. 15.

Ex. 15

In the second version of the motive that is shown in the above example, the “E” and the “F#” are the first notes of the quarter note and dotter-quarter-note beats, respectively. These notes are the first two within a scale that ascends mostly by step. This scale is the “E,” the “F#,” the “G#,” and the high “B,” which is approached by leap in contrast to the earlier step-wise approach to the final note. Since this final high “B” is higher, the performer is more likely to emphasize it. As seen back at the end of Ex. 1, the ascending and descending scales are placed symmetrically apart, and the first two notes ascend. The beginning of the dotted-quarter pulse is approached by a downward leap in this earlier version, but in the inverted version, the dotted-quarter pulse is approached by ascending leap. An aurally sensitive performer would be more likely to hear a descending group of two notes as a single pulse grouping felt separately from anything that follows. In turn, the initial “E” of this two-note grouping is connected to the “F#,” the first note of the dotted-quarter beat.

One of the main functions of this return of the opening material that starts at measure 178 seems to be the gradual lengthening of the pulse to the size of a half-note. This process is complete by the time of the arrival of the middle section at measure 204. Measures 178 through
203 serve as a transition from the rhythmically active development section to the more expansive middle section. The use of the left-hand double-sixth motive as a transitional figure that leads to the measure 204 middle section has been discussed above, and the measure 187 version of this figure is the point at which the half note becomes the beat. As described in the above paragraph, there is some ambiguity in measures 178 through 183 as to whether the pulse can be felt at the quarter note or at the half note. The irregular meters and the resulting irregularly-sized beats are the same as those found on the first two pages of the movement, but the rhythm becomes more regular at measure 187. The left-hand figure that is first illustrated back in Ex. 5 divides the beat evenly because the third and fourth eighth notes, or one can say the second pair of eighths, is in the higher octave on the third quarter note beat. Until measure 191 there is always a note or chord that falls on the first beat of the measure. Consistent placement of quarter-rests at the ends of each measure up to measure 190 focuses the pulse more strongly onto the third quarter beat. In this manner, the feeling of two beats to a measure is given extra expansiveness.

Conclusion

The exact form of this Scherzo-like movement has been difficult to pin down, but we have seen how the performer can create coherence from section to section. This is possible with an understanding of how exactly to bring out contrasts in sound both within sections and during transitions. The contrasts between sections that have a lighter, horizontal linear texture and those that have predominantly vertical and heavier chords are as pronounced in the second movement
as they are in the more formally clear-cut first movement. Despite this, the delineations between major sections in the form of the movement are less pronounced in the second movement because there is less material that is repeated. Instead, certain short motives are repeated in formal contexts that continuously vary. For this reason, it is important to understand how to link adjacent sections by way of contrast. This is also why sections are not described and analyzed in this paper sequentially from the beginning of the movement to the end. It has been found to be useful in this analysis to look at sections out of order so that linkages and similarities can be seen more clearly. It has also been useful to show repetitions of sections that are widely separated within the movement. For example, we have seen how both versions of the “Poco meno mosso” area lead to contrasting points in the form. Also, placing the measure 204 middle section before the two-part developmental section makes it possible to more directly trace the different functions of the Ex. 5 left hand double sixths throughout the movement. Saving the description of the developmental section for the last part of the paper is helpful because of this being the only section in the movement where linearity and chordal density are combined. This way, the rhythmic and energetic climax of the movement can be the last thing described in this thesis, even though it happens in the middle of the movement.
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SCORE
