

AARON COPLAND'S PIANO QUARTET - AN ANALYSIS

A Thesis

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by

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## ABSTRACT

Aaron Copland's Piano Quartet of 1950 represents his first application of twelve-tone technique. The following analysis attempts to examine how Copland assimilates various aspects of the technique into his already-defined musical language.

An introductory chapter considers such issues as the general public's and intellectual music circles' perceptions of Copland; previous divisions of Copland's music into "style periods"; Copland's musical education and its influence on his working habits; Nadia Boulanger's influence on Copland and on composition in America; and Copland's relation to Stravinsky and the aesthetics of Schoenberg's twelve-tone technique.

The second chapter presents a detailed analysis of the work. This is preceded by an examination of the properties of the eleven-note series and an overview of their applications throughout the piece. A detailed description of each of the three movements is preceded by a formal outline and concluded with a summary.

The conclusion outlines several new developments in Copland's music; the integration of the extended harmonic language of serialism; a new emphasis on harmonic texture; and a transformation of Copland's treatment of rhythm.

Copland's wide popularity with the general public and his influence as an impresario, writer, and teacher have long been acknowledged. However, there have been relatively few attempts by music scholars to evaluate his contribution as a composer. The present writer hopes that this paper will contribute to a re-evaluation of Copland's importance in the evolution of twentieth-century music. The following conclusion reached by Bayan Northcott in his article "Notes on Copland at 80" (Musical Times, Nov. 1980) was an important starting point for, and was fulfilled by, the results of the analysis: "If, somewhat unexpectedly, we are witnessing the emergence of a new 'common practice' in the handling of equal temperament - to which serialism has only been the catalyst - then the compositional significance of Copland's unique acuity for the spacing, duration, and coloring of pitches can only increase."

## BIOGRAPHICAL SKETCH

David Conte was born in Denver, Colorado on December 20th, 1955 to Cosmo Conte and Nancy (Bittle) Conte. He attended public schools in Cleveland and Lakewood, Ohio, and pursued summer study in music at the Chatauqua Institute, Chatauqua, New York, and at the Cleveland Institute of Music. In 1973 he entered Bowling Green State University, Bowling Green, Ohio, where he majored in piano and served as a teaching assistant in first-year theory. During the summers of 1975 and 1976 he studied with Nadia Boulanger at the Fontainebleau School of Music and Fine Arts in Fontainebleau, France, receiving certificates in Solfège, Keyboard Harmony, and Composition. In 1976 he was awarded a Fulbright-Hays Scholarship to continue studying composition with Nadia Boulanger and solfège with Annette Dieudonné in Paris. During this time, he was enrolled in the keyboard harmony class at the Ecole Normale de Musique de Paris. He received the B. Mus. degree magna cum laude from Bowling Green State University in March, 1978. In September, 1978 he entered the Graduate School of Cornell University, where he has studied composition with Karel Husa, Robert Palmer, and Steven Stucky, and choral conducting with Thomas Sokol. At Cornell, Mr. Conte has served as a teaching assistant in first-year theory (1978-79), second-year theory (1980), as Assistant Conductor of the Cornell University Glee Club, Chorus (1981-82), Chamber Singers (1980-92), the Sage Chapel Choir (1979-80), and as Acting Director of the Chamber Singers and the Sage Chapel

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## CHAPTER ONE - Introduction

As the first systematic application of twelve-tone technique by America's foremost "tonalist," Aaron Copland's Piano Quartet of 1950 might easily be labeled as a pivotal work. In our pluralistic musical culture, where a composer can claim style influences as seemingly disparate as Renaissance polyphony and rock-and-roll, Copland is often associated with a kind of mainstream moderateness, in which harsh and uncompromising sonorities only occasionally interrupt the easy, inoffensive diatonic and mildly polytonal harmonies, set in the context of such popular devices as dance ostinatos and jazz rhythms. Such views betray an ignorance of the enormous breadth of Copland's music, while at the same time over-emphasizing whatever radical departures his adaptation of twelve-tone technique or any other categorizable musical device might have had on his style. The present study of the Piano Quartet, viewed in the context of Copland's entire catalogue of works, reveals not radical departures, but rather the "small and unchanging compositional concepts"<sup>1</sup> which are the basis of every Copland piece.

Why this limiting popular opinion of Copland that relegates him to a relatively minor role in the evolution of twentieth-century music? The few scholars who have studied

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<sup>1</sup> Bayan Northcott: "Notes on Copland at 80", Musical Times, Nov. 1980, p. 689.



Copland in depth disagree with this classification, but why are they so few in number? Fashions change; certainly many people can remember a time when Ives, Mahler, or even Haydn were not as well-known and revered as they are today. Yet in a certain sense, Copland has never gone out of fashion, or at least out of the public eye. His title as "dean of American composers" pays tribute to his tireless efforts on behalf of his fellow composers, and to his importance as an impresario, writer, and teacher. Through his activities as a conductor in the concert hall and on radio and television, it is likely that more people have been exposed to Copland and his music than any other "serious" composer in modern times. Yet a survey of the programming of these concerts shows only a handful of pieces represented: Appalachian Spring, Billy the Kid, Rodeo, El Salón México, the Clarinet Concerto, and an occasional Third Symphony. The Copland enthusiast can unhesitatingly reel off the names of a dozen more scores: the Organ Symphony, Two Pieces for String Orchestra, Statements, Symphonic Ode, Short Symphony, Quiet City, Dance Panels, Music for a Great City, Connotations, and Inscape; not to mention chamber works like Vitebsk, the Violin Sonata, the Piano Sonata, Piano Variations, Twelve Poems of Emily Dickinson, Nonet, and the Piano Quartet. One sees that though Copland has had maximum exposure, this exposure has dealt with a minimal amount of his music. Such are the dangers of mass media communication; its influence on the perceptions of the

general public and intellectual music circles cannot be over-estimated. It is not surprising that Copland's affinities with changing fashions (jazz in the twenties, Gebrauchsmusik in the thirties and forties, serialism in the fifties and sixties) have caused many listeners to overlook the consistency of his musical habits and the importance of his role in the "re-hier-archizing of chromatic space"<sup>2</sup> that has occupied composers since the time of Debussy. In that sense, our hurried culture's tendency to absorb only superficially the ideals and aesthetic of any artist's work is nowhere more clearly evidenced than in the music of Aaron Copland.

In further considering Copland's place in history, far more complex than the relationship between mass media exposure and the general public's and music scholar's perceptions are the values and traditions of music education in America. Virgil Thomson once said that "Every American town can boast two things: a five-and-dime and a Boulanger pupil."<sup>3</sup> Though Thomson's remark is in part an attempt to recognize the strength of Boulanger's presence in American music education, it also hints that the "Boulanger school" had become so all-pervasive in the American musical scene that its true meaning had become obscured.

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<sup>2</sup>  
Ibid., p. 689

<sup>3</sup>  
Aaron Copland: Copland On Music (New York, 1960), p.

Of course, Copland was Boulanger's first American composition pupil (Melville Smith had studied organ with her before Copland first went to Fontainebleau in 1921), and it was as a result of his reputation that many American composers went to Paris and Fontainebleau to study with her. The number of her list of pupils is imposing, yet contains relatively few "giants": Copland, Piston, and Carter. The other names on the list - Virgil Thomson, Arthur Berger, David Diamond, Elie Siegmeister, Louise Talma, Harold Shapero, Marc Blitzstein, Roy Harris, Douglas Moore - together with many of Copland's some 400 students at Tanglewood, could be said to form a loosely organized American neoclassical school which dominated the composition scene in America during the thirties and forties, but whose influence has been considerably weaker in recent years. Some of these composers studied with Boulanger longer than Copland; many as briefly as a summer or two. Yet her dominating influence was largely the result of her ability to provide a kind of solid technical training unavailable in American institutions.

One can see how the idea that the American Boulanger pupil is as easy to find as a dime store relates to the general musical public's over-exposure to only a few Copland works. As for the circle of music scholars and composers, the large representation of the "Boulanger school" has also led to generalized value judgements of it as being "square", "derivative", and "reactionary." Dika Newlin mentions several

times how Schoenberg regarded the Boulanger-Stravinsky axis as greatly inferior to his own pedagogical methods, describing her as encouraging "noodling" in contrast to his "blooming."<sup>4</sup> (It is important to emphasize here that Schoenberg's methods did not include systematic teaching of the twelve-tone technique, but rather emphasized thorough study of the music of the German tradition as represented by Bach, Mozart, Haydn, Beethoven, Brahms, Wagner, Reger, and Mahler. In his essay of 1930, "National Music," he attributed all his various style characteristics to those composers. Yet the twelve-tone technique served as a model for thousands of composers, many of whom could not play one phrase of Schoenberg's music by heart, and whose music was written at some distance from any physical involvement with sound. As we shall see, Copland's application of the technique was quite different.)

The origins of an unfortunate and quite arbitrary division of composers writing during the fifties, sixties, and early seventies into two groups - those concerned with atonality and serialism as being "progressive," and those concerned with tonality as being "reactionary" - can partly be traced back to these kinds of attitudes. It is interesting to note that as early as the thirties the young composer John Cage felt that there were two distinct and polar opposite ideologies to choose from in looking for a composition teacher: the reactionary

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Dika Newlin: Schoenberg Remembered (New York, 1980), p. 225.

principles of Stravinsky, and the progressive and revolutionary principles of Schoenberg. He chose Schoenberg.<sup>5</sup>

A brief survey of Copland's musical activities in America before 1921 shows how the formation of his musical habits was already in many ways compatible with both Boulanger's teaching approach and the more general influences of French music. He had acquired a solid, if not academic, grasp of classical harmony, counterpoint, song, variation, and sonata form through his studies with Rubin Goldmark (1917-21). He developed early the habit of reading scores at the piano, and enthusiastically played the piano music of Debussy, Scriabin, and Cyril Scott. Two fragments from two songs which Copland wrote in 1918<sup>5a</sup> show the combination of these composers' influences and an "economy of means" which was instinctive to Copland, but was probably nurtured by his technical studies. The resulting gestures are early indications of Copland's highly personal musical language and its inclination toward the French aesthetics of harmony, texture, and "sound for sound's sake."

