BERIO’S EARLY USE OF SERIAL TECHNIQUES:
AN ANALYSIS OF CHAMBER MUSIC

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ABSTRACT

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In 1952, Luciano Berio studied with Luigi Dallapiccola for six weeks at Tanglewood; it was his first experience studying under a composer of serial works. Reacting to his study, he composed a number of works, among them, *Chamber Music*.

Composed in 1953, *Chamber Music* is a setting of three poems by James Joyce, an author whose work was a favorite of both Dallapiccola and Berio. Notable in that it is Berio’s first work composed using twelve-tone technique, *Chamber Music* predates his study of serialism at Darmstadt. The piece is freely serial, and offers a rare chance to see how Berio treated the concepts of twelve-tone organization before his more intense study of serialism. Though there is a cursory analysis of the first movement of *Chamber Music* in David Osmond-Smith’s *Berio*, to date there has not been a comprehensive analysis of the work.

In this thesis, I examine the ways in which Berio alters and transmutes the serial structure of *Chamber Music* to create ambiguities and associations between row forms – which helps to reflect the “associative epiphanies” and “phantasmagoric entanglement of different forms” that he believes are the hallmarks of Joyce’s work. His treatments of serialism within the work range from the conventional (unaltered row statements that make up parts of the first and third movements), to the unconventional (the dominance of a single note in the second movement, followed by half-step motion that is not immediately
identifiable as being based in the row), to a synthesis of the two (large parts of
the third movement, which synthesize material from the previous two
movements). Whereas Berio claims that Dallapiccola represents Joyce’s
literary style using a static formal structure, Berio uses every aspect of his
composition as source material to be changed, transformed, and developed. In
this way, Berio is able to better represent his view of the nature of Joyce’s
writing style.
“If I gave it all up immediately, I'd lose my immortality. I've put in so many enigmas and puzzles that it will keep the professors busy for centuries arguing over what I meant, and that's the only way of insuring one's immortality.”

- James Joyce, Joyce's reply for a request for a plan of *Ulysses*, as quoted in *James Joyce* (1959) by Richard Ellmann
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CHAPTER I. BACKGROUND AND INTRODUCTION

From the Milan Conservatory to Chamber Music

Luciano Berio stands as a powerful figure in 20th-century music. Influenced by wide-ranging interests, including serialism, electro-acoustic-music, literature, and ethnomusicology, Berio’s music represents a synthesis of these sources into a compelling mélange. David Osmond-Smith describes the appeal of Berio’s compositional style: “For all its rich surface detail, Berio’s music tends to root itself in processes that are relatively simple, and can thus offer access to the newcomer without starving the experienced listener of fresh discoveries.”

Berio’s musical education began as a child, but he did not enter into formal musical training until after World War II, and prior to this time, he had only completed a handful of compositions. In the autumn of 1945 (at the age of twenty), Berio entered the Milan Conservatory, where he studied composition, primarily with Giorgio Ghedini. Ghedini, even at his most experimental stage, made only limited use of serial techniques, and Berio had little meaningful exposure to any post-tonal music prior to his time studying with Luigi Dallapiccola in 1952. In 1946, Berio first heard Pierrot Lunaire, an experience that initially “left him baffled,” but nonetheless piqued his interest in post-tonal music. It was through Dallapiccola that Berio was finally able to

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2 Osmond-Smith, 1.
3 Osmond-Smith, 3
4 Osmond-Smith, 4.
5 Osmond-Smith, 4
fully interface with the techniques pioneered by members of the Second Viennese School. Berio’s take on these ideas exhibits a unique usage of serialist principles – his precompositional systems often seem to break down, and he is quite willing to transform or even dissolve the system should his creative concerns demand it. Chamber Music, Berio’s first published work that uses serial organizational principles, was composed in 1953 following his studies with Luigi Dallapiccola at Tanglewood in 1952. Because Berio would begin attending the Darmstadt International Summer Courses for New Music in 1954, Chamber Music represents a rare opportunity to explore how Berio used twelve-tone techniques before his study of a more vigorous brand of serialism at Darmstadt.

Luigi Dallapiccola was unique among Italian composers of his generation in that he was deeply interested in the early serialism of Schoenberg, Webern, and Berg, while the prevailing Italian musical philosophy of the time (the 1930s-40s) was one of lyrical neo-classicism. Dallapiccola integrated this expressive melodic style with the meticulous pitch-organization of twelve-tone serialism, which in turn offered an agreeable introduction to serialism for young Italian composers. Dallapiccola had been experimenting with using rows to derive musical material in his compositions since the late 1930s, but

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6 Osmond-Smith, 5-6.
7 Osmond-Smith, 7-8.
9 Osmond-Smith, 16
11 Fearn, 271.
12 Osmond-Smith, 6.
had only adopted more rigorous serial structures starting at the end of the 1940s.\textsuperscript{13}

Dallapiccola had not produced a very large body of serial work that Berio could have studied by the time of his tutelage in 1952. Even so, it seems that by the time he had been accepted at Tanglewood, Berio had given careful study to Dallapiccola’s available scores.\textsuperscript{14} Berio claims that Dallapiccola “technically, wasn’t a good teacher, but neither Debussy, Ravel, or Stravinsky would have been, had they taught.”\textsuperscript{15} It is clear, however, that Berio appreciated Dallapiccola’s artistic sensibilities, claiming that “he would transfer musical experience to another level...and link it above all with literary experience.”\textsuperscript{16} Berio makes specific mention of Dallapiccola’s fondness for the work of James Joyce, “to which he often liked to refer.”\textsuperscript{17} This is obviously significant, since \textit{Chamber Music} is a setting of three Joyce poems (dedicated to Cathy Berberian, Berio’s then wife),\textsuperscript{18} set for clarinet, cello, female singer, and harp. It is drawn from one of Joyce’s first published works, a volume of thirty-six love poems released in 1907, titled \textit{Chamber Music}.\textsuperscript{19}

\textsuperscript{13} Fearn, 129.\textsuperscript{14} Osmond-Smith, 6.\textsuperscript{15} Berio, 53.\textsuperscript{16} Berio, 54.\textsuperscript{17} Berio, 54.\textsuperscript{18} Osmond-Smith, 6.\textsuperscript{19} Nicholas Fargnoli and Michael Gillespie, \textit{Critical Companion to James Joyce} (New York: Infobase Publishing, 2006), 21.
The Poems

*Chamber Music* is a collection of poems with a narrative arc that tells the story of the rise, decline, and end of a relationship, and expresses sentiments of idealized love. Joyce’s letters and descriptions of the poetry indicate that he wanted the poems set to music from the outset, saying “The book is in fact a suite of songs and if I were a musician I suppose I would set them to music myself.” Over one hundred composers have set at least one of *Chamber Music*’s 36 poems, including Ross Lee Finney, Samuel Barber, and, significantly, Luigi Dallapiccola.

Berio chooses to set three of the thirty-six poems. His reasons for selecting the specific verses, while not entirely straightforward, are logical in that the verses form a coherent statement. The first movement, “Strings in the Earth and Air,” sets the first poem of Joyce’s collection, and serves as an introduction, establishing the mood and poetic style of the work. The third movement uses “Winds of May, that Dance on the Sea.” This is the ninth poem in the set, and is drawn from the section of the work that portrays the relationship of the lovers – in this case, a manic unhappiness resulting from the (presumably) temporary separation of the protagonist from the object of his affection. The poem which is the source for the second movement, which Berio titles “Monotone” (rather than Joyce’s title, “All Day I Hear the Noise of Waters”), was actually written in 1902, before most of the other poems, and

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20 Fargnoli and Gillespie, 21.  
21 Fargnoli and Gillespie, 21.  
22 Fargnoli and Gillespie, 390-391.  
23 Fargnoli and Gillespie, 23.
was not included in the first edition of Joyce’s work.24 It appears as the thirty-fifth poem in the series, and serves (along with thirty-six, “I Hear an Army Charging Upon the Land”) as a tailpiece for the work, not referencing the lovers at all. In the context of the original work, it expresses a deep melancholy for the loss of love, and the protagonist’s extreme feelings of loneliness.25 The probable reason for Berio’s change of the title will be discussed in Chapter III’s analysis of the second movement.

The ordering of the texts that Berio chooses for his settings breaks with Joyce’s organizational scheme, and seems to form a narrative statement that differs from that of Joyce. The first movement introduces the themes of love, nature, motion, and music that appear in the other poems.26 The second has a similar emphasis on the natural world, focusing on a lonely seascape. The sentiments expressed in the line, “Sad as the seabird is when going forth alone” anticipate the climactic moment of the third poem: “Love is unhappy when love is away.” By choosing and ordering the three poems the way he does, Berio creates a mood for his work that focuses on different emotional reactions to loneliness, essentially using the poems to offer three views on a single state of affairs: separation from love. This is a marked difference from the narrative story that Joyce creates. For Berio, who doesn’t set any of the poems that actually describe the love affair, the protagonist’s love is always distant. The

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24 Fargnoli and Gillespie, 23.
25 Fargnoli and Gillespie, 23.
26 Fargnoli and Gillespie, 24.
narrator only describes longing for love. Berio is able to emphasize this specific theme by extracting the poems that best represent his artistic vision.

