

**An Analytical Study  
of  
Selected Chamber Works**

**by  
Arnold Schoenberg**

**by  
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This dissertation is submitted in partial fulfilment

of the requirements for the degree of

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## DECLARATION

I hereby declare that this thesis, submitted in partial fulfilment of the requirements for the degree of Master of Music at the University of Cape Town, has not been submitted by me previously for a degree at another university.

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## ABSTRACT

This study examines Schoenberg's compositional procedures in selected chamber works written between 1906, when Schoenberg started to move away from tonality, until 1936, when his twelve-tone technique had been firmly established.

The analysis of the First Chamber Symphony, Op. 9, of 1906, concentrates on the formal principles of the work, in which Schoenberg's fusing of the different movements of a complete sonata into a single movement, is investigated in detail. In the Second String Quartet, Op. 10, of 1908, Schoenberg's cryptography is investigated in its second movement, and the last movement, representing one of his first atonal works, is analysed from a non-tonal point of view. *Pierrot Lunaire*, Op. 21, is included as an example of a consistently free-atonal work.

The “Sonett” from the Serenade, Op. 24, of 1922 to 1923, is examined as one of the earliest examples of a twelve-tone work. The first and third movements of the Fourth String Quartet, Op. 37, of 1936, were chosen as an example of a mature twelve-tone work in which combinatoriality becomes an important compositional device.

## CONTENTS

|  |     |
|--|-----|
| INTRODUCTION .....                                   | 1   |
| CHAPTER ONE. CHAMBER SYMPHONY, OP. 9 .....           | 5   |
| CHAPTER TWO. STRING QUARTET, OP. 10 .....            | 32  |
| CHAPTER THREE. <i>PIERROT LUNAIRE</i> , OP. 21 ..... | 55  |
| CHAPTER FOUR. SERENADE, OP. 24 .....                 | 102 |
| CHAPTER FIVE. STRING QUARTET, OP. 37 .....           | 119 |
| CONCLUSION .....                                     | 171 |
| BIBLIOGRAPHY .....                                   | 174 |

## INTRODUCTION

Arnold Schoenberg, an Austrian composer by birth, is one of the best-known composers of the twentieth century because of his innovations in tonal organisation. His music was not understood by many of his contemporaries and by the audiences where the music was performed. This is because the language of his music takes a long time for the ear to become familiar with, but even then one never really grasps or understand its full implications. Scholars today are still trying to understand his music but they all agree about one thing, that his music is different, genuine, and “an inevitable expression of the art form of music during their time”.<sup>1</sup>

Schoenberg's style of composition was not accepted as he was abandoning triadic harmony and progressively moving towards chromaticism. According to Neighbour, each new work raised a storm among his contemporaries and audiences because it was becoming more and more dissonant.<sup>2</sup> He further states that after the disintegration of functional harmony, Schoenberg was left with two choices: to devise

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<sup>1</sup>OW Neighbour, “Arnold Schoenberg”, in *The New Grove Dictionary of Music and Musicians*, 1980.

<sup>2</sup> Ibid.

ideas which were complete by themselves and required no development, or to construct larger forms based on a text.<sup>3</sup>

Schoenberg's style of composition can be divided into four periods. The first period, up until about 1908, is a tonal one. After that he abandoned tonality totally, and he was the first composer to do so. This second period is often referred to as the "free-atonal" period. It is also regarded as his "expressionist" period. The third period is that of serialism; from 1920 onwards, and here he first introduced his twelve-tone techniques. The last period, from about 1936 onwards, includes a return to a more tonal approach to serialism. This thesis analyses five chamber works (or movements thereof), which are representative of Schoenberg's compositional styles. This includes a late tonal work, the First Chamber Symphony, Op. 9, of 1906. The Second String Quartet, Op. 10, of 1908, is included as a transitional work, bridging the gap between his late tonal and early free-atonal style. *Pierrot Lunaire*, Op. 21, of 1912 is included as an example of his established atonal style of composition. "Sonett" from the Serenade, Op. 24, composed between 1921 and 1923, illustrates Schoenberg's early twelve-tone technique. In the final work analysed here, the Fourth String Quartet, Op. 37, dating from 1936, Schoenberg's mature twelve-tone style is investigated.

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<sup>3</sup> Ibid.



In the analyses below, the following abbreviations are used for instruments:

clarinet, cl;

bass clarinet, bcl;

bassoon, bn;

contra bassoon, cbn;

violin, vl;

violin 1, vl-1;

violin 2, vl-2;

viola, vla;

cello, vlc.

Notes 1 to 3 are indicated as 1-3 and dyads of a set such as 4 and 5 are written as 4/5. Pitches are presented as follows: A for A natural, A# for A sharp and then A flat. So A#-A stands for A sharp to A natural.

The First Chamber Symphony, the Second String Quartet and *Pierrot Lunaire* are published by Universal Edition. The Serenade, is published by Wilhelm Hansen Edition, and The Fourth String Quartet by G. Schirmer, Inc.

I wish to thank my supervisor, Professor James May, for the invaluable help his insights into the analyses of Schoenberg's works has afforded me.

University of Cape Town

## CHAPTER ONE

### CHAMBER SYMPHONY No. 1, Op. 9

The Chamber Symphony was completed in July 1906. This work, like the String Quartet Op. 7, is performed without a break and is one of the last works in which Schoenberg makes use of tonality. Whittall says: "In this work Schoenberg combined a further compression of the single movement form perfected in the Op.7 quartet with the kind of textual elaboration hitherto explored only in the expansive orchestral contexts of the *Gurrelieder* and *Pelleas und Melisande*".<sup>4</sup> The Symphony is written for fifteen instrumentalists: flute (piccolo), oboe, cor anglais, clarinet in D/E flat (cl), clarinet in A/B flat, bass clarinet (bcl), bassoon (bn), contra bassoon (dbn), two horns, two violins (vl-1& vl-2), viola (vla), cello (vlc) and double bass. Whittall states that it must be impossible to balance these instruments; ten wind instruments and five strings, especially when the winds include a bass clarinet and a double bassoon.<sup>5</sup>

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<sup>4</sup> Arnold Whittall, Booklet accompanying *The Complete Works for Chamber Ensemble by Arnold Schoenberg*, conductor David Atherton, The London Sinfonietta, DECCA STEREO SXL 6660-4, 9.

<sup>5</sup> Arnold Whittall, *Schoenberg Chamber Music* (London: BBC Music Guides, 1972), 16.

On the other hand, he points out that this layout creates an opportunity for textures of great density even though the composer is less concerned with writing in fifteen real parts.<sup>6</sup> According to Friedheim, the “simplification of the structure helps compensate for the increased tonal instability”.<sup>7</sup> He further states that all the oblique methods of modulation noted in the shorter *Lieder* now appear within this single structure.<sup>8</sup> The work has themes that are chromatic, and harmonically unstable, unlike those of Op. 7 which were predominantly diatonic.<sup>9</sup>

According to Frisch, this work is the direct heir of the first string quartet.<sup>10</sup> The outer sections are the lengthiest with a central development and transition arranged as follows:

- exposition; with two main thematic groups
- scherzo
- a central development; which ends with the opening material
- the equivalent of a slow movement; with new thematic material
- a recapitulation.

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<sup>6</sup> Whittall, *The Complete Works*, 9.

<sup>7</sup> P. A. Friedheim, “Tonality and Structure in the Early Works of Schoenberg” (Ph. D. diss., New York University, 1963), 338.

<sup>8</sup> Ibid., 337.

<sup>9</sup> Ibid.

<sup>10</sup> Walter Frisch, *The Early Works of Arnold Schoenberg, 1893-1908*, (Los Angeles: University of California Press, 1993), 220.

Frisch states that the parts are well balanced and arranged in the following manner:

- first movement/exposition-transition- scherzo- development- transition
- slow movement- transition- finale.<sup>11</sup>

According to Frisch the openings bars of the sections in his overall formal layout are as follows:

|                           |                       |
|---------------------------|-----------------------|
| First movement/exposition | bar 1                 |
| Transition                | bar 133               |
| Scherzo                   | bar 160               |
| Development               | bar 280               |
| Transition                | bar 368               |
| Slow movement             | bar 378               |
| Episode/transition        | bar 415               |
| Finale/recapitulation     | bar 435 <sup>12</sup> |

Frisch sees the first movement as having a double exposition. He suggests that Schoenberg might have been influenced by Strauss's *Don Juan*, a piece that Schoenberg knew well and which has the same tonic as Op. 9.<sup>13</sup> The first exposition is introduced by two passages: the

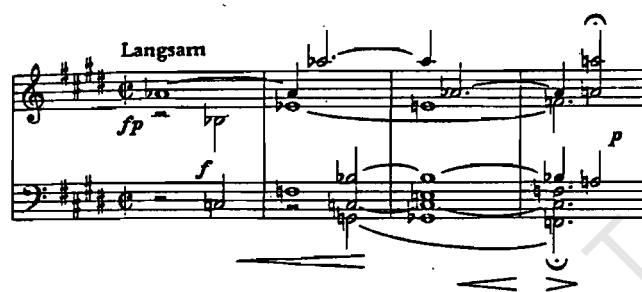
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<sup>11</sup> Frisch, 221.

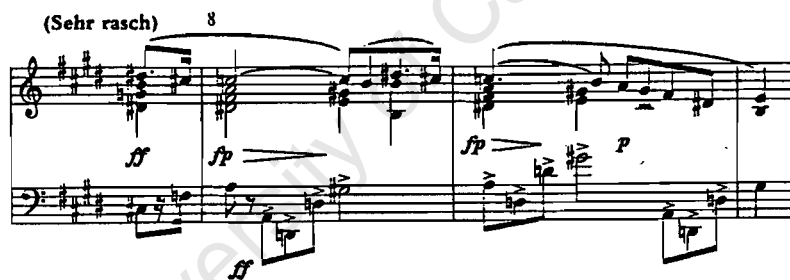
<sup>12</sup> Ibid.

introductory passage from bars 1-4 and the horn theme from bars 5-9. These passages end on F major (cadence 1) and E major (cadence 2) in bars 4 and 8 respectively. Example 1 is taken from Frisch's "The Early Works".

Example 1 a.



Example 1 b.



These two passages introduce the two keys that dominate the following expositions, especially the first. Berg refers to the E major cadence as a cadence theme that appears throughout the piece when there is a strong cadence in E major. Berg states that there are certain components which appear at all the structurally decisive places in the work:

<sup>13</sup> Ibid., 222.

- the fourth chord stated at bars 1- 4 and at the end of the development section, though stated differently each time.
- the theme consisting of rising perfect fourths (horn motto) stated ascending from bar 5, descending and in inversion at some places; also stated at the end of the scherzo at bars 278-9: and also bars 354-77 in different voices and, finally, within the coda.
- the cadence theme stated whenever there is a strong cadence in E major.<sup>14</sup>

Both expositions begin with the same theme, theme 1a, which ends on a cadence in E major at bar 10 and at bar 58. After the introduction's resolution into F major, the exposition is launched by the horn with a pattern of rising perfect fourths. There are two related thematic groups, each with important subsidiary ideas. Whittall states that Schoenberg was worried about the apparent absence of any relationship between the two main themes. He points out that unity between these two themes was created subconsciously.<sup>15</sup> The first and second themes share the interval of a perfect fourth and this interval is of great harmonic importance in the work. The principal notes of the first theme (bar 9, vlc) when inverted

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<sup>14</sup> Alban Berg, "Chamber Symphony Guide", trans. Mark De Voto, *Journal of the Arnold Schoenberg Institute*, 16 nos.1 and 2 (June & November 1993) : 245.

<sup>15</sup> Whittall, *Schoenberg Chamber Music*, 17.

form the notes of the second theme at bar 31 in vlc.

Example 2 is taken from Schoenberg's "My Evolution" and shows clearly how the two subjects are related: the main intervals outlined by Schoenberg in the first subject is inverted in the skeletal second subject.<sup>16</sup>

### Example 2.

The image displays two staves of musical notation. The top staff is labeled '1st main theme' and the bottom staff is labeled '2nd main theme'. Both staves are in G major (one sharp). The 1st main theme begins with a triplet of eighth notes (G4, A4, B4) followed by a sequence of notes: C5, B4, A4, G4, F#4, E4, D4, C4. The 2nd main theme begins with a triplet of eighth notes (G3, F#3, E3) followed by a sequence of notes: D3, C3, B2, A2, G2, F#2, E2, D2. Annotations with brackets indicate intervals: 'a minor 6th up' between the first triplet of the 1st theme and the first triplet of the 2nd theme; 'a minor 6th down' between the first triplet of the 2nd theme and the first triplet of the 1st theme; '2nd up' between the second triplet of the 1st theme and the second triplet of the 2nd theme; '2nd down' between the second triplet of the 2nd theme and the second triplet of the 1st theme; '-3 up' between the third triplet of the 1st theme and the third triplet of the 2nd theme; and '-3 down' between the third triplet of the 2nd theme and the third triplet of the 1st theme. The notation includes treble and bass clefs, a key signature of one sharp, and a common time signature. The 2nd main theme ends with 'etc.'.

According to Whittall the contours of the main themes ensure that the underlying tonalities are expanded and modified by chromaticism of various types, the whole tone scale being the most prominent.<sup>17</sup>

<sup>16</sup> Arnold Schoenberg, "My Evolution" in *Style and Idea: Selected Writings of Arnold Schoenberg*, ed. Leonard Stein, trans. Leo Black (London: Faber & Faber, 1975), 85.

<sup>17</sup> Whittall, *The Complete Works*, 9.



He further points out that conventional triadic harmony is infrequent in spite of the expectations raised by the introductory passage. According to Friedheim, this work contains the most complex music to be composed by Schoenberg up to this time. This work has all of Schoenberg's previously accumulated harmonic experiments. Friedheim further states that, a number of steps were taken by Schoenberg to support this form of composition:

1. The preservation of thematic character; principal themes remain strong and aggressive while the subsidiary melodies are expansive and lyric.
2. Relative harmonic stability even within an advanced chromatic style; although the principal theme is based on a whole tone scale, it is placed against an E major harmonic background that clearly indicates which melody notes lie outside the tonality and which do not.
3. Throughout the work the structural articulation, in particular the approach to principal areas remains audible.
4. Sonority plays an increasingly important role as tonality loses its hold; in consolidating his harmonic resources, Schoenberg included extensive use of chords in fourths which had appeared in *Pelleas und Melisande*. This unstable yet recognisable tone-colour helps contribute to structural clarification, reappearing between all major sections.<sup>18</sup>

The F major chord which closes the first four-bar section is the

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<sup>18</sup> Friedheim, 337-8.

Neapolitan of the central tonality.<sup>19</sup> The opening five-part chord, consisting of superimposed perfect fourths, heralds the first theme. Friedheim points out that this opening chord moves to an altered dominant (containing both the raised fifth, G#, as A flat, and the lowered fifth, G flat) of F to which it resolves at bar 4.<sup>20</sup> Wellesz points out that the horn theme at bar 5 plays an important role in the symphony and mentions its appearances at all the important points in the development. According to Wellesz, this theme is capable of discarding tonality because of its ascending fourths and is capable of bringing into the polyphonic texture of the parts a contrast that has immediate effect.<sup>21</sup> Directly after this theme, a short motive appears leading to a cadence at bar 9. The augmented triads starting at bar 6 move down the whole tone scale (with lowest notes G, F, E flat, C# and B) to a diminished seventh chord at bar 8. (The A, which would complete the whole-tone scale, forms part of the diminished seventh.)

From the second beat of this bar and in bar 9, the head motive of the principal theme 1a (for the first exposition) is introduced by vlc. The subject proper starts at the end of bar 9 and lasts till bar 16. At bar 58 it

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<sup>19</sup> Ibid., 338.

<sup>20</sup> Ibid., 339.

<sup>21</sup> Egon Wellesz, *Arnold Schönberg*, trans. by W A Kerridge (London and Toronto: J M Dent and Sons.), 105.

reappears for the second exposition. Apart from the note A which forms part of the head motive, this theme is based on the whole tone scale. (Friedheim referred to this theme as theme A.<sup>22</sup>) This theme in both expositions preserves the thematic character of the traditional sonata form. Theme 1b which follows has the character of a modulatory transition especially by its use of sequence in overlapping four bars at bar 16 and bar 68. (Friedheim refers to this theme as theme B.<sup>23</sup>)

In both expositions, the second themes provide contrast in key, thematic material and mood. The first of these themes, 2a, at bar 32, in F minor has a counter-statement or repeated variant at the end of bar 38 and is seven bars long. (Friedheim refers to this theme as theme C<sup>24</sup>). The second theme 2b at bar 84, in A major, is an expansive one. It is 9 bars long with a varied repetition of bar 88 as 89. This theme also has a counter-statement that starts at bar 97 in the horns. As in the first exposition, it soon changes. According to Friedheim, the 63-bar exposition of the principal section can be divided into an AB-C-AB form with a 27-21-15 bar division.<sup>25</sup>

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<sup>22</sup> Friedheim, 337.

<sup>23</sup> Ibid., 338.

<sup>24</sup> Ibid., 339.

The second theme **1b**, at bar 16 is in A minor and consists of a contrapuntal development of the motive and its inversion (theme **B** of Friedheim). Berg states that this theme is followed by the imitative entries of the theme and its inversion. At the same time the basses have an imitative upbeat of this theme (the triplet motive) in augmentation from bar 16-31.<sup>26</sup> The **2a** theme at bar 32 is in the Neapolitan minor (theme 1/2 of Frisch and **C** of Friedheim). Friedheim says that the key is suggested indirectly by the F major introduction.<sup>27</sup> This development section leads to a crescendo at bars 50-4 with the principal theme, **1a** (theme **A** of Friedheim) returning at bar 58, at original pitch but harmonised in the whole tone scale.

The second theme **1b** returns at bar 62, and, proceeding from its high point, leads to the end of this section. The following transition from bar 68 preserves the thematic function through the use of short motives: 6 bars of an imitative quaver figure are followed by a bar and a half of running semi-quavers which lead to six and a half bars of a new figure accompanied by semi-quavers. According to Berg, the transition consists of different figures: from bar 74-75 there is an energised figure for the

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<sup>25</sup> Ibid., 343.

<sup>26</sup> Berg, 247.

<sup>27</sup> Friedheim, 343.

strings; from bar 75-76 the *sehr zart* melody for the oboe; then the last melody breaks off on a B flat minor chord at bar 82 after a short intensified figure by the strings. He further states that this B flat minor chord functions as a cadential chord for A major, the key for the new section.<sup>28</sup> The secondary theme, **2b** is introduced at bar 84 in A major (theme 2/2 of Frisch) through its minor Neapolitan chord. Friedheim states that this tonal relationship parallels that of theme 2a (C of Friedheim) in the principal section.<sup>29</sup>

ple is taken from Friedheim's "Tonality and Structure".

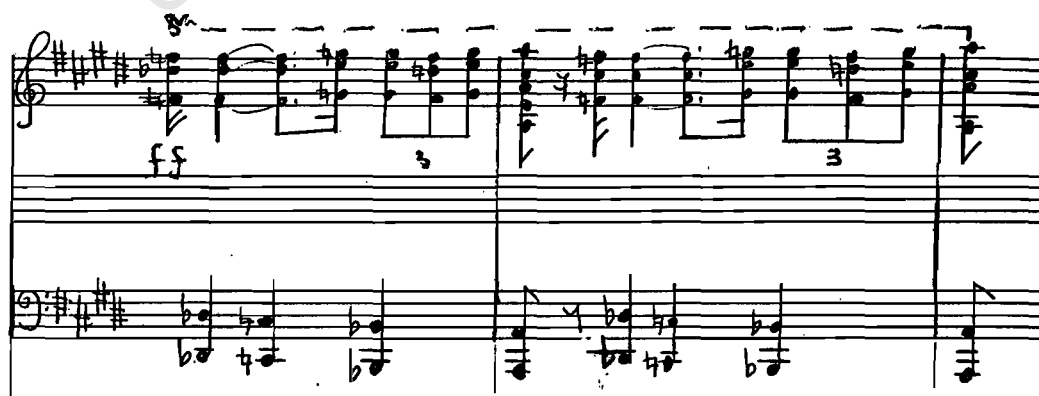
### Example 3.



<sup>28</sup> Berg, 247.

The melody is very chromatic and the tritone leap from F# to C natural becomes an important referential element. This theme is developed for 29 bars. This melody reaches its high point at bar 106 where the strings have *ff* pizzicato stating an A major triad. Berg states that this is made stronger by the triplets played by bcl, dbn, vlc and double bass at bar 109, joined by bn at bar 110 whilst vl-2 maintains its pizzicato. He further states that the A major tonality established at bar 106 is maintained in the following section.<sup>30</sup> The exposition ends with a 20-bar passage at original tempo. Every now and then an A major triad appears on the downbeat like in bars 113, 116 and 123. The final bars from 127 have a short rhythmic figure with a stepwise progression, down in seconds to A major via major triads on D flat, C and B flat. At the end of bar 130, last beat, note A is heard between the persistent C# major triads.

#### Example 4.



A 27-bar transition leads to the scherzo movement. Here at bar 133, the

<sup>29</sup> Friedheim, 345.

principal theme at original pitch and in a varied form is used, still harmonised in E. According to Friedheim, this serves to conclude the exposition since it is not followed by a development but an entirely new set of themes.<sup>31</sup> The passage from bar 151, last beat, has skips in the woodwind section that are gradually becoming bigger (to leaps of a seventh interval). According to Berg, these leaps lead to the paraphrase of the horn theme in the basses with *fff* at bar 156-9. He further states that these leaps are characteristic of what is to come.<sup>32</sup> The last part of the transition introduces motivic fragments from the coming movement. Stuckenschmidt points out that there is a chordal transition from triads to ninth and eleventh chords, then the movement leaps into the scherzo with an *ff* sequence of thirds.<sup>33</sup>

In the scherzo, Schoenberg moves away from the traditional scherzo-trio-scherzo form, but uses the thematic dualism of the form. The two themes are closely related. Stuckenschmidt refers to the themes as two percussive motives which answer each other polyrhythmically.<sup>34</sup>

This movement is closer to sonata form because of the manner in which

<sup>30</sup> Berg, 249.

<sup>31</sup> Friedheim, 348.

<sup>32</sup> Berg, 251.

<sup>33</sup> H.H. Stuckenschmidt, *Arnold Schoenberg*, trans. Edith Temple Roberts and Humphrey Searle (London: John Calder Publishers LTD, 1959), 39.

<sup>34</sup> Ibid.

themes are introduced and developed:

|                |         |         |         |
|----------------|---------|---------|---------|
| Scherzo        | theme 1 | bar 160 | C minor |
| Transition     |         | bar 184 |         |
| Trio           | theme 2 | bar 200 | A-flat  |
| Development    |         | bar 215 |         |
| Recapitulation |         | bar 249 | C minor |

both themes at bar 253.

Frisch shows that the accompaniment of the first theme at bar 160, is modified to become the trio theme at bar 200 (oboe and vla).

He further states that the principal voice of theme 1 can be derived from the ascending semitones in vl-2 at cadence 1, movement 1, bar 1-4.<sup>35</sup>

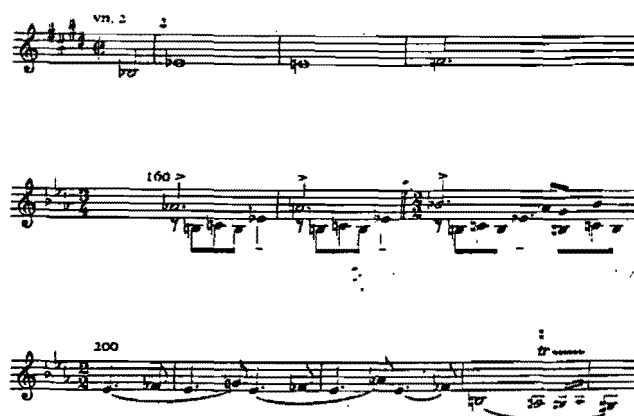
Example 5 is taken from Frisch's "The Early Works" and it shows the relationship between these themes.