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John Cage: A Year from Monday (Middletown, 1969), pp. 43-49.

5a

Reprinted from J. F. Smith: Aaron Copland: His Work and Contribution to American Music (New York, 1955).

1.1 "My Heart is in the East" (1918)

How can I ows and oaths re-pay, while E-don Zi - on holds

In "My Heart is in the East," the open spaced triads of the left hand support the simple, mildly dissonant two-part counterpoint of the right hand and the voice line; the clear harmonic progression of I, I<sub>6</sub>, IV, iv, I with its modal cadence on iii is gently challenged by the major seventh and added sixth in m. 18, the 7-6 suspension in m. 19, and the triadic outlines suggesting a borrowed ii<sup>o</sup>7 and added sixth in m. 20. The triadic outline of the voice part in mm. 16-17 shows the beginnings of the habit of composing melodies harmonically, as if guided by a larger harmonic shape in order to create a kind of harmonic/melodic unity. The striving for this unity appears in all of Copland's later works, and it is one of the outstanding features of the Piano Quartet.

1.2 "Night" (1918)  
VERY SLOWLY  
mf

My heart is placid as the lake

In "Night," the use of the whole-tone scale shows Debussy's influence. The suggestion of a major subtonic chord in m. 4, the borrowed bVI dominant seventh which serves as the focus of the phrase's harmonic tension in m. 6, and the more complex eleventh chord in m. 7, with its unusual but clean spacing, are all gestures characteristic of Copland's style, which at its most harmonically complex can often be reduced to the juxtaposition of false-related consonances.<sup>6</sup>

Copland's musical habit of composing, improvising, and reading scores at the piano certainly encouraged a sensitivity to the spacing and voicing of sonorities and an inclination toward composing harmonically. It was Boulanger who helped Copland strengthen the interdependence of these habits. Her concept of technique, based on the long traditions of the Paris Conservatoire and her own special insights, together Northcott, p. 686.

concept of technique, based on the long traditions of the Paris Conservatoire and her own special insights, together with her unique understanding of the delicate psychology of America's emerging musical culture, provided the perfect combination of resources for the young Copland.

In his book The New Music, Copland wrote that Boulanger had "an encyclopedic knowledge of every phase of music, past and present." She had acquired a thorough technique through her training at the Paris Conservatoire, winning prizes in harmony, composition, and organ. In her teaching, she strove to make acquiring technique an active and creative process, as opposed to an academic exercise: she regarded technique as a union of physical and mental discipline, developed through contact with sound. The mind and ear developed together, and she was suspicious of any musician who could not sing or play his musical ideas. She taught harmony not as formulas to be written down, but as distillations of musical gestures whose historical evolutions she could instantly demonstrate with musical examples. A simple, four-part harmony exercise became a challenge to the development of memory and attention by having the student play the bass with the right hand, soprano and alto with the left hand, and sing the tenor, while modulating through all keys. Her goal was to strengthen the memory, so that in the spontaneous act of improvisation the



technique of having absorbed mere formulas would become subliminal, the greater skill of aural memory remaining, guiding the composer to create relationships between gestures experienced within the context of the improvised phrase, section, or movement. She used the knowledge of harmonic structure gained through written harmony in the application of score-reading. Copland speaks of getting to know scores by spending long hours reading through them at the piano with Boulanger.<sup>7</sup>

When put in the context of the void that existed in American musical education, one can see the impact of this kind of technical training. Boulanger understood America's enormous potential for musical growth, while at the same time taking into account the disadvantages of such a rapidly growing musical culture. She once commented that "America has the misfortune of having become an adult without ever having been an adolescent or child." She saw the manifestation of this in her American pupils, arriving full of enthusiasm and a kind of brash optimism for new ideas and free thinking. Her motto of "freedom through discipline" acquired through sound technical training and her reverence for the sacred vocation of the artist provided the eclectic American spirit with firm, yet flexible guidance.

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Edward T. Cone: 'Conversation with Aaron Copland', Perspectives of New Music, vi/2 (1968), p. 61.

At this point, it is tempting to make comparisons between Copland and Stravinsky, whom Boulanger championed throughout her long teaching career as embodying her credo of "freedom through discipline" and as the most important musical figure in the twentieth century. (In her analysis classes of 1975-78 the twentieth century was represented exclusively by Stravinsky with the exception of three scores: Dutilleux's Second Symphony (Le Double), Penderecki's Saint Luke Passion, and Xenakis's Nuits.) There are immediate similarities: the interest in jazz, in ballet, in serialism in the late works; the predilection for careful spacing and voicing of vertical sonorities. Their fundamental musical habits are also similar; both composed at the piano, both were committed to "renewing tonality," and both have spoken of their tendency to compose "harmonically," deriving their ideas from a vertical shape.<sup>8</sup> Yet some of Copland's gestures predate Stravinsky; Copland's preoccupation with minor third ostinatos in the finale of the Organ Symphony (1925) predates Oedipus Rex by two years.<sup>9</sup> Though Copland made further use of this device in several works (Symphonic Ode, Short Symphony, Piano

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<sup>8</sup> Eric Walter White: Stravinsky: The Composer and his Works (Berkeley, 1979), p. 489.  
Phillip Ramey: 'A Talk with Aaron Copland', from Columbia Record M 32736.

<sup>9</sup> Northcott, p. 689.

Sonata), Stravinsky's greater preoccupation with ballet and the quality of arrested development associated with ballet led to his more extensive use of this device. Copland's experiments with the application of twelve-tone technique in the Piano Quartet (1950) predate Stravinsky's experiments in the Cantata and the Septet by a year. Copland was never as interested in the contrapuntal possibilities of serialism; his main attraction was that in working with the technique he "began to hear chords I wouldn't have heard otherwise."<sup>10</sup>

The contrast between the emphasis on canonic techniques in Canticum Sacrum (1955) and Threni (1957) with the emphasis on sonority and harmonic texture in the Piano Fantasy (1957) and Inscape (1967) is a clear example of the two composers' highly personal applications of twelve-tone technique.

Both composers were committed to "small and unchanging compositional concepts" throughout their work, but the manifestations of this consistency produced very different results. Stravinsky often worked from the principle of setting new problems for himself with each new piece: to master the intricacies of cymbalom technique in Renard (1915-16); to cultivate an eclectic international style in L'Histoire, Ragtime (1918), and Three Pieces for Solo Clarinet (1919); to

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<sup>10</sup>  
Cone, p. 67.

renew the musical languages of Pergolesi in Pulcinella (1920) and Tchaikovsky in The Fairy's Kiss (1928); to rediscover sonata form in the Octet (1923); to work with the problems of language setting in Oedipus Rex (1928 - Latin), Persephone (1933 - French), English in a dramatic context (The Rake's Progress, 1951), English in a pure non-dramatic form (Cantata, 1951-52); to rediscover concerto form in the Piano Concerto (1924), Capriccio (1929), Violin Concerto (1931), Concerto for Two Pianos (1933); to rediscover concertante style in Dumbarton Oaks (1938), Dances Concertantes (1942); to produce a jazz equivalent of the concerto grosso in the Ebony Concerto (1945). One can find Stravinsky very self-consciously admitting the "problem to be solved" in each work.

Copland's influences are fewer and more central. They demonstrate a kind of national unity that is in sharp contrast with Stravinsky's "eclectic internationalism" and historical self-consciousness, yet they also represent a pluralism in sharp contrast to Schoenberg's ethnocentric preoccupation with mainstream German musical tradition. Copland's desire to produce a "music that would be immediately recognized as American" led to his use of jazz in Music for the Theatre (1925) and the Piano Concerto (1927). The extra-musical associations of various facets of American life can be seen in John Henry, Billy the Kid, and Rodeo (folklore); Our Town, Music for a Great City, Quiet City (city life); The Red Pony, Of Mice

and Men, and Appalachian Spring (country life). Various combinations of all these influences are apparent in Copland's remaining "absolute" music, and it is here that his "small and unchanging compositional concepts" are most apparent.

Bayan Northcott has written that "The Symphony for Organ and Orchestra (1924) adumbrates three of Copland's most characteristic moods: the pastoral, the extrovert dance-scherzo, the declamatory or hymn-like sublime." The table below is an attempt to group movements of Copland's works into these categories:\*

<u>Pastoral</u>	<u>Dance-Scherzo</u>	<u>Declamatory</u>
Short Symphony, II	I, III	II
Piano Sonata, III	II	I
Violin Sonata, I	III	II
Third Symphony, I	II	IV
Piano Quartet, III	II	I

These moods are also present in the ABA structure of one-movement pieces like Quiet City, Our Town, Outdoor Overture; in works with two-movement forms like the Two Pieces for String Orchestra, the Piano Concerto, and the Clarinet Concerto; and in the more complex sectional forms of works like Symphonic Ode, the Piano Fantasy, Connotations, and

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Though the above categorizations are a convenient way of representing the general mood of these movements in relation to the structure of entire pieces, it is important to acknowledge the presence of all the moods in all movements: for example, though the general mood of the first movement of the Third Symphony is pastoral, the statement of the second theme in the trombones is declamatory.

Inscape, as well as the suite-like forms of Statements, Music for a Great City, Twelve Poems of Emily Dickinson, and the ballet suites.

One sees that though much has been written about placing Copland's music into style periods, there are works in every period that contradict the classifications, and a survey shows that those features present in the earliest works run through all the works, with new resources like jazz, folksong, and serialism assimilating themselves through Copland's language in each new piece.

Our introduction has attempted to place the following analysis into a broad context. This context has been defined by preliminary explorations of such issues as the general public's and intellectual music circles' perceptions of Copland; Copland's musical education and its influence on his working habits; Nadia Boulanger's influence on Copland and on composition in America; and Copland's relation to Stravinsky and the aesthetics of Schoenberg's twelve-tone technique.

