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Stylistic Changes in the Music of Ruth Crawford Seeger

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ABSTRACT

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While the body of Ruth Crawford Seeger's works is not extensive, her musical legacy cannot be ignored. As a central member of the "ultramoderns," her work influenced the next generation of American composers such as Elliot Carter. This research document examines the stylistic changes of Crawford's music throughout her career as a composer. Taking into account the various influences that could have impacted her compositional style over time, three pieces were selected for in-depth analysis from different times in Crawford's life. The first two pieces analyzed are the first movement of *Diaphonic Suite No. 2* and the third movement of *Three Songs,* entitled "In Tall Grass." These pieces were composed after Crawford began studying under Charles Seeger. The third piece analyzed in this research, the third movement of *Suite for Wind Quintet*, was composed after a twenty-year compositional hiatus where Crawford focused on folk music and children's music education. Using a variety of methods, analysis is conducted in order to explore Crawford's compositional techniques and uncover stylistic similarities and differences between the three pieces.

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Chapter I: Introduction to Ruth Crawford Seeger

Ruth Crawford Seeger was an American composer, who is often recognized as a leading figure in the development of American modern music. She was an important member of a group of musicians known as the "ultramodernists", alongside other well-known musicians such as Henry Cowell, Carl Ruggles, and Crawford's husband, Charles Seeger. To avoid possible confusion due to Ruth and Charles sharing a last name, Ruth shall be referred to as Ruth or Crawford, while Charles shall be referred to as Charles or Seeger.

Born in 1901, Ruth was the second child of Methodist priest Clark Crawford and his wife, Clara Graves Crawford. She began taking piano lessons from her mother at the age of six. Longing to become an "authoress or poetess,"[1] and possessing a creative mind, Ruth wrote over two hundred poems by the age of sixteen.

In 1913, after her family relocated to Florida, Crawford began taking piano lessons with Bertha Foster (who would later become the first Dean of Music at the University of Miami). In 1914, Ruth's father passed away, and Miss Foster waived her fees in exchange for Ruth teaching at the South Jacksonville branch of Foster's School of Musical Art. Upon graduating high school, Ruth officially became a piano teacher in Foster's school. Hoping to increase her rate, she enrolled in a one-year program at the American Conservatory of Music in Chicago in the fall of 1921.[2] She developed a muscular injury from her intensive practicing, thereby preventing her from moving forward as a performer. Instead of returning home, she attended for another year, this time with her studies focused on music theory. Moving her focus from piano to composition was the first

[1] Judith Tick, *Ruth Crawford Seeger: A Composer's Search for American Music*, (New York: Oxford University Press, 1997), 12.
[2] Ibid, 23.

major decision she made as a young adult, which carved a path for herself that would eventually lead her to prominence as an innovative composer.[3] She studied composition with Adolf Weidig at the American Conservatory of Music, received her bachelor's degree in June of 1924, and immediately enrolled in the master's degree program at the Conservatory.

Chicago provided Ruth with exposure to musical modernism. Ruth's piano teacher in Chicago, Djane Lavoie-Herz, introduced her to a number of new music composers, such as Dane Rudhyar, and the first influential person in her career as a composer, Henry Cowell. Cowell in particular was impressed by Crawford's talent, especially her natural abilities in writing dissonant music. He became a life-long friend and vigorous promotor of Crawford's music.[4]

Crawford was also introduced by music and art critic Alfred Frankenstein to the leading Chicago poet, Carl Sandberg. Crawford taught Sandburg's three daughters piano and composed several pieces using Sandberg's poems as text, including *Five Songs on Sandburg Poems* in 1929, and *Three Songs* – "Rat Riddles," "Prayers of Steel," and "In Tall Grass" in 1930-1932. Being immersed in this circle of Chicago's intellectuals, Crawford was afforded opportunities to have her compositions performed, which subsequently opened doors for her in the city as a composer.

In 1929, Cowell made arrangements for Crawford to stay in Blanche Walton's flat in New York, where Crawford arrived on September 5th. Mrs. Walton had offered her apartment at 1 West 68th Street as the meeting place for the ultra-modernists, a group which was initially started by Cowell and renowned music theorist Charles Seeger. This location quickly became a haven of artistic exploration for new music and was consistently occupied with regulars such as Carl Ruggles, Dane Rudhyar, Edgard Varèse, and several others. In November of 1929, Crawford began taking lessons with Seeger at Walton's apartment; their lessons occurred weekly, lasting

[3] Tick, 34.
[4] Ibid, 51.

until May of 1930. It was during this year that Crawford began writing her *Diaphonic Suites*. This marked a pivotal time in Crawford's life and career, as she not only officially began to study Seeger's concept of dissonant counterpoint and implement the method into her compositions, but she also adapted Seeger's logic in form and traditions, thus making her largely free of direct influence from her European contemporaries.[5] This period was not without benefit to Seeger, who found validation in his own theoretical work through teaching Crawford. Seeger as a superior intellectual theorist, and Crawford as a talented, eager-to-learn composer resulted in a strong working relationship between the two.

Meanwhile, Crawford's immense talent had not gone unnoticed in the wider world. In March of 1930, she was granted a Guggenheim Fellowship in music composition that supported her traveling to Europe for a year. She was the first woman ever to receive this honor. On Seeger's suggestion, Crawford spent her time before traveling to Europe as Seeger's assistant, helping him finish his book on dissonant counterpoint that eventually evolved to be the treatise, *Tradition and Experiment in the New Music*. They worked at Seeger's family estate in Paterson, sixty miles from New York City.[6] Shortly before Crawford's departure for Europe, they realized that they had fallen in love.[7] Prior to this, Crawford had concerns about the idea of love and marriage, as many "professional women" at that time struggled to have a family and a career.[8] Working with Seeger to some extent had changed Crawford's mind. She realized that she was able to find a professional and romantic relationship in a single partner.[9] This suggested the possibility that she could in fact have both a marriage and a career: an ideal life that would allow her to continue her work.[10]

[5] Tick, 119.
[6] Ibid, 129.
[7] Ibid, 134.
[8] Ibid, 99.
[9] Ibid, 135.
[10] Ibid.