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<sup>35</sup> Frisch, 224.



## Example 5.



Friedheim illustrates that the principal theme, 1 which is in C minor, combines 2/2 and 2/4 bars with the basic 3/4 rhythmic pattern.<sup>36</sup> The following example is taken from Friedheim's "Tonality and Structure".

## Example 6.



Friedheim points out an interesting procedure in Schoenberg's presentation of a theme: the theme is stated, followed later by its inversion, and then a canonic combination of both ideas. But here at bar 184 he changes: in bar 185 the inversion statement is immediately

<sup>36</sup> Friedheim, 348.

coupled with its original form.<sup>37</sup> From bar 184-9, the basses have imitative entries of a figure while the winds have entries of its inversion in thirds at bar 181-90. The leaps are also stated at bar 190-5 by the winds. Then at bar 197-8, there are ascending and descending fourths by the basses and bcl, bn and dbn. At the end of the scherzo, the melodic fourths appear briefly from bar 197. The trio, at the end of bar 199, is also in C minor and is based on the accompanying phrase which was played by the vlc in the scherzo (at bar 180). This theme, 2, retains the 2/4 rhythm of the scherzo section. At the end of the first statement of the theme at bar 203, there is a C minor chord on *fff* pizzicato. Again at bar 207, and at the end of the second statement of the theme, the chord of the dominant in C minor is stated.

In Frisch's analysis, the passage from bar 215-8, with the final appearance of theme 2 (the trio), followed by a sustained horn pedal, marks the end of an important section, the development section.<sup>38</sup> At bar 218-23, there are components of the scherzo added in this section and also at bars 226-32. This is followed by the re-appearance of a portion of theme 1. Frisch suggests that this theme appears in the manner one might

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<sup>37</sup> Ibid, 349.

<sup>38</sup> Frisch, 224.

expect at the beginning of a development section.<sup>39</sup> Berg suggests that the shrill clarinet figure stated at bar 236, third beat, and the dotted rhythm lead to the recapitulation at bar 249.<sup>40</sup> Both themes are recapitulated simultaneously from bar 253 to bar 258. The end of the movement is clearly marked by the sustained *ff* at bar 274 -79 and the re-appearance of the horn theme, from the first movement, now descending in fourths at bar 279 -80.

The development section begins in F minor. This section recalls themes from the exposition. Theme 2a of exposition 1 (theme C of Friedheim or theme 1/2 of Frisch) reappears in the original key, followed by cadence 1, then by theme 2b of exposition 2 (theme 2/2 of Frisch) which dominates the first part of the development. This section can be divided into three sections:

|           |               |         |
|-----------|---------------|---------|
| Section 1 | bar 280 - 312 | F minor |
| Section 2 | bar 312 - 335 |         |
| Section 3 | bar 333 - 367 |         |

These sections are divided according to their thematic material.

This section begins with imitative entries of the scherzo figure first

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<sup>39</sup> Ibid., 225.

introduced at bar 184 (basses) in original form and in inversion. The first part deals mainly with themes introduced in the exposition and it ends with the appearance of descending melodic fourths in vlc and double bass. At bar 290, there is a short transition with the triplet motive. From bar 303-7, the oboe has a figure which proceeds with the triplet figure and its inversion. This section ends with the descending fourths from bar 308 in vl-2 with the triplet figure, and vlc & double-bass, stating the descending melodic fourths at bar 310. The first part breaks off at an *fff*. Part two is dominated by theme 1b of the second exposition (theme B) as it was at bar 68. This part also breaks off on *ff* at bar 333-4 like the previous section. The third part combines scherzo themes with those of the exposition. It begins with part of theme 1 of the scherzo and then combined with theme 2b of the second exposition and finally at bar 343 theme 1a of the first exposition joins. Friedheim points out that the following passage has a canonic version of the scherzo theme, and, this theme appears simultaneously against two other themes; this demonstrates Schoenberg's contrapuntal diversity.<sup>41</sup>

In this development individual motives appear in sequence. Friedheim maintains that harmonic relations remain unclear even though F# minor,

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<sup>40</sup> Berg, 251.

D minor and B flat minor appear at various moments.<sup>42</sup>

At the end of the passage there are a few bars of augmented triads moving in contrary motion in whole and half steps (bars 354-60). From the end of bars 354-60, vlc and double bass appear with descending melodic fourths. This is followed by bcl, bn, dbn vlc and the double bass all playing ascending melodic fourths against vl-1, vl-2 and vla with their descending fourths until bar 362. From bars 363-68 the instruments continue with fourths, *fff*. The climax of these *fff* chords eventually settle to a sustained fourth at bar 364-67 in the strings. Berg points out that these chords break into fragments at bar 368-71 in the following manner:

Double bass and vlc have harmonics *pp*

vl-1 and vl-2 with muted *col legno*

cl with arpeggios

bn also arpeggios.<sup>43</sup>

According to Frisch, the triple forte chords culminate the development and the sonority represents a compression of the horn motto.<sup>44</sup> The appearance of these fourths mark the end of the development section. At

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<sup>41</sup> Fiedheim, 352. For his example, see page 353.

<sup>42</sup> Ibid., 354.

<sup>43</sup> Berg, 257.

<sup>44</sup> Frisch, 229.

bar 374 the introductory chord appears resolving to F major (bars 374-5), the second resolution is to G major, the key for the new section. The repetition of this F major cadence leads to the beginning of the slow movement. Friedheim points out that a variant of this progression alters the tonal direction and ends on G (bars 374-81).<sup>45</sup>

At the beginning of the work, the chord in fourths moved to a dominant seventh on C and now it has moved to one on D. Friedheim states that the following chord in G is then augmented. There is a suggestion of B as the root and this is supported by the F#/7 which follows, and V of 111 resolving to G.<sup>46</sup>

Frisch divides the slow movement in the following manner:

Introduction (cadence)      bar   378 - 381

Main theme (A)              bar   381 - 385

Secondary theme (B)        bar   385 -390

Main theme varied (A1)      bar   391 -394

Secondary theme varied (B1) bar   395 -397

Introduction (cadence) varied bar   398 -404

Main theme (A)              bar   405 -407

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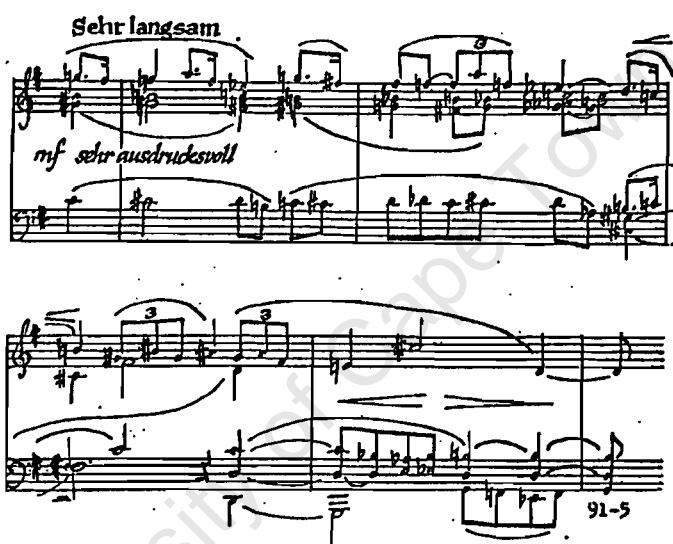
<sup>45</sup> Friedheim, 355.

Coda

bar 407–410<sup>47</sup>

The main theme, A, is introduced at the end of bar 381. This theme is derived from the dotted rhythmic figure of cadence 2 in the first movement. Example 7 is taken from Friedheim's "Tonality and Structure".

Example 7.



Frisch sees the relationship between these two as appropriate because here, the theme comes after the horn motto and cadence 1, so it occupies the position formally occupied by cadence 2.<sup>48</sup>

Friedheim compares this theme with the secondary theme of the first movement. He states that although both themes are very chromatic, this theme (the cadence 2 theme) appears to be more functional as the main theme. The other he sees as the secondary theme because in the main

<sup>46</sup> Ibid., 357.

theme, the line above is more stable as a result of the stepwise movement and the melodic sequences. The other theme is in direct contrast, it contains leaps and avoids sequences.<sup>49</sup>

The secondary theme **B** is introduced at bar 385 and is derived from the secondary theme of the first movement. After the repetition of both themes **A** and **B** at bar 391-4 and bar 395-7 respectively, the introduction is repeated at bar 398. This time, the (f#/7) chord which originally functioned as V of 111 in G becomes an augmented sixth in B-flat. The C pedal acts as a root: C - E - G flat - B flat - D flat.<sup>50</sup> The chords in fourths reappear and are repeated suggesting B major.

This section leads to the recapitulation of the original sonata-allegro exposition. The final part of the slow movement merges with the recapitulation.

The themes now appear in the following manner: theme **B**, theme **A**, and at the end of bar 405, the modulatory passages are stated with theme **A** at original pitch for the first time. The fourths motto and cadence 1 from the exposition reappear from bar 410. This is followed by a long transitional

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<sup>47</sup> Frisch, 227.

<sup>48</sup> Ibid., 227.

<sup>49</sup> Friedheim, 358. For his example, see pages 346 and 357.

<sup>50</sup> This seems a rather fanciful explanation. It seems that these bars act as elongated appoggiature to the



passage to the recapitulation in B major from bar 415-34. This passage continues with a thematic variation of the slow movement theme and the last segment of the theme of this section has two descending semitones and a rising major third (diminished fourth). This is clearly derived from the slow movement theme.

According to Frisch, this is made more obvious by the horn melody that appears at bar 430.<sup>51</sup> Friedheim points out that the appearance of a key signature with four sharps signals the beginning of the recapitulation.<sup>52</sup> According to Frisch, Schoenberg's aim here is to return to the tonic key. The section of the slow movement after the horn motto and the fourth chords is in B major. Then the tonic key E returns at bar 435 with the appearance of theme **1b** and continued in B major. The tonic key is finally established at bar 448 with theme **2b** (theme **2/2** of Frisch).<sup>53</sup> According to Frisch, Schoenberg creates a double recapitulation which is different from the double exposition in terms of harmony and thematic material.<sup>54</sup> The themes used in the exposition are now intermingled. As in the exposition, there is a double approach to the tonic, first at bar 448 and more clearly at bar 497. Frisch states that this

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G major triad of bar 381. See Friedheim, 356 –58.

<sup>51</sup> Frisch, 227.

<sup>52</sup> Friedheim, 388.

<sup>53</sup> Frisch, 228-9.

parallels the double approaches in the exposition at bar 8-10 with cadence 2 and bar 56-8.<sup>55</sup> This section begins with theme **1b** as seen at bar 68 but is in B major and the slow movement theme. The tonic key is at bar 448 with theme **2b** as it appeared at bar 84 (theme 2/2 of Frisch) and more clearly at bar 475 with theme **1a** and cadence 2. In the exposition, the secondary theme was preceded by a minor triad half a step above the tonic and now it is a minor triad half a step below the tonic. Friedheim points out that Schoenberg used this technique as far back as in the *Verklärte Nacht*.<sup>56</sup>

A long passage in the whole-tone scale and an altered dominant seventh chord leads to the principal theme **1a** (theme A of Friedheim) at bar 497.

The closing theme at bar 576, originally in A is now E major. In the earlier passage, the A clashed with a C# major chord a third above and now the E clashes with a C major chord a third below. According to Friedheim, this reflects the manner of composition where the principal tonality of E surrounds inner movements in C minor a third below and G

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<sup>54</sup> Ibid., 230.

<sup>55</sup> Ibid.

<sup>56</sup> Friedheim, 359.

major a third above.<sup>57</sup> A short coda follows and uses fragments of the melodic fourths and the whole-tone scale. The following table is a summary of how different authors divide the symphony. For the major sources see Friedheim, Frisch, Mahnkopf, Schoenberg and Whittall.<sup>58</sup>

Bars      Friedheim      Frisch      Mahnkopf      Schoenberg      Whittall

|         |   |                           |   |                           |  |
|---------|---|---------------------------|---|---------------------------|--|
| 1-133   | Expo. of the princ. and secondary theme | First movement exposition | Section 1 Exposition                      | Sonata Allegro Bars 1-159 | First section with two thematic groups |
| 133-160 | developm.                               | transition                | Reprise with Hauptthemas/Überleitungssatz |                           | Developm.                              |
| 160-274 | scherzo                                 | scherzo                   | Section 2 scherzo                         | Scherzo 160-279           | Scherzo; ends with opening material    |
| 280     |   | developm.                 | Section 3                                 | Durchführung              | Central                                |

<sup>57</sup> Ibid., 361.

<sup>58</sup> See Friedheim, *Tonality and Structure*, 338; Frisch, *The Early Works*, 221; Claus-Steffen Mahnkopf, *Gestalt und Stil: Schönberg's Erste Kammer-symphonie und Ihr Umfeld* (Kassel: Bärenreiter-Verlag, 1994), 12-91; Arnold Schoenberg, "Preface to the Fourth String Quartet" in *Self-Portrait*, ed. Nuria Schoenberg Nono (Los Angeles: Belmont Music Publishers, 1988), 114.; Whittall, *Schoenberg Chamber Music*, 15.

|                 |                                    |                  |   |                    |  |
|-----------------|------------------------------------|------------------|---|--------------------|--|
| -<br>368        |                                    |                  | Durchführung                              | 279-367            | developm.  |
| 368<br>-78      | recap.of the<br>principal<br>theme | transition       | Transition and<br>cadenza of<br>section 4 | Adagio 367-<br>435 |  |
| 378<br>-<br>415 | adagio                             | Slow<br>movement | Section 4 adagio                          |                    | Slow<br>movement<br>with new<br>thematic<br>material |
| 415<br>-35      | Recap. of<br>sec. theme            | transition       |   |                    |  |
| 435<br>-end     | Final<br>movement                  | finale           | Section 5 finale                          | recapitulation     | Finale<br>recap.                                     |

The Chamber Symphony is one of Schoenberg's most important transitional works. The instrumentation is novel and the work is Schoenberg's final solution for combining, in a tonal work, the separate movements of a complete sonata-form work into a single whole.<sup>59</sup>

<sup>59</sup> The preceding works are *Verklärte Nacht*, *Pelleas und Melisande* and the First String Quartet.

Schoenberg's ideas of the unity of musical space, the interchangeability of melody and harmony, is here clearly evident in its first stages. Its most obvious manifestation is the use of perfect fourths melodically and harmonically.

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## CHAPTER TWO

### THE SECOND STRING QUARTET IN F-SHARP MINOR, Op. 10

This quartet was started in 1907 and finished in 1908. It has four movements and each one ends on its tonic. The principal key is F# minor and although the last movement has no key signature, it ends on an F# major triad. According to MacDonald, this quartet bridges Schoenberg's earlier and later styles; this is certainly true of its last movement.<sup>60</sup> Schoenberg regarded this quartet as having played an important role in his career, but the decision to move towards atonality was not yet established. He further stated that this quartet is one of the first symptoms that the period of greatly expanded forms was passing, and that the new period aimed at shorter forms.<sup>61</sup> This quartet, dedicated to his wife, was written during the summer when Mathilde had a relationship with the young painter Richard Gerstl.

Friedheim states that, in this work, one can trace the dissolution of tonality from an opening theme that could have been written by Brahms

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<sup>60</sup> Malcolm MacDonald, *Schoenberg* (London: J.M. Dent and Sons, 1976), 173.

to the final movement that moves beyond traditional harmonic limitations.<sup>62</sup> The first movement is simple and direct. Friedheim suggests that it is a deliberate evocation of the past.<sup>63</sup> This movement has a gentle lyric opening and its principal theme is never recapitulated in the original key. Friedheim also states that this movement points to the insufficiency of traditional Romantic expressions.<sup>64</sup> The second movement quotes from a popular Viennese song which suggest the influence of Mahler. According to Graubart, the quotation of "*O, du lieber Augustin, alles ist hin*" does not refer to traditional harmony only. It also refers to Schoenberg's marriage and Mahler's departure from Vienna. Schoenberg was particularly obsessed with Mahler as a man and musician.<sup>65</sup>

The third movement introduces a soprano voice and like Beethoven's ninth symphony, it repeats themes from all the preceding movements.

These themes return over and over in distorted versions, against this, the singer prays for release from all human feelings. The fourth movement has a chromatic introduction. Friedheim states that the freedom from

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<sup>61</sup> See Arnold Schoenberg, "Preface to the Four String Quartets", 75.

<sup>62</sup> Friedheim, 371.

<sup>63</sup> Ibid., 371.

<sup>64</sup> Ibid., 372.

<sup>65</sup> Michael Graubart, review of "Schoenberg: Leben – Umwelt – Werk," by H.H. Stuckenschmidt, Tempo 111 Dec. 1974, 47. Friedheim says "*Ach du*" instead of "*O du*". See Friedheim, 372.

human emotions expressed in the opening lines, '*Ich fühle luft von anderem planeten*', produces a quasi-atonal musical style which floats beyond key and theme.<sup>66</sup>

### The Second Movement: *Sehr rasch*

The movement starts in D minor with an exposition of 19 bars. The movement has a four-bar introduction and at bar 5 the principal theme, **A**, is introduced by vl-2. The secondary theme, **B**, is at bar 14 and the closing theme, **C**, at bar 17.

Example 1a, b and c.



According to Friedheim, this movement begins like a Beethoven scherzo with a rhythmic figure which barely gets started when the fragmentary

<sup>66</sup> Friedheim, 373.



second and third themes interrupt.<sup>67</sup> He further states that although the movement is tightly organised thematically, it never moves at all because of the rests and the fermatas that frustrate the motion.<sup>68</sup> The introductory rhythmic figure comes from theme **B**. The vla phrase at bars 5-6 is stated by vl-1 at bars 7-8, now varied. The descending figure of vl-2 at bar 6, B-F-E-C# becomes a constant feature of theme **A**. It is also stated at bar 15 as part of theme **C**. According to Friedheim, the rhythmic pattern of vla at bar 12 is a diminution of vl-1's bars 7-9 and later is used in the closing theme **C**.<sup>69</sup> Theme **C** leads to the end of the exposition at bar 19.

In the development section which starts immediately at bar 20, all themes are developed. From bar 20, theme **A** is developed for fifteen bars; at bar 30, a transition is reached which leads to the development of theme **B** at bar 35. This theme is developed for twenty-seven bars until the beginning of bar 62. In the development of theme **C**, Schoenberg takes the figure from bars 7-8, vl-1, and applies it to the pitch sequence of bars 17-8 of vl-1 to produce the figure at bar 65. In other words, bars 64-6 can be seen as bars 17-9, in the rhythm of bars 7-8.

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<sup>67</sup> Ibid., 282.

<sup>68</sup> Ibid., 379.

<sup>69</sup> Ibid., 282.

## Example 2.

VI-1 bars 7-8

VI-2 bars 17-18

This section is 17 bars long and at the end of the section, bar 78, vlc continues with a figure which recalls theme B. At the end of bar 80, vlc plays a melody based on a rhythmic augmentation of theme A which was sounded by vl-2 at bars 5-6. At the same time, in the vla, theme A is imitated in normal note values and then a little varied until the end of bar 84. At bar 85, the introductory figure is stated by vlc and vl-2 states theme A. VI-1 joins in at bar 87 with theme A and this continues until the end of the section at bar 98.

## Trio

Friedheim sees the monothematic trio as related to the principal theme of the first movement.<sup>70</sup>

<sup>70</sup> Ibid., 383.

## Example 3.



The trio begins energetically for six bars and at bar 107, an A major chord is approached simultaneously from a half step above and below.

## Example 4



The main theme of the trio is stated at bar 100 by vlc. VI-1 states a descending seven-note figure which introduces all the notes of the chromatic scale within its first five bars. Schoenberg points out that this figure serves as accompaniment for the main theme.<sup>71</sup> He further explains that he conceived this as a seven-note figure, the four-semi-quavers-plus-triplet-quavers arrangement was because he feared being called a revolutionary while he considered himself a conservative.<sup>72</sup> At bar 110,

<sup>71</sup> Schoenberg, *Self-Portrait*, 77.

<sup>72</sup> Ibid., 77. Schoenberg does not make clear whether his original idea was that of seven equal note values. Did he afterwards divide this into four semi-quavers plus triplet quavers in order to illustrate his "conservatism"?

the seven-note figure is restated by vl-1, joined by vl-2 at bar 112 and vlc with the main theme at the same bar. Vla joins with the seven-note figure at bar 114 which leads to a C major chord at bar 119, approached like before, simultaneously from a half step above and below. This leads to the beginning of the development section at the end of bar 123.

The exposition is 25-bars long and the development 28. A shortened recapitulation, which begins at bar 151, develops the opening material of the trio in an ingenious way. He retains the original pitches of the vl-1 figure from bar 98 for almost the first five bars (151-5) as well as the first four bars of the vlc melody from bars 100-4, now in the vla from bars 153-6. The music is now harmonised in E flat minor instead of F# minor. In addition, vl-2 (bar 152) imitates vl-1 at a bars distance (fairly accurately). And vlc imitates vla, also one bar later from 154.

The contrasting middle section beginning at bar 165 introduces a melody from an old popular Viennese song, "*O, du lieber Augustin*". This melody is combined with a phrase which first appeared in bars 7-8 (at the beginning of the movement) in vl-1. Material from the first movement is used, the secondary theme from bar 43. Bar 180 has C#-d-C-B flat-A, etc.

Example 5 bars 165-69.

Langsamer

According to Graubart, Schoenberg uses a series of basic cells in this section.<sup>73</sup> These basic cells are made from the letters of his name, of his wife Mathilde and of Gerstl. The cello part accompanying “*O, du lieber Augustin*” uses notes A, D, E flat and A flat. These notes can form one of Schoenberg’s possible signatures.

Example 6.

Arnold = A and D.

E flat = Es (in german) = S for Schoenberg.

A flat = As (in german) = A. S.

Other forms of the basic cell occur in vl-1. Graubart further states that the key, D major, of the song is not only related to Arnold, but, the only key in which the most prominent notes of the tune are F# which is G-flat for

<sup>73</sup>1 Graubart, Schoenberg, 47. Graubart refers to the first two phrases of the melody, quoted from bars

Gerstl, A-H, D-E for Mathilde at bar 176 onwards. Moreover, the motive that develops the “Augustin” tune becomes D-C-H-A, an anagram of Richard.<sup>74</sup> VI-1 settles into these letters at bar 194-5. Finally, Gaubart argues that the key notes of the four movements use these notes:

F# = G flat = Ges = Gerstl

D = Arnold

E flat = Es = Schoenberg and Mathilde

F# = G flat = Ges = Gerstl repeated.<sup>75</sup>

At bar 188, the secondary theme of the first movement is stated by the two lower instruments. The opening material, theme **B**, returns at bar 203 varied. The coda begins at bar 259 with all the instruments playing in octaves until the beginning of bar 271. According to Friedheim, the final bars 272-5 are similar to the final bars of the *Kammersymphonie* where the tonic in the bass seems to fight against the other voices.<sup>76</sup> The movement ends with vlc playing its opening phrase.

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165 – beginning of 171. The note E is introduced in bar 169; this obviously also belongs to Schoenberg's signature.

<sup>74</sup> Ibid., 48.

<sup>75</sup> Ibid.

<sup>76</sup> Friedheim, 386.