Our brief survey of Copland's catalogue of works affirms his breadth and diversity of style at the expense of narrow categorizations, while at the same time emphasizing the consistency of his musical personality. This knowledge can guide us in the larger question of the re-evaluation of Copland's place in twentieth-century music history. Hopefully, a detailed analysis of one of Copland's works will clarify these issues, bringing their most salient features into relief for clearer viewing.

CHAPTER TWO - Analysis  
Properties of the series

Arnold Schoenberg wrote concerning his formulation of the "method of composing with twelve tones": "I was always occupied with the aim to base the structure of my music consciously on a unifying idea, which produced not only all other ideas but regulated also their accompaniment and the chords."<sup>13</sup> In keeping with this aesthetic, a study of the properties of the eleven-note theme that opens the Piano Quartet demonstrates how thoroughly all aspects of the piece are based on this single idea.

2.1

ADAGIO SERIO (♩ = 60)

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

2.2 Matrix

	0	10	8	6	4	1	3	5	7	2	9	0	
0	Bb	Ab	Gb	Fb	D	B	C#	D#	E#	C	G	Bb	0
2	C	Bb	Ab	Gb	E	C#	D#	E#	G	D	A	C	2
4	D	C	Bb	Ab	Gb	Eb	F	G	A	E	B	D	4
6	E	D	C	Bb	Ab	F	G	A	B	F#	C#	E	6
8	F#	E	D	C	Bb	G	A	B	C#	G#	D#	F#	8
11	A	G	F	Eb	Db	Bb	C	D	E	B	F#	A	11
9	G	F	Eb	Db	B	G#	A#	B#	C#	A	E	G	9
7	F	Eb	Db	Cb	A	F#	G#	A#	B#	G	D	F	7
5	Eb	Db	Cb	Bb	G	E	F#	G#	A#	F	C	Eb	5
10	Ab	Gb	Fb	Eb	C	A	B	C#	D#	Bb	F	Ab	10
3	Db	Cb	A	G	F	D	E	F#	G#	Eb	Bb	Db	3
0	Bb	Ab	Gb	Fb	D	B	C#	D#	E#	C	G	Bb	0

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Willi Reich: Schoenberg: A Critical Biography (New York, 1971), p. 131.

Copland has carefully constructed his series to allow for maximum flexibility in combination with the tonal gestures of his already-defined musical language. The whole-tone implications of the series provide an easy transition into chromaticism, yet the fact that the series uses only eleven different notes and that each statement in the first movement's fugal exposition is rounded off by the first note of the series places this chromaticism into a static context, which, as we shall see, demands the contrast of diatonic modulatory passages.

When pitches 1-9 are combined in step-wise order, they form an extended B melodic minor ascending scale containing the major third and Lydian fourth.

2.3 Melodic minor implications of the series

1 2 3 4 5 6 7 8 9

5 4 3 2 1 6 7 8 9  
b melodic minor scale

major 3rd lydian 4th

When these pitches are considered in the context of Ab minor, the split third which results (C and Cb) produces sonorities typical of Copland.

2.4 Chords derived from melodic minor implications of the series

Mvt. I, m. 86

5 4 3 2 1 6 7 8 9  
ab melodic minor scale



The interval properties of the series suggest both whole-tone and diatonic vertical sonorities.

2.5

Whole-tone Properties

Pitches 1-4  
" 6-9

Diatonic Properties

Pitches 1-3  
" 4-6  
" 7-9  
" 9-12

Pitches 1-4 and 6-9 produce the following chord forms:

2.6 Chords derived from pitches 1-4 and 6-9 of P

Mvt. I, m. 55      Mvt. II, m. 89

These sonorities provide a subtle contrast with those derived from the diatonic implications of pitches 1-3 and 7-9.

2.7 Chords derived from pitches 1-3 of P

Mvt. I, m. 57      m. 58      m. 63      m. 90      Mvt. III, m. 1      m. 4

The interval properties of pitches 4-6 and 9-12 suggest vertical relationships that could be found in any of Copland's earlier works.

2.8 Chords derived from pitches 4-6 of  $\underline{P}$  Pitches 4-6

Mvt. I, m.55

m.63

m.94

Mvt. III, m.9

Mvt. I, m.25

Pitches 9-12

The rhythmic structure and Copland's phrase markings show a clear division of the eleven-note theme into two hexachords (hereafter referred to as hexachord  $\underline{X}$  and hexachord  $\underline{Y}$ .) Each hexachord is built with alternating and overlapping whole-tone and diatonic segments.

2.9 Hexachord, whole-tone and diatonic formations of the series

X hexachord

Y hexachord

W-T

D

W-T

D

(be)

Copland fully exploits this property of the theme, freely combining  $\underline{X}$  and  $\underline{Y}$  hexachords from various row forms in order to obtain a wider range of contrapuntal and harmonic possibilities.

2.10

I1

I4

Mvt. I, m. 82

I9

P3

I1

The whole-tone implications of the X hexachords result in many pitch duplications when both the original and inverted forms of hexachords related by a major second are combined.

The image shows a musical score for a piano quartet, consisting of two staves. The top staff is in treble clef and the bottom staff is in bass clef. The music is in 2/4 time. The top staff begins with a tempo marking 'p espress.' and a dynamic marking 'p'. The bottom staff begins with a dynamic marking 'p'. There are several annotations in red ink: 'IR' above the first measure of the top staff, 'pp' above the first measure of the top staff, and 'IR' above the first measure of the bottom staff. There are also some blue markings above the top staff, including 'Pa' and 'IR'. The score shows a series of chords and melodic lines, with some notes marked with 'p' or 'pp'.

It is worth noting that many of the most obvious features of the over-all formal construction of the Piano Quartet can be traced back to one of Copland's first large-scale pieces, the Organ Symphony (1924).<sup>\*</sup> As was shown by the above chart which categorized some of Copland's movements into three moods (the pastoral, dance-scherzo, and declamatory), the three-movement, slow-fast-slow forms of both pieces contain all three of these moods, although the order of the outer movements is reversed.

	I	II	III
<u>Organ Symphony</u>	pastoral	dance	declamatory
<u>Piano Quartet</u>	declamatory	dance	pastoral

In the first movements of both pieces, the declamatory mood is established in part through a fugal exposition - a somewhat self-consciously explanatory device which is rare in Copland. In these movements, the device suggest both tentativeness and boldness. In an early work like the

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<sup>\*</sup>Not including the Dance Symphony, which was begun earlier but not completed until 1929.

Organ Symphony and in a transitional work like the Piano Quartet, one can understand how the tentative exploration of pitch organization might have led to a reliance on stylized formal procedures. Yet the solid construction of the themes of both works allows them to be combined with themselves in a tightly controlled contrapuntal context. This is a bold demonstration of compositional technique; it also embodies a principle which is evident in every Copland piece, i.e. the principle of horizontal/vertical unity, or the construction of themes that can accompany themselves.

Another striking similarity between both works is the cyclical quotation of themes. In the Organ Symphony, the minor triad serves as a motto which appears in each movement in various guises and at important structural points. In the Piano Quartet, the eleven-note theme of the first movement plays a similar role, not only in that much of the piece's material is derived from it, but in that it also makes cyclical appearances in the second and third movements.

2.12 - Mvt. II, m. 97

The image shows a musical score for two staves, likely piano accompaniment. The top staff is in treble clef and the bottom staff is in bass clef. The time signature is 2/4. The key signature has one flat (B-flat). The score consists of three measures. The first measure has a treble staff with a half note chord (B-flat, D, F) and a bass staff with a half note chord (B-flat, D, F). The second measure has a treble staff with a half note chord (B-flat, D, F) and a bass staff with a half note chord (B-flat, D, F). The third measure has a treble staff with a half note chord (B-flat, D, F) and a bass staff with a half note chord (B-flat, D, F). The score is enclosed in a rectangular box.

Mvt. III, m. 113

Much subtler is the cyclical quotation of texture and melodic shape in the following passages:

2.13 - Mvt. I, m. 59

8

Mvt. I, m. 95

Mvt. II, m. 249

8

Mvt. III, m. 9

Mvt. I, m. 94

Handwritten musical score for Mvt. I, m. 94. The score is written on two staves. The upper staff is in treble clef and the lower staff is in bass clef. The key signature has one flat (B-flat). The time signature is 3/4. The music consists of four measures. The first measure has a quarter note G4 with a fermata. The second measure has a quarter note G4 with a fermata. The third measure has a quarter note G4 with a fermata. The fourth measure has a quarter note G4 with a fermata.

Mvt. III, m. 1

Handwritten musical score for Mvt. III, m. 1. The score is written on two staves. The upper staff is in treble clef and the lower staff is in bass clef. The key signature has three flats (B-flat, E-flat, A-flat). The time signature is 3/4. The music consists of four measures. The first measure has a quarter note G4 with a fermata. The second measure has a quarter note G4 with a fermata. The third measure has a quarter note G4 with a fermata. The fourth measure has a quarter note G4 with a fermata.

Mvt. III, m. 94

Handwritten musical score for Mvt. III, m. 94. The score is written on two staves. The upper staff is in treble clef and the lower staff is in bass clef. The key signature has three flats (B-flat, E-flat, A-flat). The time signature is 3/4. The music consists of four measures. The first measure has a quarter note G4 with a fermata. The second measure has a quarter note G4 with a fermata. The third measure has a quarter note G4 with a fermata. The fourth measure has a quarter note G4 with a fermata.

Cyclical quotations of themes are not unique to these works; Copland uses this device in a similar way in the Third Symphony, Piano Sonata, and Violin Sonata. In terms of form, these four pieces have more in common with each other than with other Copland pieces, for though all of Copland's work is characterized by a rigid motivic unity, the cyclical

quotation of themes used in these five pieces is quite different from, for example, the organic development of the single five-note phrase of the Symphonic Ode or the four-note cell of the Piano Variations.

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### First Movement

The formal outline of the first movement is shown below.