Crawford departed for Europe in August of 1930. Throughout her time in Europe, she promoted Seeger's theories, and she reported on her experiences and on major musical events to Seeger through a frequent exchange of letters that enabled their relationship to continue evolving.[11] She also had her music performed in many recitals, and she networked as much as she could with European musicians. Through her networking, she was able to meet Alban Berg, Béla Bartók, and many other composers and publishers. Unfortunately, she was not met with the hospitality and support that she deserved. At the time, women composers were not regarded as equals to their male colleagues. Additionally, European composers believed themselves to be the world leaders in their field, dismissing American composers as being of a lower caliber.[12] Seeger had warned Crawford "not to get too mixed up with European teachers,"[13] advising she needed to continue defending the American ultra-modernists for their independence.

On November 10th, 1931, Crawford returned to the United States and moved in with Seeger at 204½ West 13th Street in New York. From this point, hardship ensued. On a personal level, family and friends expressed their concern and distaste for their now-romantic relationship as Charles' divorce was not yet finalized.[14] On a larger scale, the United States economy was even worse than when she had left. Living in the throes of the Great Depression, Ruth and Charles struggled to find work and make ends meet. The depths of the Great Depression inspired a change in their perspective. The juxtaposition of homeless people in the streets while exotic cars drove by made them sympathetic to the struggles of the working class.[15] Along with the turmoil of the Great Depression also came both a sense of community and a demand for social relevance in music.

[11] Tick, 146.
[12] Ibid, 143.
[13] Ibid, 143.
[14] Ibid, 180.
[15] Ibid, 188.

Charles became involved with the Pierre Degeyter Club and the Workers Music League; he was devoted to the American Communist Party and the Proletarian ideology. Crawford, determined to exhibit her political concerns, composed two songs in 1932, "Sacco, Vanzetti" and "Chinaman, Laundryman" both of which were commissioned by the Society of Contemporary Music in Philadelphia. "Sacco, Vanzetti" was about a controversial trial and execution of two immigrants accused of murder, and "Chinaman, Laundryman" portrayed the exploitation of an immigrant worker.[16] These two pieces mark a change in the content of Crawford's music.

She and Charles got married in October of 1932, and then in August of 1933, their first child, a son, Michael Seeger, was born. The Great Depression continued to cast a shadow on their lives. They were briefly homeless after Michael was born, and they struggled to find work, however, Ruth was ecstatic to be a mother. In this time, Charles and Ruth abandoned their work in dissonant counterpoint, because they believed "it was virtually dead."[17] The next two years were filled with struggles and odd jobs as the Seeger family tried to survive. In June of 1935, Crawford and Seeger's second child, Margaret (Peggy) Seeger was born. At the end of the year, Charles finally received a full-time job offer from the Music Unit of the Special Skills Division of the Resettlement Administration in Washington, D.C. That was the opportunity that would save the family from poverty. They moved to the Washington D.C. area, where Crawford remained for the rest of her life.

The work of President Roosevelt's Resettlement Administration sparked a revival movement in folk music. Since folk music is a style that often can be accepted by a wider audience than concert music, as well as being a strong representation of what was understood to be a "true American musical culture," folk musicians started to make their way to the grand stage of music

[16] Tick, 191.
[17] Ibid, 198.

halls. Charles frequently went on field trips to collect and record folk songs. At the same time, Ruth was also redirecting her musical interest towards folk music. She came to recognize the complexity and originality of folk music, and she found the diversity of American music traditions to be interesting; something "she needed to master."[18] Béla Bartók's integration of Hungarian folk music into contemporary music also inspired her.[19] She arranged *Twenty-Two American Folk Tunes* for piano in 1937, among which she included songs previously published in Carl Sandburg's *The American Songbag* and John and Alan Lomax's *Folk Songs*. In the meantime, May 1937 saw the birth of the third Seeger child, Barbara. Shortly thereafter, Ruth was asked by John Lomax to work on his second anthology of American folk songs, for which she would transcribe folk music field recordings into music notation. The music for this anthology came from all over the American continent, across approximately 16,000 miles of collecting. Some of these places include California, Ohio, Louisiana, the Georgia Sea Islands, New York, and even the Bahamas.[20] The variety of music is as wide as the distance that was covered to collect it. It included work songs, dance tunes, spirituals, prison songs, ballads, blues, lullabies, and more.[21] Crawford did not simplify the folk tunes while transcribing or arranging them. Instead, she emphasized the oppositional qualities of folk music; she treated folk music with a modernist consciousness, thereby keeping the essence of originality.[22] In 1940, after three years of intensive listening, transcribing, working with John and Alan Lomax, and negotiating with the publisher for a better quality of printing, *Our Singing Country: A Second Volume of American Ballads and Folk Songs* was finally published. During these three years, Crawford spent hours every single day, tirelessly

[18] Tick, 248.
[19] Ibid, 242.
[20] Ibid, 247.
[21] Ibid.
[22] Ibid, 269.

working on these transcriptions. She lived and breathed folk music.[23] While she found value in folk music, this endeavor, along with household responsibilities and raising children, did prevent her from composing on her own. Her only surviving composition between 1931 and 1951 is a three-minute tonal work for high school orchestra called *Rissolty, Rossolty*, which she completed by the end of 1939.

In the following years, Crawford worked at the Silver Spring Cooperative Nursery School. In 1943, their fourth child, Penelope (Penny) Seeger, was born. Ruth dedicated herself and her time to children's early music education at the nursery school, teaching around twenty private piano students, raising her own children, and pursuing her own project: a book of transcribed folk melodies with piano accompaniment. This book, *American Folk Songs for Children*, was published in 1948, and brought her national recognition.