## The Fourth movement

In this movement a poem by Stefan George, '*Entrückung*' is presented. According to Arnold Schoenberg, the form of the movement follows the outline of the text. He further states that Wagner's *Leitmotif* technique, is used in this movement to vary motives and phrases so as to express every change of mood and character in the poem.<sup>77</sup>

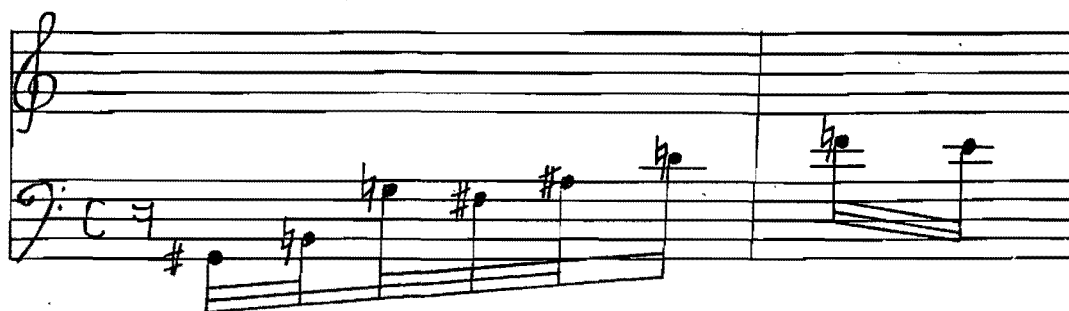
The movement is written without a key signature but it ends on an F# major triad; F# recalls the tonality of the opening movement. The movement opens with an introduction of twenty bars. The opening figure of eight notes, figure x, has two features. The first three notes, G#, B-natural and G-natural, when rearranged recall the opening bar of Schoenberg's Op. 11, no 1. The next three notes form an augmented triad. This, plus note 7, form a transposition of the 'silent' chord from op11, no 1. The figure ends with a falling semitone.<sup>78</sup>

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<sup>77</sup> Schoenberg, *Self-Portrait*, 78.

<sup>78</sup> The "Silent" chord of Opus 11. consists of F-A C#-E. See J.W.May, "Arnold Schoenberg's Early Atonal Style Compositional Procedures in his *Drei Klavierstücke*. Opus 11", Unpublished MMus dissertation, University of Cape Town, 1989, 25-26. The opening three notes of Opus 11 form a basic cell which controls much of the melodic and harmonic material of Opus 11 No. 1. May identifies two other such basic cells in opus 11: a "semi-expanded" basic cell consisting of a falling major third and semitone and an "expanded" basic cell, consisting of a falling major third and falling tone. See "Some Aspects of Pitch Organisation in Schoenberg's Opus 11, no. 1." *Musicus* 17.2 (1989), 126-127. The augmented triad is also an important harmonic feature. See Perle, pages 10-15. According to May the augmented triad always appears as part of the 'silent chord'. See "The 'Silent Chord' and other Basic Cells in Arnold Schoenberg's *Three Piano Pieces*, Opus 11". Paper read at a meeting of the Western Cape chapter of the Musicological Society of Southern Africa, Cape Town, 12 May 2000.

Example 7, figure x.



At the beginning, the circle of fifths control the successive entries of figure x on G#, D#, B flat and F. These four entries introduce all four augmented triads, thus all twelve pitches of the chromatic scale are sounded. At the end of the first bar, vl-1 takes over pitches 4-8 of figure x from the vla and for the next two bars, treats these as an ostinato. Similarly, vl-2 takes pitches 4-8 from vl-1 for the next two bars. At the end of bar 3 the motive y; C#, D#, F<sup>x</sup> and D#, in vla, is based on the whole-tone scale. This is the equivalent of the inversion of the expanded basic cell from op 11, no 1.<sup>79</sup>

Example 8, figure y.



<sup>79</sup> May, Schoenberg's *Early Atonal Style*, 20.



Vla and vlc in bar 3 descend in perfect fifths. The descending fifths form a figure which alternates dyads from the two whole-tone scales. At bar 4, the whole-tone element is further emphasized. In this bar, the successive entries in the violins are taken down a tone each time and vl-2 imitates vl-1 an octave lower. At bar 5 the contour of the figure descends; the augmented triad is still an important ingredient; vl-2 and vl-1 both present overlapping versions of the 'silent chord'.<sup>80</sup> At bar 6, the figure which emphasizes perfect fourths and fifths descends by a tone in vl-1. Vla and vlc proceed with descending fifths (figures consisting of two each) and the fifth is stressed within the figure.<sup>81</sup> In vla these are whole-tones apart. Vlc imitates the two vla figures a perfect fifth lower in each case. The falling fifth idea from bar 3 in vla and vlc is therefore further developed in the same instruments at bar 6 and, as before, the whole-tone scale is emphasised.

<sup>80</sup> As A flat-C-E-G and G-B flat (A#)-D-F# in vl-2 and E flat-B-D-G and D-F-A-C# in vl-1.

<sup>81</sup> The figure consists of eight different pitches.

## Example 9.



At bar 7-8, motive y is repeated in vl-2 and vla against a pedal on E in vlc and a B flat to D oscillation in vl-1 (B flat-D of vl-1 is again a fifth higher than the D#-F## of vl-2 and vla). In bar 9 the fifth relationship is still stressed in the lower strings. Vlc has notes C and G; vla with D and A. At bar 10, the Schoenberg motive returns with minor and major intervals in vlc.<sup>82</sup> In the following bar this motive expands chromatically until bar 13, first beat, where an interval of a major sixth is reached. The vla figure also expands from the end of bar 10 to the beginning of bar 13. Throughout these bars, vlc maintains a pedal on E, which recalls bars 7 and 8 (see bars 10-3).

Vl-1 in bar 13 at first states the major third from bars 7-8 (which refers to

<sup>82</sup> These spell the Schoenberg motive that May identifies in his discussion of Opus 11, No.1. See *Schoenberg's Early Atonal Style*, 135.

motive y). The B-D# is then followed by a minor third, E-G, thus forming two overlapping versions of the semi-expanded basic cell as well as a version of the 'silent chord'. In bar 14, the minor second and major third, stated twice, are a major third apart. This gives two further versions of the semi-expanded basic cell from op. 11 no 1.

#### Example 10.



Vla and vlc are still based on fifths. In these bars 13-5, vl-2 has a new melody. In bar 15, the violins, are also based on the figure of fifths as in bar 6, the first figures in vla and vlc. The figure at bar 16 comes from bar 3, in vla, still at its original pitch. This is changed at bar 17 and at bar 19, an interval of a seventh is reached which leads to the principal theme at bar 21 with the entrance of the voice. At bar 21 a tritone fourth chord is stated. (The D is doubled.) This leads to a succession of basic cells in different forms in the following manner:

Bar 22-23

Bar 23-24

Bar 23-24

vl-1 EXBC

BC

SEBC

(A-F-E flat)      (E flat-G flat-D)      (G flat-D-C#)

vla BC                  BC-RI                  BC

(B flat-G-F#)      (F#-F-D)      (F-D-C#)

The phrase ends with a tonic six-four chord in F# at bar 25 but this does not stabilise the key. The melodic line comes from the second theme of the second movement, the scherzo, bar 15, played by vl-1 and vla with the intervals reversed and inverted.

#### Example 11

Voice bar 21

VI-1 bar 15

The image shows two staves of musical notation. The top staff is labeled 'Voice bar 21' and contains a single melodic line in treble clef. The bottom staff is labeled 'VI-1 bar 15' and contains a single melodic line in treble clef, with a slur over the first four notes. The notation is handwritten and appears to be a sketch or a specific analytical representation of the original score.

It also appears in vla at bar 36 with the intervals restored to the order established in the second movement. From bar 27-31, different forms of the basic cell are stated. At bar 29, vlc, the ascending figure comes from bar 23-5, in the voice. At bar 31, the voice has the retrograde of bars 21 and 22. In bar 39, vl-2 has figure x, its basic cell, the augmented triad and the falling semitone. This is followed by a descending semi-tonal figure

from E flat to C. At bar 41, as in bar 31, the voice has the retrograde of bar 21.

From bar 46-7, vl-2 and vla have figure y and the voice has the basic cell at bar 47. From the end of bar 44, the voice has various, and often overlapping, statements of the BC. For instance: D#-C#-A (R of expanded BC); C#-A-G# (SEBC); D#-G-E (BC); E#-B#-C# (SEBC); C#-B-G (RI EBC); B-G-C (I of SEBC) C-A flat-B (I of BC) A flat-B-G (BC at opening pitch). And this is followed by an overlapping “silent chord” as B-D-E flat-D. From halfway through bar 46 the upper strings also have overlapping statements of forms of the BC. Vl-1 continues this into bars 48 and 49 as well. It is arranged so that vl-1 has major thirds rising semi-tonally from A flat/C-C/E, with the E continuing semi-tonally to the F. Again, in bar 47, the upper strings are a tritone apart (D- A flat); the lower strings also start a tritone apart (E-B flat). From bar 48 until 49, first beat, vl-2 and vla also rise semi-tonally from D-A, and B flat-F respectively. Vlc from the end of bar 46-9, falls semi-tonally from F-C, then A-G. At bar 49, vl-2 and vla have figure x in octaves, falling semi-tonally from G# to F#, returning to the original pitch at bar 50. This figure introduces the secondary theme at bar 51, also coinciding with the entrance of the voice. The theme shifts between C and F#.

The upbeat chord at bar 51 resolves to an F# triad with B in the melody moving up a major seventh to A# instead of down a minor second. (This B is like a passing note of which the “resolution” is displaced by an octave.) The next bar has an altered German sixth chord, suggesting a dominant of C, then the next bar returns to F# through its dominant, v/9 of I in bar 54. At bar 56, vl-1 has basic cells as D#-D-B and G-E-D#; these notes also yield two overlapping ‘silent chords’ as D#-G-B-D and E-G-B-D#. The voice which doubles vl-1 in bar 57, continues to F# and G in bar 58, thus creating a further basic cell, D#-F#-G. At the end of the phrase, bar 62-7, the F#-C shift returns. A long held v/9 in F# becomes an altered v/9 in C with both raised and lowered fifths.

The secondary theme from bar 51 is now re-introduced in the vlc in bar 65. It is echoed in canon one bar later by the vla at the upper fifth. This process is repeated from bar 69, now in a free diminution: vlc is now one octave higher and vla now imitates at the octave. Further variants of this follow in vl-1 (bar 71), vla (bar 71), vlc (bar 72) and vl-1 (bar 72).

At bar 67 the canon is accompanied by a statement of figure y in vl-2. From bar 68 this figure is developed as a series of overlapping basic cells which descend chromatically as major thirds until the beginning of 69.

From here, two overlapping statements of *y* initiates another descending movement from bar 70 until the beginning of 71. After another two overlapping statements of *y*, now in *vlc*, *vl-2* continues with its descending figure in bars 72 and 73. In 73 this is accompanied by ascending fourths (not always notated as such) rising in semitones.

The development starts at bar 65 and uses material primarily from the introduction and an occasional reference to the exposition material. *Vla* and *vlc* have figure *x* (without the falling semitone) and the voice begins with a diminished version of the secondary theme. *vl-1* and *vl-2* share augmented triads between them (the first one, E flat/D#-G-B, can be extracted from Schoenberg's signature); this material superficially recalls the chromatically expanding figure from bar 10, but are in fact restating the chromatic thirds from bar 68 as sixths which change to two fifths at the end of the figure in *vl-1* and a single fifth at the end of *vl-2*. In the next bar, *vla* and *vlc* continue with figure *x*, still without the falling semitone. This continues at bar 76 where *vlc* has figure *x*, now at its original pitch (with an F# at the end) and *vla* has figure *x*., now no longer in octaves with *vlc*, but echoed one beat later at the upper tritone. These three statements ascend in semitones in the *vlc*.

At the end of bar 76 to the beginning of bar 77, vlc has the first four notes of figure x, followed immediately by an inexact statement of these four notes with its last two notes stated an octave lower. From the third beat notes 3-8 of x are stated twice, the second one a tritone away from the first. (The first one echoes its last two notes an octave lower. At the same time vl-1 and vl-2 continue with the figure from bar 74, with vl-2 copying vl-1 in major and minor thirds. Falling minor seconds are emphasised. The end of bat 76 has a last statement of the sixths in vl-2. After that the upper strings uses its rhythm but with varying intervals (mainly octaves). At the end of bar 78, vl-1 and vl-2 play a descending figure in unison while vla and vlc ascend in octaves. Superficially x and its inversion are recalled but these figures now emphasise fourths with endings emphasising all three versions of the BC.

From the B flat at the end of bar 74, the voice recalls the falling semitones and central leap of the secondary theme; mostly as a leap and falling semitone (notes 2-4). The central major seventh is reached at the end of bar 76 to the beginning of 77 (as A-G#-G). From the end of bar 74 until bar 80, the voice has a number of versions of the BC. From bar 79, vlc's C#-D and D flat-D, refer to bar 25 (vlc). At bar 80, vl-2 has the seventh, recalling bars 19-20. In the following bar 82, the two middle



instruments play in octaves, emphasizing the seventh, now minor, as in bar 20 where all the instruments had the seventh. From bar 83, material from bar 10 onwards is used. Vl-2 has minor and major thirds expanding chromatically and vl-1 also expands chromatically until bar 85 where a descending figure is stated. This figure has an augmented triad and contains six pitches of the original figure x. This figure also retains the inverted contour of figure x but it reinstates the original and expanded contour when stated for the second time:

Bar 85    figure a has 7 pitches;    figure b has 8 pitches

Bar 86    figure c has 7 pitches;    figure d has 8 pitches

Figures c and d develop figures a and b of bar 85.

In the next bar vl-1 continues with the figures, descending. At bar 88, the voice has its original opening notes D-G-A-C, followed by a transposition up a major third as F# -B-C#-E. Vl-1 still has figure x and at the end of this bar, vl-1 introduces material from bar 22. In bar 89, vl-1 continues as before with the notes which were stated in bar 23. Vlc uses the intervals of the voice's opening statement (up a fourth, a second then a third) from the end of bar 89 to the beginning of bar 92. In bar 90, vl-1 has notes from bar 24 then back to bar 22, 23 and 24 at the beginning of

bar 91. At this point, material from bar 27 is restated, from C#, the second quaver.

From bar 90, vlc has two statements of the secondary theme. From bar 92, the voice has B-G#-G which recalls the opening figure x (the BC). At bar 93, vl-1 introduces material from bar 21 to 24 again. At bar 97, vl-2 has the first six notes of figure x at the original pitch then down a semitone (with octave displacement up a major seventh). The figure at the original pitch starts on G#, then down a semitone to G, then back to G# (bar 98), G (bar 99), then the figure starts on F#, E and a variant on C. At the same time, vlc emphasizes the intervals of the seventh, the third and the fourth.

At bar 100, the recapitulation starts with the vocal line using fragments of the principal theme while the secondary theme appears in accompaniment. The voice uses the intervals of bars 21-3, in the voice. All the instruments use material from bars 52-4 and this changes at bar 103 in the other instruments except the vlc which continues until bar 108. From bar 104, vla takes the tune of vl-1 from bar 57-9 which was then repeated by the voice at bars 59-60. Bars 110-5 bring back the material from bars 21-4 by vl-1. The voice has the principal theme as whole notes

from bar 110-5. The principal theme also appears in the accompaniment, the two lower instruments as whole notes from bar 110. In these bars, vl-2 has the semiquaver figure (as sextuplets) which was first introduced at bar 93 by vlc as demisemiquavers.

A postlude begins at bar 119 with the two opening chords of the secondary theme followed by its closing chord. From bar 120, vla introduces material from bar 60. According to Friedheim, this passage is particularly striking because of its similarities with the bars from which it is derived.<sup>83</sup> From bar 135, vl-2 has the vocal part of the principal theme and this is stated three times. At bar 140, vl-1 has the principal theme from bar 21. From this bar, a harmonic progression which comes from the introduction of the principal theme at bar 21, reappears with a number of F# major triads introduced in the passage. From bar 152, vlc has a rhythmic variant of the first six notes of figure x at original pitch. Vl-2 imitates this a fourth higher, adding the falling semitone after note 6. This leads to the end of the movement on an F# major triad.

Friedheim states that the ending of the movement might be considered tonic except that tonal function has been so weakened by non-tonal

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<sup>83</sup> Friedheim, 399.

elements that it no longer operates as such.<sup>84</sup> He further states that “the thematic character remains tonal in that the introductory material is melodically unstable, and that the principal themes have a pronounced linear quality, and are recapitulated at original pitch. The major triads appearing throughout the movement serve to relieve the tension rather than to stabilize a central harmony.


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<sup>84</sup>Ibid., 401.

## CHAPTER THREE

### PIERROT LUNAIRE, OP. 21

In 1911, Schoenberg gave a series of lectures on aesthetics and the teaching of musical composition at the Stern Conservatory in Berlin. There he met the Viennese actress Albertine Zehme who requested Schoenberg to compose pieces that she could recite against a musical background. This request enabled him to experiment on how to bring the spoken word and music close together, the result thereof being Sprechgesang.

Sprechgesang is a kind of declamation in which the vocal melody is spoken rather than sung, on exact pitches and in strict rhythm. The singer sounds the written notes at first but does not sustain the pitch before sounding the next note. The result is a vocal style which became the vehicle for the moods associated with Expressionism. In *Pierrot Lunaire*, the speaking voice is indicated by notes with a cross, thus.  <sup>85</sup>

According to Dunsby, Schoenberg, like Mozart had always wanted to compose this style of drama (Mozart composed a duo drama, called

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<sup>85</sup> In *Gurrelieder* the note head has a cross (x). *Moses und Aron* is the same, and in *A Survivor from Warsaw* noteheads are notated on, above and below a single line, with accidentals added at times.

Semiramis, which is now lost).<sup>86</sup> Schoenberg gave instructions on how to perform this: the reciter should avoid singing on one hand and speaking on the other hand. Schoenberg stated that:

The melody given in the *Sprechstimme* by means of notes is not, except for isolated exceptions that are specially marked, intended for singing. The task of the performer is to transform it into a speech-melody, taking into account the given pitch. This is achieved by:

1. Keeping very closely to the rhythm as if you were singing, i.e. with no more freedom than would be allowed with a singing melody.
2. Becoming aware of the difference between singing tone and speaking tone: the singing tone unalterably stays on the pitch, whereas the speaking tone gives the pitch but immediately leaves it again by falling or rising. However the performer has to be very careful not to adopt a *singsong* way of speaking. That is not intended at all. In no way should one strive for realistic, natural speech. Quite on the contrary, the difference between ordinary speaking and the kind of speaking involved in a musical form should become obvious. But at the same time it must never be reminiscent of singing.<sup>87</sup>

Lessem states that “the reciter’s participation in the musical form and substance is, in fact, a very real one as the kinds of inflections she uses often mirror, or are mirrored by, the musical shapes in the instrumental ensemble”.<sup>88</sup> The close relations between the spoken word and music are

<sup>86</sup> Jonathan Dunsby, *Schoenberg: Pierrot Lunaire* (New York: Cambridge University Press, 1992), 3.

<sup>87</sup> See *Schoenberg Self-Portrait*, 14.

<sup>88</sup> Alan Lessem, *Music and Text in the Works of Arnold Schoenberg: The Critical Years, 1908-1922*, (N.p.: UMI Research Press, 1979), 133.

more evident in the following places:

- In no.3, the voice follows the cl closely and also at bars 2-3 the voice takes the piano's principal theme.
- In no.11, the piano and the recitation are linked because they both take their cue from the text, the rhythmic patterns used underlining the piano's opening ostinato.

Example 1.

The musical score for Example 1 consists of two staves. The top staff is a vocal line in treble clef, 3/4 time, starting with a piano (pp) dynamic. It features a series of eighth and sixteenth notes, with a large slur over the first two measures. The text 'Mit ei - nem phan - ta - sti - schen' is written below the vocal line. Above the vocal line, there are markings for '(gesungen)' (sung) and '(tonlos)' (toneless). The bottom staff is a piano accompaniment in bass clef, 3/4 time, starting with a forte (fp) dynamic. It features a series of eighth and sixteenth notes, with a large slur over the first two measures. The piano accompaniment is linked to the vocal line by a large slur.

According to Lessem, this technique of inflectional and rhythmic variation supplied by the text or an instrumental motive suits the

speaking voice. It allows the voice to have a wide range. It is very effective when applied to the repetition of lines in the poem.<sup>89</sup>

The work consists of settings of twenty-one poems from Albert Giraud's *Pierrot Lunaire* in a German translation by Otto Erich Hartleben. The number of settings corresponds to the opus number of the work. In 1884 this Belgian poet published a cycle of fifty poems under this title, generally translated as "Moonstruck Pierrot". Schoenberg's twenty-one melodramas for female voice and instrumental accompaniment was published as his opus 21. The accompaniment includes: a flute (fl) (alternating with a piccolo); a cl (alternating with a bcl); a vl (alternating with vla); a vlc and a piano. The poems are arranged into three groups of seven.<sup>90</sup> Schoenberg was extremely superstitious about the number thirteen which he regarded as his number of fate.

To a numerologist the number of settings will total three (two plus one), the holy number. According to Stuckenschmidt, the verse technique of the poems must have had a great attraction for Schoenberg.<sup>91</sup> Each poem

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<sup>89</sup> Ibid., 135.

<sup>90</sup> Perle speculates that the mystical and holy numbers, seven and three, serve as an "antidote" to the thirteen lines of the text. See George Perle, "Pierrot Lunaire" in *The Commonwealth of Music*, ed. Gustave Reese and Rose Brandel (New York: The Free Press, 1965), 308.

<sup>91</sup> H.H. Stuckenschmidt, Schoenberg: *His Life, World and Work*, trans. By H. Searle (London; John Calder, 1977), 198.



is a Rondeau, which is a French verse form of 13 lines of which the first comes back (as a motto) as the seventh and the last line. The second line repeated as the eighth. This means that a musical form is translated into a poetic form: A – B – C – D – E – F – A – B – G – H – I – J – A. Each poem's setting is varied and individual.

- In no.1, ostinato patterns are used as well as imitation and some augmentation.
- In no.5, close stretto imitation is used.
- In no.6, ostinato patterns are used.
- In no.8, Schoenberg uses generative cells, a principle that anticipates the twelve-tone system which he was to use years later.
- In nos.17 and 18, he uses canons for different reasons. In no.17, imitative writing symbolizes the mimicry of moonbeams and in no.18, the retrograde version of the canon starts exactly when Pierrot discovers the spot on his coat and stops when he “rubbs it off”.

Instruments are grouped in different combinations in each movement except the last which employs all the instruments. Leibowitz states that this work is Schoenberg's first return to real chamber music since Op. 10, except for Op. 20, which may be regarded as a preliminary study for

Pierrot.<sup>92</sup> He further states that it is *Pierrot Lunaire* which exhibits Schoenberg's most advanced contrapuntal style.<sup>93</sup> *Pierrot Lunaire* is regarded by many scholars as a good example of Schoenberg's expressionist atonal style. Atonal refers to "without tonality", and it implies that all twelve notes of the chromatic scale are to be treated equally without special emphasis on any one of them.

A number of passages are realized in the forms of strictest counterpoint:

- The seventh piece is described as a free two-part invention for fl and the speaking voice.<sup>94</sup>
- The eighth piece is a strict passacaglia with canonic writing.
- The twelfth piece uses free polyphony.
- The thirteenth piece also uses free polyphony but the second half of the piece is like a choral prelude including in quasi-imitative fashion the fl melody of the seventh piece (plus three accompanying counterpoints derived from the material given to the voice in no.7) and keeps in the fl while the melody sung by the reciter at the seventh piece is now given to the bcl at the thirteenth piece.
- The eighteenth piece has a double retrograde canon between the

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<sup>92</sup> R. Leibowitz, *Schoenberg and His School: The Contemporary Stage of the Language of Music*, trans. Dika Newlin (New York: Da Capo Press: 1970), 86.