- Section A: mm. 1-16; (Adagio serio,  $\text{♩} = 60$ )  
Fugal exposition with 1st theme on P0, P8, P5, P2
- Section A1: mm. 17-28  
Imitative entries of X hexachords from  
I2, P0, P2, I6
- Section B: mm. 29-54; (Poco più mosso,  $\text{♩} = 80$ )  
2nd theme derived from R7; imitative entries of  
R9, R4, R2
- Section C: mm. 55-66; (Più deliberamante,  $\text{♩} = 66$ )  
First appearance of contrasting textures for  
piano and strings; verticalization of the series
- Section A2: mm. 67-81; (Più mosso,  $\text{♩} = 76$ )  
X hexachords of P4, I8, P2, I4, I2, P8  
First appearance of 16th notes
- Section A3: mm. 82-89; (Più largamente,  $\text{♩} = 66$ )  
Simultaneous statements of I1, I4, P9, P0, P5  
with transpositions at mid-point to P0, P3, I2,  
P9, P2; return to Tempo I at m. 86 with simultane-  
**ous statements of P1, I2 with transpositions**  
at mid-point to P10, P2
- Section C1: mm. 90-102  
Return of the contrasting textures of section C;  
diatonic writing foreshadows section A4 of mvt. II  
and section A of mvt. III
- Section A4: mm. 103-7  
complete statement of first theme on P5

The outline of this movement shows Copland's tendency to organize his forms around variant structures, or "mosaic sequences of various restatements of his basic ideas."<sup>14</sup>

Each of the eight sections is based on the eleven-note theme in some way, showing the operation of Copland's principle of variant structure on a macro-level. As we shall see, the micro-level considerations of phrase structure and motivic development also are guided by this principle.

Section A consists of a sixteen-bar fugal exposition of four entries of the eleven-note theme. The first pitches of these entries form a half-diminished seventh chord, a sonority which is evocative of the static quality of this section. This static quality is also partly attributable to the stream of unrelated, pure consonances which result from the vertical combinations of the four series forms. These harmonies are oddly reminiscent of the chord successions of Renaissance music, while at the same time pointing ahead to the dyadic writing in the instrumental litanies of Inscape (1967).

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14

Northcott, p. 686.



2.14 Chord successions in the fugal exposition

Handwritten musical score for three staves, labeled 'm. 13'. The top staff shows a melodic line with notes and accidentals. The middle and bottom staves show chordal accompaniment with various chord symbols and accidentals.

2.15 Dyad successions in Inscape(1967)

Handwritten musical score for two staves, labeled 'm. 46 mp DOLCE'. The score shows dyad successions with notes and accidentals, and some notes are bracketed together.

The countersubjects in the fugal exposition are similar to each other only in that they retain the same rhythmic shape, and in that their melodic construction is based on free combinations of fragments of the series.

2.16 Countersubject

Handwritten musical score for one staff, labeled 'm. 5'. The score shows a melodic line with notes and accidentals. A bracket above the staff is labeled 'PITCHES 7-11' and spans several notes.

On the whole, these first sixteen measures are characterized by a de-emphasis on harmonic rhythm. The effect is typically Coplandesque, in that the section's sense of forward motion comes from the restatements of a single theme over an extremely slow-moving harmonic background.

At section A1, the piano introduces the X hexachords of the inversion (I2), imitating and continuing the linear texture established by the strings in section A. There is a strong feeling of a C tonal center here; the piano's entry on C at m. 17 has been set up by the previous section's entries of descending thirds and is further reinforced by the C major triad in the strings.

The first seven measures of this section consist of statements of X hexachords from series forms I2, P0, P2, and I6. An examination of the pitches of these hexachords shows many common notes. (I2 and I6 are notated backwards.)

2.17

P0 -		Bb	Ab	Gb	E	D	B
P2 -	C	Bb	Ab	Gb	Fb	Db	
I2 -		B	G#	F#	E	D	C
I6 -	Eb	C	Bb	Ab	Gb	Fb	

The entries of these hexachords also contribute to the establishment of C as a tonal center: ten of the fourteen entries begin on C; two on E (or Fb); and two on Bb.

This passage is followed by five measures of a chain of superimposed fourth chords built on the Db major scale in the piano, with foreign tones resulting from the sequential tetrachords in the strings. This progression, underlined

by the descending thirds in the left hand of the piano in mm. 27-28, leads to a cadence on F which Peter Evans has described as demonstrating "a suavity that derives from Fauré."<sup>15</sup>

2.18

m. 24

fine

Section B is marked by a slightly faster tempo (*Poco più mosso*,  $\text{♩} = 60$ ) and the entrance of the second theme derived from the retrograde form of the series and stated in canon in the cello and piano. This two-part canonic passage is extended by a sequential spinning-out of the last five notes of the theme in the cello.

2.19 Sequence with the last five notes of B

m. 32

<sup>15</sup> Peter Evans: 'Thematic Technique in Copland's Recent Works', Tempo 51 (1959), p. 7.

The static quality of the previous two sections now is contrasted by a sequence of diatonic modulatory passages which will lead to section C's dramatic change of mood and texture. Beginning at m. 41, incomplete statements of the theme in the viola and piano (R4) and violin (R9) with common pitches A, B, C, D, and E are combined with an ostinato built on thirds and sixths in the right hand of the piano over an A pedal in the left hand. At m. 45, the last five notes of the second theme are again sequentially spun out, continuing through to m. 48 over an E pedal in the piano. At mm. 52-53, the cello makes one last statement of the second theme, accompanied by the continuation of the five-note motive in the strings and the piano's ostinato, with pitches B, C#, D#, F#, and G# over an F# pedal.

2.20

The image shows a musical score for measures 41-53. It consists of five staves. The top two staves are for Violin (R9) and Viola (R4). The middle two staves are for Piano (right hand and left hand). The bottom staff is for Cello. The score includes dynamic markings such as *mf*, *mp*, and *p*. A rehearsal mark is present at the bottom of the page, marked with an asterisk and the number 20.

Section C is marked by a change in tempo and character (*Piu deliberamente*,  $\downarrow = 66$ ) and the movement's first forte.

For the first time, the piano and strings have contrasting textures; the linear, rhythmically contrapuntal texture of the previous three sections is replaced with the unison rhythm of the strings and the marcato chords of the piano.

In this section Copland explores the vertical possibilities of the series. The piano chords at mm. 55-58 are derived from pitches 1-4 and 1-3.

2.21 Chords derived from pitches 1-4 of  $\mathbb{P}$

m.55 *f* MARC.

Detailed description: This musical example shows two staves of music. The upper staff is a grand staff with a treble clef, and the lower staff is a grand staff with a bass clef. The music is in 3/4 time. The piano part (lower staff) is marked 'f MARC.' and consists of two chords. The first chord is a triad with notes G#2, B2, and D3. The second chord is a triad with notes G#2, B2, and D3. The string part (upper staff) consists of two chords, each with a rhythmic pattern of a quarter note followed by two eighth notes. The first chord has notes G2, B2, and D3. The second chord has notes G#2, B2, and D3.

The interval structure of the string chords in mm. 55-59 is derived from a rearrangement of pitches 4-6.

2.22 Chords derived from pitches 4-6 of  $\mathbb{P}$

m.55

Detailed description: This musical example shows two staves of music. The upper staff is a grand staff with a treble clef, and the lower staff is a grand staff with a bass clef. The music is in 3/4 time. The string part (upper staff) consists of a sequence of chords. The first chord is a triad with notes G2, B2, and D3. The second chord is a triad with notes G#2, B2, and D3. The third chord is a triad with notes G2, B2, and D3. The fourth chord is a triad with notes G#2, B2, and D3. The piano part (lower staff) consists of a sequence of chords. The first chord is a triad with notes G#2, B2, and D3. The second chord is a triad with notes G#2, B2, and D3. The third chord is a triad with notes G#2, B2, and D3. The fourth chord is a triad with notes G#2, B2, and D3.

The chords at mm. 59-62, like the string chords of mm. 55-62, are derived from pitches 4-6, with added notes to strengthen the feeling of a  $\underline{C}$  major tonality. A harmonic analysis of

mm. 59-62 shows how Copland uses his eleven-note series to produce the two streams of false-related consonances in the manner of his earlier works.

2.23 False-related consonances

The image shows a musical score for a section titled "2.23 False-related consonances". It consists of four staves. The top staff is the piano part, featuring a melodic line with a triplet of eighth notes in the final measure. The second staff is the right hand of the piano, and the third staff is the left hand. The bottom two staves are string parts, with the upper staff in treble clef and the lower in bass clef. Handwritten annotations include "H w/ ADDED 6th" above the piano part, "bVII w/ ADDED 6th" above the piano part, and "I" above the piano part. Roman numerals "bIII", "iv7/V", "bIII", and "iv7/V" are written below the piano part. The string parts are marked with "C:" and "bIII" and "iv7/V".

The string parts in this section foreshadow the diatonic, hymn-like mood of the opening of the third movement (see ex. 2.13).

The juxtaposition of whole-tone and diatonic elements which pervades the entire work is demonstrated by the sonorities of mm. 63-66. Here the string chords are derived from the interval properties of pitches 1-4 and the piano chords from pitches 1-3 and 4-6.

2.24

Musical score for Section A2, measures 65-68. The score is written for two staves (treble and bass clefs) and includes dynamic markings such as *ff* and *f*. The notation shows a complex rhythmic pattern of constant sixteenth notes. A box labeled '65' is present above the first staff, and another box labeled '65' is present above the second staff. The score ends with two asterisks (\*).

Section A2 is marked by a change in tempo (*Piu mosso*,  $\downarrow = 76$ ) and a return to the linear texture of sections A, A1, and B. A composite rhythm of constant sixteenth notes is established (the first occurrence of rhythmic values smaller than eighth notes). However, the harmonic rhythm remains unchanged.