The post-war years saw a return to the avant-garde, and serial techniques emerged in America's musical culture. The work of the ultramoderns, including Crawford's early music, began receiving attention, which reinforced her determination to return to composing.[24] The Washington chapter of the National Association for American Composers and Conductors held a competition in 1952, for which Crawford composed and submitted *Suite for Wind Quintet.* Crawford won the contest, and with that, received the opportunity to have the piece published.

Crawford passed away in November of 1953 due to intestinal cancer, *Suite for Wind Quintet* being her final completed project. However, her premature death and short list of works did not prevent her from achieving greatness. She was an accomplished contributor to both modern music and folk traditions. Her work in these fields helped the preservation of American folk music

[23] Tick, 265.
[24] Ibid, 313.

and her strong contributions to the development of indigenous compositional styles helped to further the cause of the independence of American modern concert music.

Chapter II: Review of Literature

This research will focus on three movements from Crawford's compositions, each from a different time in her life. Other concert works by Crawford will be discussed but will not be analyzed in detail. A selected folk fiddle tune is included as well and will be used for comparison purposes. Outside of this comparison, her body of work relating to folk music, including her special contribution to children's songs, despite its obvious importance, will not be examined. This contribution is principally collected in Crawford's *American Folk Songs for Children in Home, School, and Nursery School: A Book for Children, Parents, and Teachers*,[25] and is documented in many review articles about this book. Furthermore, this study will be limited to her role as a composer, rather than her role as a mother of successful musicians, teacher in piano and composition, or as a student under Charles Seeger. For more information on her role as a mother, see *Music From the True Vine: Mike Seeger's Life and Musical Journey*,[26] written by Bill C. Malone. For her role as a composition teacher, see "'You Too Can Compose': Ruth Crawford's Mentoring of Vivian Fine,"[27] by Rachel Lumsden.

Due to the language barrier, this study will focus on literature published in English. This is a small concession, since the overwhelming majority of research into Crawford's music is in English. However, this does mean that consideration of Kirsten Reese's "'Dissonant music': Ruth Crawford-Seeger, Pionierin der amerikanischen Moderne," [28] and Sandra Müller-Berg's

[25] Ruth Crawford Seeger, *American Folk Songs for Children in Home, School, and Nursery School: A Book for Children, Parents, and Teachers*, (New York: Doubleday, 1948).
[26] Bill C. Malone, *Music from the True Vine: Mike Seeger's Life and Musical Journey*, (Chapel Hill: University of North Carolina Press, 2011).
[27] Rachel Lumsden, "'You Too Can Compose': Ruth Crawford's Mentoring of Vivian Fine," *Music Theory Online*, 23, no. 2 (June 1, 2017).
[28] Kristen Reese, "'Dissonant Music': Ruth Crawford-Seeger, Pionierin Der Amerikanischen Moderne," *Neue Zeitschrift Für Musik*, 160, no. 3 (January 1, 1999).

"Ultramodern versus Neokassizistishch: Ruth Crawfords Three Songs Und Aaron Coplands Short Symphony"[29] will not be included.

The idea that Crawford's career was subject to the expectations laid upon woman composers at the time has been explored extensively in articles such as "Feminist Music Theory into the Millennium: A Personal History"[30] by Ellie M. Hisama and "'Never Call Us Lady Composers': Gendered Receptions in the New York Composers' Forum, 1935-1940"[31] by Melissa J. De Graaf, and therefore it will not be the focus of this study.

The most significant source for this study is *The Music of Ruth Crawford Seeger*[32] by Joseph N. Straus. After a brief introductory chapter, Straus devotes the second chapter to an in-depth showcase of analytical procedures, providing explicit demonstrations of how to analyze Crawford's music. These analytical procedures are not only drawn from Seeger's theories, but also from 20th century analytical approaches that were developed later. Straus organizes Crawford's varied stylistic traits into eight categories – melody, register, large-scale designs, precompositional plans, counterpoint, harmony, rhythm, and dynamics. A great number of Crawford's works, including works from both before and after she studied with Charles Seeger, were examined in this chapter.

In chapter three, Straus provides analyses of six of Crawford's most significant works. Two songs, "Rat Riddles" and "Prayer of Steel" of Crawford's *Three Sandburg Songs*, third and fourth movements of String Quartet (1931), and first and third movements from *Suite for Wind Quintet* were chosen. These analyses reinforce the analytical approaches from chapter two, but with all of

[29] Sandra Müller-Berg, "Ultramodern versus Neoklassizistisch: Ruth Crawfords Three Songs und Aaron Coplans Short Symphony," *Symphonik 1930-1950: Gattungsgeschichtliche Und Analytische Beiträge*, Series: Frankfurter Studien, No. 9 (2003).
[30] Ellie M. Hisama, "Feminist Music Theory into the Millennium: A Personal History," *Signs* 25, no. 4 (2000).
[31] Melissa De Graaf, "'Never Call Us Lady Composers': Gendered Receptions in the New York Composers' Forum, 1935-1940," *American Music* 26, no. 3 (2008).
[32] Joseph N. Straus, *The Music of Ruth Crawford Seeger*, (Cambridge, England: Cambridge University Press, 1995).

the elements in the eight categories combined. In this research, I also examine the third movement of *Suite for Wind Quintet*. This redundancy was forced by the limited amount of work Crawford composed after her hiatus before she passed away. The movement was also chosen because it best demonstrates the changes in her compositional style under consideration.

In chapter four, Straus places Crawford's music in the context of her biography, the ultra-modern movement, and the history of women in music. These discussions offer insight into Crawford's struggles and concerns politically, economically, and musically.

Another vital resource is Charles Seeger's *Tradition and Experiment in the New Music*.[33] In particular, part II of the treatise, "Manual of Dissonant Counterpoint," demonstrates Seeger's concept of dissonant counterpoint in the following musical parameters: "dissonation of the neume," "dissonation of the phrase," "dissonation of the line as a whole," "chordal orders and species," "dissonation of the two-line phrase," "heterophony," "chordal dissonance; tonal and rhythmic," and "dissonation of the three-line phrase." He also provided detailed rules of general procedures of each chapter with many handwritten examples to illustrate the principles. Additionally, he included nine appendices on "notation," "accentuation," "dynamics," "tempo," "attack, release, and articulation," "steps in the learning of polymeters," "dissonant scales," and "correlation of music and the other arts."