<sup>93</sup> *Ibid.*, 94.

piccolo and cl, and vl and vlc. From the middle of the piece onwards, the parts are played backwards. The voice has a free melody and there is a three-voice fugato in the piano. These do not participate in the retrograde motion.

James Hunecker called the passacaglia (No. 8) a vision of prehistoric night because it uses the bcl, vlc and the piano only to make extraordinary tone colours.<sup>95</sup> Stuckenschmidt states that one of the greatest means of contrast in *Pierrot* is the instrumental colour. Each instrument is discovered anew in its extremes of colour.<sup>96</sup> The same combination of instruments is not used twice in the same way. Each of the 21 pieces of the cycle introduces a different combination. The piano is the most used instrument in the melodramas:

- the piano in seventeen melodramas
- the cl and vlc in fourteen melodramas
- the vl and fl in twelve melodramas
- the piccolo in seven
- the bcl in six and
- the vla in five.

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<sup>94</sup> See Boris William Pillin, *Some Aspects of Counterpoint in Selected Works of Arnold Schoenberg*, (Los Angeles: Western International Music, Inc., 1970), 114-5.

<sup>95</sup> Stuckenschmidt, 199. Stuckenschmidt does not acknowledge the source.

<sup>96</sup> Ibid., 200.

Austin does not agree with the idea of counting the number of songs in which each instrument is used because some songs have doubles, e.g.

Nos. 5 and 21; so he counts them by players:

- the pianist appears 17 times
- the flautist 16 times
- the clarinettist 19 times
- the violinist 15 times
- the cellist 13 times.<sup>97</sup>

Austin explains that Schoenberg uses instrumental word painting: the pallid *ppp* sound of fl; the cl and the muted vl that begin no.4; in no.10 the “redly gleaming princely rubies” are portrayed by wind and string textures.<sup>98</sup> Schoenberg avoids using instruments like the saxophone or percussion instruments because his main aim was to make new sounds from traditional resources.<sup>99</sup>

The piano’s predominant role makes it necessary for it to have much variation. The appearance of the same instrumental ensemble is

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<sup>97</sup> W.Austin, *Music in the 20<sup>th</sup> Century: From Debussy through Stravinsky*, (London: J.M.Dent & Sons LTD, 1966), 196.

<sup>98</sup> *Ibid.*, 23.

<sup>99</sup> *Ibid.*, 25.

differentiated from the others in different ways:

- In no. 20, vl and vlc are muted throughout the movement.
- In no. 19, from bar 46-51, the voice rests and vl plays in pizzicato.
- In no. 18, the cl in B flat replaces the cl in A for the first time in the work and this cl is only used here in the whole composition.
- In no. 7, fl is the only instrument used for accompaniment.
- In no. 9, only the piano and cl in A are used for accompaniment.

Leibowitz refers to the piano style as highly varied, very difficult, but still, perfectly adapted to the pianist's hands.<sup>100</sup> In "Rote Messe" all the alternative instruments; piccolo, bcl and vla with added vlc and piano are used. Dunsby links the composition of *Pierrot* to Schoenberg's personal life crisis of 1908. He states that Schoenberg sees *Pierrot* as himself (Schoenberg), Columbine as his wife, Cassander as Gerstl (the painter).<sup>101</sup>

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<sup>100</sup> Leibowitz, 99.

<sup>101</sup> Dunsby, 13.

The order in which the movements were composed is quite different from that in which they were finally grouped. They were all composed between March 12 to July 9, 1912.<sup>102</sup>

| Poem                  | Date of composition | Instruments used                           |
|-----------------------|---------------------|--|
| Gebet an Pierrot      | 12 March            | Cl in A, piano                             |
| Der Dandy             | 1-2 April           | Piccolo, cl in A, piano                    |
| Mondestrunken         | 17-29 April         | Fl, vl, piano (vlc)                        |
| Der kranke Mond       | 18 April            | Fl   |
| Eine blasse Wäscherin | 18 April            | Fl, cl in A vl                             |
| Colombine             | 20 April            | Cl in A, vl, piano (fl)                    |
| Rote Messe            | 22-24 April         | Piccolo, bcl in B flat,<br>vla, vlc, piano |
| Serenade              | 25 April            | Vlc, pino, (fl, cl in A,<br>vl)            |
| Gemeinheit            | 26 April-6 June     | Piccolo, cl in A, vl,<br>vlc, piano        |
| Die Kreuze            | 27 April-9 July     | Piano, (fl, cl in A, vl,<br>vlc)           |

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<sup>102</sup> Lessem, 127.

|                 |              |                                       |
|-----------------|--------------|---------------------------------------|
| Parodie         | 4 May        | Piccolo, cl in A, vla,<br>piano       |
| Heimweh         | 5 May-22 May | Cl in A, vl, piano (fl,<br>vlc)       |
| Valse de Chopin | 7 May        | Fl, cl in A, piano (bcl<br>in B flat) |
| Madonna         | 9 May        | Fl, bcl in B flat, vl<br>(vlc, piano) |
| Raub            | 9 May        | Fl, cl in A, vl, vlc                  |
| Heimfahrt       | 9 May        | Fl, cl in A, vl, vlc,<br>piano        |
| Nacht           | 9-21 May     | Bcl in B flat, vlc,<br>piano          |

|               |        |  |
|---------------|--------|--|
| Galgenlied    | 12 May | Vla, vlc (piano)   |
| Enthauptung   | 23 May | Bcl in B flat, vla, vlc,<br>piano                                    |
| Der Mondfleck | 28 May | Piccolo, cl in B flat, vl,<br>vlc, piano                             |
| O alter Duft  | 30 May | Fl, (piccolo), cl in A,<br>(bcl in B flat), vl,<br>(vla), vlc, piano |



The final grouping of the movements is as follows:

1. Mondestrunken
2. Colombine
3. Der Dandy
4. Eine blasse Wäscherin
5. Valse de Chopin
6. Madonna
7. Der kranke Mond
8. Die Nacht
9. Gebet an Pierrot
10. Raub
11. Rote Messe
12. Galgenlied
13. Enthauptung
14. Die Kreuze
15. Heimweh
16. Gemeinheit
17. Parodie
18. Der Mondfleck
19. Serenade
20. Heimfahrt

## 21. O alter Duft

For the purpose of this study, nine (three in each group) of the twenty-one melodramas have been analysed and will be discussed below; not all of these in detail. These numbers illustrate all the principal referential elements in the work.

- Mondestrunken (1)
- Columbine (2)
- Der Dandy (3)
- Nacht (8)
- Raub (9)
- Der Kreuze (10)
- Parodie (17)
- Der Mondfleck (18)
- O alter Duft (21)

May analyses Schoenberg's music with regards to the B-A-C-H motive which is found in a number of his works.<sup>103</sup> He states that the use of this motive in Schoenberg's music reflects his admiration for the music of

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<sup>103</sup> James May, "The use of the BACH Motive in the music of Arnold Schoenberg," SAMUS, 13; 1993, 3

Bach, and this is well documented.<sup>104</sup> He further explains that in *Pierrot Lunaire*, Schoenberg uses the B-A-C-H motive in combination with his own signature or close to it. The following discussion will be based on May's analysis.

Schoenberg uses the signature S-C-H (E flat-C-B) in all his atonal works. This cell is used in different permutations; three pairs of prime and retrograde forms which help in achieving motivic unity within the works. This is the same in the B-A-C-H motive, when its inversion is transposed starting on B, its retrograde inversion equals its prime form:

$$\begin{array}{ll} \text{I} = \text{B-C-A-B flat} & \text{RI} = \text{B flat-A-C-B} \\ (\text{H-C-A-B}) & (\text{B - A-C-H}) \end{array}$$

The minor third and the minor second of S-C-H are spelt differently in B-A-C-H and two inversions overlap, the second being the retrograde inversion of the first.

$$\begin{array}{ll} \text{I} = \text{B flat-A-C} & \text{RI} = \text{A-C-B} \\ (\text{B- A-C}) & (\text{A-C-H}) \end{array}$$

Schoenberg signed his name in a number of different ways, apart from S-C-H. Two of these are: A-E flat (A-S)

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<sup>104</sup> See Schoenberg, *Style and Idea*, 393-97.

### A-D-E flat (A-D-S)

These two signatures can be stated as the tritone-fourth chord, E flat-A-D. A-S can also be stated as A flat (As in German). When combined with A and E flat this yields the tritone-fourth chord A-E flat-A flat as A-D#-G#.

The combination of these two tritone-fourth chords results in a symmetrical tritone-fourth chord which is frequently used in Schoenberg's early atonal works:

$$(E \text{ flat}-A-D) + (A \text{ flat}-E \text{ flat}-A \text{ flat}) = E \text{ flat}-A-D-G\#(A \text{ flat})$$

In *Pierrot Lunaire*, the B-A-C-H motive, directly or in one of its transformations, is present in all the movements and whenever it is used, it is combined with a version of S-C-H. May argues that if *Pierrot Lunaire* was intended to honour Bach, it was also regarded as a tribute to *Tristan und Isolde*. He points out that when B-A-C-H is inverted starting on B flat, C is replaced by G# and the chromatic segment of G#-B appears as the upper voice in the opening of *Tristan*. In "Mondestrunken", when the voice enters it starts with a permutation of B

flat-B-G#-A and C which is the B-A-C-H motive in prime and inverted form. From bar 10-1, B-A-C-H is spelt between vl and the piano.

Many of Schoenberg's pieces use this chromatic figure at or near the beginning. In "Mondestrunken" further references to *Tristan* and to the B-A-C-H motive can be found in bar 29 in the piano, left hand, which has B-C-B flat, A follows in bar 30. The A flat-E flat of the right hand in bar 29 plus B-F of the left hand form the Tristan chord. The following right hand chord E-G-D plus B flat of the left hand form a transposition of the Tristan chord as E-B flat-D-G. The chord at the beginning of bar 30 form another transposition. In bar 31, two more versions are present: D-G#-C-F and B-F-D#-G#. In bar 32, there are references to the "resolved" Tristan chord, which is equal to the French augmented sixth. The vocal line for "den . . . treibt", bar 29, gives a transposed direct and inverted B-A-C-H combination and "berauscht . . . an", bar 30, forms a transposition of B-A-C-H. As mentioned above, the B-A-C-H motive is present in all the movements of *Pierrot Lunaire*. The following are some of the many instances where these occur.

In "Raub", a harmonic statement of B-A-C-H appears from the bass upwards in bar 20, as B flat-A-C-B (B-A-C-H). In "Gemeinheit", vl starts

with a melodic B-A-C-H but also has harmonic statements. In the opening two bars B flat-A is stated twice, in each case the note A is harmonised to include B flat. B-C is stated melodically in bar 3 and B is stated dyadically with C; thus following the pattern of bars 1–2. The B-C dyad at the end of bar 3 is followed by an A-B flat dyad at the beginning of bar 4, thus yielding a dyadic retrograde of B-A-C-H. Vlc emphasizes B-C at first (bar 0 and bar 1); this is against the B flat-A of the vl. In bar 3 the vlc states B flat-A against the B-C of the vl. Vlc also yields the four-note chromatic figure B-C-D flat-D within the first two bars. The piano melodically outlines the opening of the vlc in a free augmentation of its first three pitches. It therefore also starts with a melodic H-C against the melodic and harmonic B flat-A of the vl. S-C-H is stated by the voice in bar 2-3. In “Die Kreuze”, the opening outer voices of the right hand spell B-A-C-H. The same occurs in the following left hand chords. S-C-H is also spelt in the bottom stave of bar 1. “Rote Messe” starts with a transposition of B-A-C-H in bcl. The vocal line also begins with S-C-H in retrograde.

The chromatic opening notes of “Mondestrunken” are present in number 21, “O alter Duft”. In bar 23 B-A-C-H is formed by the outer parts of the right hand from the second beat. The Tristan chord can be formed across

the voices: A flat-D-F#-B in bar 23. The voice from bar 23, from B flat, gives a direct inverted B-A-C-H and adds A-E flat in bar 24. In bar 28 the A flat minor triad on the piano combined with F held in vla, form the Tristan chord.

“Raub” contains further references to Bach and to Schoenberg’s signature. Its opening starts with a five note chromatic segment between fl and the cl. A-S is stated by fl as A-D# (E flat). The voice then enters with overlapping versions of S-C-H as: B-G-A flat and A flat-E-G, so, “Rote . . . Rubine” is set as Schoenberg’s signature followed by B-A-C-H transposed as: A flat-G-B flat-A set on the words “blutge Tropfen”. Again in bar 18, an untransposed permutation of B-A-C-H is stated overlapping with two interlocking versions of S-C-H; B flat-A-C# and C#-E-F. In bar 19, two transposed versions of B-A-C-H are stated as harmony and S-C-H is spelt. The harmonic statement in bar 20 states B-A-C-H. After this statement, the concluding seven notes state a permuted S-C-H followed by a transposed and permuted B-A-C-H. Again, as in the beginning of this piece, the harmonic statement of B-A-C-H follows, “rote fürstliche Rubine”.

Lessem also emphasises the relationship between Pierrot, the nocturnal clown, and Tristan's romantic invocation to the night in the second scene of act two of *Tristan*.<sup>105</sup> Wagner used a simple motive consisting of a short succession of rising and falling half-steps to capture the atmosphere of romantic love.

When Isolde sings of the daylights delusion's end, Wagner uses a falling E#-E natural D# countered by a rising G#-A-A# in the orchestral bass. Schoenberg uses similar melodic figures throughout this work. In "Gebet an Pierrot", a rising B flat-B-C in the piano is used at bars 1 and 2, and a falling E flat-D-C# in the cl at bar 6. Lessem further states that Pierrot parodies Tristan for "turning his inner world of night upside down; the clown's night of hallucinations ends only with the first welcome glimmer of dawn in "Heimfahrt" (number 20) and the returning "liebe Welt" in "O alter Duft" (number 21).<sup>106</sup> The three notes which make this simple motive can be divided into three groups:

- Rising or falling half steps.
- Rising or falling half plus whole and vice versa.
- Interlocking thirds.

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<sup>105</sup> Lessem, 137.



Lessem points out that the manner in which these notes are used can be traced to the text and the kinds of gestures it required.<sup>107</sup> Rising shapes are active. They invoke, demand, assert, discharge aggressiveness as in “Gebet an Pierrot” and in “Gemeinheit” where Pierrot takes revenge on Cassander.

- “Gebet an Pierrot” = bar 1-2 on the piano from B flat-B-C#
- “Gemeinheit” = bar 1-2 on vlc from B-C-D flat

Falling steps on the other hand represent passivity, suffering, emotional or physical withdrawal as in “Valse de Chopin” in the piano at bar 3 from D-C#-B (using falling half plus whole), and at bars 6-7, C-B-A. The same falling steps are evident in “Madonna” on the fl at bar 17 from F#-F-E flat. In “Valse de Chopin”, the above-mentioned falling motive of the piano is linked with the clarinet’s poignant interlocking third. This makes the piece’s main theme. Lessem suggests that both elements return conspicuously in “Der Kranke Mond”.<sup>108</sup> In several movements, both the rising and falling shapes are used to represent Pierrot’s uncertain emotional world. In “Der Dandy”, the piccolo and cl reflect one another at bars 1-2. The cl plays the piccolo’s figure simultaneously with it but in

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<sup>106</sup> Ibid.

approximate inversion. The piano follows with a rising half plus whole at bar 2 and falling half steps at bar 3 (A-B flat-C + D-C#-C).

Pillin states that Schoenberg uses all types of imitation that he lists in his “Preliminary Exercises in Counterpoint”, either by “local imitations” or canons.<sup>109</sup> The imitation is either strict; semi-strict; in augmentation; in diminution or inverted.

In “Mondestrunken”, Schoenberg uses imitation and some augmentation. From bar 25-6, the imitation is strict; interval for interval but in this instance it is at an octave.

Example 2.



Again at bar 11-3 Schoenberg uses the second type of imitation; the semi-strict.

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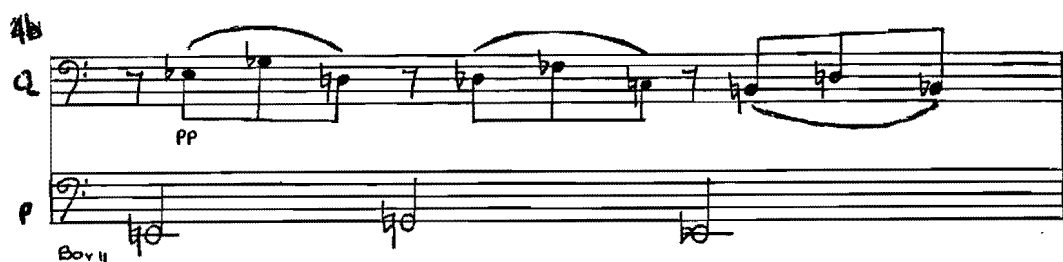
<sup>107</sup> Ibid.

## Example 3.



In “Mondestrunken” (bar 29-30) and in “Nacht” (bar 11), Schoenberg uses imitation in augmentation and in diminution.

## Example 4 a (bars 29-30), and b (bar 11).



<sup>108</sup> Ibid., 138.

<sup>109</sup> Pillin, 96.

“Valse de Chopin” has close stretto imitation. There are two examples of canonic procedures in *Pierrot Lunaire*: nos. 17 and 18. In no. 18 (a double retrograde canon), vl and vlc have a strict canon (in terms of intervals and rhythm) in retrograde. The piccolo and cl canon is exact in terms of pitch but rhythmically it is shortened: the distance between the two parts is not always the same. The following example is taken from Pillin’s “Aspects of Counterpoint”.

Example 5.

The musical score for Example 5 consists of four staves. The top staff is for Clarinet in B (Cl. in B), the second for Violin (vl.), the third for Violoncello (vl.), and the fourth for Viola (vlc.). The music is written in 3/4 time. The Cl. and vl. parts feature complex rhythmic patterns with many beamed sixteenth and thirty-second notes. The vl. and vlc. parts are in retrograde. Dynamics include piano (p) and pianissimo (pp). There are various musical markings such as slurs, ties, and accents throughout the score.

According to Pillin, the piano part frequently described as a fugue is not so. The main argument against this is that, it is related to the piccolo and cl canon both rhythmically and melodically (it is a note-for-note augmentation of the piccolo and cl canon throughout), so it cannot be a fugue unless if the piccolo and cl material were also a fugue. He further states that this piece must be regarded as a triple canon rather than a

double canon with a fugue<sup>110</sup>. Example 6 is taken from Pillin's "Aspects of Counterpoint".

Example 6.

The musical score for Example 6 is a double canon with a fugue. It is written for four staves. The first staff is labeled 'Picc.' (Piccolo) and the second 'Cl.' (Clarinet). The third staff is labeled 'Pfte.' (Piano Forte). The fourth staff is unlabeled. The music is in 3/4 time and features complex counterpoint with triplets and various dynamics like *p*, *pp*, and *f*. The score is divided into two systems, each with two measures. The first system starts with a measure number '1' and the second system starts with a measure number '3'. The music is written in a key with one flat (B-flat) and a common time signature.

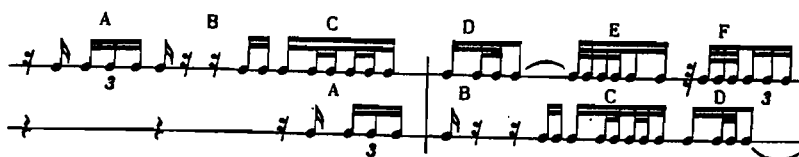
The other canon is in the seventeenth piece which is an example of a strict canon by inversion. The canon in inversion is exactly the same

<sup>110</sup> Ibid., 104-5.

throughout the piece: every interval is played in the opposite direction (see bars 1-6).

In contrapuntal combinations, Schoenberg uses the principle of complementary rhythm which is one of the basic characteristics of traditional counterpoint. His imitations are usually on the beat like in no. 8 bars 4-6. Schoenberg occasionally uses off-beat strettos like in no. 5 bars 16-8 and bars 38-9. In most cases the stretto is combined with other instruments (like the piano) which helps to create the feeling of bar lines. Pillin points out that meter changes are very rare in Schoenberg's music.<sup>111</sup> Schoenberg achieves rhythmic complexity in many ways; beats are divided in varied and intricate manner. In no. 18, in the piccolo and cl canon, the subject is such that no two beats have the same subdivision. When this line is combined with itself in imitation, the result is rhythmic counterpoint. The following examples 8, 9 and 10 are taken from Pillin's "Aspects of Counterpoint".

#### Example 8.



<sup>111</sup> Ibid., 119.

Again in the same piece, in vl and vlc's canon subject, the rhythm is repeated in every two beats but the imitation is spaced three beats apart, so that the two rhythms do not coincide.

Example 9.




In this example, in the first bar the rhythmic patterns create a 2/4 within a 3/4 but stressing the 2/4. When the imitation enters (a bar later) it stresses a 3/4, resulting in polyrhythm.

Example 10.



Other unifying elements in *Pierrot Lunaire* are; the four-note figure, (motive x), D-B flat-C#-G, first introduced at bar 13 and the idea of major and minor triads found at the beginning of the piece. Another prominent feature is the use of major and minor triads and intervals. According to Lessem, the short phrase which appears in "Gebet an Pierrot" (the first setting that Schoenberg composed), bar 3 of the cl part

(commentators have overlooked this element) is one of the main unifying elements in *Pierrot Lunaire*. This figure is constantly associated with Pierrot throughout the work and its identifying feature is a pattern of sixteenths going downwards, thus  <sup>112</sup>. Example 11 is taken from Lessem's "Music and Text".

Example 11.



In no.1 the figure dominates throughout as an ostinato pattern.

In no.2 it is quoted only towards the end.

In no.3 it identifies, in augmentation the silent dandy of Bergamo.

In no.7 it is woven into the flute's soliloquy.

In no.9 it is Pierrot's laugh.

In no.13 it is stated as Pierrot roams about restlessly, starr[ing] at the moon.

In no.14 it becomes an "Erwartung"-like flurry.


<sup>112</sup> Lessem, 131.



In no.21 it “drifts away aimlessly in search of ‘alter Duft’ ”.<sup>113</sup>

Lessem states that these variants chose their pitches freely, the only stable referential factor is rhythm and the overall contour.<sup>114</sup> This device plays an important part in Schoenberg’s approach to melodrama (using generalised musical shapes which can be pulled about to fit a particular poetic or dramatic context).

### **Mondestrunken** (Moondrunk)

This movement is set for four instruments: fl, vl, piano and, from bar 29 onwards, vlc. The rhythmic figure  appears throughout the work, especially in the piano. The opening line, “Den Wein den man mit Augen trinkt” is recited over a seven-note ostinato in the piano and a three-note figure in the vl for the first four bars (this reflects the opus number as well as the three times seven poems). The ostinato piano and the vl phrase make up the Pierrot motive which dominates throughout the movement. The ostinato patterns that open the movement describe the moon: bars 1-5; 25 and 39, etc. At bar 7 to bar 8, a musical correspondence between spoken and instrumental shapes is demonstrated: C–D#–C spoken corresponds with B flat–F–A flat in vl.

<sup>113</sup> Lessem, 132.

<sup>114</sup> Ibid.

Again at bar 7, the middle chord on the piano, B-F#-C becomes a pedal from the end of bar 28 to the beginning of bar 33. According to Lessem, the poem's imagery is reflected in the persistent unsteady rhythms (2/4 and 3/4 time) which alternate freely producing prolonged phrase lengths.<sup>115</sup> The descending sequences of the piano in bars 8, 17, and 25-8 describe the pouring down of wine by the moon.