2.25 Harmonic rhythm of Section A2

Musical score showing the harmonic rhythm of Section A2. The score is written for two staves (treble and bass clefs) and includes dynamic markings such as *b*. The notation shows a complex rhythmic pattern of constant sixteenth notes. The score is labeled 'm. 68' at the beginning. The score ends with two asterisks (\*).

Mm. 74-76 consist of statements of the X hexachords of row forms P4 and I8, whose combined pitches form an eb minor scale:

2.26

P4 I8 eb minor

The eb minor tonality is further reinforced by the sequential spinning-out of diatonic tetrachords in the strings in mm. 72-75, reminiscent of the tetrachords in the Db major passage in section A1 (see ex. 2.18).

2.27



Statements of X hexachords from I8, I4, P2, I0, I2, and P0 continue through mm. 73-81. Common pitches in this passage's hexachords are shown below.

2.28

I8 -		F	D	C	A#	G#	F#			
I4 -					Bb	Ab	F#	E	D	
P2 -				C	Bb	Ab	Gb	Fb	Db	
I0 -	A	F#	E	D	C	Bb				
I2 -	B	G#	F#	E	D	C				
P0 -						Bb	Ab	Gb	Fb	D B

The ambiguous tonal center that results from the duplication of whole-tone interval relationships is lessened by an emphasis on C in the left hand of the piano in mm. 74, 76, and 78.

The expectancy of the X hexachord statements of sections A, A1, and A2 and the incomplete statements of the second theme in the strings in section B is fulfilled by a complete statement of the series at m. 78.

Section A3 is marked by another tempo change (*Piu largamente*, = 66) and a return to the more vertical texture of section C. Piano and strings state various forms of the series and its inversion in rhythmic unison, with transpositions at mid-point over a Bb pedal in mm. 82-85 and a B pedal in mm. 86-89 (see ex. 2.10). The return to Tempo I at m. 86 is maintained through the remaining twenty-two measures of the movement.

Section C1 marks a return to the dual string-piano texture of section C, with its vertical sonorities again derived from pitches 1-3 and 4-6 (see ex. 2.7 and 2.8). The chord structures and melodic and rhythmic shape of mm. 94-97

foreshadow the third movement and the coda of the second movement (see ex. 2.13).

Section A4 consists of a final complete statement of the eleven-note theme in the simple manner with which the movement began.

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### Summary

Copland's treatment of rhythm in this movement is consistent with its declamatory mood. The predominance of even quartet notes and the absence of faster note values and dotted rhythms are also characteristic of the declamatory passages of the Symphonic Ode, the Piano Variations, and the Piano Sonata. Even the visual lay-out of the page in these pieces seems vertical, emphasizing Copland's reliance on the voicing and spacing of sonorities in building his forms.

Copland's tendency toward a rhythmic unison of voice parts and the resulting steady harmonic rhythm is even more pronounced in the Piano Quartet, almost in compensation for the complex pitch organization. It is notable that the first movement's most rhythmically active passage (section A2, mm. 67-79) produces no change in the steady quarter-note harmonic rhythm established in the fugal exposition (see ex. 2.25).

The emphasis on pitch organization also partly explains the four-bar squareness of the eleven-note theme, which results in a predominance of four-bar phrases. Copland rarely works with such a long thematic unit, preferring instead to spin his material out of short motives. This often results in frequent meter changes.

2.29

Piano Variations (1930)

m. 12

The only meter changes in the first movement occur in the two  $\underline{C}$  sections, where the material is based on the diatonic properties of pitches 4-6 of the series (see ex. 216). The insertion of a single  $3/4$  bar in a four-bar phrase shows Copland's use of rhythmically varied repetitions of a single idea. (This device is also used in the opening of the third movement.)

2.30 Variation of motive repetition through meter changes

Mvt. I, m. 58

Mvt. I, m. 90

Mvt. III, m. 1

Mvt. III, m. 9

Many of Copland's works open with this kind of phrase variation, establishing the use of sequences of varied repetitions throughout the rest of the piece.

2.31 Techniques of rhythmic variation of single motives

1) Variation of the unit within the bar

Violin Sonata(1943)

m. 1

Piano Sonata(1941)

m. 26

Piano Fantasy(1957)

m. 1

2) Re-groupings over the bar

"Lento" from Two Pieces for String Orchestra(1928)

m. 1

Piano Variations(1930)

m. 12

The first movement demonstrates the Piano Quartet's fusion of traditional and serial techniques. The four-bar phrase structure of the series, its organization into whole-tone and diatonic units, and these units' organization into two

complementary hexachords suggest the kinds of symmetries associated with tonal music. The duplication of sets of pitches which results from the vertical combination of different forms of the series makes possible the organizing of sections around tonal centers.

The preoccupation with pitch organization results in a de-emphasis on other parameters. Copland's characteristically lean textures are even more so (a dual conception of piano/string texture does not occur until section C), and the harmonic complexity of the eleven-note series precludes any elaborate rhythmic variation.

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### Second Movement

Like the first movement, the form of the second movement is built of sections which are variants of each other. However, its longer length (267 bars compared with 107 in the first movement) requires a stricter organization. An over-all view of the sections reveals a kind of sonata-allegro form.

### Exposition

- Section A: mm. 1-20; (Allegro giusto, = 138)  
1st theme from RI on A
- Section B: mm. 21-30  
2nd theme derived from dyad groups of interval classes 2,3, and 5 from R6
- Bridge: mm. 13-37  
Introduction of i.c.'s 4 and 6 in melodic sequence
- Section A1: mm. 33-66  
1st theme on Bb, C, A, Bb, C
- Section B1: mm. 67-88 ( = 132)  
2nd theme dyad groups from RO over piano ostinato
- Section C: mm. 89-104; (Meno mosso, = 104)  
Verticalization of PO
- Bridge: mm. 97-100  
Reference to section A, 1st mvt. with P7, P11, and P3

### Development

- Section B2: mm. 101-12; (Tempo I, poco meno, = 126)  
2nd theme dyad groups from R8; irregular phrase lengths - 4,6,6,12,4,16 mm.
- Bridge: mm. 113-14  
i. c.'s 4 and 6
- Section D: mm. 115-59; (Con humore)  
I on Ab; canons with motive from pitches 4-6 of P
- Section E: mm. 160-93  
Motives derived from P, R, and I over piano ostinato; complete statement of R leading to recapitulation

### Recapitulation

- Section A2: mm. 194-216  
1st theme on A, Bb, and C
- Section B3: mm. 217-40  
2nd theme dyad groups from RO; augmented phrase groups punctuated by rests - 4,4,8,16 mm.
- Section C1: mm. 241-48; (Meno mosso, = 104)  
Verticalization of P2
- Section A3: mm. 249-66; (Quasi tempo I)  
Motives derived from P, R, and RI with texture of section C1 from mvt. I

The A and B section, though related, are based on contrasting ideas which take the shape of first and second themes. As in the first movement, section C is characterized by a contrasting block-chord texture and serves as a rallying point at the end of large sectional divisions.

2.32

<u>First movement</u> -	A	A1	B	<u>C</u>			A2	A3	<u>C</u>	A4		
<u>Second movement</u> -	A	B	A1	B1	<u>C</u>	B2	D	E	A2	B3	<u>C</u>	A

The first theme is based on the retrograde-inversion of the original series, except for the first note (which corresponds to the last note in the original series). The substitution of A for Bb prevents this theme from sounding like too closed a statement. This is in character with the extroverted dance-scherzo mood of this movement, much in the same way that rounding off the first theme of the first movement with the first note of the series contributes to its static, declamatory character.

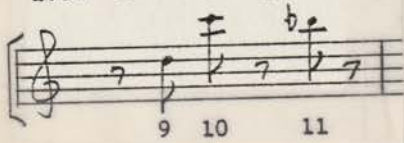
2.33 First theme

The musical notation shows a single staff with a treble clef and a common time signature. The notes are: 1 (quarter), 2 (quarter), 3 (quarter), 4 (quarter), 5 (quarter), 6 (quarter with a sharp sign), 7 (quarter), 8 (quarter), 9 (quarter), 10 (quarter), 11 (quarter). There are rests above notes 9, 10, and 11. The notes are connected by a slur from 1 to 6, and another slur from 7 to 11.

Two components of the first theme are developed throughout the movement. 1) Octave displacement of pitches 9-11 of RI, punctuated by rests. This forms a cadential gesture (hereafter labeled as cadential gesture X) which recurs with

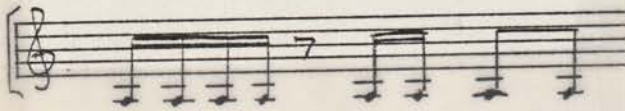
variations of rhythm, spacing, dynamics, and melodic contour.

2.34 Cadential gesture X



2) Four repeated sixteenth notes (hereafter labeled as cadential gesture Y) generate various rhythmic groupings.

2.35 Cadential gesture Y



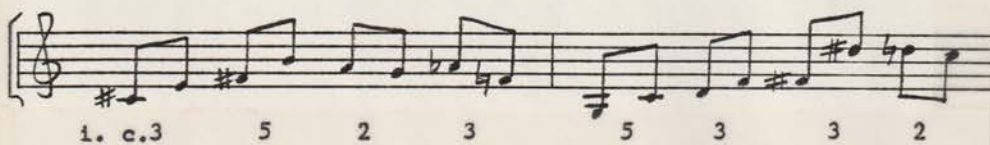
The development of the material in the B sections demonstrates Copland's most systematic application of twelve-tone technique. The second theme is generated by a group of four dyads derived from R6 (see matrix, ex. 2.2). The interval classes represented by these dyads are 2, 3, and 5.

2.36 Dyad groups from B sections



Consequent motive groups are formed by a reordering of the interval classes of these dyads.

2.37





These motive groups are alternated and varied to build phrases. All variant B sections are textural and rhythmic variations of the dyad-based procedure. Interval classes 4 and 6 are introduced in transition sections.

The restatement of the first theme at various transposition levels gives the movement a quasi-tonal architecture, centered around A.