This treatise is Seeger's most important work. Its contents are the foundation of his theories on dissonant counterpoint. Not only did Crawford take part in its creation as an assistant, but Seeger's theories contained within it were developed through the work done in his lessons with

[33] Charles Seeger, "Manual of Dissonant Counterpoint," in *Studies in Musicology II: 1929-1979*, 163-228, (Berkeley and Los Angeles: University of California Press, 1994).

Crawford. Henry Cowell's contributions to Seeger's theories are explored in writings by John Spilker.[34] This document will concentrate on Crawford and Seeger.

Judith Tick's *Ruth Crawford Seeger, a Composer's Search for American* Music[35] is an important resource for Ruth Crawford's biographical information. It includes details of all of Crawford's major events in her life and discusses her relationships. The book is organized into six parts, each based on where Crawford was living at the time and the years that she resided there, breaking down the chronology of events based on time and location.

In addition to the biographical content, Tick also includes analytical insights on several of Crawford's pieces. This is not limited to Crawford's concert works; she examines numerous folk tunes that Crawford transcribed, including "God Don't Like It," "Trouble, Trouble," "Bonyparte," "Peter Gray," and more. Her intuitions concerning Crawford's work in folk music prove to be useful in establishing connections to Crawford's concert works later in this research.

The book *Ruth Crawford Seeger's Worlds: Innovation and Tradition in Twentieth-Century American Music*[36] edited by Allen Ray and Ellie M. Hisama explores Crawford's compositional methods and her involvement in the ultramodern movement. It includes chapters written by both Tick and Straus, as well as Ellie M. Hisama, Allen Ray, Lynn Ellen Burkett, Melissa J. de Graaf, Nancy Yunwha Rao, Bess Lomax Hawes, and more. Tick's contribution to this collaborative work discusses Crawford's subsequent rise in popularity, righting the wrongs of a past in which Crawford's works were overlooked. In chapter two, Straus develops ideas from his earlier

[34] John Spilker, "Substituting a New Order: Dissonant Counterpoint, Henry Cowell, and the Network of Ultra–Modern Composers," PhD diss., (The Florida State University, 2010).
John Spilker, "The Origins of 'Dissonant Counterpoint': Henry Cowell's Unpublished Notebook," *Journal of the Society for American Music*, 5, no. 4 (January 1, 2011): 481–533.
[35] Judith Tick, *Ruth Crawford Seeger: A Composer's Search for American Music*, (New York: Oxford University Press, 1997).
[36] Allen Ray and Ellie M. Hisama, *Ruth Crawford Seeger's Worlds: Innovation and Tradition in Twentieth-Century American Music*, (Rochester, New York: University of Rochester Press, 2007).

monograph: here, he addresses Crawford's precompositional strategies, dividing the precompositional schemes into four types: simple ostinato, retrograde, systematic rotation, and other ad hoc arrangements. He curates a chart containing a great number of Crawford's works and identified the precompositional scheme used in each one. Lynn Ellen Burkett emphasizes the importance of understanding Seeger's *Tradition and Experiment in the New Music* in chapter three. She explains a number of reasons why it is important, then goes on to discuss Crawford's use of linear aggregates in *Piano Study in Mixed Accents*. Ellie M. Hisama reviews the political backgrounds of Crawford's *Two Ricercari* in chapter four, with analysis demonstrating Crawford's use of hexachords, polyrhythm, voice leading, and verse form. In chapter five, de Graaf illustrates the difficulties that women composers faced in the New York Composers Forum, offering examples of the constant misogyny that Crawford and other women musicians were forced to tolerate. In chapter six, Nancy Yunhwa Rao declares that Crawford's work is not a predecessor of total serialism, but that her compositions deal with fundamental aspects of what Elliot Carter referred to as geometrical schemata. Rao analyzes and compares the Scherzo movement of Crawford's String Quartet to Carter's String Quartet No. 1 to prove her point. Bess Lomax Hawes retells in chapter seven the story of how Crawford worked with her father and brother (John and Alan, respectively) to create *Our Singing Country*, leveraging technical music prowess to preserve the originality of folk music. Taylor A. Greer investigates the similarities and differences between Seeger's *Tradition and Experiment in the New Music* with Crawford's *The Music of American Folk Song* in chapter eight. In chapter nine Roberta Lamb discusses Crawford as an educator, referring to the latter's credo as important factors in her teaching style. In chapter ten, Jerrold Hirsch elaborates on the Seegers' contributions to folk music in the context of society and culture. Following that is Ray Allen's exploration of Mike Seeger's unorthodox introduction to folk music

by means of his parents' work and how it shaped him to become a prominent figure in the revival of folk music in the 60's. Continuing the discussion of Crawford's children, Peggy Seeger is the topic of chapter twelve, written by Lydia Hamessley. It explores Peggy Seeger's trajectory from being a traditional folksinger to becoming a contemporary songwriter and how she incorporates folk traditions into her newer music. In conclusion, this book covers a wide range of topics involving and surrounding Crawford, several of which are highly relevant to this study.

There are two analytical dissertations that contain the movements analyzed in this research. Juanita Karpf's D.M.A. dissertation, "Tradition and Experimentation: An Analytical Study of Two Diaphonic Suites by Ruth Crawford (1901-1953),"[37] contains analysis of the first movement of Crawford's *Diaphonic Suite No. 2*. Karpf's analytical procedure involves sectional structure, set analysis, and trichordal motives, whereas this research uses the procedures covered in Straus's book *The Music of Ruth Crawford Seeger*, due to Straus's greater engagement with Seeger's writing. It is important to note that Karpf's dissertation predates Straus's book by three years.