None of the poems are written in free verse, but neither are they all written in a uniform meter; each poem has its own meter and rhyme scheme. Berio’s *Chamber Music* mirrors this somewhat in the musical language used between movements. The piece uses twelve-tone technique, but each movement departs from strict twelve-tone technique and uses internally consistent compositional techniques. This is reflective of the idea discussed above; just as the poems that Berio chooses offer three views of a similar state of affairs, so to do the settings offer three views of a single compositional model: twelve-tone technique. The individual poems will be discussed at greater length during each movement’s respective analysis – for the full text of each poem used by Berio, see Appendix 1.

Compositional Process

Berio says that he reacted to his studies with Dallapiccola in four works: *Due Pezzi*, *Cinque Variazioni*, *Variazioni*, and *Chamber Music*.27 Through these pieces, Berio claims he was able to “enter into Dallapiccola’s ‘melodic’ world, but they also allowed (him) to escape from it.”28 The full extent of what this statement entails is an important focus of this analysis.

*Chamber Music* is undoubtedly a twelve-tone work, but it becomes clear over its course that Berio has concerns that extend beyond maintaining its

27 Berio, 53.
28 Berio, 53.
serial integrity. As David Osmond-Smith points out, there are aspects of the Webernian style of serialism, for instance, the “pervasive use of canon,”\(^{29}\) that, while becoming increasingly important to Dallapiccola, did not appeal to Berio. Instead, Berio “took on board the exigencies of serial orthodoxy only in as much as they suited his creative needs.”\(^{30}\) This quotation seems to imply that Berio took his serial framework (and indeed, precompositional systems in general) somewhat lightly. However, in a comprehensive analysis of *Chamber Music*, it becomes very clear that row material pervades the work, both melodically and harmonically, even when it may, on the surface, appear that Berio has entirely abandoned the initial serial formulae on which the piece is based. It is through this transformation of serial material that Berio is better able to reflect his understanding and view of the literary style of James Joyce – a writer whose penchant for ambiguity and transformation created for many (including Berio) a new way of thinking about literature, in particular, and art, in general.

The Row

The row from which musical material is derived (for this movement and others), transposed to \(P_0\), is as follows: \(< 0 \ 9 \ 3 \ 5 \ 7 \ t \ 2 \ e \ 4 \ 6 \ 8 \ 1 \ >\). The interval-class content between adjacent pitches classes is as follows:

\[
\text{IC1: } 0, \ \text{IC2: } 4, \ \text{IC3: } 3, \ \text{IC4: } 1, \ \text{IC5: } 2, \ \text{IC6: } 1
\]

\(^{29}\) Osmond-Smith, 6.
\(^{30}\) Osmond-Smith, 6.
There are no half-steps built into this row (at least as adjacencies), so to furnish the missing interval, Berio would have to make consecutive statements of the same row form, create overlapping statements of the row, or change the order of pitch classes. This is, of course, contingent on the composer’s devotion to the idea of strict serialism (which, as mentioned above, is not an overwhelming concern for Berio). Regardless, there are few conspicuous instances of IC1 in the first movement, particularly when compared with the second and third movements (when Berio generates IC1 through other means), which lends support to the idea that Berio is using the row to determine the overall melodic and harmonic sound of the work, even if he is willing to break the integrity of a strictly twelve-tone framework.

The row’s unique properties come into focus when I₀ is compared to P₀ (see Figure 1.1). Starting on the second pitch of I₀, three dyads in a row form the retrogrades of their counterparts in the P₀ form of the row, and the final pentachord forms a similar retrograde of the final pentachord in P₀.\(^{31}\)

Figure 1.1, Comparison of P₀ and I₀ Row Forms

\[
P₀ \quad \langle 0 \underline{9} 3 \underline{5} 7 \underline{t} 2 (e \ 4 \ 6 \ 8 \ 1) \rangle
\]

\[
I₀ \quad \langle 0 \underline{3} 9 \underline{7} 5 \underline{2} \underline{t} (1 \ 8 \ 6 \ 4 \ e) \rangle
\]

\(^{31}\) Osmond-Smith, 7.
David Osmond-Smith, in his cursory evaluation of this movement, claims that the retrograded dyadic relationship allows “melodic lines derived from (the row) (to) sound as permutational variants of each other.”\textsuperscript{32} This might be a little misleading – hearing retrogrades is certainly not easy for every listener, and considering the fragmented nature of the retrogrades that the row’s construction entails, it is quite possible that the melodies would not be heard as direct permutational variants of one another (especially considering how often Berio reorders pitch classes within his row statements).

Another facet of the row’s permutational structure is that it is I-combinatorial. Any given row form $P_x$ will have hexachordal invariances with the row form $I_{x-1}$ – the first hexachord of one will have the same pitches (reordered) as the last hexachord of the other. This $P_x / I_{x-1}$ relationship makes it easier for Berio to use invariances to create associations between different row forms. A side-by-side comparison of $P_1$ and $I_0$ is presented in Figure 1.2. This combinatorial relationship facilitates the creation of ambiguities based on the reordering of dyads within a row form. Because Berio is willing to freely reorder, it is sometimes unclear whether he is using the row form $P_x$ or the form $I_{x-1}$, since the row isn’t stated strictly (see the analysis of the first movement for more discussion of this subject).

\textsuperscript{32} Osmond-Smith, 7.
Since this work often features fragments of the row (as well as row reorderings), it is especially helpful to consider the subset structure. The row is fragmented in a variety of ways:

- Portions of ordered rows might be featured in their unaltered forms.
- Portions of rows might be stated with pitches swapped or altered.
  (This is common practice during the opening of the first movement. See Figure 2.7 and relevant discussion).
- Most abstractly, fragments that do not appear as discrete segments of any row, but which share identical intervallic content to row subsets, are sometimes featured. This is most commonly manifested in (036) and (014) trichords, but takes other forms as well.

These techniques are not used in a particularly systematic way: some, all, or none of them may be present in any given passage. For a passage that features most of these fragmentation techniques, see Figure 2.3.

An inventory of subsets is given in Appendix 2 (along with a row matrix), but it is important to note that one of the most prominent subsets is the initial trichord of P - a minor third followed by a tritone. Throughout the work, this
forms a conspicuous motivic component, both melodically and harmonically, and, especially in the first movement, the initial descending minor third itself becomes a melodic touchstone. The first pentachord of I is also an important subset to recognize, as it forms the basis for the opening measures of the first movement (which in turn influences the movement’s final section).

The general sentiment of Osmond-Smith’s statement is more or less correct, and it becomes clear through analysis that Berio is quite adept at using the row, as well as row fragments, to create an internally consistent musical statement, even when he departs from twelve-tone structure. The row’s construction is therefore of paramount importance to the work’s organization and thematic material, even when Berio often breaks with serial convention.
CHAPTER II. ANALYSIS OF “STRINGS IN THE EARTH AND AIR”

As mentioned in the introductory chapter, “Strings in the Earth and Air” serves as a preludial poem, in both Joyce’s original collection and Berio’s setting. The poem is grouped into three stanzas of four lines each, with alternating lines of each stanza rhyming. The poem introduces the imagery that is featured prominently in the rest of the set; love and music seem to be the main focus (“There’s music along the river/for love wanders there”), as well as motion – love “wanders” by the river, and fingers “stray upon an instrument.” The exact meaning of “love” in the poem is somewhat obscure, because it talks of love in such abstract terms. Love is personified (love “wanders” along the river with “dark leaves in his hair”), but there is no object of affection. The passage can therefore have multiple interpretations, especially when taken out of the context of the original set. The speaker might be celebrating the possibilities of a new love, but it is also possible that he or she is speaking about love in a melancholy sense; while love wanders by the river, the object of the speaker’s love is absent, or perhaps even nonexistent. In the context of the original set of poems, the interpretation is almost certainly the former, since the poems that immediately follow are celebrations of a new love. However, in the context of the set that Berio has chosen, the latter interpretation seems more likely, since the speaker’s love is always absent in the three poems that he has set.
Form and Serial Organization

Berio’s treatment of twelve-tone technique in the opening movement of *Chamber Music* may at first appear somewhat hard to follow; he seems to fluctuate between strict serial organization, fragmentation that is often only peripherally related to the row, and structures that transcend the row. Upon closer examination, it seems clear that these differing approaches form modules within an overarching structure.