<u>Sections</u>	<u>A</u>	<u>A1</u>	<u>A2</u>	<u>A3</u>
<u>Transpositions</u>	A	Bb, Bb, C, A, A, Bb, B	A, Bb	A

Section A consists of five varied statements of RI.

The variation techniques used in this opening section are applied throughout the entire movement.

- 1) m. 1: RI in strings, cadential gesture X in piano and strings
- 2) m. 5: RI with octave displacement in strings, cadential gesture X with octave displacement in piano
- 3) m. 9: RI in strings and piano; phrase extension through repetition of dyads (pitches 5 and 6 of RI)
- 4) m. 13: RI with octave displacement, augmentation, and phrase extension through dyad repetition; strings and piano in canon
- 5) m. 16: RI in piano, cadential gesture X in strings

The concentration on the motivic variation of a limited number of pitches (in this case, those of RI) results in a thin, heterophonic texture. Some meter changes result from the rhythmic variation of motives. The traditional technique of tonal sequence occurs in m. 13 in the piano. This writing is not unlike the sequences of the first movement (see ex. 2.18 and 2.19).

The first statement of the second theme at m. 19 serves as a bridge to section B, which begins with the re-establishment of the steady Allegro giusto tempo at m. 21. This section consists of five two-bar units built from the coupling of the dyad groups shown in example 2.37. The grid below shows the vertical alignment of these dyads. (Each dyad is labeled with a small-case letter.)

2.38

1) m. 21:	piano	- a b c d e f g h
	violin	- a a b c f f e g
	vla. vc	- a b e f g
2) m. 23:	piano	- a b c d e f g h
	violin	- a a b c f e f g
	vla. vc	- a b ? e f g
3) m. 25:	piano	- a b c d e f g h
	violin	- a b c d
	vla. vc	- a b ? d
4) m. 27:	piano	- d c b a e f g h
	violin	- e f g h
	vla. vc	- e f g h
5) m. 29:	piano	- a b c d e f g h
	violin	- a b c d e f g h
	vla. vc	- a b c d

The piano maintains the original order (abcdefgh) with the exception of one retrograde in the fourth phrase. In the first two phrases the violin repeats the first dyad, forming the beginnings of a canon with the piano, followed by free reorderings and repetitions of the dyads. Starting with the third phrase, the violin states the dyads in augmentation. The viola and cello also state the dyads in augmentation, at times playing only one pitch of the dyad.

The harmonic result is a constant shifting of vertical relationships between the eight dyads. A sense of regular harmonic rhythm is achieved through the vertical alignment of the same dyads at the beginnings of phrases.

2.39 Harmonies resulting from vertical alignment of dyad groups

The musical score consists of three staves. The top staff is in treble clef, the middle staff is in a middle clef (likely alto), and the bottom staff is in bass clef. The score is divided into two measures. Above the first staff, there are diagrams of dyad groups with arrows indicating vertical alignment. The notation includes notes, rests, and chord symbols like #F and F. The first measure is marked 'm. 21'.

This emphasis on an elaborate pitch organization again results in a regular quarter-note harmonic rhythm with few meter changes (the 5/4 at m. 22 is to accommodate a quarter rest between the first and second phrases). The heterophonic texture of section A is continued in the piano, as each dyad forms its own off-beat accompaniment.

The introduction of interval classes 4 and 6 in the piano at m. 31 form the piece's first twelve-tone row.

2.40

i.c. 4 5 5 6 4 6

This row becomes the basis of the bridge material that follows. The strings echo the piano with an augmentation of the last four notes of the row, stated in two rising sequences, the second of which is shortened.

Section A1 is marked by a return of the first theme in m. 38. This section consists of seven different statements of the first theme on different pitch levels.

- 1) m. 38: RI in strings on Bb; rhythmic, dynamic, and textural variation of cadential gesture X in piano and strings
- 2) m. 43: RI on Bb with octave displacement in strings
- 3) m. 47: RI on C with phrase extension through dyad repetition (pitches 5 and 6 of RI) in strings
- 4) m. 51: RI on A with octave displacement, augmentation, phrase extension through dyad repetition; strings and piano in canon
- 5) m. 54: RI on A in piano, cadential gesture Y in strings
- 6) m. 57: RI on Bb in strings, cadential gesture X with interval expansion, transposition, and rhythmic variation in piano and strings
- 7) m. 62: RI on B with octave displacement in strings, C bass in piano

The most outstanding feature of this section is the manipulation of cadential gesture X in the sixth and seventh statements of the first theme. The melodic contour is expanded, transposed and rhythmically varied in such a way that the last pitch of the seventh statement (in this case C) sounds like a tonic instead of a phrygian super-tonic.

2.41 Expansion of cadential gesture X

m. 57

Section B1 begins with a new tempo at m. 67 ( $\text{♩} = 132$ ). The second theme of four dyads now takes on the quality of a motive, as it appears in the new textural guise of successive entries in the strings, played at the frog, over a piano ostinato. These entries are varied in melodic contour and rhythmic shape, first isolated by rests and later overlapping, forming a contrapuntal web of varying phrase lengths. The left hand of the piano articulates a pedal A, punctuated by rests in a manner that suggests the rhythmic shape of cadential gesture X. The right hand quotes the head of the first theme from the first movement with the rhythmic shape of cadential gesture Y. Harmonic and rhythmic tension is

increased with the introduction of interval classes 4 and 6 at m. 78 and the piling up of motive entrances in mm. 85-88. (The numbers in ex. 2.42 represent eighth-note beats.)

2.42

Musical score for example 2.42, showing three staves of music. The first staff is marked with a box containing the number 85. The music is in a 2/4 time signature and features a melody with eighth-note patterns. Above the melody, interval class numbers are indicated: 8, 6, 5, 4, 6, 5, 7, 6, 5. The dynamics are marked as *ff (marc.)* on both the first and second staves.

The exposition is rounded off by section C, which is marked by a new tempo at m. 89 (*Meno mosso*,  $\text{♩} = 104$ ). The block-chord texture of this section sets it apart from the rest of the music in this movement and gives it a monolithic quality as a point of focus for the exposition. The chords are a verticalization of the series.

2.43 Verticalization of the series

Musical score for example 2.43, titled "Verticalization of the series". It shows a block-chord texture with interval class numbers (6, 5, 4, 3, 2, 1) and dynamics (*ff*). The score is in a 2/4 time signature and features a melody with eighth-note patterns. The dynamics are marked as *ff* on both the first and second staves.

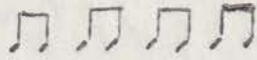

The harmonic density of these sonorities, articulated with a triple-forte dynamic, harmonics in the strings, and sforzandos

in the piano is balanced by the clear phrase structure of two four-bar phrases.

A short bridge passage is marked by a slower tempo at m. 97 (*Meno mosso ancora*,  $\downarrow = 92$ ) and a new character (*pesante*). This passage alludes to the contrapuntal texture of the first movement, with imitative entries on P7, P11, and P3.

A quasi-development section is formed by the next three sections.

- Section B2: mm. 101-14; (*Poco meno*,  $\downarrow = 126$ )  
2nd theme of four dyad groups  
Section D: mm. 115-59; (*Con humore*)  
New material derived from I10  
Section E: mm. 160-93  
Motives derived from P, R, and I over piano ostinato

Section B2 begins with the re-establishment of Tempo I. The four dyads which generate the second theme are stated here with a new rhythmic shape (  becomes  ). The rounding-off of the dyad groups with a rest becomes the basis for a string of phrases of varying lengths. The two dyad groups alternate in a pattern similar to the phrase structure of section B (see ex. 2.38).

2.44 - m. 101 (Each dyad is labeled with a small-case letter.)

<u>1st phrase - 4 beats</u> a   b   c   d	<u>2nd phrase - 4 beats</u> e   f   g   h
<u>3rd phrase - 6 beats</u> i   j   k   l	<u>4th phrase -</u> e   f   g   h
<u>6 beats</u> i   j   k   l	<u>5th phrase - 12 beats</u> e   f   g   h
<u>6th phrase - 4 beats</u> i   j   k   l	<u>7th phrase - 10 beats</u> e   f   g   h
<hr/>	
m   n   o   p (i. c.'s 4 and 6)	q   r

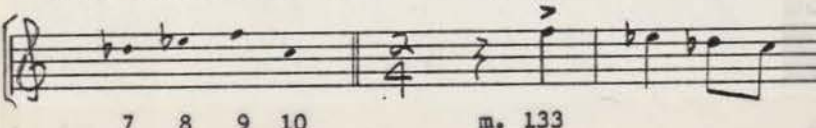
The difference here is that all voices have the same dyads on any given beat, producing a clearer harmonic rhythm. The violin and cello move in steady eighths; the viola plays a slight rhythmic variation; and the piano plays an off-beat dyad accompaniment which expands to steady sixteenth notes at m. 109, reminiscent of the composite rhythm of section A2 in the first movement (see ex. 2.25). Another similarity to section B is the introduction of interval classes 4 and 6 in the transition section (mm. 111-14).

The introduction of new motives and themes in the next two sections warrants the new letter classifications of D and E, even though the texture of section D is similar to that of section A and the texture of section E is similar to that of section B1. Section D introduces the inversion of



the original series in the piano on B with octave displacement and punctuated with rests. The strings answer with passages of "nonchalant diatonicism"<sup>16</sup> (this section is marked "con humore"). The tonal references of this section are foreshadowed in the Db major pandiatonic passage in section A1 and the diatonic modulatory passages in section B of the first movement (see exx. 2.18 and 2.20). The diatonic tetrachord writing in mm. 131-36 is derived from pitches 7-10 of the series.

2.45 Tetrachords derived from pitches 7-10 of P



7 8 9 10 m. 133

This leads to another statement of the inversion at m. 137, this time on B, and the introduction of a motive derived from the retrograde-inversion of a rearrangement of pitches 4-6 of the series and stated in a rhythmic and textural context derived from mm. 85-88 of section B (see ex. 2.42).