Roger Lee O'Neel, in his PhD dissertation, "Pitch Organization and Text Setting in Songs of Charles Seeger, Ruth Crawford Seeger, and Henry Cowell,"[38] analyzes a number of Charles Seeger's and Henry Cowell's songs, as well as Crawford's *Five Songs*, *Three Songs*, and *Two Ricercari*. The third movement of *Three Songs* — "In Tall Grass" — is, therefore, analyzed in his document. O'Neel's analysis divides the music based on the mood of the poem, points out the pitch centricity, analyzes the chords formed by the ostinati instruments, and discusses timbral and intervallic symmetry. He uses set analysis as his main approach for Crawford's melody, which

[37] Juanita Karpf, "Tradition and experimentation: An analytical study of two Diaphonic Suites by Ruth Crawford (1901-1953)," DMA diss., (University of Georgia, Athens, 1992).
[38] Roger Lee O'Neel, "Pitch organization and text setting in songs of Charles Seeger, Ruth Crawford Seeger, and Henry Cowell," PhD diss., (University at Texas at Austin, 1996).

again, is not as comprehensive as Straus's methods and does not incorporate the specific context of Seeger's writings.

There are a number of analytical articles and dissertations that explore Crawford's compositional techniques in her other pieces. While they did not provide insight into the pieces analyzed in this research, they did assist in establishing a baseline regarding Crawford's compositional style. These works include Kate Soper's "Orchestration in the Chamber Works of Ruth Crawford Seeger,"[39] Mark D. Nelson's "In Pursuit of Charles Seeger's Heterophonic Ideal: Three Palindromic Works by Ruth Crawford,"[40] Sharon Mirchandani's "Ruth Crawford Seeger's Five Songs, Suite No. 2, and Three Chants: Representations of America and Explorations of Spirituality,"[41] Cynthia Pace's "Accent on Form-Against-Form: Ruth Crawford's 'Piano Study in Mixed Accents',"[42] and Yi-Cheng Daniel Wu's "Ruth Crawford's String Quartet, Mvt. 3: An Analysis of Dynamic Counterpoint, Contour Similarity, and Musical Form."[43]

While there is a great wealth of publications in which Ruth Crawford is the subject, analysis of her concert works comprises only a small portion of it. Frequently, when Crawford's concert works are discussed, the spotlight shines on Seeger. Although Seeger was undeniably an important mentor and supporter to Crawford, this undermines her intellect and originality as an independent composer. Furthermore, the existing analytical works rarely cover the stylistic changes that she made throughout her life and career. There is still work that needs to be done, and analysis to be

[39] Kate Soper, "Orchestration in the Chamber Works of Ruth Crawford Seeger," *Theory & Practice* 35 (2010).
[40] Mark D. Nelson, "In Pursuit of Charles Seeger's Heterophonic Ideal: Three Palindromic Works by Ruth Crawford." *The Musical Quarterly*, Volume LXXII, Issue 4 (1986).
[41] Sharon Mirchandani, "Ruth Crawford Seeger's Five Songs, Suite No. 2, and Three Chants: Representations of America and Explorations of Spirituality." PhD diss., (The State University of New Jersey, 1997).
[42] Cynthia Pace, "Accent on Form-Against-Form: Ruth Crawford's 'Piano Study in Mixed Accents.'" *Theory and Practice* 20 (1995).
[43] Daniel Yi-Cheng Wu, "Ruth Crawford's String Quartet, Mvt. 3: An Analysis of Dynamic Counterpoint, Contour Similarity, and Musical Form." *Intersections: Canadian Journal of Music/Revue Canadienne de Musique* 37, no. 2 (2017).

conducted. All such endeavors are preliminary to a larger project: an adequate appreciation of Crawford's place in American art music, especially within the context of other renowned ultramoderns such as Henry Cowell, Charles Ives, and Edgard Varèse.

Chapter III: Analysis of *Diaphonic Suite No. 2*, Mvt. 1

The four *Diaphonic Suites* were written in 1930 during Crawford's Guggenheim fellowship in Europe; they were written shortly after she began studying with Seeger in 1929. This is the time that Crawford composed the first of her most characteristic works, which will assist in making comparisons with her later works. The four-movement *Suite No. 2* was written for bassoon and cello or two celli. The meaning of the word "diaphonic" is, by implication, the opposite of "symphonic," as discussed by Seeger in his article "On Dissonant Counterpoint" published in *Modern Music* in 1930. The concept is to "sound apart," rather than to "sound together."[44]

The procedures used to analyze the pieces in this and the next two chapters include (but are not limited to) neume analysis, melodic process, large-scale designs, and specific characteristics in counterpoint. The foundation for this plan is derived from methods developed by Joseph N. Straus. Although the following analytical procedures are all interrelated, for heuristic purposes they will be presented separately.

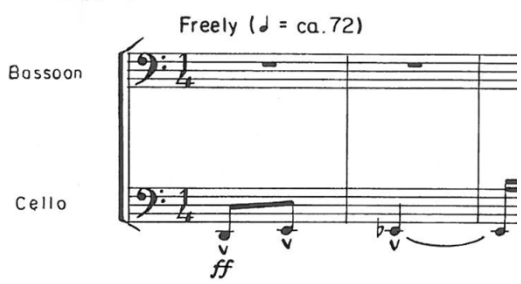
The movement has a characteristic beginning – two eighth notes and a quarter note with the articulation of *marcato* in *fortissimo* in the cello solo (see Figure 3.1). This combination of proportionately longer notes (eighth and quarter) with accents can be seen as an indication of a rhythmic motive, one which will reappear—typically, varied—many times throughout the cello part. The pitch content is even more formative and more directly linked to Seeger's writing, forming what Seeger called a neume.

Neumes are an important device that is used in almost all of Crawford's compositions, becoming even more prevalent after studying with Seeger. Seeger introduced neumes in his treatise

[44] Joseph N. Straus, *The Music of Ruth Crawford Seeger*, (Cambridge, England: Cambridge University Press, 1995), 80.