The first repetition of the lines "Den Wein" in bar 23 brings back the ostinato piano and vl pizzicato in bars 23-8, dropping down in sequences. The following melody with its chordal-like accompaniment on the piano relieves the tension created by the ostinato figures. Vlc's line from bar 29-31 has fourths and fifths, doubled by the piano's left hand, over a pedal point on the piano. Finally the first phrase comes in again from bar 36-38 with the fl phrase now is quasi-glissando. Vlc has a falling whole-tone line from bar 35 to the beginning of bar 38. From the middle of this bar, 38, vlc's faint pizzicato chords bring back some of the notes of the melody and its accompanying chords of bars 29-32. In the last bar the piano and vl elements are introduced.

Dunsby describes "Mondestrunken" from a different perspective. According to him, in this movement, consistent hallmarks of the cycle

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<sup>115</sup> Ibid., 140.

are presented. It is a crucial exposition of mood and musical material.<sup>116</sup> Dunsby refers to the “principal rhythm” of seven equally spaced notes as one recurring motive throughout the work.<sup>117</sup> The pitch motivic-curve described by the principal rhythm is the proper focus of attention. It is this rhythmic motive that occupies Schoenberg as a musical idea to be resorted to again and again in the melodramas. This is because it can be repeated, expanded, contracted, added to, set to repeated pitches or to any number of pitch shapes, etc. Dunsby, like other writers, describes the piano ostinato at the beginning as the principal rhythm of *Pierrot*. He further states that musical control is exerted by the instruments, not the voice.<sup>118</sup> This is revealed in the interludes: at bar 7 with sudden loud dynamics, at bar 15, the second verse begins with an *a tempo* and new texture, again at bar 27-8, which closes the second verse and, at the abrupt ending at bar 39. The late entry of vlc at bar 29, doubling the piano in its tenor register demonstrates Schoenberg’s instrumental control. Dunsby discusses chromatic harmony used in the piece. Firstly, he mentions the reference to major-minor tonalities which are active through various parts of *Pierrot*. Secondly, pitch relationships; many

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<sup>116</sup> Dunsby, 29.

<sup>117</sup> Ibid., 28.

<sup>118</sup> Ibid., 29.

cadence-like points seem to focus around the note E. Thirdly, the factor of total chromaticism; at the beginning of the movement, the piano, vl and fl together use ten of the twelve pitch classes. The missing ones are B and F; B is supplied by the recitative on the first down beat at bar 3 and F is supplied and supported in the piano part at bar 6 by the voice.<sup>119</sup>

The recitation in this melodrama is expositional in many ways. The vocal part covers nearly two octaves, A flat to F#, and moves rapidly across this range: bars 9-10 where the range is E flat to A flat (bass clef). Dunsby sees the text as syllabic and moves through the text rapidly such that the repetitions of line 1 at 7 and 13 (the closing line) are articulations of the mood of the melodrama.<sup>120</sup> Textually, Dunsby states that “Mondestrunken” opens a world of impossibilities, of intoxication by a wine which comes out at night as moonlight.<sup>121</sup>

### **Nacht** (Night)

“Nacht”, the first poem of the second group, is scored for bcl, vlc and piano. Schoenberg subtitled this movement “Passacaglia”. In a passacaglia the basic motive tends to retain its original shape. [This one is unusual because the unifying motive (a rising minor third followed by a descending major third) is not a complete phrase but a three-note cell.

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<sup>119</sup> Ibid., 29-32.

The whole movement is based almost entirely upon the manipulation of this single three-note cell; E-G-E flat, that is introduced at the beginning and then varied by transposition; inversion and sometimes by rhythmic diminution.] According to Pillin, this piece is a canon with a subject which constitutes of a ten-tone row, imitated at an octave which stops any ideas of duplication of pitches.<sup>122</sup> The following example is taken from Pillin's "Aspects of Counterpoint".

Example 12.

He further states that the piece has the following features:

- The extensive use of canon, augmentation and diminution.
- The ground-bass subject.
- As a result of this, the extreme motivic economy which sometimes approach serial procedures.<sup>123</sup>

<sup>120</sup> Ibid., 32.

<sup>121</sup> Ibid., 32.

<sup>122</sup> Pillin, 112.

<sup>123</sup> Ibid., 113.

The use of a strict canon and imitation with this motivic economy reflect an emphasis on contrapuntal complexity. Schoenberg uses low registers throughout the work although it rises in the middle. The voice takes an independent role; it starts with the chromatically descending motive and only twice during the piece states the BC in an obvious way. The instruments follow with their own repetitions at different points.

From bar 1-3, the three-note cell is introduced by the piano first at bar 1 and the vlc and bcl at bars 2-3. When considering the notes of the piano, Schoenberg's signature can be seen; E flat-A and A flat on the left hand. These can also be stated as one of the tritone-fourth chords frequently found in Schoenberg's works:

|        |    |    |
|--------|----|----|
| A flat |    | G# |
| E flat | as | D# |
| A      |    | A  |

The passacaglia theme at bar 4 starts with BC, E-G-E flat, by the bcl. The recitation enters also at bar 4 and is accompanied by a strict canon with four entries, starting with the bcl; then vlc; the piano (left hand) and the piano's right hand. These instruments enter one bar after the other. From

bar 4-6, Schoenberg's signature is clearly seen especially on the bcl's melody. The recitation has Bach's signature at bar 4 and the beginning of bar 5 as C-C flat-B flat-A (C-H-B-A). From bar 6-7 the piano part has the theme then followed by a chromatic line and this is transferred to the right hand. At bar 8, a transposed version of BC in rhythmic diminution is given by bcl with the notes E-G-E flat, G-B-G flat and E-G flat-D. The piano on the other hand, at bar 9 has BC followed by transposed versions. This new version of BC introduced in these two bars becomes more insistent later on. In bar 10, the voice has BC for the first time and after this it has overlapping versions of major and minor thirds, which brings the first verse to the end.

The second verse at bar 11 opens with the vlc playing a variant of the basic theme. This new variant is based on the opening rising sevenths.

### Example 13.



The piano has BC in long notes against the bcl's transposed BC in rhythmic diminution. The voice also has a transposed version of the theme as G-B flat-G flat. The chromatic patterns played by vlc at bar 12 are derived from the opening melody but now in tremolo. The bcl follows with the chromatic melody and tremolo. The piano has the chromatic melody on the right hand. The left hand has BC plus transposition and at bar 14, the top notes equals BC plus BC transposed. This section rises to fortissimo and reaches the climax on the words, "Sonne Glanz". The piano at bar 16 has BC and a low *fff* pedalled tremolo. The last section begins at bar 17 with all the instruments stating BC, then transposed. In this bar the right hand takes up the theme to the beginning of bar 18. The recitation enters at bar 18 with the piano still playing a transposed version of BC on the right hand. On the left hand there is an ornamented BC (with the use of chromatic melody). At bar 19, a transposed and permuted version of BC is on the voice. The piano continues with different transpositions on both hands. In this section, strict imitation is abandoned. The instruments use more of the quaver pattern introduced at bar 8. Long and short note values are used.

At bars 20-3, the chromatic figure in vlc is the development of the voice's figure stated at bars 4-5 and the piano has different versions of



canons, the first one beginning at bars 11-15. This canon between the voice and vla, in unison, uses a variation of the phrase presented from bars 1-3. Lessem divides this phrase (bars 1-3) into two different little motives: x and y.<sup>124</sup>

The cl has the phrase in an inverted canon. From bar 16, the piccolo participates in the canons for the first time. From this bar, a double canon is used: the voice is paired with the piccolo using the original form of phrase x at pitch from bar 1 and the piccolo an octave higher. In these two parts there is a slight difference in notes than in their first appearance at bar 17; the voice uses B instead of B flat and A instead of A flat, the piccolo uses the notes at bar 18. An inverted canon between vla and the cl starts at bar 17. New material is used by these two instruments. At bar 21, cl plays an ascending passage which leads to the beginning of the third verse at bar 22. The third verse retains the four parts and is a double canon. The voice and cl are now paired against fl (instead of the piccolo) and vla. The voice enters with a rhythmic prolongation of phrase x but starting with two added notes, B flat and C. It is joined by cl in a canon but dropped at bar 24 by the voice and at the beginning of 25 by cl. On

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<sup>124</sup> Lessem, 157.

the other hand, vla and fl are in a canon by inversion using material derived from phrase x until bar 26.

From bar 26, vla and cl join in imitation. These two instruments use the Pierrot motive which was played by the piano at bars 16-7. These are joined by the piccolo from bar 27 using the original form of phrase x at pitch, imitated more freely by the piano and the voice. All the instruments are used in this double canon, and the piano in its accompanying role had maintained its independence until now. The last two bars are a transition to the new piece, "Der Mondfleck". According to Dunsby, these two bars set the serious mood of the next piece and its rhythmic motives and melodic shapes.<sup>125</sup>

### **Der Mondfleck** (The Moonspot)

This piece is the fourth of the third set. It is scored for piccolo; cl; vl; vlc and piano. In this canon that proceeds to midpoint (bar 10) where Pierrot discovers the moon spot that irritates him, and then moves backwards in retrograde motion until its opening is reached again. The piano has a three-part fugue which is developed independently, not participating in

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<sup>125</sup> Dunsby, 65.

the inversions of other instruments, not moving backwards from bar 10, but forward. The vocal line is also very much independent. This poem is introduced by a two bar piano transition which introduces the rhythmic figures and melodic shapes that are to be used in the setting.

The first canon is between cl and piccolo from bar 1-4. It is based on the piano's fugue subject but in diminution. The outer voices of the piano are in an augmented canon with the piccolo and cl; the piccolo with the lower voice and cl with the upper voice. The second canon in strict imitation is between vla and vlc from bar 1-10 and is thematically independent. According to Dunsby, there is a fugue between the piccolo and cl (which Schoenberg clarified himself in his own copy) instead of a double canon that many analysts had mentioned, and a canon between vla and vlc.<sup>126</sup> From bar 1-4, the piano presents a fugue in three voices. The first entry is at bar 1, on E, in the right hand; the second one at bar 2, on B, in the left hand and the last one at bar 3. Lessem suggests that in these bars, counterpoint is obscure because of the crossing of voices and chordal doublings.<sup>127</sup> These four bars can be regarded as the first exposition of the fugal subject, the first episode appearing from bar 5-7. In these bars the fugal texture breaks up matching the words, "Plötzlich .

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<sup>126</sup> Ibid., 66.

.. Anzug". From bar 8, the piccolo and cl restate their theme. The piano from bar 8-13, has a number entries of the opening statement as the second exposition in stretto and pitch transpositions but now becomes less complete:

- First entry at bar 8, on E in the left hand.
- Second entry at bar 9, on B, in the right hand.
- Third entry at bar 9 in stretto, on E.
- Fourth entry at bar 10, on B, in the right hand (with the first note coming last!).
- Fifth and sixths entries at bar 11 and 12 transposed to F and C, respectively.

In the middle of bar 10, at the high A flat in the piccolo, the woodwinds and the strings engage in a strict retrograde version of the first half of the piece in both rhythm and pitch and proceed note for note to the end of the piece at bar 19. The recitation and the piano are not participating in this. According to Dunsby, Schoenberg made four tiny errors in transcribing the retrograde. The first one is of rhythm which he corrected in his own printed score, and the other three are of pitch. He argues that Schoenberg

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<sup>127</sup> Lessem, 158.

might not have noticed the wrong notes, but there are times when he (Schoenberg) made minor errors in strict twelve-note works, and when challenged, he refused to correct them claiming that a composer's intuition must definitely override all laws of composition. Dunsby further states that "Der Mondfleck" is regarded as "one of the most elaborate canons worked out since the end of the fifteenth century".<sup>128</sup> This feature becomes very important in the compositional techniques of Schoenberg's star pupils, Webern and Berg. In Berg's compositions, his retrogrades are an important feature such that, with the exception of the Violin Concerto, there is no single major work after Opus 5 that does not include one.

From bar 15-6 there are two entries in stretto with rhythmic diminution on the piano as the third exposition. At bar 15, there are overlapping entries on B and E; two on E on the right hand and B on the left hand. The last three bars 17-9 are the coda and the opening theme is used, thrown around.

### **O alter Duft    (O Ancient Scent)**

This is the last of the twenty-one poems.

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<sup>128</sup> Dunsby, 67.

According to Dunsby, the beginning of this piece is outlined by the previous one, "Heimfahrt", where in the last bar the piano has the dominant chord of E, the key for the last poem.<sup>129</sup> The key of E is a clear indication that Schoenberg is harking back to tonality.<sup>130</sup> This is the only poem where all eight instruments are used and also, the only piece which has the voice completing the final bar. According to Lessem, the piano carries the weight of the music because it is the "protagonist of the melodramas and proclaimer of Expressionist agonies."<sup>131</sup> The piano's dominant role is often supplemented by occasional phrases of the melody and chords from the other instruments. There are referential elements to other works in this piece:

- the opening piano melody from bar 1 to 3, right hand, has a hidden melody; the opening of Opus 11 No. 1 (B-G#-G-A-F-E). This could be a deliberate recall of the earlier work; like Opus 11 No. 1, it here also spans three bars. The notes of the opening melody of Opus 11 can almost be superimposed on the RH material here.

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<sup>129</sup> Ibid., 71.

<sup>130</sup> Ibid., 72. Dunsby states that the music did not strike all of Schoenberg's contemporaries as notable for its return to tonality.

<sup>131</sup> Lessem, 161.

- the thirds found at the beginning of “Mondestrunken” and later at bar 12, etc., are also found at the beginning of No.21, the piano part and at bar 14, the recapitulation.
  
- a mixture of major and minor thirds, and triads is used in both No.1 and No. 21.
  
- Dunsby sees a reference to the second string quartet. Dunsby states that they both share a “ bitter-sweet quasi-tonality”.<sup>132</sup> This tonality is established by repeated E major triads and D major in bar 6, and an E octave at the end of the piece. According to Dunsby, historians observed that Schoenberg intended that the idea of “a scent regained” be associated with tonality.<sup>133</sup>
  
- there is reference to the Bach motive which is used in most of the poems. Here, since it is combined with the Tristan chord, it could be seen as a reference to “Mondestrunken”.

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<sup>132</sup> Dunsby, 72.

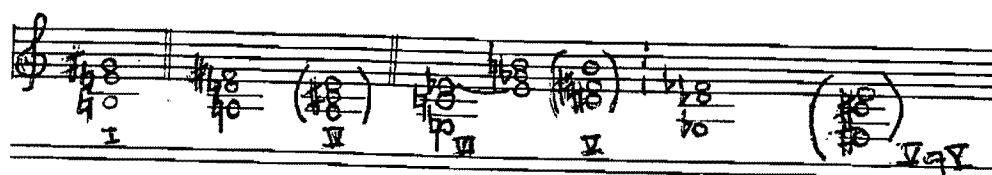
<sup>133</sup> Ibid., 72.

Dunsby states that this is the most beautiful, melodic and harmonic melodrama.<sup>134</sup> This poem is characterised by running quavers (sometimes crotchets) which pause when establishing a major triad in the piano part; for instance E major in bar 3 and D major in bar 6. For the first six bars, the voice joins its pitches with those of the piano theme.

Lessem states that in these bars 1-3 the piano counterpoints the work's falling and rising steps: the left hand has a rising C-C#-D and the right hand states falling thirds of B-G#; A-F#, G#-E.<sup>135</sup>

The recapitulation starts at bar 14 an octave higher than the opening statement until the E major chord is stated at bar 16. The original structure of the piano and the voice is preserved with little changes when it comes to the spacing or stating the chords; bars 3 and 16; bars 6 and 18. Throughout the work there are major and minor triads which establish the key of E.

Example 14.

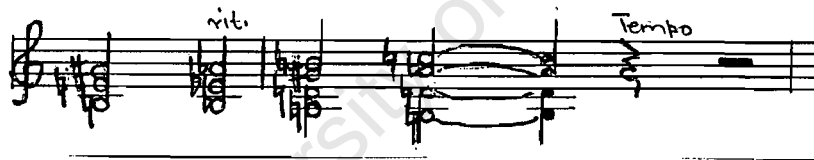


<sup>134</sup> Ibid., 71.



At bar 23 the Tristan chord can be extracted across the voices, as A flat, D, F# and B. According to Lessem, from bars 24-6 the E major triad is stated chromatically into the distance.<sup>136</sup> In these chords, an inversion of the B-A-C-H motive (B flat-B-G#-A) is stated, with S-C-H. There is a combination of the Tristan chord, S-C-H and the B-A-C-H across the voices.

Example 15.



From bar 28 to the end of the piece, Schoenberg uses chords 1V, 1V, V and 1 in E major, going back to the beginning and emphasising the tonality of the piece. The subdominant triad is stated first in a flattened version (as an A flat minor triad). It is then followed by an A minor triad, an augmented triad on E flat/D# (as dominant), cadencing onto a low E octave in the piano part.

<sup>135</sup> Lessem, 162.

Lessem states that the main theme is divided into two parts: the first three bars ending on E followed by three plus four bars to end at bar 10.

<sup>137</sup> According to Dunsby, the main theme is stated in many forms; diminished, inverted, varied in figuration and in three-part chords.<sup>138</sup> At bars 12-3 the piano's theme is stated in diminution, it is almost recapitulated at bar 14-9.

Unity is achieved in "O alter Duft" by repeated statements of the chromatic theme. It has in common with most of the melodramas in *Pierrot* the spelling of Schoenberg's name, the Bach motive, and major and minor triads or thirds stated melodically or harmonically.

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<sup>136</sup> Ibid., 163.

<sup>137</sup> Ibid., 162.

<sup>138</sup> Dunsby, 73.

## CHAPTER FOUR

### SERENADE, OP. 24: AN INTRODUCTION TO SERIAL COMPOSITION.

According to Wellesz, Hauer provided Schoenberg with the principal idea of using a row consisting of the twelve pitches of the chromatic scale, as a new principle of composition.<sup>139</sup> This technique was fully developed for the first time in the “Sonett”, the fourth movement of Schoenberg’s Serenade, Op. 24, for seven instruments and voice. Wellesz states that the aim of this new technique of composition was “to create several harmonic centres instead of one tonic centre; to create twelve centres of equal importance, a harmonic development by which the old system based on harmonic progressions is replaced by a new kind of part-writing in which the harmonies are part of a line, but sounding simultaneously”.<sup>140</sup>

In an entry on twelve-tone composition, George Perle and Paul Lansky state that, the term twelve-note or dodecaphony generally refers to music using a twelve-note set as its basis, although logically this could refer to

all non-tonal music in which use is made of the total chromatic complex.<sup>141</sup> This would include pre-serial and so-called free atonal compositions of Schoenberg, Berg and Webern.<sup>142</sup> These authors further state that the evolution of the twelve-note system and serialism was guided mainly by an attempt to break down the traditional hierarchical pitch distinctions and to base their music on ordered or partially ordered sets or motives which controlled the harmonic and melodic aspects of the composition. This eventually led to the fully-fledged twelve-note system where the basic referential material became the twelve-note set.<sup>143</sup>

Serialism is a method of composition where a set of pitches (and its transformations) form the basic referential element of the composition. This most often consists of a series which is formed from an arrangement of the twelve pitches of the chromatic scale in a specific linear order. The set is statable in any of its four linear aspects: Prime, Inversion, Retrograde and Retrograde Inversion, generally presented as P, I, R, and RI. The set can be transposed to begin on any note of the chromatic scale. P, the prime form is the original form. As I, the first note of the prime

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<sup>139</sup> Egon Wellesz, *The Origins of Schoenberg's Twelve-Tone System*: A lecture delivered by E. Wellesz in The Whittall Pavilion of The Library of Congress (Washington: The Library of Congress, 1958), 9.

<sup>140</sup> Ibid., 10.

<sup>141</sup> George Perle and Paul Lansky, "Twelve-Tone Composition," in *The New Grove Dictionary of Music and Musicians*, 1980.

<sup>142</sup> Ibid.

<sup>143</sup> Ibid.

remains the same, and every interval is inverted, ascending intervals become equivalent descending intervals and vice versa. R, the retrograde, reverses the pitches of the prime form and R I, those of the inversion. All four versions, P, I, R and RI can be transposed to any of the other eleven positions of the semi-tonal scale, thus giving forty-eight possible versions of the series. Schoenberg considered all of these to be forms for the same series.<sup>144</sup>

The Serenade is written for: cl, bcl, mandolin, guitar, vl, vla and vlc. A baritone voice is introduced in the fourth movement. There are seven movements and all instruments are used in all movements: "Marsch", "Menuett", "Variationen", "Sonett von Petrarca No 217", "Tanzscene", "Lied (ohne Worte)" and "Finale".<sup>145</sup> Various authors disagree about the exact dates of composition of the Serenade's movements. It is generally agreed that the dates range from 1920 to 1923. MacDonald states that the Serenade was begun in 1920 but the bulk of music dates from 1923.<sup>146</sup> It is agreed that the variation movement was begun in 1920 and finished in 1923. According to Maegaard, the whole variation movement was finished in 1920 and only the last few bars of the coda were altered in

<sup>144</sup> See Paul Griffiths, "Serialism," in *The New Grove Dictionary of Music and Musicians*, 1980.

<sup>145</sup> Jan Maegaard, "A Study in the Chronology of Op. 23-26 by Arnold Schoenberg", *Dansk Aarbog for Musikforskning*, (1962): 93-115.

<sup>146</sup> MacDonald, Schoenberg, 141.

1923.<sup>147</sup> The “Variationen” and the “Tanzscene” were started in 1920. The “Marsch” was written in 1921 and the “Menuett”, started in 1921, was finished in 1923. The “Sonett” was begun in 1922 and finished in 1923. The following table presents the dates from four sources:<sup>148</sup>

Table 1.1.<sup>149</sup>

| Movement  | Maegaard   | Maegaard                    | Stuckensm.                        | Rufer                        |
|-----------|--|-----------------------------|-----------------------------------|------------------------------|
| March     | Beg.Sept.27<br>1921.Compl.Sept.27<br>1921.                   | 27 Sept.1921-<br>6/X1/1921  | Bet'n<br>Sept.27-Oct.6<br>1920    | 27/1X/192<br>1-6/X/1921      |
| Minuet    | Beg.Oct.8 1921<br>completed March 16<br>1923                 | Sept.1921-08<br>Oct.1921    | August 6<br>1920-March<br>16 1923 | Completed<br>20/111/192<br>3 |
| Variation | Beg.before Aug.3 1920<br>completed March 11<br>1923          | 3 Aug.1920-11<br>March 1923 | March 11<br>1923                  | 19/111/192<br>3              |
| Sonnet    | Beg.Oct. 8 1922<br>resumed March 16<br>1923, compl. April 29 | Oct. 1922                   | Beg. 1922-<br>March 29<br>1923    | 16/1V/192<br>3               |

<sup>147</sup> Maegaard, “A Study in Chronology”, 93-115.

<sup>148</sup> For the major sources, see: Jan Maegaard, “A Study in the Chronology”, 104; *Studien Zur Entwicklung des Dodekaphonen Satzes bei Arnold Schoenberg*, (Copenhagen: Wilhelm Hansen, 1972), 99-104; H.H. Stuckenschmidt, *Schoenberg: His Life, World and Works*, 287-89; Josef Rufer, *The Works of Arnold Schoenberg*, trans. Dika Newlin (London: Faber & Faber, 1962), 62.