2.46 Motive derived from retrograde-inversion of pitches 4-6 of P



5 4 6

---

<sup>16</sup> Ibid., p. 9.

The strings make a reference to Db major at m. 147, and the motive derived from pitches 4-6 is combined in canonic sequences of descending major thirds with a second motive derived from pitches 1, 2, and 4 of the series.

2.47 Motive derived from pitches 1, 2, and 4 of P

m. 154 1 2 4

In section E beginning at m. 160, the strings state motives derived from P, R, and I, and section C over a piano ostinato whose regular rhythm and square harmonic outlines suggest dance movements from Copland's popular ballets.

2.48 Motive Chart for Section E

a) derived from P  
m. 162

b) derived from string writing at Section C  
m. 172

c) derived from I  
m. 176

d) derived from R  
m. 180

e) derived from R  
m. 181

In mm. 161-71, the piano ostinato is centered on A. The primary melodic material in this passage is the head of P, stated in canon and in a new rhythmic shape, with alternating *espressivo* and non-vibrato articulations. The canonic entries at the minor ninth suggest the comic half-step juxtapositions in passages of Billy the Kid, "Jingo" from Statements, and El Salón México. The last two notes of the motive developed in section C (see ex. 2.46) are stated with vamp-like rhythms that support the piano ostinato. In mm. 171-93, the piano ostinato shifts up to Bb, continuing a regular vamp pattern. In this passage the strings state: 1) a motive reminiscent of the string writing in fifths in section C; 2) variations of R with hocket-like distribution of voices in mm. 174-75, and in various rhythmic shapes in mm. 180-85; 3) a motive derived from I in mm. 176-77, 186-87, and 192. This section culminates with a complete statement of R at m. 190.

In summarizing the effect of sections B1, D and E as a "development section" of this sonata-allegro movement, one is faced with the difficulty of perceiving the true contrast of these sections. The comic relief (as evidenced by the "con humore" marking, diatonic references, square piano ostinatos, and simultaneous statements of motives a half-step apart) provides some contrast, but these devices are "non-devel-

opmental", reaffirming Copland's affinity for the gestures of dance-drama. However, what is even more strikingly reaffirmed is Copland's tendency to build large forms with variant structures, as the many sections of this movement are all related to each other in some fundamental way. In this sense, Copland's Franco-Russian musical heritage is also reaffirmed, as his habit of mono-thematic generation of sections is much different from the concept of thematic opposition of the essentially German sonata-allegro form.

The recapitulation presents the material of the exposition in denser form; both the first and second themes are developed and transformed in their respective A and B sections, with those variations of rhythm and texture found in the exposition, culminating in a restatement of section C. The movement ends with motivic references to P and R with the texture and melodic shape of section C of the first movement.

- Section A2: mm. 194-216  
1st theme  
Section B2: mm. 217-40  
2nd theme  
Section C1: mm. 241-48  
Verticalization of the series  
Section A4: mm. 249-66  
Motives from P and R with texture of  
section C of 1st movement

There are three statements of the first theme in section A2.

- 1) m. 194: RI on A in strings and piano, head of RI in canon
- 2) m. 205: RI on Bb in strings and piano in canon
- 3) m. 213: RI on C in piano, cadential gesture Y in strings

Section B3 states the two dyad groups (a,b,c,d and e,f,g,h) in four symmetrically augmented phrase lengths of four, four, eight, and sixteen beats, separated by rests. (This phrase structure is similar to that of section B2; see ex. 2.44). The pitches of the dyad groups are the same as those in section B1. A comparison with the dyad grid of section B shows some subtle ~~rhythmic~~ and textural variations (see ex. 2.38).

2.49

- 1) m. 217: vln, vla - a b c d e f g h  
vc - a a b c e f g  
piano - a b c d (a b a d-up a half-step)
- 2) m. 219: vln, vla - a b c d e f g h  
vc - a b c e f g  
piano - a a b c (a b c d-up a half-step)
- 3) m. 221: vln, vla - a b c d e f g h  
vc - a b c e f g h  
piano - a b c d
- 4) m. 223: vln, vla - d c b a e f g h  
vc - d c b a c f g h  
piano - b a d c
- 5) m. 228: vln, vla - a b c d a b c d a b c d  
vc - a b c d e f g h a b c d  
piano - a b c d e f g h a b c d
- 6) m. 228: vln, vla - e f g h e f g h  
vc - e f g h e f g h  
piano - e f g h e f g h

Beginning at m. 225, the dyads in all parts are vertically aligned, producing a steady harmonic rhythm. The faster composite rhythm of steady sixteenth notes brings the section

to a climax in mm. 238-40, preparing for a return to the dramatic textural contrast of the verticalization of the series at section C (m. 241).

The movement's coda, beginning with the "Quasi Tempo I" at m. 249, is a quiet and understated summation of all the music that has come before: motives derived from P, R, and cadential gesture Y, combined with the texture and melodic shape of section C from the first movement. The result is a "glow of luminous sound" <sup>17</sup> which provides the perfect transition to the diatonic, hymn-like sublimity of the third movement.

2.50 Motive Chart for Section A3

Musical notation for motive a) in bass clef, showing a sequence of notes with accidentals.

a) derived from P  
m. 254

Musical notation for motive b) in treble clef, showing a sequence of notes with accidentals.

b) derived from cadential gesture Y  
m. 255

Musical notation for motive c) in treble clef, showing a sequence of notes with accidentals.

c) derived from P  
m. 255

Musical notation for motive d) in treble clef, showing a sequence of notes with accidentals.

d) derived from P

Musical notation for motive e) in bass clef, showing a sequence of notes with accidentals.

e) derived from R  
m. 257

Musical notation for motive f) in treble clef, showing a sequence of notes with accidentals.

f) derived from pitches 4-6 of P  
m. 260

17

Ibid.

### Third Movement

The series' predominance of adjacent major seconds and its trichord and hexachord combinatorial features have thus far enabled Copland to adapt the twelve-tone technique to his already-defined tonal morphology. His twelve-tone usage creates no new forms, as his series often retains the properties of a theme. Many of the sections' proportions are formed through varied restatements of themes organized around tonal centers: for example, the combinations of hexachords to produce duplications of pitches in the first movement (see ex. 2.12) and the quasi-tonal architecture created by thematic statements on various pitch levels in the second movement.

The diatonic properties of the series and their applications in the first and second movements reach a synthesis in the third movement. This movement has a sectional-form based on restatements of the opening theme, not merely on various pitch levels, but in various tonalities as indicated by key signatures. An overall view of the sections shows a simple ABA song form.

<u>Section A:</u>	mm. 1-23; (Non troppo lento, $\text{♩} = 80$ )	] A ]
	1st theme in strings, <u>Db</u> major	
<u>Section B:</u>	mm. 24-33; (Molto meno mosso, $\text{♩} = 63$ )	
	Motive <u>X</u> in piano, motive <u>Y</u> in strings	
bridge:	mm. 34-49; (Tempo I)	
	Motive <u>Y</u> in imitative counterpoint; strings	

- Section A1: mm. 41-50; (*Piu lento*)  
1st theme in piano, E<sub>b</sub> major
- Section A2: mm. 51-70; (*Tempo I*)  
1st theme in viola; motive group from 1st theme  
in violin and piano, G<sub>b</sub> major
- bridge: mm. 71-78  
1st theme in modulating sequence
- Section A3: mm. 79-98; (*Lento assai*, ♩ = 60)  
1st theme in piano and strings, D<sub>b</sub> major  
textural variation of A2
- Section B1: mm. 99-117; (*Molto calmato e molto lento*, ♩ = 58)  
Motive X in viola and cello; motive Y  
in piano and violin; textural variation of B;  
incomplete statement of original series over A<sub>b</sub>  
major triad in strings

The pitches and contours of the themes in the third movement are derived from the series, although less strictly than the themes in the first and second movements. The first theme can be divided into three motive groups. The manner in which this melody is spun-out to form a twenty-two measure paragraph is similar to the self-generating melody that opens the Third Symphony.

2.51 First Theme

Motive group I derived from pitches 10-12 of P  
m. 1

Motive group II derived from pitches 1-4 of P  
m. 5

Motive group III derived from pitches 10-12 of P  
m. 9

The image shows three staves of musical notation in G-flat major (three flats) and common time. The first staff shows a melodic line starting with a half note G-flat, followed by quarter notes A-flat, B-flat, and C, then a half note D-flat, and finally a half note E-flat. The second staff shows a similar melodic line starting with a half note G-flat, followed by quarter notes A-flat, B-flat, and C, then a half note D-flat, and finally a half note E-flat. The third staff shows a melodic line starting with a half note G-flat, followed by quarter notes A-flat, B-flat, and C, then a half note D-flat, and finally a half note E-flat.



In place of the usual contrasting second theme there are two motives also derived from the series (hereafter labeled motive X and motive Y.)

2.52

Motive X- derived from pitches 1-3 of P

Motive Y- derived from 2 m9ths a M3rd apart

The use of a minor ninth as a motive building-block is new; admittedly its derivation from pitches 1-3 is tenuous. However, it is totally assimilated into the language of the Quartet through its juxtaposition with motive X and its development through imitative entry. Its newness is also linked with its occurrence in the Quartet's most subtle and interesting textures.

What this movement lacks in motivic ingenuity and thematic development is compensated for by textural variety. For the first time, there is a kind of a textural rhythm, established by the alternation of various combinations of piano and strings and the wide variety of string effects.

- Section A - strings sul tasto
- Section B - piano with "glassy tone;" strings con sord.
- bridge - strings poco sul ponticello
- Section A1 - piano
- Section A2 - piano and strings
- bridge - strings
- Section A3 - piano and strings
- Section B1 - piano with "glassy tone;" strings con sord. e poco sul ponticello

The simplicity of pitch organization and the manipulation of motive groups instead of single themes results in the Quartet's most frequent meter changes (the first movement is 107 bars long with only four meter changes; the second movement 266 bars with sixty-four meter changes, and the third movement 117 bars with fifty meter changes).