Though the modules are not as clearly delineated as in other works (such as *Nones*, which will be discussed later), the movement does seem to be structured around the three verses of the poem’s text. The first verse is divided into two subsections, separated by rests in the vocal line, while the subsequent verses are demarcated by statements of the row in the voice. Once the row is stated in its entirety, there is a tendency toward increased fragmentation of the row in the other voices, culminating in the construction of a new structure (derived from row material) that serves as the vocal line for the last verse. See Figure 2.1 for a formal outline of the movement, coordinating the textual organization with formal divisions.
Given this interpretation, it seems that the path of this movement’s structure focuses on the construction of the row from initial fragments, followed by the emphatic statement of the newly discovered row. The music’s structure then begins to become unstable, vacillating between fragmentation and more complete row statements before the established serial structure is utterly destroyed after the completion of the second verse. During the final verse, a new structure arises from the ashes of the old (based on many of the same sonorities), and then steps aside to end the movement as it began, with

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33 Any and all of the possible techniques for fragmentation (discussed in the previous chapter) are used. See Figure 2.3 and relevant discussion for a representative passage.
whispers of the fragments that formed such an integral part of the row’s sonority.

This structure mirrors the global narrative structure of Joyce’s *Chamber Music*, in that the poems can be grouped into preludial poems, poems that portray idealized love, poems that portray the love’s decline and ending, and poems that focus on the individual, now alone.\(^3^4\) As the movement progresses, the tone shifts from being quite lyrical to powerful, harsh description;\(^3^5\) just as Joyce changes his voice throughout the arc of the poems, so Berio changes his organizational style across the first movement to create a more fluid artistic statement.

On a more local level, Berio’s structure mirrors the poetic form of “Strings in the Earth and Air” itself. The lines of the first two stanzas of the poem follow the form of:

| More syllables (six in the first stanza, eight in the second) |
| Fewer syllables (four in the first, five in the second)     |
| More syllables (six in the first, seven in the second)     |
| Fewer syllables (four in the first, six in the second)     |

In the third stanza, the syllabic structure is inverted, making:

| Fewer syllables (five)                   |
| More syllables (seven)                  |
| Fewer syllables (five)                  |
| More syllables (six)                    |

Additionally, the first two stanzas share a rhyme scheme (“air,” “where,” and “there”), while the third stanza’s rhyme scheme is not tied at all to that of the previous stanzas. Berio reflects the similarities in poetic structure between the

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\(^{34}\) Fargnoli and Gillespie, 23.

\(^{35}\) Fargnoli and Gillespie, 28.
first two stanzas by basing the musical structure of their settings on his
twelve-tone row, while he draws attention to the differing construction of the
third stanza by basing its musical setting on a newly created structure.
Berio has stated his belief that in order to appropriately reflect Joyce’s literary
style musically, the composer should embrace a fluid treatment of structure,36
and this principle is exemplified in this movement and becomes increasingly
clear as the other movements are examined as well.

Use of the Row and Invariances
The first full statement of the row in the movement comes in the harp (m. 5, as
P₀). P₀ is used throughout this movement (and work) as a preferred row form
for beginnings. The other voices then join in row statements of their own. On
occasion, pitches are “borrowed” from other voices, as is the case in m. 7, when
the B♭ concert in the clarinet stands in for the B♭ skipped by the vocal line,
(keep in mind when looking at the examples that the clarinet is in B♭).37 The
final C of the row is delayed, to facilitate the launching of P₃ on the line “the
willows meet” (see Figure 2.2 – the score order reads, from top to bottom,
clarinet, cello, voice, harp).38 Because of the row’s construction (as discussed
in the introduction), the last hexachord of Pₑ shares an invariant relationship
with the first hexachord of Iᵣ, which means that by isolating the C♯, D♯, G, and

36 Berio, 54
37 Osmond-Smith, 7.
38 Osmond-Smith, 7. Berio often makes use of the common twelve-tone practice of restating
pitches once they have been exposed in the row, and the lead up to the C does this extensively.
F against the sustaining B♭, Berio also revisits the first pentachord of I, which (as will be seen) forms such an important part opening measures’ melodic language. Invariances such as these highlight similarities and associations between rows and musical passages, and help to create a unified musical idea.

Figure 2.2, mm.7-8

While row elision takes place at subsequent moments in this movement, placing the first such occasion on this phrase forms an appropriate bit of text setting. This statement of P3 abruptly ceases and fragments in m. 8, with A♯ being picked up in the low harp, and row elements 6-9 (C♯, F, D, and G) continuing in the cello and clarinet. While the harp and clarinet have maintained their row statements intact, the other voices have fragmented – this fragmentation continues until the second half of the second verse (m. 11), when the vocal line and cello complete long, linear statements of the complete
row. Many of the fragments from mm. 8-10 seem to be three or four notes long, and come from a variety of subsets (but often contain the major third or tritone – intervals that only occur once in the row).

For example, m. 8 sees continuing statements of the row in all voices (becoming more truncated and fragmented). These fragments are created from many sources, and encompass all of the methods of fragmentation described in Chapter I. Below the example is a key that fully describes each highlighted segment; the letter to the lower left corner of each segment acts as its identifier in the key. This example should be looked at in the context of Figure 2.2, since row forms labeled there are not marked in Figure 2.3. Figure 2.3 shows the extent to which fragments only peripherally related to the row are employed in this movement.
During the initial exposition of serial material, the organization appears to be based largely on statements of the row made linearly across individual voices. However, there are also statements that cross voices, and are more harmonic in character. These statements often use invariances between row forms to create multiple options regarding which row a passage belongs to. As the statement of RI₄ ends, an apparent statement of P₁ begins (m. 9, see Figure 2.4b), elided over the final two pitches of RI₄. A statement of I₀ begins in the
voice (with pitches one and two switched, the first note being the D♯ in the harp\textsuperscript{39}). This statement has all the pitches of I₀, but the second hexachord seems to be extensively reordered. Perhaps Berio is stating the two hexachords of the row together, the second hexachord being stated in a way that overlaps the first (see Figure 2.4a). This interpretation gives a semi-ordered labeling to the row form, with swapped pitches in both hexachords.

Figure 2.4a, mm. 9-10

However, this interpretation is complicated by the fact that in m. 10, there is a statement, across voices, of the second hexachord of P₁. This opens the possibility that the statement of I₀ ceases after the first heptachord, while P₁ is stated in full, rather than belonging to the final section of the I₀ statement (see Figure 2.4b).

\textsuperscript{39} This allows for the now familiar C/A minor third to be stated as the beginning interval of the poem’s second verse.
The harmonic presentation of row elements allows for the row to be heard in a different context, and opens up the possibility of multiple interpretations of the passage. Either or both interpretations could be correct, and it is up to the analyst to determine how they should be conceived of. This ambiguity would not be possible without some level of verticalization.

Berio also creates motives and sonorities not strictly drawn from row forms. The melodies created by adjacent fragments can be used as independent motivic units. For instance, as shown in Figure 2.5, a fragment of R₁ is stated in m. 11 (the F♯ in the voice and three sixteenth-note grace-note sequence in the cello form the row’s last tetrachord). The subsequent A in the cello is the first pitch in the statement of l₂; the resulting four-note sequence (E B♭ D♭ A) is stated earlier in m. 10 in the voice. In this case, the A is not the beginning of an adjacent row. This sequence cannot be found in any row form,
and its prime form (0, 1, 4, 7) cannot be found in any contiguous four notes in the row (see Appendix 2). Nonetheless, this fragment is repeated motivically. Figure 2.5, mm. 10-11

This repetition creates a motivic organicism in the pitch material not strictly drawn from the row’s structure, which becomes increasingly important as the final verse of the work is examined, since it is here that Berio’s willingness to branch out beyond material that is strictly part of the row becomes clear. In particular, the interval of the minor third and the interval of the tritone are extracted from the row and used as a four-note motive (though the notes sometimes differ, the key intervals of the minor third and tritone are always featured). This occurs in the treble part of the harp in m. 11, in the bass part of the harp in m. 18, and in the vocal part during the final verse (see below). Though not identical in construction to the above example, both motives rely on intervallic sequences that are not stated strictly in the row. The structure of the piece shifts back to stricter twelve-tone row statements for
the second half of the second verse (mm. 12-16). This is the last section in the movement that is based around strict row statements (see Figure 2.6).

Figure 2.6, mm. 14-16

David’s Osmond-Smith assessment of Berio’s compositional process seems especially apt when looked at in the context of these freer practices within a serial framework: “The analyst will often find in Berio’s scores only hints or remnants of a ‘system’ which has in effect been consumed in the process of composition.”

Nowhere is this idea more prevalent in the first movement of Chamber Music than during the setting of the poem’s final verse (m. 18). Interestingly, the key to understanding the structure of the final verse lies in the opening measures of the work.

Opening Measures and the Final Verse

Unlike the standard practice in the serial music of the Second Viennese School, the first measures of this movement do not state the whole row. The effect of this section is to anticipate the later formal sections of the movement, where row fragmentation (as opposed to complete statements of the row) becomes the

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40 Osmond-Smith, 9.
dominant source for melodic material, and large-scale symmetries prevail. Osmond-Smith describes the material as “employing the first five notes of the series (with pitches one and two switched), to create an autonomous structure whose retrogrades anticipate the final structure of the song.” This assessment has the potential to be somewhat misleading, perhaps implying that the pitch material comes from an arrangement of the P₀ material expressed as < 9 0 3 5 7 > (and of course, transposed as needed). A quick analysis of these first few bars shows that this sequence is completely absent, melodically or harmonically.