Tradition and Experiment in the New Music. He claimed that a neume is the "smallest melodic unit,… a single stenographic symbol which signified to the performer both tonal and rhythmic progress."[45] He also emphasized that a neume is at least three successive musical events that are defined by their internal progression (musical shape) rather than the points of departure and arrival.[46] In the second chapter of *The Music of Ruth Crawford Seeger*, Straus emphasizes the difference between a neume and a traditional motive, elaborates on the types and contours of neumes, and categorizes the transformation of neumes. He also points out Seeger's identification of two types of neumes: line neumes and twist neumes; a line neume being when all progressions of the neume are in the same direction (e.g., what Straus labels as neume M4, with its pitch succession of <+1, +2>), and a twist neume being when they progress in opposite directions (e.g., what Straus labels as neume M1, with its intervallic succession of <+2,-1>). Perhaps most importantly, here Straus demonstrates how Crawford used neumes to construct her melody and to create connections between the melodies in order to form unity through analysis. These three notes in the beginning motive, with the intervallic value <+2, -1>, establish the prime form of the twist neume M1, Crawford's most commonly used. Undeniably, M1 is of crucial significance in this movement.

Figure 3.1 – Beginning of the movement.



[45] Straus, 21.
[46] Ibid.

In this movement, neume M1 is used in all four of its twelve-tone ordering forms (prime, retrograde, inversion, retrograde-inversion). Different forms of M3 <+1, +1>, M4 <+1, +2>, M5 <+1, -3>, and M6 <+1, +3> from Straus's chart 2.1[47] can also be identified (see Figure 3.2). However, not only were they used less frequently than M1, but Straus also derives them from M1 as variants. This is because each of them contains one identical interval from the various forms of M1. In this analysis, M3, M4, M5, and M6 are included as distinct from M1 in the hope of illustrating a better picture of how Crawford superimposed M1's variants onto itself. There is a danger here: by including so many variants, we are in danger of (in Straus's words), "show[ing] only that her melodies never go for very long without either a semitone or a whole tone."[48] However, they are included here to assist in demonstrating in detail how Crawford constructed a web of neumatic relationships.

Figure 3.2 – Table of neumes.

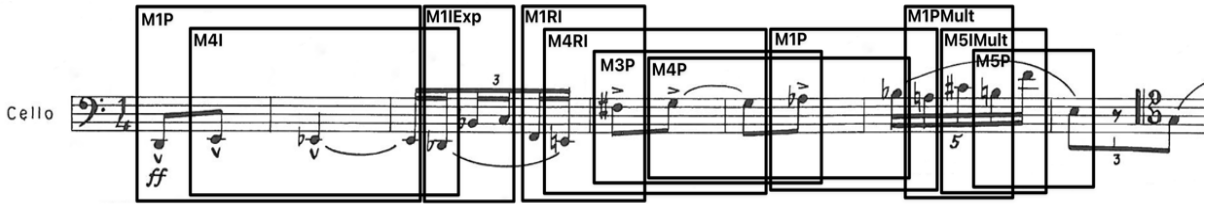
	P	I	R	RI
M1	<+2, -1>	<-2, +1>	<+1, -2>	<-1, +2>
M3	<+1, +1>	<-1, -1>	<-1, -1>	<+1, +1>
M4	<+1, +2>	<-1, -2>	<-2, -1>	<+2, +1>
M5	<+1, -3>	<-1, +3>	<+3, -1>	<-3, +1>
M6	<+1, +3>	<-1, -3>	<-3, -1>	<+3, +1>

I will first focus on neume M1, beginning with the cello part (see Figure 3.3). Please note that, when identifying pitch classes, this study uses note names and numerals interchangeably, with C=0; whatever is lost in precision thereby is hopefully compensated for in intuitive directness. Precise pitches will be indicated with a combination of letters and numerals, with middle C=C4. After the prime of M1 is formed by the beginning three pitches, immediately, the D♭, B♭ and C form the expanded inversion of M1 by adding one semitone to each interval. It is important to

[47] Straus, 33.
[48] Ibid.

understand that neumes should be calculated based on pitch-class intervals, not pitch intervals. Therefore, the aforementioned pitch-classes form a twist neume even though the notes are ascending. The following F, E, and F♯ form the retrograde inversion of M1. In m. 5, A♭, B♭, and A♮ form another prime version of M1. The same A♮ and the following C♯ and B♮ form the multiple of M1 prime. Other related cells are formed by groups that overlap these discrete groups. The E in m. 1, E♭ in m. 2, and the D♭ in m. 3 form the inversion of neume M4. In m. 3, E♭, D♭, and B♭ form an expanded inversion of M4 by adding one semitone to each interval: <+1, +2> is expanded to <+2, +3>, which is then inverted to <-2, -3>. The last note in m. 3, E♮, and the F♯ and G in m. 4 form the retrograde inversion of M4. F♯, G, and A♭ create the prime of M3, then G and the following A♭ and B♭ construct the prime of M4. The C♯, B♮, and F in m. 6 is the multiple of the inversion of M5, and finally, the last two notes in the same measure, B♮ and F combined with the following E in m. 7 form the inversion of M5.

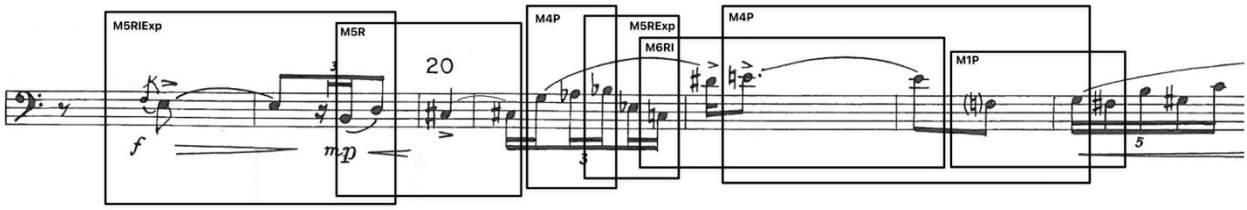
Figure 3.3 – Neume Analysis, cello mm. 1-7.