<sup>149</sup> The given sources are in the order stated in note 148. Abbreviations used, for reasons of space, are obvious. Dates are indicated as in the original documents.

|             |  |                               |   |                |
|-------------|--|-------------------------------|---|----------------|
|             | 1923   |                               |   |                |
| Dance Scene | Beg. Aug. 6 1920<br>resumed March 30 1923<br>compl. April 7 1923 | 6 Aug. 1920-<br>29 March 1923 | Beg. 1920<br>resumed<br>March 30<br>1923 compl.<br>March 30<br>1923 | 18/1V/192<br>3 |
| Song        | Beg. March 30 1923<br>compl. March 30 1923                       |                               |   | 19/1V/192<br>3 |
| Finale      | Beg. April 11 1923<br>compl. April 14 1923                       |                               | April 11<br>1923-April 14<br>1923                                   |                |

Rufer points out that this work represents a transition from one style of composition to another.<sup>150</sup> This change is between the free-tonal chromaticism of the earlier atonal works and serialism. He further states that, although, apart from the “Sonett”, the complete twelve-note set is not used in the work (in the variation movement a set of eleven notes is

<sup>150</sup> Rufer, *The Works of Arnold Schoenberg*, 43-5.

used), Schoenberg uses the set in the manner of the later twelve-note works.<sup>151</sup> On the other hand, Whittall points out that although this work is a product of the period in which serialism was crystallising, it looks back in atmosphere and in form to the mannerist world of *Pierrot Lunaire*.<sup>152</sup> For the purpose of this study, only the fourth movement, the “Sonett”, will be analysed.

In the fourth movement, “Sonett von Petrarca, No. 217”, the vocal line is derived throughout from a single twelve-note set. Goehr points out that, since each line of the sonnet has eleven syllables, the composer adopts a one-note-per-syllable setting.<sup>153</sup> The voice has the horizontal statement of the set, stated thirteen times and the last time, notes 11 and 12 are completed by vl and vla. The sonnet has fourteen lines but twelve sentences. The endings of the vocal phrases coincide once, in the eleventh statement, with the ending of the statement of the set. Since each line has eleven syllables, each new set- form op P-0 will start further into each line of the text.

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<sup>151</sup> Josef Rufer, *Composition with Twelve Notes Related to Only One Another* trans Humphrey Searle (London: Barrrie & Rockliff, 1945), 62. The same is also true of his Five Piano Pieces Op. 23, written during the same time.

<sup>152</sup> Whittall, *Schoenberg Chamber Music* (London: BBC Music Guides, 1972), 33.



There are 154 in the complete poem; twelve complete statements and one incomplete syllables statement of P-0. This also means that apart from line 1, line 13 will be the only line which starts a statement of P-0. All the other lines will therefore start on a different note of P-0, in retrograde form: line 2 with note 12 (B flat), line 3 with note 11 (G), etc., until line 13. The following example gives the set of the movement and indicates the starting notes for each of the lines:

#### Example 1



Throughout these thirteen statements of P-0, variety is achieved by varying the contour through changes in intervals (a third becomes a sixth, etc.).

From bar 1 to bar 5, the mandolin and guitar provide accompaniment for a complete statement of the set by vl, bcl, vlc and vla with chords which avoid doubling the melody notes but which do not themselves follow the

<sup>153</sup> Whittall, *The Complete Works*,

ordering of the set. According to Whittall, such a relationship between a fixed order and a free arrangement becomes fundamental to Schoenberg's later twelve-tone manner as is also his concern to avoid doubling of pitches.<sup>154</sup> According to Maegaard, the rhythmic shape of the theme is based on the sketch for the sonnet which was made on the manuscript of the variation movement; this is reflected in the final version of the instrumental prelude. He further states that the final theme does not show much melodic connection with the previous one as that was based on the set for the variations.<sup>155</sup>

Example 2a, b and c

In these bars 1-5, there is a horizontal usage of the set, bars 3-4, vlc with 5-8 and vla with 9-12 against the mandolin and the guitar. At bars 4-5, cl also has a horizontal statement of 1-5 and in the middle of these bars (last beat of bar 4 to the end of 5), there is a dyadic statement of the set, divided into three-note groups by the mandolin and the guitar which

<sup>154</sup> Whittall, *Schoenberg Chamber Music*, 33.

reverses the two hexachords. VI also has a horizontal statement of notes 6-12 at bar 5. Maegaard states that the main characteristic of this movement is the motive, **x**, of a major second down and a minor second up and its inversion.<sup>156</sup>

Example 3, motive **x**.



Another characteristic of the movement is the rhythmic motive **a**, which appears first at bar 3 in *vlc* with notes 5-8. Most of the time this motive appears in this form and in *Hauptstimme*. The second important rhythmic figure, **b**, first appears at bar 4 in *cl* as notes 1-4. Rhythmic figures, **c**, **d** and **e** found at bars 6, 9 and 10 played by the *vl*, mandolin and *cl* are frequently used.

<sup>155</sup> For the original sketches see Jan Maegaard, "A Study in Chronology", 103.

<sup>156</sup> *Ibid.*, 102.

Example 4, motives a, b, c, d, and e.



Figure c uses the opening pitches of a, transposed a fifth higher as G-A flat, against the C-D flat of a in the vlc (now as a minor second instead of a minor ninth). In the next bar c is stated in vlc as C and D flat. Figure d, first introduced in bar 9, consists of a note which is repeated nine times. Figure e, in the cl at the end of bar 10, uses this rhythmic shape; its anticipation in bar 7, which has the same pitches, is not the normal form. Another frequently used characteristic is the sharing of common notes from the set by the instruments. The analysis is divided according to the statements of P-0 by the voice. In the first vocal statement, the thick harmonic texture of the opening bars is gone. The instruments mainly state the row as melodic dyads against the voice's horizontal statement. The set is permuted in such a way that most of these dyads form semitones, often with octave displacements. Others are major seconds, thirds and sixths.

## Example 5





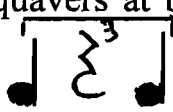
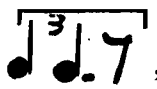
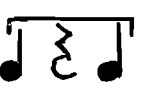
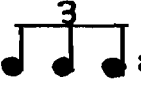
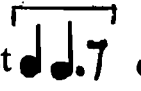
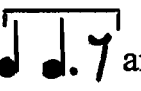
that figure **c** continues as a triplet. The instruments share common notes with the voice to complete the set.

The sixth statement at bar 25 opens with vlc continuing with figure **a**. There is horizontal usage of motivic units especially by the cl and bcl. The notes are grouped into three-note melodic quaver triplets. Intervals of major and minor thirds are more prominent. From bar 28, the set is stated more vertically than horizontally and the texture becomes thicker. At bar 29 a tremolo statement of notes 1-11 of the row in all the instruments, against note 12 held in the voice, results in a complete vertical statement of the row. The use of tremolo is a feature of the sixth statement. Common notes with the voice are also used in this statement. In the seventh statement from bar 30, the repeated quaver triplets continue as figure **c**. A new rhythmic figure, **f**, is introduced in *Hauptstimme* by vla at bar 31. Figure **a** is also stated by the cl at bar 33.

The eighth statement at bar 35 continues with repeated quaver triplets. Here, in bars 37 and 38, the set is stated mainly horizontally in cl and vl. There is also a vertical statement of notes 5-9 at bar 36. Figure **f** is stated at bars 40-1 by cl and bcl as repeated staccato notes. From bar 41, repeated staccato semi-quaver triplets are introduced by vla. The dyadic

idea is continued from bar 41 by the mandolin. In this statement the texture is thinner and more contrapuntal. The voice also rests after note 4 at bar 36 to continue three and half bars later at bar 40, third beat.



From bar 32, the seventh statement, the quaver triplet becomes important. In the following bars there is a gradual increase in rhythmic complexity and diversification up to bar 44. At bar 33, vla has the quaver triplets joined by the bcl and vlc at the end of the bar. In the next bar cl, mandolin and guitar have the quaver triplets and in the following bar 35, the three instruments continue with the triplet idea but now as dotted quaver triplets, . The mandolin carries the figure to the next bar.

At bar 41, the mandolin has the quaver triplets against the semiquaver triplets of the vla, , and this continues for two bars. It is at bar 44 where rhythmically the quaver triplet reaches the peak. cl has semiquavers at bar 43 and quaver triples at bar 44. The bcl and guitar have , while the mandolin rests. Vl and vlc have , against vla's . In other words, in this bar 44, there are quaver triplets  against  and  in the strings (see bars 33, 35, 41 and 44).

The ninth statement at bar 44 has a vertical statement of the set with notes 1-7, omitting note 2, and at bar 45 with notes 5-9. The instruments and the voice share common notes. Harmonics are used in the strings for the first time and the dyadic idea is still maintained from bar 48. Rhythmic figure **d** is stated at bar 48 by the guitar and by the mandolin in the next bar, but varied. The tenth statement opens at bar 50 with the continuation of the dyadic motive. Figure **c** is further varied by the guitar and the bcl at bars 51-2. The strings re-introduce the quaver triplets from bar 54. Motive **x** is again more prominent in this statement.

In the eleventh statement, from bar 57, last beat, the voice rests for seven bars after the set's first note, until bar 65. There is horizontal usage of the set at bar 58 by vl notes 1-9; bar 59 by cl notes 1-12; and at bar 61 by vl notes 1-12. At bar 58, figure **a** is stated by vl as semiquavers for the first time. The instruments state the set against mandolin and guitar accompaniment as melodic fragments as in bar 60 where the bcl has notes 5-12 and vla has notes 7-12. This creates a thicker harmonic texture similar to that of the introduction. Rhythmic figure **e** is stated twice in its original form at bar 60 by vla and bar 62 by vl.



In these bars motive **x** is also more prominent as in bar 60, where mandolin has notes 1-10-3. At bar 65 the voice comes in and motive **x** is continued. At the end of the statement, bar 68, dyads are used. The twelfth statement has figure **f** varied, now as  by the bcl, vla and vlc at bar 69. Cl also varies figure **f** as . The texture is again thinner and the dyadic idea is more prominent.

The last statement, thirteen, from bar 73 onwards, uses material from previous statements. The dyadic idea is maintained. Rhythmic figures **e**, **d**, **b** and **c** are stated: figure **e** by the bcl at bar 76, figure **d** by cl at bar 76, figure **b** by cl at bar 80, and at bar 81 the bcl has figure **b** and figure **c** is stated by the guitar at bar 81. The statement is thirteen and a half bars long but the voice is stated for six and a half bars with notes 11 and 12 sounded by vla and vl at bar 78. From bar 80-5 the instruments state the whole set mostly bar-by-bar. At bar 85 the guitar has figure **e** as quavers as in bar 76. The statement ends with the notes of the set spread amongst the instruments for two bars with notes 1 and 2 as long notes in vlc; 3-4-5 as a vertical statement by the mandolin, guitar and vla; 6-8 as a melodic three-note group by vl; notes 9 and 10 by cl; note 11 by the bcl and note 12 by the mandolin.

In the opening bars, the set is used freely in the accompaniment and the notes do not follow any specific arrangement. Although it is used as accompaniment, the instruments freely use the set as a source of motivic material like the horizontal statements at bar 3-5. The vocal line has thirteen statements of the untransposed twelve-note set. Throughout the movement, instruments use common notes with the voice to complete the set. The set is stated horizontally and vertically by the instruments. It can also be divided hexachordally and sometimes used as three-, four- or five-note melodic groups.<sup>157</sup>

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<sup>157</sup> Schoenberg used hexachordal divisions and three- or four-note groups more prominently in his Fourth String Quartet, Op. 36.

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## CHAPTER FIVE

### THE FOURTH STRING QUARTET, OP 37

This quartet is one of Schoenberg's mature twelve-tone works. The four movements are based on a single row. In many of Schoenberg's twelve-tone compositions a specific relationship exists between a set-form and an inversion of that set-form; in this case between P-0 and I-5.<sup>158</sup> This is known as combinatoriality and the two set-forms are combinatorial. The pitch content of the first hexachord of one set-form is equal to that of the second hexachord of the other set-form and vice versa.

Example 1.



<sup>158</sup> In all the twelve-tone works except the Three Songs, Op.48 where Schoenberg uses an all-

If combinatoriality is to exist between P-0 and its transposed inversion, the second half of P-0 must be statable as the inversion of its first half.

Example 2.



This will then determine the transposition for the combination. When the first hexachords of the two set-forms are combined, all twelve pitches are present and this creates a subset. According to Haimo, Schoenberg frequently used hexachordal inversive combinatoriality in his serial works.<sup>159</sup> Schoenberg already used combinatoriality in the 1920s; soon after the completion of his first twelve-tone works. This is certainly the case in his Suite, op. 29, completed in 1926.<sup>160</sup> The opening set-form and

combinatorial set-form.

<sup>159</sup> Ethan Haimo, *Schoenberg's Serial Odyssey: The Evolution of his Twelve-Tone Method, 1914-1928*. (Oxford: Clarendon Press, 1990), 9.

<sup>160</sup> For a detailed discussion of combinatoriality, see George Perle, *Serial Composition and Atonality*;

its combinatorial pair, I-5, are stated together for the first time in the work at bar 27 where the hexachords are counterpointed against one another.

Because of combinatoriality Schoenberg makes use of much hexachordal subdivision. A given set-form is associated with its hexachordal inversive combinatorial set-form like P-0 notes 1-6 and I-5 notes 7-12. Haimo states that the only way two set-forms occur simultaneously in the mature twelve-tone compositions, is in hexachordal inversive combinatorial pairs. He further states that Schoenberg used no other method of set combination in the later serial works.<sup>161</sup> Throughout the work a set is stated by itself or partitioned into several voices as in bar 1 or stated together with its combinatorial partner as in bar 27. More rarely other set-form combinations are used. Another important aspect of the work is the grouping of notes into equal segments either linearly, vertically or both as in bars 45-7 of the first movement.

Apart from the obvious combinatorial 'invariancy', a number of other set combinations share pitch invariancy in this quartet.

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*An Introduction to the music of Schoenberg, Berg, and Webern* (Los Angeles: University of California Press, 1962), 97-100. In most of these cases these are semi-combinatorial sets.

<sup>161</sup> See Haimo, 10. This is not always the case. See for instance bar 17 to the beginning of bar 21 where P-1 and I-5 are combined but they are not combinatorial.

Example 3.

The image displays six staves of musical notation, each representing a different hexachord in a series. The staves are labeled on the left as P-0, I-0, I-6, P-7, I-9, and P-3. Each staff contains 12 notes, numbered 1 through 12 below the staff. Above the notes, various hexachord labels are written, such as A, B, C, B-I, C-I, F, C-I, H, A-RI, C, A-R, E-R, B-R, and G-R. The notation includes treble clefs, key signatures (one sharp for P-0, P-7, and P-3; one flat for I-0, I-6, and I-9), and note heads with stems. Some notes are beamed together, and there are various accidentals (sharps, flats, naturals) throughout the piece.

1. C of the first hexachord of P-0 ends the second hexachord of I-0.
2. C-I of the second hexachord of P-0 is equal to notes 3-5 of the first hexachord of I-0.
3. P-0 and I-0 have the same augmented triad at the beginning of their second hexachords.
4. Furthermore, every fifth version of P and I will share augmented triads as far as pitch content is concerned.
5. A of P-0 will be retrograded in notes 8-10 of I-5 or stated as notes 3-5 of RI-5. Therefore E of I-0 will be stated as retrograde in notes 8-10 of P-7 or stated as notes 3-5 of R-7.
6. A-RI of P-0 will therefore be retrograded at the start of I-5 or stated at the end of RI-5.

7. B of P-0 will be retrograded as notes 6-8 of I-9 and B-RI of P-0 stated, in retrograde, as notes 2-4 of I-9. G of I-0 is retrograded in notes 6-8 of P-3 and H of I-0 is retrograded as notes 2-4 of P-3.

P-1 and I-5 also share three-note invariancy.

#### Example 4.



In these two set-forms, (i) of P-1 is stated as notes 10-12 of I-5 and notes 10-12 of P-1 are stated as notes 1-3 of I-5. Note groups 4-6 and 7-9 are stated the same way in both sets.

In this movement a section of music is often characterized by a group of set-forms. Schoenberg limits choices of set-forms within these sections to those that form combinatorial pairs. A linear statement of the set, P-0 is stated at the beginning of the movement. This presentation includes three of the set-forms that make up the combinatorial complex. P-0, I-5 and R-5; RI-5 is left out. After the opening statements of these set-forms, which last for 25 bars (with the exception of P-1 mentioned above), no further



linear presentation of the set occurs until bar 63, where I-0 is stated, coinciding with the change in texture, rhythm and tempo. From bar 68-78 there are linear statements of the set-forms from this combinatorial pair, I-0, P-7, R-7, and RI-0. According to Haimo, throughout the movement, new sections are marked by a clear linear presentation of the set: bar 95 with I-3; bar 165 with P-6; etc.<sup>162</sup> The set appears in forty-five of its forty-eight possible versions; only R-8, R-10 and RI-3 are not present.

#### First Movement Bars 1-284.

|            |            |            |             |
|------------|------------|------------|-------------|
| P-0<br>1   | bar<br>9   | R-0<br>6   | bar<br>29   |
| P-1<br>153 | P-1<br>156 | I-6<br>160 | RI-6<br>199 |
| P-2<br>45  | R-2<br>44  | I-7<br>42  | RI-7<br>43  |
| P-3<br>79  | R<br>217   | I-8<br>80  | RI-8<br>82  |
| P-4<br>189 | R-4<br>55  | I-9<br>187 | RI-9<br>59  |

<sup>162</sup> Haimo, 15.

|             |             |             |              |
|-------------|-------------|-------------|--------------|
| P-5<br>35   | R-5<br>37   | I-10<br>31  | RI-10<br>37  |
| P-6<br>104  | R-6<br>176  | I-11<br>105 | RI-11<br>176 |
| P-7<br>60   | R-7<br>64   | I-0<br>60   | RI-0<br>65   |
| P-8<br>50   | R-7         | I-1<br>51   | RI-1<br>264  |
| P-9<br>203  | R-9<br>201  | I-2<br>204  | RI-2<br>209  |
| P-10<br>94  | R-10        | I-3<br>95   | RI-3         |
| P-11<br>140 | R-11<br>186 | I-4<br>142  | RI-4<br>186  |

R-8; R-10 and RI-3 are not used in the movement.

The first movement opens with a linear statement of P-0, bars 1-6, in vl-1. The set is divided into three-note groups and each melodic three-note group is accompanied by three-note chords which leave out these three melodic notes. Each three-note group is stated three times harmonically.

This is varied so that apart from notes 4-6, all use three of the six possible permutations; notes 4-6 use only two.

Example 5 P-0 (bars 1-6).

|      |        |        |        |         |
|------|--------|--------|--------|---------|
| Vl-1 | 1 - 3  | 4 - 6  | 7 - 9  | 10 - 12 |
| Vl-2 | 4 9 11 | 7 12 2 | 10 1 6 | 2 6 7   |
| Vla  | 6 7 10 | 8 11 3 | 12 3 5 | 1 5 9   |
| Vlc  | 5 8 12 | 9 10 1 | 11 2 4 | 3 4 8   |

From the middle of bar 6 until bar 9, I-5, the combinatorial set-form of P-0, is introduced. This time vl-2 has the melodic statement of the set. This is again accompanied by three-part harmonic statements; the duplication of pitches is avoided by having two statements of notes 1-3. R-0 is stated by vl-1 from bar 10 until bar 15. Like P-0, a melodic three-note group is accompanied by three-note chords. Again, each group is stated three times harmonically except note group 1-3 which is stated four times. Groups 1-3 and 4-6 use three of the permutations and groups 7-9 and 10-12 use only two. The last note of R-0 overlaps with the beginning of P-0 at bar 15, last beat.

Example 6 R-0 (Bars 10-15).

|      |        |        |          |         |
|------|--------|--------|----------|---------|
| VI-1 | 1 - 3  | 4 - 6  | 7 - 9    | 10 - 12 |
| VI-2 | 5 9 11 | 9 10 3 | 3 10 1 5 | 2 4 9   |
| Vla  | 6 8 10 | 7 11 1 | 1 11 2 4 | 3 6 8   |
| Vlc  | 4 7 12 | 8 12 2 | 2 12 3 6 | 1 5 7   |

From the end of bar 15 the four-part chordal texture of P-0 is divided as follows: the first three notes are stated melodically by vl-1. Each melodic note is accompanied by a harmonic three-part chord using notes 4-6 for note 1; 7-9 for note 2 and 10-12 for note 3. The last beat of bar 16 introduces a new set-form, P-1, stated as three-part chords in the upper voices against a linear statement of I-5, starting at bar 17 in the vlc. These two set-forms are not combinatorial but they share three-note invariancy.

The arrangement of these chords is determined by the three-note invariancy. As in the opening of the movement, a melodic statement of the set, divided into three-note groups, is accompanied by three-note chords which avoid using the three melodic notes. Only the first three-

note group of I-5 is doubled; notes 1-3 of I-5 and notes 10-12 of P-1 are the same (see example 4 above).


Vlc has a statement of I-5 until the middle of bar 21. From bar 21-6 there are a number of melodic statements of I-5. Vl-1 states the full set followed by vlc at bar 22. The middle instruments play little segments of I-5. At bar 23, the set is divided into three-note groups, each instrument stating its own melodic group; for instance vl-2 has notes 1-3, vla 4-6; vlc 7-9 and vl-1 10-12. In the following bars, 27-8, Schoenberg presents two set-forms simultaneously in each bar. P-0 is divided between the upper instruments and I-5 between the lower instruments in bar 27. In the following bar the set-forms are reversed. The note grouping for the sets is different in each bar.<sup>163</sup> The note grouping used in these bars, (sometimes a little varied), and the grouping or pairing of instruments, are commonly used throughout the movement.

At bar 28 the roles are reversed, the upper strings have I-5 whilst the lower ones have P-0. The note grouping in the second instrumental division is retained; in other words vl-1 and vl-2 use the same division for P-0 and I-5, and vla and vlc retain their division of the two set-forms.

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<sup>163</sup> Ibid., 27.

From bar 29 until bar 30, the retrograde sets are stated. The upper strings have R-0 at bar 29 and the lower strings have RI-5, the last-named is here stated for the first time since the opening of the movement. The grouping of notes remains the same and in the middle of bar 30 RI-5 is taken by the upper instruments whilst the lower ones have R-0. The grouping for notes 2-3-4 and 1-5-6 are interchanged in the lower voices.

At the end of bar 31 a new set-form, I-10, is introduced by vlc. The set is presented as a combination of linear and vertical segments. Although the set is not presented completely linearly here, this is beginning of a new section.<sup>164</sup> The notes are spread across the instruments, starting from the lowest to the highest, vlc has notes 1-2 repeated, vla has 3-4 also repeated, vl-2 has 5-6 stated harmonically with rhythmically varied repetitions. Vl-1 has a melodic statement of the second hexachord. The rhythmic motive  of the vlc and vla is referential, (see bars 2 and 3 at the beginning of the movement). In bars 35-41, P-5 and I-10 and their retrogrades are used. Throughout this section, Schoenberg uses the note grouping introduced at bar 27 but sometimes varied.

The set is used dyadically for bars 35-6 by the upper instruments, then in

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<sup>164</sup> According to Haimo, a complete linear statement of the set is a prerequisite for introducing a new

bars 37-40, it is used hexachordally by the upper instruments.

From bar 42-62, new set-forms are introduced: P-2 and I-7, P-8 and I-1, R-4 and RI-9. In all these statements the complete set is never presented linearly, it is mostly the combination of linear and vertical statements. Throughout this section Schoenberg uses techniques from earlier statements, this section does not introduce anything new but it is like a bridge to the next section. From bar 42 to the middle of bar 50, P-2 and I-7 are stated with their retrograde set-forms. Bars 42 to the beginning of 44 state I-7 and RI-7 both linearly and vertically. Both set-forms are shared by the lower three instruments while vl-1 rests. The notes are divided into three-note groups with vl-2 stating notes 1-3 and 7-9 melodically. The other two instruments share the other two three-note groups.