The passage does indeed use pentachords (with, as Osmond-Smith describes, initial pitches swapped), but more often than not, it relies on statements of I and RI. This opening section also foreshadows a future, larger-scale palindromic statement of pitch material, which forms a structural centerpiece for the final section of the movement. The vocal line opens with a descending minor third, sung in the rhythm of a sixteenth and dotted eighth-note (this interval and rhythm are used throughout the movement at the beginnings and endings of phrases). The next five notes form the first five notes of I₁₀, with pitches one and two switched. The first five pitches in m.1 of the harp form what might be considered a fuzzy retrograde of this sequence, since one pitch is shifted by a half step, and the first two notes in the sequence

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41 Osmond-Smith, 7.
42 Because the statement in the voice has all of the pitch classes of the row fragment (the harp part changes pc 7 to 6, and states the pitches entirely out of order, making it difficult to label definitively), I choose to define this sequence by the statement in the voice, even though the statement in the harp is temporally first.
(which translates to the last two pitches in the pentachord) are swapped (see Figure 2.7). Because of the change in contour and register between the two statements of these lines (not to mention the shifted pitch and swapped order numbers), the exact relationship between these passages is not immediately obvious. However, the presence of so many common tones makes it clear, even at first glance, that this is not conventionally twelve-tone.

Figure 2.7, mm. 1-4

Fragmentation of the initial pentachords (and occasionally, hexachords) of various row-forms create the organizational scheme for the rest of the first four measures, generally keeping with the practice of swapping the first two pitch classes of the sequence. The harp’s next five notes (m. 2) form the first pentachord of Iₙ, while the vocal line from “the earth and air” creates the last hexachord of I₉. The harp’s final statement of pitch material before starting a complete presentation of the row forms the last pentachord of RIₙ ensuring that the common tones established in the opening measures continue to the end of
the introduction. The organizational scheme established with these opening measures lays the groundwork for the final section of the movement (beginning after the second verse), which relies on large-scale palindromic statements of pitches drawn from row material, but not technically part of any row.

At the close of the second verse, the voice makes a statement of $RI_0$ (m. 14), with the first and second notes switched, and elides the last two pitches of the row into a statement of the opening minor-third/tritone fragment of $P_3$ (see Figure 2.6). The cello makes an individual statement of $I_9$ that spans five measures (and both statements of the row in the voice). Against this backdrop, the other two voices get more fragmented (eventually becoming a mixture of three-note and four-note fragments), before all three accompanying voices devolve into scalar accompaniment that has little to do with row material and more to do with creating a feeling of frenetic movement under the final verse of the song (see Figure 2.8).

Figure 2.8, m. 18
This verse (starting m. 18) is described by Osmond-Smith as “a large-scale retrograde in the voice part that pivots upon the climactic pianissimo at ‘bent’.” Technically, this passage might be considered “non-retrogradable,” since it is in fact organized as a palindromic statement of material derived from the row. See Figure 2.9 for a diagram of the pitch exposure of this section.

Figure 2.9, Exposure of Pitches in Vocal Line, mm. 18-24

The material in this section seems to be taken from a combination of row fragments and lines derived from the row’s interval classes. For example, there is a clear fragment of R1 in m. 19 (in the form of <D A C G♯>). The way that Berio reorders this fragment plays on the important minor-third/tritone motive that has played such an important role in this movement, and has precedent within this movement (see the discussion after Figure 2.5). The A-to-C forms the minor third, while the subsequent G#-to-D leap forms the tritone, so even

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43 Osmond-Smith, 7.
though the fragment is technically drawn from R₄, it references the A-to-C leap that is prominent in both I₀ and P₀. Though not stated in the same manner as the row, the use of these two intervals (which then retrograde in m. 22) clearly points to a unified sonic idea that, while based on row material, is not strictly faithful to traditional serial convention. The A-to-C leap is the retrograde of the initial interval in the vocal line (and is featured prominently in the other two movements), forming a clear connection to other important moments in both the first and subsequent movements.

Density and Hicks’s “Accumulation/Dispersion Modes”

Berio treats pitch density in a varied way in *Chamber Music*. The beginning and ending sections mirror each other in that they are lightly scored, while the middle of the movement is far denser. With this larger-scale framework, Berio also works on a more localized level, juxtaposing passages with a high density of pitch content with moments of comparative respite. When a clear statement of a row is sounding, the texture often will be less dense, and the pitch density will increase as the row statement ends and more ambiguous fragmentation begins. These moments give a measure of grounding from which busier, more melodically and harmonically intense gestures can be launched, and help to draw attention to the less-altered statements of the row form. For example, the first statement of complete row forms (mm. 5-7) has a pitch density that increases into m. 8, which is based on quick statements of row fragments rather than unaltered statements of the row. When a row statement begins in
m. 9, the density is decreased, but subsequently increases as the row becomes more fragmentary in m. 10. This is even more apparent during the final verse, when row statements no longer form the building blocks for the organizational scheme, and the voices surrounding the newly constructed organizational structure become frantic and scalar.

This practice is similar to what Michael Hicks described in his analysis of Berio’s *Nones*, using the terms “accumulation” and “dispersion” to reference the density of material in a given passage.⁴⁴ Like *Chamber Music*, *Nones* “moves from the orderly to the disorderly”⁴⁵ in its treatment of serial material, though in *Nones*, the tie between serial schemes and accumulation/dispersion modes is clearer, with specific modes relating to specific serial treatments. In *Chamber Music*, the lines are less well defined, as Berio moves from pure row-forms to fragmentation in a very fluid way. Regardless, Hicks’s assessment of the dialogue between the orderly and disorderly in *Nones* seems quite appropriate for *Chamber Music* as well – Berio describes this dialogue as relating to that which is “in focus” and that which is “out of focus,” and calls this dialectic a consistent theme in his work.⁴⁶ This feeds into the piece’s more fascinating ambiguities – without moments of clarity, ambiguity looses its meaning, so there must be clear row statements for the fragmentation (and other, more ambiguous treatments of material) to have the desired meaning and effect.

⁴⁴ Michael Hicks, “Exorcism and Epiphany: Luciano Berio’s *Nones*,” *Perspectives of New Music* 27, no. 2 (Summer 1989), 257.
⁴⁵ Hicks, 257.
⁴⁶ Hicks, 257.
On a first look at this movement, it may seem that Berio used serial ideas inconsistently. After all, it seems that he is only too willing to break his system when the mood strikes him. However, it becomes very clear on closer inspection that the row material (particularly the hexachordal invariances built into the row) plays an integral role in both determining the thematic content and the large-scale formal structure of the movement and piece in general. This is clearly demonstrated in mm. 7-8 (see Figure 2.2 and accompanying discussion), as well as mm. 8-9 (discussed in conjunction with Figures 2.4a and b). In these examples, Berio uses the inherent invariances in the row’s construction either to create separate row fragments out of unrelated rows, or to mask which row form is being used. He also shows his willingness to create motives and structures outside the row (see Figure 2.5 and accompanying discussion, as well as the discussion surrounding the setting of the song’s final verse). Flexibility, both in the structure of the row that forms the basis for the musical language in this work and in the compositional practice that features creation of motives and structures that are not drawn specifically from the row, is of paramount importance in evaluating and appreciating the construction of “Strings in the Earth and Air.” Though his use of serialist techniques is quite free in this movement, Berio manages both to establish a structural framework for the work and subsequently to establish many of the ways that he will choose to break it. He creates a piece that is quite conceptually coherent (obviously coherent in a different way than traditional serial works) while being
thematically rich, using the precompositional process to create a row that helps to generate a tableau whose material is open to multiple analyses.
CHAPTER III. ANALYSIS OF “MONOTONE”

“Monotone,” at first glance, seems to be an atypical movement to find in a serial piece. The near total concentration on one pitch for the majority of piece is certainly anomalous in the body of twelve-tone music. This movement, however, is not a complete break with twelve-tone material, but rather an intermezzo-like piece that slows down the pitch exposure of the twelve-tone row to the point that most of the movement states only the first pitch. The text of the vocal-line is intermezzo-like as well, in that the poem set was not originally intended to be included in Joyce’s series, and thus forms a semi-autonomous piece sandwiched between the two outer movements, which are both more overtly serial in character and have text drawn from the original edition of Joyce’s *Chamber Music*.

The title, “All Day I hear the Noise of Waters” (Joyce’s original title), does not emphasize what seems to be the key line for Berio. “Monotone” is the only line in the poem that is a single word (other lines are at least two words), so it is understandable for Berio to pick it out as significant. While the theme of nature is prominent in this poem, its imagery is more negative than that of the first poem. The music of the natural world is now “noise.” The seabird with which the protagonist identifies is “sad,” and cold winds blow. Whereas “Strings in the Earth and Air” took a more pensive, ambiguous approach to the nature of love and the object of the protagonist’s affection, in “Monotone,” the speaker is truly alone, and love isn’t even mentioned. Also notable is the sense of stasis that this poem evokes. The speaker hears the noise of the winds and
waters “all day,” and the sound is “monotone” – it is as if nothing is changing in the protagonist’s world. He or she is alone in a wilderness, and there is nothing that suggests this state of affairs will change. In contrast to the sense of meandering motion in “Strings in the Earth and Air,” and of manic motion in “Winds of May,” “Monotone” suggests a sense of dynamism only during the last few lines, when the waters are revealed to be flowing “to and fro.” Berio reflects this by having the vocal part move from A3 only during the final recitation of “to and fro.”