Thus, though the third movement lacks the contrapuntal elaboration of the first movement and the motive variation of the second movement, its pure, simple, hymn-like mood reveals the essence of the Quartet's language - a language which has emerged through the careful and systematic exploration of the limits of the original series.

Section A consists of two main ideas for strings alone: the first theme, stated in mm. 1-8 in rhythmic unison chords; and a harmonic sequence from mm. 9-22 whose melodic shape is derived from section C in the first movement (2.13, 2.23). The chords in this section are derived from the series.

2:53 Chords derived from the series

The musical notation shows a sequence of chords on a treble clef staff. The chords are labeled with Roman numerals and accidentals: 2 b o, 3 b b o, 2 b o, 11 b o, 12 b o, 3 b o, 7 b o, 10 b o, 11 o, 8 b o, 9 b o. Below the staff, the measures are labeled: m.1, m.2, m.2, m.2, m.7, m.9.

A Roman numeral analysis of the harmonic sequence reveals a tonic-subtonic progression typical of Copland and present in his earliest works.

2:54 Chord reduction of mm. 9-22

A musical score for a chord reduction of measures 9-22. It consists of two staves: a treble clef staff and a bass clef staff. The treble staff contains a melodic line with notes and accidentals. The bass staff contains a bass line with notes and accidentals. Below the bass staff, there are chord symbols: Cb: I, bVII, C: I, bVII, Ab: I, bVII.

Chord reduction of "Lento" from Two Pieces for String Orchestra(1928)

A musical score for a chord reduction of the "Lento" section from "Two Pieces for String Orchestra" (1928). It consists of a single treble clef staff. The first measure is marked "m. 1" and contains a chord with a sharp sign. The second measure contains a chord with a sharp sign and a circled "4" below it. The third measure contains a chord with a sharp sign. Below the staff, there are chord symbols: F#: I, bVII, I.

The Lydian fourth in the cello suggests the whole-tone formations of the series and helps to establish stylistic unity by recalling the whole-tone writing of the first and second movements. The frequent voice-crossing in this section produces angular melodic lines which are typically Coplandesque.

A subtle change of mood is established at section B through a tempo change to *Molto meno mosso* ( $\text{♩} = 63$ ) and the interruption of the Db major tonality by a sonority alluding to the parallel minor in m. 23. The piano develops motive X sequentially while the strings state motive Y in imitative entries. The spinning out of motive Y produces contours similar to those of the first theme.

2.55

First theme, m.1

Spinning-out of motive Y, m. 27

The image shows two staves of musical notation. The first staff is labeled '2.55' and 'First theme, m.1'. It begins with a treble clef, a key signature of three flats (B-flat, E-flat, A-flat), and a common time signature (C). The melody consists of quarter notes: B-flat, E-flat, A-flat, B-flat, E-flat, A-flat. The second staff is labeled 'Spinning-out of motive Y, m. 27'. It also has a treble clef and a 3/4 time signature. The melody consists of quarter notes: B-flat, E-flat, A-flat, B-flat, E-flat, A-flat, B-flat, E-flat, A-flat. The notes are connected by a long slur, indicating a continuous melodic line.

The bridge section from mm. 34-40 develops motive X in imitative entries and diminution.

Section A1 is a fourth species (i. e., syncopated) variation of the first theme for piano in Eb major. A common-tone modulation results in a consequent phrase in Gb major, setting up the tonality of section A2.

Section A2 develops motive group II of the first theme (see ex. 2.51) in the piano while the strings state the first theme in the texture of section A. The gesture to a harmony built on Fb in m. 58 suggests a phrase enlargement of the tonic-subtonic gesture in the harmonic sequence of section A (see ex. 2.54). After a modulation to d minor, motive group II is spun out in the first violin with supporting syncopated rhythms in the viola and cello reminiscent of the rhythms in mm. 63-66 in the first movement. The piano texture in this passage, with its wide leaps of single accented notes, is reminiscent of the Piano Variations (1930) and the Twelve Poems of Emily Dickinson (1950) and points ahead to the Piano Fantasy (1957).

The bridge leading back to the restatement of the first theme in D major is built from a rhythmic variation of the

The bridge leading back to the recapitulation of the first theme in Db major is built from a rhythmic variation of the first theme in modulating sequence (mm. 71-78). Measures 75-78 are a direct quote of the harmonies of mm. 94-97 in the first movement (see ex. 2.13).

Section A3 is a textural inversion of section A2 with the first theme in the piano and motive group II developed in canon in the strings. The harmonic sequence of tonic-subtonic chords is shortened by one bar.

Section B1 is a textural variation of section B, with motive X in the viola and cello and motive Y in the violin and piano. The bell-like articulation of an accented chord derived from pitches 1-4 of RI (see 2.33) suggests the block-chord textures of the C sections of the first movement and the coda of the second movement.

In the work's closing bars, motive X is extended into an incomplete statement of the original series under an Ab major triad in the strings.

### CHAPTER THREE - Conclusion

The foregoing analysis of the Piano Quartet has demonstrated how Copland assimilates twelve-tone technique into his own musical language. Brief discussions of pieces from Copland's catalogue of works have helped to place the Piano Quartet in perspective, and have reaffirmed Copland's stylistic unity. But though the Piano Quartet looks back to the hallmarks of style which have resulted from Copland's uniquely American reinterpretation of a largely Franco-Russian musical heritage, it also points ahead to developments and extensions of that heritage. The stylistic hallmarks of variant structure, slow harmonic change, the formation of dissonances through the juxtaposition of false-related consonances, ostinato and dance rhythms, non-developmental forms, and an emphasis on sonority, are all present in the Piano Quartet. Furthermore, one sees the beginnings of new developments: an integration of the extended harmonic language of serialism which is later realized in works like the Twelve Poems of Emily Dickinson (1950) and Duo for Flute and Piano (1972); a new emphasis on harmonic texture to build large-scale works like the Piano Fantasy (1957) and Inscape (1967); the systematic exploration of contrasting multiple interval doublings in Emblems (1964); the variety of spacing and voicing of chords in Music for a Great City (1964) and Night Thoughts (1972); the extended diatonicism of Nonet (1960); and a more highly-evolved chromaticism in Connotations (1964). Viewed in this

light, the Piano Quartet shows the beginnings of the even greater emphasis on harmonic organization which characterizes Copland's works since 1950.

As we have seen, the complexity of serial pitch organization results in a simplification of other parameters. Copland's use of his series not only as a source of raw material, but as a long thematic unit which generates phrases, sections, and movements, insures a greater harmonic complexity. The length of the thematic unit, which includes nearly or all twelve chromatic pitches in a work like the Piano Quartet, contrasts greatly with the short, two- and three-note motives that characterize the pre-1935 scores. This results in a transformation of Copland's earlier habit of creating variation within phrases of exceptionally slow harmonic change through various combinations of rhythmic groupings of twos and threes with frequent meter changes. In the Piano Quartet, meter changes always occur in conjunction with rhythmic variations of short motives. For example, in the first movement, where each section is built on statements of the long first theme, Copland's characteristically frequent meter changes are conspicuously absent. The complex pitch organization also results in the simplifications of texture characterized by the heterophonic texture in the second movement, much in the same way that the lessening of dissonance in Copland's popular scores resulted in an even greater attention to the spacing and voicing of

18  
simple triads.

Copland's emphasis on harmonic organization is hardly surprising when one remembers that his earliest musical habits were formed as a pianist and improviser. Like Stravinsky, he has always been inclined to compose from a larger harmonic shape. And if a clearer understanding of the Piano Quartet helps us both to trace the beginnings of a new harmonic complexity in Copland's later works, and to acknowledge its stylistic unity with his earlier works, above all it demonstrates how the evolution of his musical language has always been an empirical one.

In sharp contrast with so many serial works which seem to spring from a more theoretical conception, the Piano Quartet has many qualities of improvisation: the extended passages based on limited pitch-class sets in the first movement; the vamp-like ostinatos of the second movement; and the quality of continuous variation in the third movement. These movements' forms seem to be realized through improvised sections which fix on quasi-tonal areas as goals which are moved through, to, and from. An organic development of the three movements, which is affirmed by the dates of their composition (first movement, 8/31/50; second and third movements, 10/20/50), gives some evidence for Copland's habit of developing the morphology of each new piece through a pushing forward of ideas, and through trial and error.



This in part explains why to some listeners the Piano Quartet sounds no more dissonant than non-serial works like the Symphonic Ode, Statements, and the Piano Variations. Similarly, many listeners might have difficulty in distinguishing between Schoenberg's atonal works like Erwartung, Pierrot Lunaire, Five Orchestral Pieces, and strict twelve-tone pieces like the Fourth String Quartet and the Piano Concerto. But major similarities between the twelve-tone aesthetics of the two composers end there. Schoenberg's tendency to create a feeling of cadence through the linear shape of each voice is contrasted by Copland's use of vertical sonority to form hierarchical relationships. Copland may use all twelve tones within a single phrase (though rarely in the Piano Quartet) but only in order to extend his fundamentally diatonic language.

Though serialism developed step by step from some of the most traditional features of western music - motivic development, motivic variation, and principal and subordinate voices - the applications of these principles are often derived from such a strong theoretical point of view that they are difficult for the ear to comprehend. A large part of Copland's success in modifying these applications can be accounted for by his absorption of the rhythmic procedures of popular and folk music: ostinato, regular syncopation, repetition of larger sub-phrase units, accompaniment textures, and regular harmonic rhythm.

Copland's use of serial technique is not an attempt to attain a kind of multi-dimensional aesthetic. His tendency to avoid multi-dimensionality accounts for the plainness of his materials and their treatment. This "nakedness of device" makes his creative expression painfully human, somehow reflecting an inevitable incompleteness. Though other composers have made attempts to evolve an all-encompassing aesthetic, this is too haughty a pursuit for Copland. Rather, his more defined, if limited, musical language has produced a body of work in striking contrast to other artists' approximateness of expression.<sup>19</sup>

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