In the middle of bar 44 R-2 is stated as three-note groups. Vl-2 states notes 4-6 of R-2, but in its prime form (notes 7-9 of P-2) followed by 1-3 of R-2, thus retrograding the two three-note groups that form the first hexachord. The other instruments share the notes of the second hexachord and vl-1 rests. At bar 45 P-2 is stated twice and in the second

statement the set is treated as at the beginning of the movement where a melodic three-note group is accompanied by three-note chords. In these bars, 45 to the beginning of 48, the same technique is used.

From bar 46 vl-1 joins in with notes 12-11-10 of I-7 and at bar 47 notes 10-12 of P-2. The treatment of I-7 in these bars is similar to that of P-2 in the previous bar except that now notes 10-12 are stated twice, both linearly and vertically. Vl-2 has a melodic 1-3 and the lower two instruments share the rest of the notes. At bar 47 vl-1 has a melodic three-note group; 10-12 of P-2 and at the end of this bar the three-note chords of P-2 continue with the idea from the previous section.

From bar 48 the upper instruments have a melodic statement of P-2. Vl-1 has melodic dyads of notes 1/2; 6/7 and 10/11 and they are all repeated. In the meantime, vl-2 treats the set as three-note groups of 3-5 and 8/9/12, the last one repeated. When I-7 is stated by the lower instruments from the middle of bar 49, it is also treated in a similar manner. Vla has dyads of notes 3/4; 6/7 and 10/11, and as before, they are all repeated. Vlc has three-note groups of notes 1/2/5 and 8/9/12 with the last one repeated in retrograde in the next bar. In the middle of bar 50, P-8 is introduced and shared by all the instruments, and is stated both linearly and vertically. I-1 is introduced almost at the end of bar 51 with the first



hexachord stated starting from vla up to vl-1, while vlc is resting. Vla and vl-2 create the impression of canonic imitation. Schoenberg treats P-8 and its combinatorial set-form I-1 mostly as melodic dyads.

From bar 55 until bar 58 R-4 is stated thrice; each time shared by all four instruments. Again, a combination of linear and vertical statements is used. The notes are grouped into threes. In the first statement, notes 1-3 and 7-9 are stated vertically by the upper three instruments. Vlc completes the set with a melodic 4-6 and 10-12. In the second statement, vlc has a melodic 1-3 and 7-9 reversed to complete the vertical statement of the upper three instruments. In the last statement, vlc has notes 10-12 stated twice to complete the set. This means that from bars 55-8 vlc has a complete melodic statement of R-4 arranged as three-note groups, but not in the correct order, with note group 10-12 stated thrice. RI-9 is stated in the following bar 59 with vlc stating notes 1-3 and the other notes shared amongst the upper three instruments. At the end of bar 59, I-9 is stated mostly as three-part chords except for notes 12-11-10 in vlc. From the middle of bar 60, the upper instruments introduce P-7 as four-note chords and the lower instruments have I-0 as four-note chords until the middle of bar 62.

According to Haimo, Schoenberg reserves linear statements for the articulation of important structural points.<sup>165</sup> He further states that, the linear statement of I-0 at bar 63 acts as a bridge, to close the previous section and prepare a section in which a new theme is accompanied by a variant of the opening theme of the quartet.<sup>166</sup> At bar 63, vl-1 has a melodic statement of I-0 for the first time. The lower instruments have P-7, the combinatorial set-form, stated as a three-part chord plus single note; 1-4; 5-8 and 9-12. At the end of bar 64, the three lower instruments introduce R-7 as four-note melodic groups, note against note, copying the rhythm and distribution of vl-1 just heard. At bar 65 vl-1 has R-7 stated melodically, omitting the three notes still held by the three lower strings; 4/8/12. In the middle of bar 65 RI-0 is introduced. The three lower instruments have three-note groups of 1-3; 5-7 and 9-11. Vl-1 has notes 4/8/12 as an arpeggio.

From the end of bar 68 until bar 78 there are linear statements of the set-forms from the new complex; the lower instruments start with notes 1-3

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<sup>165</sup> Haimo, 15.

<sup>166</sup> Ibid., 17.

of I-0 in the vla at the end of bar 68. The upper instruments have chordal statements until bar 72. The following melodic statements then follow:

1. Vl-1 with I-0 at bar 73.
2. Vl-2 with I-0 at bar 73.
3. Vlc with P-7 at bar 73.
4. Vl-1 with R-7 at bar 75.
5. Vl-2 with R-7 at bar 75.
6. Vlc with RI-0 at bar 75.

Throughout this section, from bar 72-6, vla rests. From bar 79 to bar 94, P-3 and I-8 are stated. In these bars I-8 is stated linearly once from bar 80 to the beginning of 81 by vl-2. P-3 is stated simultaneously by vlc and vla at bar 81. Throughout this section Schoenberg uses hexachordal divisions; three-note chords and the set is used both linearly and vertically. In bars 89 to the beginning of bar 94, there are two statements of I-8 and P-3. These statements are divided hexachordally and are mixed.

## Example 7.

89

From the second beat of bar 94, new set-forms, P-10 (bar 94) and I-3 (bar 95), are introduced. I-3 is stated linearly by vlc until bar 98, vla and vl-2 also have another statement of I-3 from bar 96, sharing the notes between the two instruments. Vlc's statement of I-3 uses the same rhythm as the opening statement of P-0 at the beginning of the movement. P-10 is played by the middle instruments at bar 94 with the notes grouped into three; as a result each instrument has six notes. At bar 95 the middle instruments continue with a new statement of P-10 and in bar 96, there is an overlap of the two set-forms. Throughout this section vl-1 rests until the end of bar 98. From bar 99 to 100 the outer instruments have P-10 and the middle instruments have I-3 a beat and a half later. These two statements use the same note grouping.

At bar 100 vl-2 has three notes of P-10 and vlc has two notes of I-3, so the two instruments exchange roles. In the following bars, 101-103, the

instruments exchange their set-forms. The upper instruments have I-3, first hexachord, from bar 101 and at bar 102, its second hexachord is stated by the lower instruments. P-10 starts in the lower instruments and then continues in the violins. In both set-forms the second hexachord is repeated and lower and upper instruments are exchanged. In bar 101, the rhythmic grouping used for the first hexachords is the same. The rhythmic figure used by the lower instruments for the second hexachord is the same for I-3 and P-10. With the upper instruments the rhythm used for I-3, second hexachord, is a variation of the previous bar's second hexachord of P-10.

Example 8 (bars 100-3).

At the end of bar 104, a new set-form, P-6, is stated by vla. The combinatorial set-form I-11 is stated in the following bar by vl-1. In these two statements, the set-forms are presented both linearly and vertically: as three-note melodic groups or three-note chords with a note

doubled. The upper instruments have I-11 at bar 105 and the lower instruments state P-6. In the next bar when the second hexachords are stated, the upper instruments now state P-6 whilst the lower ones state I-11. In these bars there are rhythmic and melodic imitations. These two bars also introduce a new texture which was first introduced in the same manner from bar 86.

The following four bars continue with P-6 and I-11. The middle instruments make use of pedals, vl-2 on A and vla on D flat: in the previous section, it was the outer instruments that used pedals. Vl-2 has tremolos on E and G#; and E and B, and vla on F and C; and C and F. In this section, bars 107-8, only P-6 is stated. I-11 is only stated at bar 109-10. From bar 111, I-7 is stated by vlc, vla joins at the end of the bar. The notes are grouped into a two-part texture between the two instruments as follows:

1 2    3 4 5 6    7 8    9 10 11 12

vlc    vla        vlc        vla

At bar 114 vla starts a statement of R-2 until bar 115. From bar 117-39 a new kind of texture is introduced. The four set-forms that form the combinatorial complex of P-2 are used. The instruments are paired and

the pairs play the set-form and its combinatorial pair at the same time. The grouping mostly used is vl-1 and vla, and vl-2 with vlc. In these bars there are alternating rhythmic patterns and the pitches are used as three-note chords and melodic dyads. Schoenberg also uses rhythmic repetitions. It is only at bar 128 where the retrograde set-forms are introduced.

Throughout this whole section, the four set-forms are never used completely linearly. From bar 140, P-11 is introduced for the first time. The notes are shared between the instruments with many repetitions. The instruments enter in a rhythmic canon from vl-1 to vl-2 then vla; vlc is rhythmically different. Vl-1 starts with notes 1 and 2 at the second beat, second quaver; vl-2 follows with notes 3 and 4 at the third beat, second quaver, a beat later from vl-1. Vla is another beat later with notes 5/6/7; and lastly vlc with long held note 8 at bar 141. At the end of this bar, 141 last quaver, vl-1 has note 10; vl-2 has note 9, both repeated in the following bar with note 11 added by the vl-1. At bar 142 vla continues with notes 5/6/7; vlc has a long note 12; vl-2 also has a long held note 9 and vl-1 has repeated notes 10 and 11. I-4, the combinatorial set-form of P-11, is introduced at bar 143 by vlc starting on note 3. Vla formally starts the set a beat later at bar 143. This is followed by vlc with notes 3-

4, then vl-2 a beat later from vla with notes 5/6/ 7. Lastly, vl-1 at bar 144 has a long held note 8. Again notes 9 and 10 are played by vlc and vla at the end of bar 144. The last two notes are in the following bar 145, played by vla and vl-1. The instrumental entries are thus reversed from bar 143 onwards.

From bar 148 to bar 152, second beat, I-1 and P-8 are each stated twice. Each of these four statements starts on the second beat of a bar and lasts until the second beat of the next bar. Vlc always starts on the second beat of a bar and the other three instruments start on the last beat, thus vlc ending on the last beat of the same bar and the others, on the second beat of the following bar. The sets are always divided into three-note segments. Notes 1-6 of I-1 are juxtaposed with notes 7-12 of P-8, thus yielding complete chromatic complex. The notes within these groups are sometimes reversed.

The sets are introduced as follows: vlc has I-1 notes 1-3. The other instruments enter with note 3; vla has I-1 notes 6/5/4; vl-2 has P-8 notes 8-10 and vl-1 has P-8 11/7/12. Vlc starts its second three-note segment with the last note of the upper voices with I-1, 6/5/4. The other segments are introduced (in a note-against-note arrangement) with note 4. Notes



3/2/1 of I-1 are stated by vl-1, 11-7-12 of P-8 in vl-2 and P-8, 10/9/8 in vla. Then, after this the process is reversed, P-8 now has the first hexachord and I-1 has the second hexachord. Vlc starts its first statement of P-8 with notes 6/5/4. As in the previous statements, the other instruments enter with the last note, 4, except vla, which enters half a beat earlier, with I-1 notes 10-9-8 in smaller note values. Vl-2 has I-1, 12/7/11 and vl-1 has P-8 notes 1-3 also in smaller note values. Vlc again starts its second three-note segment with the last note of vl-2 with P-8, notes 3/2/1. Vla follows half a beat later with P-8, 4-6, again in smaller note values. Vl-2 has I-1 notes 10/9/8 and vl-1 also has I-1 notes 12/7/11 in quavers. P-8 and I-1 share note-groupings.

Example 9.

The musical score for Example 9 consists of two systems, each with four staves labeled a, b, c, and d. The first system is titled 'I-1' and the second system is titled 'P-8'. Each system contains musical notation for four staves, with fingerings indicated by numbers 1 through 5. The notation includes various note values and accidentals, with some notes marked with '148-149' and '149-150'.

a of P-8 is R of b of I-1

b of P-8 is R of c of I-1

c of P-8 is d of I-1

d of P-8 is a of I-1

e of P-8 is R of h of I-1



f of P-8 is R of e of I-1


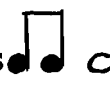
g of P-1 is R of f of I-1

h of P-1 is R of g of I-1

At bar 153, second beat to bar 160, P-1 and R-1 are introduced, the latter starting only at bar 157. P-1 is stated both linearly and vertically. When R-1 is stated, vlc starts with a melodic four-note group then the other instruments join from the bottom to the top, with note group 1-3 constantly repeated. The first statement adds note 4, then the next one in vla after 1-3 adds note 5. In a similar way, notes are added until all the twelve notes of the set have been sounded. See 1-2-3-4 in vlc; 1-2-3-5 in vla; 1-2-3-6 in vl-2 1-2-3-7 in vl-1, etc. In the middle of bar 159 the instruments have notes 9-12 as repeated quaver notes. Throughout this section, vlc has three statements of 1-2-3-4, 1-2-3-8 and 1-2-3-12, vla

two of 1-2-3-5 and 1-2-3-9, vl-2 two of 1-2-3-6 and 1-2-3-10 and vl-1 with 1-2-3-7 and 1-2-3-11. For the first hexachord the rhythmic figure used is three quavers and a dotted crotchet and for the second statements they all have three quavers and a minim, except for vl-1 with three quavers and a dotted crotchet. This technique is used here for the first time.

From bar 160, second beat, the combinatorial set-form of P-1 and I-6 is introduced. The set is divided into two hexachords; the first from bar 160-162 and the second from 162-163. This statement is treated similarly to the previous one of R-1. Only the first two notes of the set are used as a head. From vlc upwards the notes 1-2-3, 1-2-4, 1-2-5, 1-2-6, etc. are used, then again, following the same pattern from bottom to the top, 7-8-9, 7-8-10, 7-8-11, 7-8-12 are stated. In the first hexachord, notes 1-2 are always accented and the rhythmic figure used is  except for vl-1 with  and the ending notes 3, 4, 5 and 6 repeated.

With the second hexachord the rhythmic figure used is  and the last note repeated except vl-1, where the rhythmic figure used is  and note 12 is not repeated; instead notes 7-8 are repeated. The head notes 7-8 are not accented. After this, at bar 164, the first hexachord of I-6 is

stated as three-part chords while vl-1 has the second hexachord as melody. At bar 165 to 169 the outer instruments have a canonic statement of P-6, a new set-form. The dux uses some repeated notes to form quaver figures. Rhythmically, this is not imitated by the voices. Both these statements extend over four bars and they recapitulate the rhythm of the opening bars. In the inner voices, I-11 is used in a hexachordal division. With the first hexachord, the notes are shared between the two voices in bar 165 and repeated in bar 166. The second hexachord is stated by vl-2 with the last three notes in retrograde at bar 167 and in the following bar notes 7-9 are repeated. Vla doubles some of these notes in the order 7/9/12, 9/7/8/12 (10 and 11 are left out). From bar 169 to 184 the hexachordal complex of P-6 and I-11 and their retrogrades are explored. The instruments are paired in various ways: at bar 169-70 the upper instruments have P-6 and the lower ones have I-11; at bar 172 the middle instruments have P-6 and the outer instruments have I-11; at 176 the upper three instruments have R-6 against R-11 stated by vlc; and from bar 182 the four instruments state one set at a time. Throughout this section, P-6, I-11, RI-11 are stated linearly only once: I-11 by vlc from bar 170; P-6 by vl-2 from bar 171 and RI-11 by vlc from bar 175.

From bar 182-4 I-11 and RI-11 are stated by all instruments as three-note

groups. I-11 is stated first with vla stating notes 1-3 and the last note repeated. Then vl-2 has 4-6, vlc with 7-9 and vl-1 retrogrades 10-12. In all these three-note groups the last note is repeated. From bar 183 RI-11 is stated, the notes as three-note groups until bar 184. At bar 185 a new set-form, I-4 is introduced. Vl-2 starts with a four-note melodic statement and vl-1 follows with notes 5-12 stated as four-note groups. At the same time, vla and vlc add notes 1-3 to vl-2's held note 4. In the next bar, RI-4 is stated by the lower instruments as four-note melodic groups. In the middle of bar 186, vl-1 states P-11 still as four-note groups while the lower instruments have a chordal statement of the first four notes of R-11. In the following bar, vl-1 continues with the melodic statement of P-11 and the lower instruments with the chordal statement of R-11, with the four-note groups reversed, until the middle of the bar.

Throughout this section of this hexachordal complex, only P-11 is stated linearly. All the other components of the complex are stated both linearly and vertically. In this section, from bar 185, the set-forms are stated only once and the notes are divided into 4+4+4 melodically and chordally. In the middle of bar 187, a new set-form, I-9, joins in this division. The lower three instruments state this set-form still as four-note segments while vl-1 rests. The combinatorial set-form, P-4, is stated at bar 189.

From bar 187 to the beginning of bar 195, these two set-forms are stated for the first time. Their retrogrades are not stated here but they were introduced at bar 55 and 59 for R-4 and RI-9 respectively. At bar 192, P-4 is stated linearly by the upper instruments whilst the lower instruments share the notes of I-9.

From bar 194, last beat, a new set-form, R-1, is introduced by the vla. The notes are shared by all instruments with repetitions until the middle of bar 197. In this bar, vlc introduces I-6, the combinatorial set-form, until the end of bar 198. P-1 is played by the upper instruments and the note grouping of the two set-forms is the same; 1-2, 3-5, 6-8, 9-11, and 12. At bar 199 the upper instruments have RI-6, introduced for the first time, maintaining the previous bar's note grouping and the lower instruments have R-1 and this time the note grouping has been reversed as 1, 2-4, 5-7, 8-10, 11-12. In the following bar 200, I-6 and its retrograde are stated. The middle instruments have RI-6 and the outer ones have I-6. From bars 201-2, the middle instruments now have P-1 with the second hexachord repeated at bar 202. The outer instruments continue with I-6. At bar 203 a new set-form, P-9, is introduced for the first time. It appears in vl-1, and is joined by vla until the end of bar 204 while the other two instruments rest.

At the end of bar 204, vlc introduces the combinatorial set-form I-2, joined by vl-2 at bar 205 until the beginning of bar 206. The hexachordal complex of these set-forms is stated until bar 210 where vl-1 introduces I-10. From bar 212 to the middle of 214, third beat, five set-forms are used; P-5, RI-10, P-5, R-2 and I-7. In the five statements, the upper instruments take four notes except the middle statement where it takes eight. The lower instruments take eight except also the middle statement where it takes four notes. The lower instruments use the same rhythmic figure throughout this section and the upper ones share the rhythm and play mainly off the beat.

Example 10.

The musical score for Example 10 consists of five measures, each representing a different set-form. The measures are labeled at the top: P-5, RI-10, P-5, R-2, and I-7. The first measure (212) is P-5, the second (213) is RI-10, the third (213) is P-5, the fourth (214) is R-2, and the fifth (214) is I-7. The score is written for four staves (treble and bass clefs) and includes various musical notations such as notes, rests, and accidentals. The measures are numbered 212, 213, and 214. The notation includes various musical symbols such as notes, rests, and accidentals, and the measures are numbered 212, 213, and 214.

From bar 214, last beat, to the beginning of bar 217 a different hexachordal complex is introduced, starting with RI-4 followed R-11 then I-4 and P-11. The rhythmic arrangement has now changed, the lower instruments retain only the quaver triplets while the upper instruments continue their off-beat rhythm. The lower instruments change from the end of bar 215 and the upper ones from the end of 216. At the end of bar 215, the lower instruments use an off-beat quaver rhythm and for two statements, that of I-4 and P-11, the lower instruments state only six notes of the set. The upper instruments use the off-beat rhythm at the end of bar 216 and state the second hexachord. At bar 217, a new set-form, R-3 is stated (the hexachordal complex of this set-form was first introduced at bar 79-82, except for R-3). The set-form is played by all the instruments. The lower instruments have the first hexachord and the upper instruments have the second hexachord. The rhythmic figure used in this bar is the same; the upper instruments reverse the rhythm of the lower instruments. From bar 218-20, P-3 and its combinatorial set-form are mixed, used in the same bar as different hexachords and instrumental pairing.

At bar 218, the lower instruments have the first hexachord of I-8 and the upper instruments have the second hexachord of P-3. The next statement



has P-3, first hexachord by the lower instruments and I-8, second hexachord by the upper instruments until the middle of bar 219. At the end of this bar, the lower instruments have P-3, second hexachord until the beginning of bar 220. The upper instruments repeat notes from the previous statement of I-8.

However, since P-3 and I-8 are combinatorial set-forms, these bars can also be analysed in the following manner: from bar 218, the lower instruments have I-8 first hexachord and the upper instruments have also the first hexachord of I-8. The following statement, from the middle of bar 218 to the beginning of 219, the instruments state P-3, first hexachord. Then, at bar 219, the lower instruments state I-8 notes 1-6 and the upper ones have a permutation of P-3, notes 1-6. This statement can also be regarded as a permutation of RI-8, first hexachord. The last beat of bar 219, the lower instruments have P-3 notes 7-12 continued until the beginning of bar 220.

Example 11.

|                           |            |
|---------------------------|------------|
| Bar 218 lower instruments | I-8 (I-6)  |
| upper instruments         | P-3 (7-12) |

Bar 218 (middle) lower instruments      P-3 (1-6)

Bar 219 (beginning) upper instruments      I-8 (7-12)

Bar 219 lower instruments      I-8 (1-6)

                 upper instruments      I-8 (7-12)

Bar 219, last beat, lower instruments      P-3 (7-12) continued to the beginning of bar 220.

Bar 220, lower instruments      RI-8 (3-12)

                 lower instruments      P-3 (1-6)

                 upper instruments      R-3 (1-6)

From bar 220, the retrograde forms are introduced, with the lower instruments stating RI-8, notes 3-12, and P-3 notes 1-6. The upper instruments have R-3, first hexachord. From bar 221-3, I-11 is stated linearly. Vl-1 and vla have each a complete statement of I-11. At bar 222, the instruments state the set as melodic dyads except for vl-2 which has a melodic segment of I-11, notes 1-5. In the following bar 223, vlc and vla each have a complete statement of the set, stated simultaneously whilst vl-2 has notes 8-12 and vl-1 a dyad, notes 5/6. At bar 224, vl-1 and vl-2 state the first hexachord of I-11. In the middle of the bar, R-11 is stated hexachordally: the upper instruments have the first hexachord and the lower ones have the second one until the end of the bar. At bar 225, RI-

11 and R-6 are introduced. The upper strings have RI-11 as three-note chords and the lower ones have the first hexachord of R-6. At the end of the bar, vla states the first hexachord of RI-11, continued in the following bar where the first hexachords of P-6 and I-11 are then added. In this bar, 226, vla has I-11, vlc has P-6, and, vl-1 and vl-2 share the notes of P-6's first hexachord. From the next bar, 227, to the middle of bar 229, the second hexachords are stated. At bar 227, vl-1 has I-11 while vl-2 and vlc share P-6. In this bar vla rests. At bar 228, vl-2 and vla have I-11 with vla playing notes 7 and 12. Vl-1 has R-6 until the beginning of bar 229 and at the end of bar 228, vla and vlc have RI-11 until the middle of bar 229.

From bars 224-8, Schoenberg associates certain rhythmic and textural ideas for specific set-forms; these are normally repeated. At bar 224, the figure used for the first hexachords of I-11 and RI-11 (in the next bar) in the upper instruments, is the same. The figure used for RI-11, first hexachord, at the end of bar 224, is repeated for RI-11, second hexachord, in the second half of bar 225. In the lower instruments, the figure used for RI-11, second hexachord is the same as that of the first hexachord of R-6. At bar 226, the figures used for P-6 in vlc and of RI-11 and I-11 in vla are the same. The one used by the upper strings for P-

6, first hexachord, is the same as that used by the vlc and vl-2 when stating the second hexachord of P-6. This figure is also used in the following bar, 228, by the middle instruments when stating I-11, second hexachord, and also by the lower instruments stating RI-11, until the middle of bar 229. In this bar, 228, vlc has P-6 and vl-1 has R-6 using the same figure. In the middle of bar 229, I-11 is stated, with the notes shared by all the instruments. Each of the lower instruments has a four-note melodic group: vla with notes 1-5 and vlc with 7-10.