Turning to the opening of the bassoon (see Figure 3.4) and skipping the beginning grace note (which participates in a structure-forming strategy that will be addressed later), the E in m. 18, B, and D in m. 19 expanded the retrograde inversion of M5 <-3, +1> by adding two semitones to each interval. The same B and D produce the retrograde of M5 <+3, -1> with the following C♯ in m. 20. The G, A♭, and B♭ in m. 21 form the prime of M4 <+1, -2>. The same B♭ and the remaining two notes in this measure, E♭ and C, expanded the retrograde of M5 <+3, -1> by adding

two semitones. The same C, along with the D♯ and E♮ in m. 22, form the retrograde inversion of M6 <+3, +1>. D♯ and E in m. 22, and F in m. 23 in chromatic progression form the prime of M3 <+1, +1>. The same E and F in m. 23, and the following G once again construct the prime of M4 <+1, -2>, and the F in m. 23, G and F♯ in m. 24 produce the prime of M1 <+2, -1>.

Figure 3.4 – Neume analysis, bassoon mm. 18-24.



Although both M1 and M4 contain the same intervallic values (one whole-step and one half-step), they differ in the contours that they project. The other neumes that we have identified—that is, M3, M5, and M6—are variants of M1. In other words, the construction of these melodies are built on M1 and its transformations, with no notes falling outside this network of M1-related neumes. The forms of neumes and their transformations are superimposed and intertwined, as if each new pitch is evolved from the older ones. This illustrates Straus's observation that "Crawford's melodies often give the impression of living organisms, like amoebas that change shape as they move. They expand and contract, surge forward and hold back, twist and turn, move forward and shrink back, and, all the while, their intervallic identity shifts and changes."[49] This leads us into Crawford's melodic process.

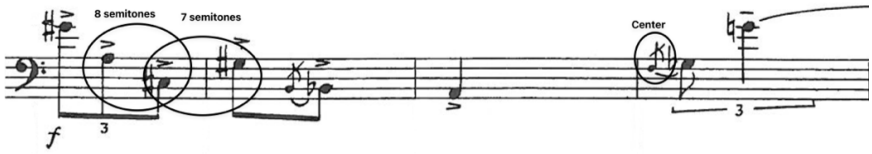
Straus organizes Crawford's melodic process methods into the following categories: ASSERT, OPEN, CENTER, FILL, ADJOIN, RICH, and PIVOT. Each of these shall be considered in turn, with representative rather than exhaustive illustrations. Crawford would "assert" a first note as a necessary, and necessarily unprepared, starting point, from which further developmental

[49] Straus, 41.

processes would grow. She then would add a second note to create an "opening" from the initial note, and characteristically "fill" the opening using all of the chromatic pitch-classes in between. The contour of M1 demonstrates this pattern perfectly, as the opening between the pitch-class interval <+2> is filled by the following <-1>.

Both the "center" and "pivot" methods revolve around inversions. With the "center" method, once an open space is established, the melody moves towards the vertical center of the space (the pitch that is equidistant between the pitches that establish the "opening"). The center process is not only seen in all the prime and inversional forms of M1 in the movement with a span of <+2>, the smallest opening possible, but it is also used to bisect larger intervals, as seen in mm. 39-42 in the bassoon melody (see Figure 3.5). The span here, which is between A3 and C♯3, contains eight semitones. The vertical center of the span is F3, which appears as the grace note later in m. 42. The same C♯3 and the following G♯3 creates another opening with seven semitones. The vertical center is dyad E3 and F3; although the E3 is not present, F3 is heard in the same grace note in m. 42.

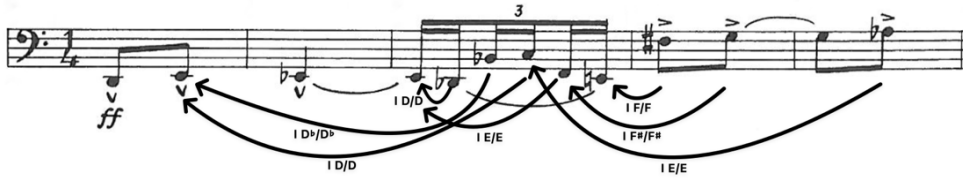
Figure 3.5 – Bassoon, mm. 39-42.



On the other hand, a "pivot" is defined by Straus as a single note or pair of notes that create pivot points, or centers of inversion, for other notes outside the previous span. This can happen in several ways. It can be done by inverting earlier notes based on the most recent note, or most recent notes based on the earlier notes; it can invert higher notes around lower ones, and lower notes

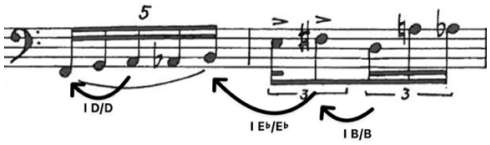
around higher ones.[50] Using Straus's method, we can deduce that the D♭ in m. 3 of the cello can be interpreted as the result of inverting the E♭ in m. 2 through the beginning D (see Figure 3.6). The next note, B♭ in m. 3, can be the result of inverting the second note, E, through the previous D♭. Inverting the previous E through D will give us the next note, C. Inverting the previous E♭ through E will give us the next note, F, and the F♯ in m. 4 is established by inverting the previous E through the F before it.

Figure 3.6 – Pivot analysis, cello mm. 1-5.



In mm. 9-10, the cello melody is in a brief pivoting chain (see Figure 3.7). The first three notes, C, D, and E are in the relationship that C and E are inversions through D. The F in m. 9 and the C♯ in m. 10 are inversionally related through E♭ in m. 9. The B, C♯, and A in m. 10 are in the same relationship, A being the inversion of C♯ through B. Many other instances of pivot can be found in this movement.