The Choice of A3

“Monotone” is not the name Joyce assigned the poem, but even a quick glance at Berio’s score makes it quite clear as to why he chose this title. For over half the movement, the only pitch sounding (with the exception of certain cello harmonics) is A3. Even after other instruments begin to venture into more varied pitch material, the vocalist maintains her A, abandoning it only for a final statement of the row at the end of the movement. The choice of A has a few possible significances. First of all, it seems a fitting choice to express the concept of a musical monotone – A is, of course, a widely used tuning note, giving it the connotation of a “default” tone. It is the first pitch an audience often hears played, and therefore the beginning of the musical experience. A3 is the top open string on the cello, which allows for the possibilities of certain harmonics (which Berio uses throughout the movement). A is also significant in that it is the second pitch of P0, and as we have seen in the first movement
(and will continue to see throughout this work), Berio is fond of swapping the first and second pitches of row statements and fragments. This means that often, the statement of what amounts to \( P_0 \) begins with A – and it is not coincidental that the voice’s only statement of the row in this movement is \( P_0 \), with pitches one and two swapped (mm. 46-48). The first complete statement of the row in “Strings in the Earth and Air” began with \( P_0 \), and the opening fragment in the vocal line begins with a C-to-A descending minor third, so this pitch’s role as an initiator has already been established. Using A as the principle pitch of this movement helps to create a continuity between movements that would be otherwise difficult to achieve, given that the spare musical texture of this movement (as compared to the others) might make the three movements seem somewhat unrelated.

Generating Musical Interest

The use of such a limited pitch-scheme for a movement might seem odd and constraining, and this is quite possibly why Berio chooses to create a texture that is, as far as pitch content is concerned, so stark. “Monotone” comes sandwiched between two movements that are quite intense in terms of pitch-class content and texture – the third movement in particular repeatedly runs through the aggregate at a brisk rate. It seems logical then that Berio envisioned this movement as a sort of musical palette-cleanser (which is not to say material in this movement does not return); the overall musical impression one gets from it is quite different than that from the bordering movements.
This construction helps to ensure that there is a clear division of movements, and gives the more apparently twelve-tone third movement another dimension of interest: the feel of departure and return. Using only one pitch also highlights Berio’s exploration of one of Dallapiccola’s favorite devices, canon, in a manner that differs from Dallapiccola’s preferred treatment of the technique.

For the first sixteen measures of this movement, the voice and cello parts are stated in canon, offset by a half-note (see Figure 3.1, the first three bars of the canon). Meanwhile, the clarinet attacks beats that are not attacked as part of the cello/voice canon, while the harp vacillates between playing a role similar to the clarinet (in mm. 2-4, 8, and the first part of 9) and emphasizing the vocal part by attacking certain syllables at the same time (m. 6) or making attacks immediately preceding a new syllable (mm. 9-14). The canon breaks after the first line of the first verse (again we see Berio’s penchant for basing the musical structure of Chamber Music around the poem’s structure), but the idea of staggered imitation pervades this movement.

Figure 3.1, mm. 2-5
Starting in m. 18, the cello and clarinet begin a point of imitation, albeit one far simpler than the aforementioned canon (see Figure 3.2). Each voice holds the equivalent of a dotted half-note, with the two parts being offset by three eighth-notes. While the voice generally makes its attacks on the beat (or at least divided evenly within the measure, as in mm. 22-24, see Figure 3.3), the clarinet and cello make off-beat attacks, continuing the trend established earlier in the movement for the accompaniment to emphasize parts of the beat not attacked by the vocal line.

As mentioned above, Berio relies on the text to inform the organization of musical material just as in “Strings in the Earth and Air” (see Appendix 1 for the text to the poems). While the second line of the first verse seems to proceed without pause into the third, Berio marks this transition by changing the durations in the point of imitation between the clarinet and cello.

Figure 3.2, mm. 18-21
While the first time pitches other than A are exposed is the climactic reciting of “Monotone” at the end of the first verse, the first time the row is referenced unambiguously is at the beginning of the second (m. 32 – see Figure 3.4). The harp plays a < T, 2, 7> trichord in both hands, and uses the pedals to glissando the 7 and T up a half step. This leaves an < E, 2, 8 > trichord: the same minor-third/tritone sequence that beings the row and formed such an important part of the first movement’s thematic content. The G#s also serve as something of a leading tone to this movement’s primary pitch of A. As we shall see below, the half step becomes increasingly important in this movement, and the work in general.
The first hexachord of P_0 is foreshadowed in the clarinet with a movement away from A-to-C in m. 30. Ordinarily, the presence of a minor third would not be enough to definitively act as a foreshadowing of a row statement. However, the A-to-C dyad has already been established as being an initiator, and though it is subtle (and the instrument goes back to emphasizing A), the interval is repeated in m. 35, this time being followed by the next four notes of P_t’s first hexachord (see Figure 3.5). This subsequent passage confirms that the initial minor third was indeed a foreshadowing.

The fact that this creates a semitone between the row fragments is quite significant, and will be discussed in further detail below. These fragments help to foreshadow the first statement of the (near) complete row, which appears in the harp in mm. 37-40 (see Figure 3.6). Here, the substitution of A (order
number 2) in place of the expected G (order number 5) introduces the A-B♭ half-step.

**Figure 3.6, mm. 37-40**

![Musical notation](image)

The movement ends with the vocal line finally moving away from the A by stating P₀, predictably (by this point) with the first and second pitches swapped. This firmly establishes the row form that will be used in the third movement, and provides a night bit of text painting, since the glissandoing, wandering line falls on the words “I hear them flowing to and fro” (mm. 46-49) (See Figure 3.7).

**Figure 3.7, mm. 46-49**

![Musical notation](image)
It is in “Monotone” that the first strongly IC1-based musical material in this work is found. It starts in the harp in m. 27 with slight movement away from the principle pitch of the work, and continues in much the same vein in the cello (see Figure 3.8).

Figure 3.8, mm. 27-29

Though subtle at first, these motions build to quite an audible force in the movement (see Figures 3.9, mm. 41-42 and 3.7, m. 49 for the most obvious examples, as well as Figure 3.6, mm. 38-39). This creates a precedent for IC1 that was heretofore absent, since Berio was not as concerned with generating members of IC1 in the first movement (though they are present, they do not seem to be the focus that they are in the second movement). This initial exposure opens the door to the use of IC1s in the third movement without
seeming as if they were included completely independent of the piece’s structure, though they are entirely absent in the row as it appears in its original form. Semi-tone movement is sometimes tied into stating row fragments, as was seen in Figure 3.4 – it is only through semi-tone movement that the return to a recognizable part of the row structure is facilitated.

Figure 3.9, mm. 41-42

47 Since Berio seems rather unconcerned with swapping pitches in the row, one might wonder why he doesn’t simply swap pitches in order to generate IC1. He does do this, as was seen in m. 35 (see Figure 3.5). However, if he is only looking to swap two members of the row, there is only one spot in the row where this would be possible: the swapping of order numbers seven and eight. Berio often seems to be more interested in swapping order numbers one and two than completely transforming his row, so it seems likely that he opted to generate semitones from the static texture of the second movement instead of completely transforming multiple row statements.
Foreshadowings of Later Work

Osmond-Smith claims that Berio “found Dallapiccola’s pervasive use of canon positively alienating.”\textsuperscript{48} If this is the case, then the use of either canon or extended points of imitation to structure large parts of this movement would seem to be quite out of character. It is not clear exactly on what Osmond-Smith is basing this statement, as he does not cite his source. We should perhaps not conclude that Berio finds all use of canon objectionable – or even assume that “pervasive” use of canon in a work is never warranted. What seems to be more critical is a willingness to let a work’s structure change and evolve.

As a matter of fact, techniques similar in spirit to the two-part canon on one note in “Monotone” can be found in subsequent works by Berio, particularly in his \textit{Sequenzas}. In “Monotone,” Berio seeks to enrich a monotonous texture rhythmically by staggering a fixed rhythm in two parts. In \textit{Sequenza IX} for Clarinet, Berio superimposes a rhythmic pattern of ten values onto a series of eleven pitches.\textsuperscript{49} In this way, he is able to create an incredibly rich, varied texture in a single line out of two set patterns. In his \textit{Sequenzas} Berio sought to imply contrapuntal polyphony through a single line, saying the \textit{Sequenzas} for solo instruments “are intended to set out and melodically develop an essentially harmonic discourse and to suggest, particularly in the

\textsuperscript{48} Osmond-Smith, 6.
case of the monodic instruments, a polyphonic mode of listening.” A similar philosophy underlies the treatment of the voices in “Monotone.” Though the movement is technically polyphonic, this is undermined by the fact that each voice is stating only A3. This gives the feel of a reduction in voices, since the only things that differentiate them become timbre and attack points. In “Monotone,” Berio uses a non-repeating set of rhythms offset between two voices to create interest, while in Sequenza IX he has only one instrument, and so must find another dimension to create variety and interest (in this case, pitch). It would be a stretch to claim that Berio’s canon on a single note in “Monotone” directly led to techniques used in Sequenza IX, but it does show an early interest in using offset groups of figures to create interest in a reduced texture.