The upper instruments state perfect fourths: Vl-1 with notes 4 and 6 and a repeated 5; and vl-2 with notes 11 and 12 and a repeated 7. Vlc's melodic figure is a retrograde inversion of that of the vla. In bars 226 to 229, P-6 is shared between two instruments; there is no complete linear statement within an instrument. Melodic statements of the two hexachords of I-11 occur in vla (bar 226), and vl-1 (bar 227). From bar 228 to bar 229, I-11 is shared by the middle instruments and in the following bar, by the upper instruments.

From the end of bar 228, RI-11 is also shared by the lower instruments. In these bars, whenever a set-form is shared between the instruments, the same rhythm and texture are used except for the last statement of I-11 in

the upper instruments, where this is slightly varied. The end of bar 229 marks the beginning of three statements of I-11: the first one is stated by the lower instruments, with the first hexachord stated by vla (minus note 4), and vlc stating notes 7-10. In the lower instruments the notes are grouped into threes or fours while the perfect-fourth idea from the previous bars is still maintained in the upper instruments. The last of these three statements can also be viewed as P-6. At bar 231, P-6 is stated followed by two statements of I-5. In the two statements of I-5 the note arrangement is the same: Vlc has notes 1/2/9/10; vla has 4/5/7/12 (played by the vl-2 in the next statement) and vl-1 has 11/8/6/3, still maintaining the perfect fourths.

From bar 231-2, there are common dyads used between the two set-forms: 1/2, 4/5, 7/12, 8/11, 3/6 and 9/10. In these bars there are two statements of I-11, two of P-6 and two of I-5. Another analysis could yield two statements of I-11 and four of P-6.

In the following bars, 233 and 234, I-5 and P-6 are repeated and common dyads of these set-forms are used:

I-5 has; 1/2, 4/5, 7/12 and 9/10

G/A flat, B/E, F/B flat, and C #/D

P-6 has; 1/2, 4/5, 7/12 and 9/10

A flat/G, E/B, B flat/F and D/C#

At bar 235, I-5 is stated both linearly and vertically. VI-1 has a dyadic statement of the set with notes 1/2 and 9/10 repeated. The middle instruments state the set as four-note chords with notes 3/6/8/11. Vlc has a melodic three-note group with notes 4/5/7. The last note of the set is only stated in the following bar 236 by vlc. In this bar the set is treated like in the previous bar. In the following bar 237, P-6 is stated and the dyadic idea is still continued in vl-1 now joined by vl-2 with notes 3/6 and 8/11. The lower instruments have the notes 4/5/7/12. This idea is continued in the following bar, still stating P-6 until the end of the bar where RI-11 is stated by all instruments only stating the first hexachord.

From bars 239-40, vlc has the first hexachord of P-0 stated melodically. The other three instruments have P-0 at bar 239 shared amongst themselves, starting with note 4. In the next bar 240, the first hexachord of I-5 is stated by the upper three instruments and the next statement is that of P-0, also the first hexachord. At bar 241, the roles are reversed; vl-1 has a melodic statement of I-5, notes 1-6 whilst the other instruments have the rest of the set-form. In the first statement of I-5, the

notes are stated as three-note chords, with 7-9 repeated. In the following statements the notes are treated dyadically by all the instruments. Only the last statement of I-5 at bar 242 starts with note 1. At bar 243, P-0 is stated by all the instruments hexachordally. The upper instruments state the first hexachord and the lower ones have the second one. In the next bar, 244, RI-5 is stated by all the instruments. Again the set is treated hexachordally; the upper instruments have the first hexachord and the lower ones have the second hexachord. In the following bar RI-5 is stated by all the instruments. An alternative analysis could give first and second hexachords from combinatorial pairs.

At bar 246, the retrograde forms are stated at the same time. The upper instruments have R-0 and the lower instruments state RI-5 until the beginning of bar 249. The upper instruments state P-0 at the beginning of bar 247 and is treated dyadically. In the following bar 248, all the instruments have P-0 for two beats, with vlc stating note 10. In the middle of this bar, the upper instruments continue with P-0 until the beginning of bar 249 where vl-1 continues with the second hexachord of P-0 until the end of bar 251. From the middle of bar 249 to the end of bar 250, the lower three instruments have I-5 stated hexachordally. In the next bar, the lower three instruments have RI-5, first hexachord. From

bar 252, vl-1 states a melodic segment of RI-5, notes 1-4 and the other instruments have notes 2-6 stated chordally. In the following bar vl-1 has 1-3 of RI-5 and the other instruments have the rest of the set-form as three-note chords. From bar 254-7, I-5 and P-0 are stated twice.

At bar 258, P-4 and the combinatorial set-form, I-9, are stated simultaneously. The lower instruments have P-4 and the upper ones have I-9. When P-4 is stated, vlc has three notes of the twelve and in the upper instruments, when I-9 is stated, vl-2 has four notes of the twelve. At bar 260, the instruments continue with their set-forms. In these bars, the upper instruments, stating I-9, use the rhythmic distribution used by the lower instruments, stating P-4, in the previous bar. The lower instruments also use the distribution of the previous bar's upper instruments. At bar 262, P-8 is introduced by the lower instruments as four-note groups. At the end of the bar vl-1 has the next four-note melodic group of P-8 notes 5-8, then followed by notes 9-12. In the next bar, the upper instruments have RI-1 also stated as four-note melodic groups. The lower ones have R-8 stated as note-against-note.

At bar 265, vl-1 has a melodic statement of P-1 until the beginning of bar 270. The lower instruments have I-6 the first hexachord, at bar 265.



In the next bar the lower instruments have P-1 until the middle of bar 267. In this bar the instruments state the second hexachord of I-6 until the middle of the following bar 269 where P-1 is stated as four-note groups by the two lower instruments. Vl-2 has note 9-11 and the last note is stated by vl-1.

At bar 270, RI-6 is introduced by vl-1, melodically until the end of bar 273. At bar 270, the lower three instruments state the set as three- and four-note groups. Vl-2 has notes 3-5, vla with notes 9-12 and vlc with notes 6-8. In the next bar R-1 is stated by the lower three instruments. The notes are still grouped as in the previous bar, vl-2 has notes 1-3, vlc has 4-7, vla has 8-10, notes 11 and 12 are sounded by vl-1 in retrograde until the beginning of the following bar. In the middle of this bar, 271, RI-6 is again stated by the lower three instruments (while vl-1 continues with the melodic statement from bar 270). The first hexachord is treated dyadically and in the next bar the notes are shared between the instruments. At bar 273, only the last three-note group of the set is sounded by vl-1 whilst the other instruments rest.

From bar 274, P-0 is re-stated melodically by vl-1, until bar 279, with notes 3 and 4 sounded by vlc at bar 275. The lower instruments have six

statements of P-0. In each bar, all the notes of the set are sounded. This treatment of the set recalls the opening of the movement when P-0 was treated similarly over six bars. The notes are divided into three-note groups, and each note group is accompanied by the notes of the whole set-form played by the other instruments. At bar 280, P-0 is restated hexachordally, but this time the notes are grouped into three-note chords. Each instrument states a three-note chord, as a result the notes are doubled except for notes 1 and 6 in the first hexachord.

When the second hexachord is stated in the middle of the bar, vl-2 has two notes of the set. The notes are again doubled except for notes 9/10/12. At bar 281, all the notes of the set-form are sounded with note 1 sounded at bar 282 by the vla. From this bar 282, the notes are grouped hexachordally with vl-1 sounding note 2 until the end of the movement, at bar 284. This means that the first hexachord is sounded thrice and the second one twice. At bar 283, the second and third beats, can also be seen as I-5 (a possible "perfect" cadence). The movement ends with the instruments playing the first hexachord.

## Third Movement (bars 614-703)

|      |      |      |       |
|------|------|------|-------|
| P-0  | R-0  | I-5  | RI-5  |
| P-1  | R-1  | I-6  | RI-6  |
| 628  | 678  | 677  | 628   |
| P-2  | R-2  | I-7  | RI-7  |
| 681  | 693  | 682  |       |
| P-3  | R-3  | I-8  | RI-8  |
| 650  | 647  | 648  | 651   |
| P-4  | R-4  | I-9  | RI-9  |
| 626  | 656  | 627  | 656   |
| P-5  | R-5  | I-10 | RI-10 |
| 690  | 691  | 690  | 691   |
| P-6  | R-6  | I-11 | RI-11 |
| 638  | 638  | 639  | 639   |
| P-7  | R-7  | I-0  | RI-0  |
| 623  | 624  | 623  | 625   |
| P-8  | R-8  | I-1  | RI-1  |
| P-9  | R-9  | I-2  | RI-2  |
| P-10 | R-10 | I-3  | RI-3  |

|      |      |     |      |
|------|------|-----|------|
| 614  | 621  | 630 | 618  |
| P-11 | R-11 | I-4 | RI-4 |
| 652  | 653  | 652 | 653  |

The movement opens with the instruments stating P-10, in unison, from bar 614 until the middle of bar 618. In this bar, the retrograde of the combinatorial set-form, RI-3, is introduced by vlc, continued by vla a beat and a half later, then vl-2 has note 5 and the set is completed by vl-1.<sup>167</sup> Vlc and vl-2 have long held notes, 2 and 5. Vla has a dyad 3/4 and vl-1 has a melodic 6-12. At bar 621, R-10 is introduced hexachordally. The first hexachord is treated as three-note chords and the second one as a melodic statement by vl-1 while the other instruments rest until the beginning of the following bar 623. In this bar, P-7 and I-0 are stated melodically by vlc (P-7) and vla and vl-2 stating I-0. At bar 624, the instruments share the notes of I-0 and at the end of the bar, R-7 is stated by vl-1 sounding notes 1-3, and the other instruments join with notes 4-6.

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<sup>167</sup> This copies a procedure from bars 31-4 of the first movement.

In the following bar, the instruments continue with the set. In the middle of this bar, 625, P-7 is stated melodically, the first hexachord by vl-1 and the other instruments join in the second hexachord. RI-10 is treated in a similar way in the middle of the bar. The lower three instruments state notes 1-4 of the set-form and vl-1 continues with a melodic statement of the set.

From bar 626 to the end of bar 629, four set-forms are stated and shared by all the instruments, P-4, I-9, P-1 and RI-6 (stated twice). In these bars the notes are treated dyadically and as three-note groups with a hexachordal division in the second statement of RI-6. From bars 630-7, another four set-forms are used; I-3, R-10, P-10 and RI-3 (with P-10 and RI-3 repeated). In these bars the notes are treated both linearly and vertically, dyadically and as three-note groups. From bar 638 to the middle of 639, P-6 and the retrograde R-6 are introduced by vlc and vl-2 playing P-6 while vla and vl-1 sound R-6. Vlc and vl-2 share the notes of the set between them while vla has most of the notes of R-6. In the middle of bar 639, I-11 and its retrograde form are introduced. Again vlc and vl-2 share the notes of RI-11 between them whilst vla has most of the notes of I-11 with vl-1 playing only three notes.

Example 12 (bars 638-9).

From the middle of bar 640, vlc and vla have melodic statements of R-6 and RI-11 respectively, and in the following bar vl-2 joins with notes of R-6 and at the end of the bar vl-1 has two notes of RI-11. From bar 642 to the beginning of 645, P-6 and I-11 are stated and the instruments are paired. Firstly, vl-1 and vla state P-6 at bar 642. The remaining two instruments have I-11. In the next two bars the roles are reversed; vl-1 and vla now have I-11 whilst the other instruments have P-6. At bar 645, R-6 is stated by all instruments starting with vlc stating notes 1-2, then vla with a three-note group of notes 3-5 repeated, then vl-2 with notes 6-9, and lastly vl-1 with notes 10-12 reversed. In the next bar 646, I-11 is also stated by all instruments and this time vl-1 starts with a melodic three-note group, 1-3, then vl-2 follows with notes 4-7, vla with a repeated three-note group 8-10 and then lastly vlc with notes 11-12. From bar 647-8, R-3 and then I-8 are stated by all instruments and in the following bar R-3 is stated.

At bar 650, P-3 is stated melodically by vl-1. The other instruments have R-3 with the first hexachord stated as a six-part chord, divided dyadically amongst the instruments, at the beginning of the bar. In the middle of the bar, the whole set is stated, its first hexachord as simultaneous melodic dyads followed by a six-part chord, again divided dyadically, and at the end of the bar, the second hexachord is stated as three simultaneous melodic dyads. In the next bar, 651, vl-1 has a melodic statement of RI-8 and the other instruments have I-8, divided in a similar fashion to the previous bar. Only three notes of the second hexachord (notes 8-10) are repeated at the end of the bar. In the next bar 652, the upper instruments have P-11 with the notes shared between them; vl-1 with notes 1-2, 6-7, 11-12 and vl-2 with three-note groups of 3-5 and 8-10. The lower instruments have I-4 stated as three-note groups. In the following bar, the upper instruments have RI-4 and the lower ones have R-11 stated as three-note groups. At the end of the bar, the lower instruments have the first hexachord of RI-4. From bar 655 to the end of 660 the instruments are paired as upper and lower instruments. When a set-form is stated, its combinatorial set-form is also stated at the same time; at bar 655, the upper instruments have I-9 and the lower ones have P-4. The retrograde forms are also stated together from the middle of bar 656 onwards, until

the end of bar 659. This is the first time this technique is used in this movement, although, in the first movement it was used more frequently.

In bars 656-7 the rhythmic figure used by the two instruments that state the set-form is the same, except for the last note of R-4, note 12. From bar 658-9, the instruments exchange their set-forms. The upper instruments now have RI-9 and the lower ones have R-4. At bar 660, P-4 is stated by all instruments and in the following three bars, P-4 and the combinatorial set-form, I-9 are stated. The upper instruments state P-4 while the lower instruments have I-9.

From bar 664 to the middle of bar 668, the instruments state I-3 in unison, the combinatorial set-form of P-10 which was used at the beginning of the movement. Rhythmically these bars are exactly the same as the opening four bars, 614-8. In the middle of bar 668, the retrograde of the combinatorial set-form R-10 is stated. As in bar 618, vlc introduces the set, joined by vl-2, vl-1 and vla playing notes 6-12 (which were played by vl-1 at bar 619-1) until the beginning of bar 671. At bar 671, the first hexachord of I-3 is stated by vl-2 and in the following bar, P-10 is stated by vla stating notes 1-6 and vl-2 stating notes 7-12 at bar 673. In the middle of this bar the three lower instruments have I-3 until



the middle of bar 674. From the middle of this bar to the middle of 675, P-10 is played by all instruments with many repeated notes. In the middle of the bar, I-3 is sounded by all instruments and at the end of the bar the lower three instruments have the second hexachord of P-10.

At bar 676, I-9 is stated and the second hexachord is repeated. In the middle of this bar, Vl-1 states P-7, the second hexachord with note 12 played by vlc. The first hexachord of P-7 is played by the middle instruments. From the middle of this bar, 676, vlc has the second hexachord of P-4 with note 12 played by vla. The three lower instruments also have I-0 from the middle bar 676 to the beginning of bar 677. This means that from bar 674-7, six set-forms are used: P-10; I-3, I-9, P-7, I-0 and P-4 (only the second hexachord).

From the middle of bar 676:

vl-1 has P-7 notes 7-10

vl-2 has I-0 notes 9-11 and 4; and P-7 note 1

vla has P-4 note 12; P-7 notes 2-6 and I-0 notes 1/2/7

vlc has P-4 notes 7-11 and I-0 notes 2/3/4/8/5/6

At the beginning of bar 677, vl-1 and vla have P-1 and vl-2 and vlc have

its combinatorial set-form, I-6. In both set-forms the upper instruments have the same melodic dyads 3/4, 6/8 and 10/12. The lower instruments have 1-2, 7-9 and notes 9 and 10 are repeated in both set-forms. At bar 678, the lower instruments have P-1 notes 5-12. From the middle of this bar, R-1 is stated with the lower instruments playing the first hexachord. Vla has notes 1-5 stated thrice and vlc has 2/6/4/3/6/3. The second hexachord is played by the upper instruments with vl-1, stating all the six notes and vl-2 stating notes 7-10, 9-10 repeated until the beginning of bar 679. From this bar until the beginning of the following bar P-10 and I-3 are stated. Vl-1 and vla have P-10 and the other two instruments have I-3. At bar 680, all the instruments state P-10, note 4 is omitted.

From bar 681-2, P-2 and the combinatorial set-form, I-7 are introduced for the first time. In both statements, notes 1-3 are stated linearly by vl-2 then notes 4-7, melodically by vl-1, except in P-2 where note 4 is played by vlc and the notes are reversed as 7-5. Notes 8-10 are also stated in retrograde in both set-forms. The last two notes are stated dyadically in both cases. The following three bars state P-11, the retrograde of its combinatorial set-form, RI-4, and the second hexachord of I-4. The notes are stated both linearly and vertically. The second hexachord of I-4 is stated as three-note groups in the lower instruments and each group is

repeated.

From bars 686-9, P-1 and the combinatorial set-form I-6 are stated with their retrograde set-forms. At bar 686 to the middle of 687, P-1 and R-1 are sounded. The two outer instruments state R-1 whilst the middle ones have P-1. When I-6 is stated, the outer instruments have I-6 and the middle ones have RI-6 until the middle of bar 688. From this bar to the end of bar 689, R-1 and RI-6 are stated. The middle instruments state R-1 and the outer ones have notes 5-12 of RI-6; note 11 is at the beginning of the next bar 690.

At bar 690, P-5 and I-10 are introduced for the first time. The upper instruments have P-5 with vl-1 stating melodic dyads whilst vl-2 has three-note groups of 3-5 and 8-10. The lower instruments treat the set as three-note groups with the second hexachord repeated. At the end of the bar, vl-2 states notes 1-2 of RI-10 and the set is continued in the following bar. In this bar, 691, the upper instruments have RI-10 and the lower ones have R-5. The lower instruments continue with their three-note groups, repeating the second hexachord. The upper instruments repeat five of the six notes of the second hexachord; notes 7-11.

At bar 692, I-7 is stated and the notes are shared between the instruments. Notes 3-5, 6-8; 10-12 are stated as three-note chords with notes 1-3 and 4-6 repeated. In the next bar 693, R-2 is introduced for the first time (P-2 and I-7 were introduced at bar 681 and 682, respectively) by the upper instruments, except for note 5, sounded by vla. Note that RI-7 is not used in this movement. The lower instruments continue with the first hexachord of I-7. From bar 694, the upper instruments have P-6, the first hexachord and the lower ones also have the first hexachord of I-11. This bar can also be analysed in the following manner:

vl-1 has I-1 notes 1-4 with a repeated note 2

vl-2 has P-6 notes 1-5 with repeated notes 3-4

vla has I-11 notes 1-4 with repeated notes 1-2

vlc has P-4 notes 1-4 with repeated notes 1-2

I-1 and the combinatorial set-form, P-8, are not used elsewhere in this movement.<sup>168</sup> The rhythm used for the lower instruments is the same. At the end of bar 694, I-11 is shared between all the instruments as three-note groups. This is followed by a statement of RI-11 in the middle of the bar, also shared by all instruments, and notes 1-4 repeated by vl-2. These

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<sup>168</sup> In this movement 35 of the possible 48 permutations of the set are used.

two statements can also be seen as I-7 and P-2 respectively. At the end of the bar, the upper instruments have P-10 and the lower ones have I-3, first hexachord, repeated in the next bar. The second hexachord is also repeated by the lower instruments whilst the upper instruments continue with P-10 at bar 696. In the next bar 697, vlc and vl-1 continue with notes of I-3 whilst the middle instruments state R-10.

At the end of the bar, the upper instruments now state P-10 and the lower ones have the combinatorial set-form, I-3. The instruments continue with their set-forms until the beginning of bar 699 where the upper instruments state RI-3 and the lower ones have R-10. RI-3 is stated mostly as three-note groups and in the following bar, the second hexachord is repeated but now played by the outer instruments. R-10 is stated as three-note groups and at bar 700, vl-2 and vla repeat the second hexachord of R-10. From bar 701, I-3 is stated by the upper instruments with vla joining in the following bar (while vlc rests) and note 5 omitted. At the end of bar 702, P-10 is sounded by vl-1, joined in the next bar 703 by vl-2 and vlc. At the end of this bar, vl-2 and vla have RI-3, the first hexachord.

Neither of these two movements uses all forty-eight possible

permutations of the set. In the first movement all the prime and inversion set-forms are used; only three retrograde set-forms, R-8, R-10 and RI-3, are not utilised. In the third movement, three set-forms and their hexachordal complexes are excluded: P-0, P-8 and P-9. Of the P-2 complex, RI-7 is not used.

In both movements Schoenberg regularly pairs the instruments using the three possible permutations of upper instruments against the lower ones, vl-1 and vla against vl-2 and vlc and the middle instruments against the outer instruments. Another division is that of a single instrument, usually stating a complete set-form melodically, against the other three, normally sharing a single set-form. Another important aspect of the movements is the grouping of notes into three-note groups and hexachordal divisions.

In the third movement, Schoenberg uses set combinations in a different way: for the first time a prime form and its own retrograde, for instance P-3 and R-3 in bar 650, are juxtaposed.<sup>169</sup> In the first movement

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<sup>169</sup> Except in the first movement, bar 186 where P-11 and R-11 were used for the first time and nowhere else in the movement after that.

combinatorial set-forms were usually paired (e.g. P-6 and I-11). Throughout the movement Schoenberg shows a preference for R and RI combinations. In both movements these retrograde combinations are used frequently in the same bar. Most of the characteristics of the first movement are also used in the third movement except that the third movement opens with all the instruments in unison for five bars and thirty-one bars later the combinatorial set-form of the opening statement is also stated in unison. In the third movement, each hexachordal complex is stated for a short while in comparison to the first movement where each complex is sounded for a long time. In the third movement a change of combinatorial complex often heralds a change in texture.

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## CONCLUSION

The works selected for analysis, clearly illustrate Schoenberg's compositional development from his late tonal works until the mature twelve-tone compositions.

The Chamber Symphony, Op. 9, can be considered to be Schoenberg's last completely tonal work.. The work is an example of Schoenberg's fondness for fusing the separate movements of a sonata into a single movement. (This had previously been done in *Pelleas und Melisande*, Op. 5, and in the String Quartet, Op. 7.) The Chamber Symphony also emphasises the use of fourths, melodically and as chords. This already illustrates Schoenberg's later concern for the unity of musical space; the idea that the horizontal and vertical elements in a work can be determined by the same material.

The second movement from the Quartet, Op. 10, demonstrates Schoenberg's techniques of his late tonal style as well as his interest in cryptography. These are shown in his interest in linear counterpoint, and the spelling of his own signature, as well as those of Mathilde and



Gerstl. The last movement of the work could be regarded as Schoenberg's first venture into atonality. Many of the techniques anticipate those used in the later *Drei Klavierstücke*, Op. 11. These include the use of basic cells (using the opening pitches of Op. 11, no. 1) and other sets (for instance the four-note set Schoenberg uses for the 'silent chord' in Op. 11, no. 1). The work clearly sets the scene for his first consistently atonal compositions.

*Pierrot Lunaire*, Op. 21, illustrates Schoenberg's mature free-atonal style. Apart from a number of recurrent basic cells and sets, the work also shows his interest in numerology and cryptography. "Nacht" clearly illustrates his use of basic cells and other sets. The use of the B-A-C-H motive and versions of his own signature are clearly illustrated in "Raub". "Mondestrunken" and "O alter Duft" have clear references to *Tristan und Isolde*.

"Sonett" from the Serenade, Op. 24, is one of Schoenberg's first twelve-tone works. Here all the material is determined by the twelve-tone set.

Certain elements from the set are highlighted to form other referential elements.

The String Quartet, Op. 37, is an example of Schoenberg's mature twelve-tone style. The most important new compositional technique here concerns the use of combinatorial sets.

After 1936, the year in which Schoenberg completed Op. 37, Schoenberg did not really introduce new techniques; his later works concentrated on refining those of his earlier free-atonal and twelve-tone works.

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