Evaluating “Monotone”

Examining this movement through the lens of accumulation and dispersion is helpful in evaluating the movement’s role in the context of the work as a whole. Reducing the texture to one note is a rather drastic dispersion technique, and it helps to place the movement apart from the other two. On the smaller scale, however, the movement appears to mirror the overall density-arc of the entire work. Canon, by its nature, increases the density of a passage, so beginning with a canon and then breaking it gives a microcosmic example of density reduced by dispersion. The subsequent addition of new pitches represents

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50 Berio, 97.
accumulation, so the second movement manages to trace the “dense pitch texture > less dense texture > dense texture” arc within one movement.

Ultimately, the second movement of *Chamber Music* continues the tendency established in the previous movement to express an in-focus/out-of-focus dichotomy, while at the same time providing an intermezzo-like movement that still manages to explore a unique treatment of twelve-tone technique. As opposed to the first-movement’s treatment of the in-focus/out-of-focus dialectic, which concentrated on row fragmentation and the ambiguities created as a result, “Monotone” focuses on one note, using half-step relationships to blur the focus. This is complicated by the fact that it is through these half-step blurring gestures that the row itself begins to come into focus (as seen in Figure 3.4). It is through these methods that Berio continues the theme of ambiguity established in the first movement in a way that is distinct to the second, as well as generating new material that can be used in the third.
CHAPTER IV. ANALYSIS OF “WINDS OF MAY”

Musically, “Winds of May” brings back an organization more closely tied to the row, but uses the frequent IC1 relationships that were established in the previous movement as well, forming a synthesis of these organizational techniques. This synthesis not only provides a structurally satisfying ending movement, it also reflects the fact that the final poem of the work combines the themes of the first and second poems.

As mentioned in the introduction, “Winds of May” neatly combines and transforms many of the poetic themes found in “Strings in the Earth and Air” and “Monotone.” The setting seems similar to that of the second poem. It contains similar references to solitude and the sea as “Monotone,” forming a clear tie, but the mood that “Winds of May” evokes with regard to the sea is quite different. “Monotone” paints a bleak and static picture of the landscape and situation, while “Winds of May” presents an ecstatic setting (foam “flies up to be garlanded in silvery arches,” and the winds of May “dance on the sea,” rather than holding a monotonous, moaning dialogue). The bright tempo and perpetual motion of Berio’s setting reflect this more energetic attitude.

The thematic similarities between “Winds of May” and “Strings in the Earth and Air” are perhaps subtler, but no less important. While the ties of the lone seabird in “Monotone” to the solitary protagonist are clear, the poem itself does not specifically mention love, while both “Winds of May” and “Strings in the Earth and Air” do. The love mentioned in “Winds of May,” in contrast to the opening poem, is specific – “love” is described as “my true love,” so the
implications are more personal than the nebulous love that wanders by the river of the “Strings in the Earth and Air.” The protagonist of “Winds of May” isn’t musing on the concept of love, or dwelling on the sad state of solitude, rather, the speaker is expressing the immediate dismay of a familiar love that is absent. Additionally, “Winds of May” has musical allusions that are more similar to the first poem than the monotonous noise described in the second – the winds are “dancing,” and while music is not absolutely necessary for dance, it still gives the verse a more musical connotation than the perpetual moan of the second poem. This synthesis of thematic elements in Joyce’s “Winds of May,” is reflected in the synthesis of the musical structures present in Berio’s “Winds of May.”

Form in “Winds of May”

The movement, like the others, is structured around the poetry of the vocal line, but in a rather different way. The individual lines are recited, rather than sung, until the final section of the poem (beginning with the “Welladay!” lines). This recitation is reminiscent of the monotonous drone of the second movement (there is no pause between lines, which gives a very hectic feeling to the movement – a feeling reinforced by the general character of the work). Decreases in the freneticism of the vocal line, another clear example of dispersion, are quite conspicuous, and help to draw attention to the final, climactic line: “Love is unhappy when love is away.” The accompaniment during this final section, while still consisting of rapidly stated eighth-notes,
relaxes into a repeating obligato that makes it easier to pay full attention to the
vocal line.

This movement divides into four sections (see Figure 4.1), structured
loosely around the poem and demarcated by caesura-like moments of repose.
Three of the sections begin with complete statements of the row, mirroring the
techniques of fragmentation and refocus that Berio used in the first movement.
Unlike the first movement, however, the sections are less defined musically (it
is the change in voice from unpitched material to pitched that indicates that a
new section has been reached, and there are no other conspicuous
demarcations between the different lines of the poem). The poem is not divided
into separate verses, since it all appears to be part of the same thought, and
Berio has reflected this by placing fewer breaks between lines of text and also
by drawing less of a line between sections explicitly based on fragments and
sections based on complete statements of the row.
**Figure 4.1, Form of “Winds of May”**

<table>
<thead>
<tr>
<th>Measure Numbers</th>
<th>Vocal Activity</th>
<th>Instrumental Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-15</td>
<td>Silent</td>
<td>Row-based lines with pitch alteration, culminating in an embellished diminished chord.</td>
</tr>
<tr>
<td>16-34</td>
<td>Unpitched sprechgesang</td>
<td>Starts with row statements, some voices give way to semi-tone based material.</td>
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<tr>
<td>35-65</td>
<td>The last section of the poem, set to drawn-out row fragments</td>
<td>Dominated by row-based ostinato figuration. This is the only section to begin without a melodic statement of a complete row.</td>
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<tr>
<td>66-82</td>
<td>Silent</td>
<td>Final statements of the row and row fragments. Ends with semitone presence.</td>
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</table>

“Winds of May” is the longest movement of the three in terms of the numbers of measures of music, but the quickest in terms of performance time. The clarinet part, and, to a lesser extent, the cello part, spend most of the movement progressing rapidly through row forms – some stated in their unaltered form, but most altered in some way. As is the case with earlier movements, the most common alteration involves swapping the first and second elements in P statements of the row. While this particular alteration is present throughout the work, in the third movement it becomes most essential to the piece’s structure and to the generation of musical material.
Use of Structural and Thematic Material

The opening begins with row statements in the clarinet – P₀, followed by R₁₀, I₀, and R₀, elided into a statement of P₀. This sets up a rather emphatic return to material overtly based on the row, and the preference for row forms that start on pcs 4 and 0 that was seen earlier. The cello’s entrance uses material based on the P₀ row, but with an altered pitch, as well as the standard swapped pitches. Instead of an E♭, the cello has an E, creating a perfect fifth, rather than a tritone. This E is heard with the clarinet’s A and D (concert) (see Figure 4.2). While a relatively brief moment, this is an important alteration to the row that sets up the preference for the perfect fifth that this movement often shows.

Figure 4.2, mm. 1-3

The cello line continues to state material more distantly related to row forms. In mm. 6-9, it begins with material drawn from the two outer tetrachords of R₁ (stated in double stops), and then continues with a melodic statement of material that synthesizes the minor-third/tritone motive of the first movement and the half-steps that permeated the second. The clarinet line makes statements of R₀ and P₀ – the beginning of P₀ is reordered (in the
first/second row member swap that is now familiar), which facilitates the elision of the two row forms (see Figure 4.3). The choice of P₀ clearly ties this row statement to the beginning movement, which used the A-to-C minor third extensively (and, perhaps more conceptually than aurally, a tie to the second movement, which used P₀ when actually stating the row).

Figure 4.3, Pick-up to mm.7-9, Clarinet and Cello

There is a return, of sorts, to these ideas towards the end of the movement. Once the voice line has ended (m. 66), the other voices make their final row statements – the last unaltered, full statement of the row is RI₁₀, played in the clarinet in mm. 69-71. This is an interesting choice for the final statement of the row, as the first three notes are < B E F# >. Rather than have tritone relationship that is found in the altered version of P₂ (< B D F >), the first and third note form a perfect fifth, mirroring the altered statement of P at the beginning (see Figure 4.2). Using RI₁₀ creates a tie to P₂, which is a prominent row-form towards the end of the first section (as shall be seen below). The last statement of an altered row comes in octaves, stated in the clarinet and cello. R₀ is stated (with pitches 2 and 3 swapped) which elides
into a statement of the first eight pitches of $P_0$, with the now familiar swapping of pitches 1 and 2 (see Figure 4.4). This is, of course, identical to the row arrangement seen in mm. 7-9.

Figure 4.4, mm. 73-75

Returning to the movement’s opening, the climax of the first section seems to occur in mm. 11-15. When the harp first enters (m. 11), it states the double-minor third that is formed by the first three notes of $P$ when pitches one and two are swapped (in this case, the first pitches of $P_2$). The gaps between these pitches are filled in with half steps, the arrangement of which seems to clearly embellish the structurally-important double-minor-third sequence (the C provides a passing tone to the D, while the E and G♭ surround the final F). Not only is this sequence stated prominently in the harp (mm. 11-14), it is also
stated in both the clarinet and cello (mm. 12-13) (see Figure 4.5). It is then repeated immediately before the first vocal entrance in m. 16. There is a gradual crescendo that begins with the harp’s entrance in m. 11, which helps to draw attention to this sequence. The first section of this piece builds to this moment, and establishes the precedent for fusing the stricter, row-derived material of the first movement with the freer half-step-based material of the second.

Figure 4.5, mm. 11-14

While next section of the work (mm.16-34) begins with statements of the row (or material drawn from the row), the half-step relationship established in movement two soon is strongly emphasized. The section launches on $R_4$ in the clarinet and cello (m. 16), helping to tie it to the ending of the last section.
(which finished on a held F, the first pc of R₄) and to the other statements of 4-based row forms. Mm. 18-19 continue with statements of RI₈ – most likely chosen because the final two pitches of R₄, combined with the first pitch of this RI form, make the double minor-third motive that has recurred throughout the work. Berio creates an association between one of the more prominent structural (and thematic) elements in this work and two unrelated row statements through their juxtaposition. The half-step relationship is brought to the fore as an E♭ pedal in the clarinet (mm. 22-25) and cello (m. 26), are played against an E pedal in the harp (see Figure 4.6, mm. 24-26). This in turn is played against another statement of the P₁-derived material in the cello, first seen in mm. 5-6. Though the movement has a “free-development” feel (owed in large part to the frantic pace and related lack of overtly audible references to previous material), Berio is still able to subtly create an organic structure.

Figure 4.6, mm. 24-26
The statements of the row beginning in m. 26 focus on PC 11 – P_e in mm. 26-27 and 32-34, I_e in mm. 27-28, and R_e in mm. 30-31 (though in this final statement, the hexachords are reordered to the point that they are barely recognizable). The statements in mm. 26-28 use the row’s construction to blur the line between P and I forms of the row (since, as discussed in the introduction, the I form of the row features a number of retrograded dyads, as well as a final retrograded pentachord of the P form). These two statements arrange the dyadic fragments in ways that point to both forms of the row, creating an ambiguity that has not been used to this extent previously. The statements are shown in Figure 4.7.

Figure 4.7, mm. 26-28

This section is frenetically paced, and Berio clearly does not want material haphazardly organized. Using row statements that begin with PC 11 helps to tie this section to the previous material (in particularly mm. 11-15, as discussed in conjunction with Figure 4.5). As the harmonic half-step material stops in this section, melodic half-step material begins, with parallel perfect fifths traveling up a chromatic scale. This treatment of half-step-based material ensures forward motion, as opposed to the harmonic half-step
material of the previous section, which was static in character (see Figure 4.8).
The moto perpetuo statement of row forms gets less insistent in this section, and so musically, it is important to keep the forward motion going as it builds to the voice’s first entrance with distinct pitches in m. 35.

Figure 4.8, mm. 28-31

While the pace of the accompaniment continues to be brisk and hurried, the vocal line soon slows to longer note values (beginning in m. 40 and slowing progressively until the final word in the vocal line in m. 65), drawing attention to the final lines of the poem (“Love is unhappy when love is away”), granting them additional gravitas and making it seem as though they are the crux of the movement. The pitch material that the voice’s entrance utilizes seems to be drawn from the last septachord of R₀, though the material is not strictly ordered, and by the end of the phrase it transitions to half-step-based material (see Figure 4.9).

Figure 4.9, mm. 35-38
The second statement of the voice begins with the same pitch material as the first, transposed up a half-step, but soon slows into longer values, with pitch material drawn from row fragments. This culminates in m. 48, with an eight measure-long statement of the first hexachord of P₄. The choice of P₄ is a natural one, considering the accompaniment, which focuses on the first hexachord of R₄. By using P₄ in the bass, Berio is able to have all of P₄ (or R₄) stated at once, which ties the vocal line to its accompaniment.

The statement of P₄ encompasses all of the line “For the winds of May,” and breaks at the end, when the voice moves to a B♭ at the close of the word “May.” This sequence is anticipated in the harp part two measures before the voice’s movement to B♭ (see Figure 4.11, m. 55). This is reminiscent of the end of the first section (see Figure 4.5), when diminutions of the harp’s passage appear in the clarinet and cello. Subsequently, the statement of P₄ then begins again (m. 59), forming a tritone leap between the B♭ and the E, and when the melody breaks from row material, it returns to the B♭ (m. 62) in place of the
predicted A a half step away. The changing of row members by a half step occurs in other voices in this section as well. For instance, in mm. 42-43, the statement of RI₄ alters the last three pitches of the row by a half step (the first two down a half-step, the last, up) before its material gives way to semi-tone based material (see Figure 4.10). Altering pitches in the row by a half step may be a way of subtly synthesizing the row and following semi-tonal melodic material, creating a conceptual semi-tonal “dissonance” between the altered row and the anticipated, unaltered row.

Figure 4.10, mm. 42-44

During the voice’s final verse, the other parts are dominated by an ostinato presentation of the first hexachord of R₄, lasting from mm. 45-54. The completion of this row form comes with a doubled statement of the last half of the hexachord in the clarinet and cello, played twice (mm.55-56) (see Figure 4.11, mm. 53-56).
Figure 4.11, mm. 53-56

The climactic line of the poem is slowed down to last six measures in the voice (mm. 59-65): “Love is unhappy when love is away.” This line is assembled from fragmentations of the row, peppered with half-step relationships. The initial phrase (“Love is unhappy”) is drawn from P₄, and highlights the minor-third/tritone relationship that was especially prominent in the first movement. Rather than complete the expected tetrachord with an A, the G goes to a B♭ – half a step off. This is then “corrected” for the second half of the line, which begins on A. The last half’s musical material is drawn from a fragment (row numbers 3, 4, 5, and 6) of I₈. This fragment ends on another B♭, which provides a half step (in the opposite direction) away from the first pitch of the next row (stated in the harp): RI₀ (m. 66). The “incorrect” notes of this passage help to create a half-step sequence that leads to the last section of row statements – B♭ (m. 62), A (m. 64), B♭ (m. 65), B (m. 66). See Figure 4.12, the vocal line from mm. 59-65 and Figure 4.13, the first hexachord of the harp’s statement of RI₀.
As discussed at the beginning of this chapter, the end of this movement brings back material from the opening (see Figure 4.3 and its accompanying discussion). The final measures of this movement see a harmonic statement of the intervals that formed the most important building-blocks for the work in general, and “Winds of May” in particular (see Figure 4.14, mm. 81-82). The pitches of the final measure, \{C♯ F D G\}, are a row fragment from P₃ (they are order numbers 6, 7, 8, and 9). This segment was most likely chosen because of the relationships brought out by the voice. The cello has the G and D, voiced in a perfect fifth – a reference to this interval’s conspicuous presence in the movement. The C♯ in the clarinet forms a minor second to the D and a tritone with the G. These intervals were of great importance in movements I and II. The pitches are rounded out by an F in the bass, which forms a minor third.
with the D (another important interval in the first movement) and IC 2 with the G – the most-used interval in the row.

Figure 4.14, mm. 81-82

“Winds of May” extensively synthesizes musical material from the previous two movements, making use of both their motivic and structural features. The more strict statements of the row are used as a frenzied backdrop, mirroring the dancing winds of May that figure so prominently in the poem, and Berio fragments the row and slows it down to emphasize the key lines.51 “Winds of May,” perhaps even more than “Strings in the Earth and Air” or “Monotone,” is a movement permeated with ambiguities created from Berio’s structural and thematic material. This movement forms not just an ending, but a culmination of musical material, not only cementing the fundamentally

51 Incidentally, they are the same lines that Joyce thought were important. Joyce even had the line “Love is unhappy when love is away” engraved on a locket for his wife (Fargnoli and Gillespie, 25.)
twelve-tone nature of the work, but showing the extent to which the serial seed of Berio’s *Chamber Music* is mutable. Berio utilizes every part of *Chamber Music* as material to be developed, including its most basic structural elements, and nowhere is this clearer than in the third movement.
CONCLUSION. DALLAPICCOLA, JOYCE, AND CHAMBER MUSIC

Berio’s conception of *Chamber Music*’s serial structure and organization is very fluid, but the work nonetheless manages to maintain an internal structural coherence. One larger question remains, however. Why did Berio use such a loose adaptation of serial techniques, particularly when Dallapiccola, his model for twelve-tone technique at the time, used a brand of serialism that relied far more heavily on unaltered row forms? Given that one of the primary advantages of twelve-tone technique (the granting of internal structure to atonal music) is undermined when the technique is used so loosely, one must wonder why Berio chose to use the twelve-tone technique at all.

The answer to this question is tied into how Berio believed Joyce’s literary style should be represented musically. While Dallapiccola no doubt influenced many of the more superficial structural elements of this work (as was mentioned, it was through Dallapiccola that Berio first interacted with twelve-tone technique), it seems Dallapiccola’s clearest influence of Berio’s *Chamber Music* was as a negative example of how Joyce’s work should be represented musically. Berio found Dallapiccola’s compositions instructive, but believed his style to be fundamentally unsuited to representing Joyce’s literary style, saying:
(Dallapiccola’s) strict world of dodecaphonic melodies made his music rather impervious to the multiplicity of techniques and structures, and the associative epiphanies of, say, Joyce’s work, to which he often liked to refer. After *Il Prigioniero*, his work is a determined, heroic hymn to canonic forms. This is part of the reason why the expressive world of his *Ulysses* is poles apart from that of Joyce: a granite stoicism, both spiritual and poetic, in the former, and a phantasmagoric entanglement of different forms, techniques, and lexicons in the latter.52

Such creative differences help to explain the multitude of techniques and treatments of material found in *Chamber Music* – to accurately reflect the “multiplicities” of literary structure found in Joyce, Berio uses analogous techniques in the structures of his music. The concept of exactly how this should be done was clearly an interest of Berio.

Berio claimed that in the pieces he wrote responding to Dallapiccola’s teaching, he “entered into Dallapiccola’s ‘melodic’ world, but they also allowed (him) to escape from it.”53 In order for Berio to fulfill his creative goals, he utilized Dallapiccola’s language of choice (serialism) in a way that expanded upon that language. By utilizing an expanded palette of compositional techniques (as compared to those at play in more traditional twelve-tone compositions), Berio is able to both interface with serialist techniques and adopt them to more appropriately represent his artistic aims. Given how loosely the twelve-tone mantle is worn in this work, an analyst is often presented with multiple possible interpretive threads to follow, and it is this ambiguity that lies at the core of Berio’s artistic vision.

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52 Berio, 54.
53 Berio, 53.
For example:

- There are at least two interpretations for the ordering of row fragments seen in Figure 2.4, and neither of them provides a textbook example for serial ordering.

- The opening and closing of the first movement present an ambiguous approach to serial ordering by being based so heavily on fragmentation that is often only peripherally related to the row.

- At times, Berio creates “associative epiphanies” by using invariances between rows. For example, in the first movement, Berio creates a distinctive pentachord out of related row forms (see Figure 2.2 and relevant discussion).

- “Monotone” is based largely on a single note; are analysts to interpret that as a method of prolonging the first element of a row, or of simply reinforcing the theme of the poem, or both?

- Equally important, in the second movement, it is not until the half-step motion begins that the row starts to take shape. This raises the issue that the underlying structure of the piece (the row) comes into focus only after the apparent structure of the movement is shifted out of focus.

- In the third movement, dyads are reordered to distort the row forms (as seen in Figure 4.7 and the accompanying discussion), and distinctive fragments are created out of two unrelated rows (mm. 18-19 – another “associative epiphany”).
- Berio uses the structure of the row (discussed in the introduction), combined with pitch swapping, to make it difficult to definitively identify the row form used (see Figure 4.6).
- “Winds of May” synthesizes previous movements’ techniques (row fragmentation and half-step movement) to call into question the row’s dominance in this work’s underlying structure.

By deciding to break conventional twelve-tone practices and choose a structure based on the poetic material (and the ordered/unordered dialectic described by Hicks), Berio creates an ambiguity that couldn’t be created if he didn’t use an established mode of organization as a point of reference; if there are no expectations to muddle, then his ambiguity would not be meaningful. Therefore, the serial seed from which this work develops is as vital to the work’s artistic vision as the deviations. Ultimately, Berio creates a worthy representation of his assessment of Joyce’s literary style in *Chamber Music*, demonstrating well the “phantasmagoric entanglement” that he felt was necessary.
REFERENCES


APPENDIX 1. THE POEMS

Here is the complete text of the Joyce poems used in this work, as well as references to the measure numbers in which the individual lines appear.

**Strings in the Earth and Air – I**

Strings in the Earth and Air
Make music sweet;
Strings by the river where
The willows meet.

There’s music (along the river)\[^{54}\]
For Love wanders there,
Pale Flowers on his mantle,
Dark Leaves on his hair.

All softly playing
With head to the music bent,
And fingers straying
Upon an instrument.

**Monotone – II**

All day I hear the noise of waters
Making moan,
Sad as the seabird is when going
Forth Alone
He hears the winds cry to the waters’
Monotone.

The grey winds, the cold winds are blowing
Where I go.
I hear the noise of many waters
Far below.
All day, all night, I hear them flowing
To and fro.

\[^{54}\] “along the river” is omitted in the text of Berio’s setting.
Winds of May – III

Winds of May, that dance on the sea,  mm.  16-22
  Dancing a ringaround in glee  mm.  22-24
From furrow to furrow, while overhead  mm.  25-27
The foam flies up to be garlanded  mm.  27-29
In silvery arches spanning the air,  mm.  27-31
Saw you my true love anywhere?  mm.  32-34
  Welladay! Welladay!  mm.  35-47
  For the winds of May!  mm.  48-58
Love is unhappy when love is away!  mm.  59-65
APPENDIX 2. ROW MATRIX AND SUBSETS FOR *CHAMBER MUSIC*

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<td>(0,2,4,6,9)</td>
</tr>
<tr>
<td>4-8</td>
<td>(0,1,4,6,9)</td>
<td>8-12</td>
<td>(0,2,4,7,9)</td>
</tr>
</tbody>
</table>

### Hexachords

<table>
<thead>
<tr>
<th>Order Numbers</th>
<th>Prime Form</th>
<th>Order Numbers</th>
<th>Prime Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-6</td>
<td>(0,2,3,6,7,9)</td>
<td>5-10</td>
<td>(0,1,4,5,7,9)</td>
</tr>
<tr>
<td>2-7</td>
<td>(0,1,3,5,7,8)</td>
<td>6-11</td>
<td>(0,1,3,5,7,9)</td>
</tr>
<tr>
<td>3-8</td>
<td>(0,1,4,5,7,9)</td>
<td>7-12</td>
<td>(0,2,3,5,7,9)</td>
</tr>
<tr>
<td>4-9</td>
<td>(0,1,4,6,7,9)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Heptichords

<table>
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<tbody>
<tr>
<td>1-7</td>
<td>(0,1,3,4,6,8,9)</td>
<td>4-10</td>
<td>(0,1,2,3,5,8,9)</td>
</tr>
<tr>
<td>2-8</td>
<td>(0,1,2,4,6,8,9)</td>
<td>5-11</td>
<td>(0,1,3,4,5,7,9)</td>
</tr>
<tr>
<td>3-9</td>
<td>(0,1,2,3,5,8,9)</td>
<td>6-12</td>
<td>(0,1,3,4,6,8,9)</td>
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</tbody>
</table>


### Octachords

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1-8</td>
<td>(0,1,2,3,5,6,8,9)</td>
<td>4-11</td>
<td>(0,1,3,4,5,6,7,9)</td>
</tr>
<tr>
<td>2-9</td>
<td>(0,1,2,3,5,7,8,9)</td>
<td>5-12</td>
<td>(0,1,2,4,5,7,8,T)</td>
</tr>
<tr>
<td>3-10</td>
<td>(0,1,2,3,4,5,8,9)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Nonachords

<table>
<thead>
<tr>
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<th>Prime Form</th>
<th>Order Numbers</th>
<th>Prime Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-9</td>
<td>(0,1,2,3,4,6,7,8,9)</td>
<td>3-11</td>
<td>(0,1,2,3,4,5,6,8,9)</td>
</tr>
<tr>
<td>2-10</td>
<td>(0,1,2,3,4,5,7,8,9)</td>
<td>4-12</td>
<td>(0,1,2,3,4,6,7,9,T)</td>
</tr>
</tbody>
</table>

### Decachords

<table>
<thead>
<tr>
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<th>Order Numbers</th>
<th>Prime Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10</td>
<td>(0,1,2,3,4,6,7,8,9,1,T)</td>
<td>3-12</td>
<td>(0,1,2,3,4,5,6,7,8,T)</td>
</tr>
<tr>
<td>2-11</td>
<td>(0,1,2,3,4,5,6,7,8,9)</td>
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<td></td>
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</tbody>
</table>

### Unadecachords

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<th>Prime Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-11</td>
<td>(0,1,2,3,4,5,6,7,8,9,T)</td>
<td>2-12</td>
<td>(0,1,2,3,4,5,6,7,8,9,T)</td>
</tr>
</tbody>
</table>

Please note, most of these subsets do not play a major role in this composition, they are included out of a sense of completeness. Some of the more prominent subsets are those formed by order numbers 1-3 (0,3,6), 6-8 (0,1,4), and 1-5 (0,2,4,6,9).