Figure 3.7 – Pivot analysis, cello mm. 9-10.

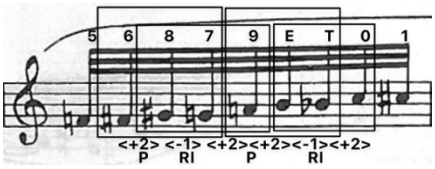


RICH represents RI-chain. When the last two notes of a motive become the first two notes of its retrograde inversion, the prime and retrograde inversion of the motive overlaps, creating a RI-chain. The most condensed use of RICH in this movement is in the ending cello line (see Figure

[50] Straus, 44.

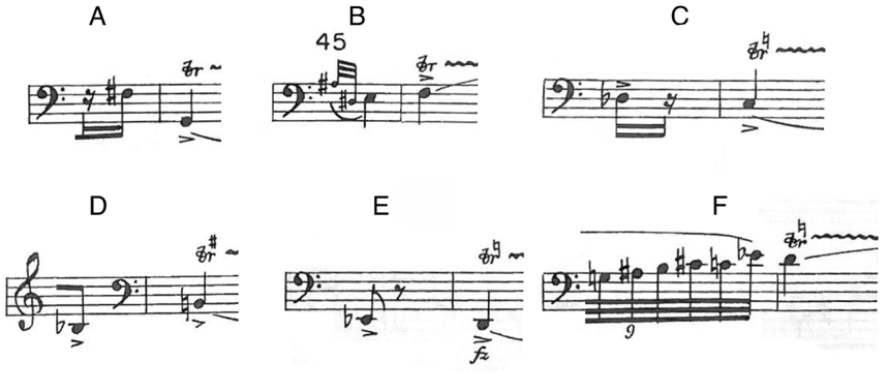
3.8). In m. 65, F♯, G♯, G♮, and A♮ form the RI-chain of M1. The same A♮, and the next three notes B, B♭, and C form another. This means that two RI-chains are overlapping by one note. Since these pitch-classes are repeated in m. 66 in a higher register, the same RI-chains recur an octave higher.

Figure 3.8 – RI-chain, cello m. 65.



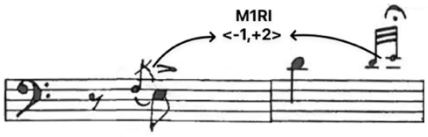
Adjoin is when a new melodic note is appended to the top or bottom of a chromatic collection. In this movement, adjoin is used extensively at the beginning of trills. For example, in the trill in the cello part in m. 27, G is a tone above the previous note F♯; the G adjoins the F# (see Figure 3.9A). Similarly, in the trill in the bassoon part in m. 46, the F is a semitone above the previous E, which it therefore adjoins (Figure 3.9B). The C of the next trill in the bassoon in m. 49 is a semitone below the previous D♭ (Figure 3.9C), and the trill in the cello on B in the following measure is a semitone above the previous B♭ (Figure 3.9D). Lastly, the two trills on D, including both the trill in the cello in m. 58 (Figure 3.9E) and the trill in the bassoon in m. 62 (Figure 3.9F), begin a semitone lower than the previous E♭. Each of these auxiliary notes adjoins the main note of its trill.

Figure 3.9 – Trills.



Returning to the beginning grace note of the bassoon melody, F and E are one semitone apart, which not only can be seen as an adjoining relationship with the F♯ and G in the cello (creating chromatic saturation), it also fits the criteria of one intervallic value of M1. When combining them with the next pitch, B, it seems that the intervallic values belong to none of the forms or the transformations of M1. Interestingly, however, the ending two grace notes of the movement in the bassoon, D and E are a whole-tone apart, therefore the interval between the first two notes and the interval between the last two notes in the bassoon melody form the retrograde inversion of M1 (see Figure 3.10). This is an extreme example of the phrase neume, which Seeger explains by saying, "Important tones in the phrase form among themselves what may be called the *phrase-neume*… In this way a kind of form-neume evolves which assist in the organization of even the largest masses."[51] This illustrates Straus's statement that "a motive may be projected over a large musical span, through the association of salient surface events."[52]

Figure 3.10 – First and last measures of the bassoon melody.

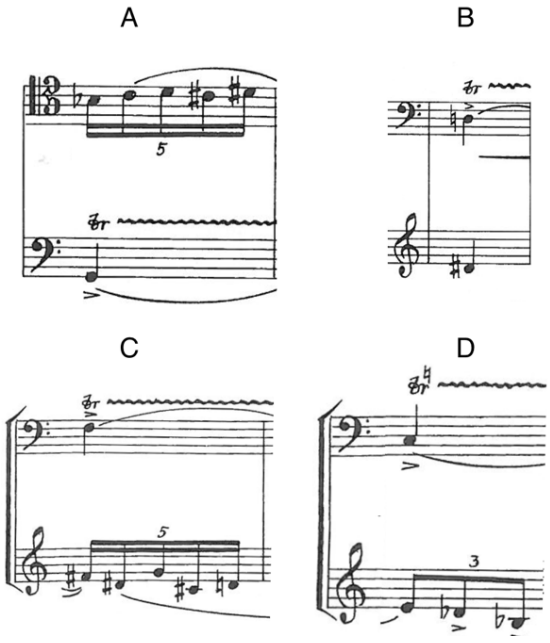


Because trills are such a characteristic feature in this movement, it would be worth inserting some observations about them into the discussion of melodic processes. The first trill begins in the cello in m. 27 and lasts for four measures. At the beginning of the trill (see Figure 3.11A), the bassoon is playing B♭ against the trilled G and A in the cello. These three pitch-classes across the two melodies form one semitone and one whole-tone, the same intervals that construct M1. In m. 32 of the bassoon part, the trill again appears, lasting for three measures. While the bassoon is trilling between D and E, the cello begins with D♯ an octave higher (Figure 3.11B). These three

[51] Straus, 57.
[52] Ibid.

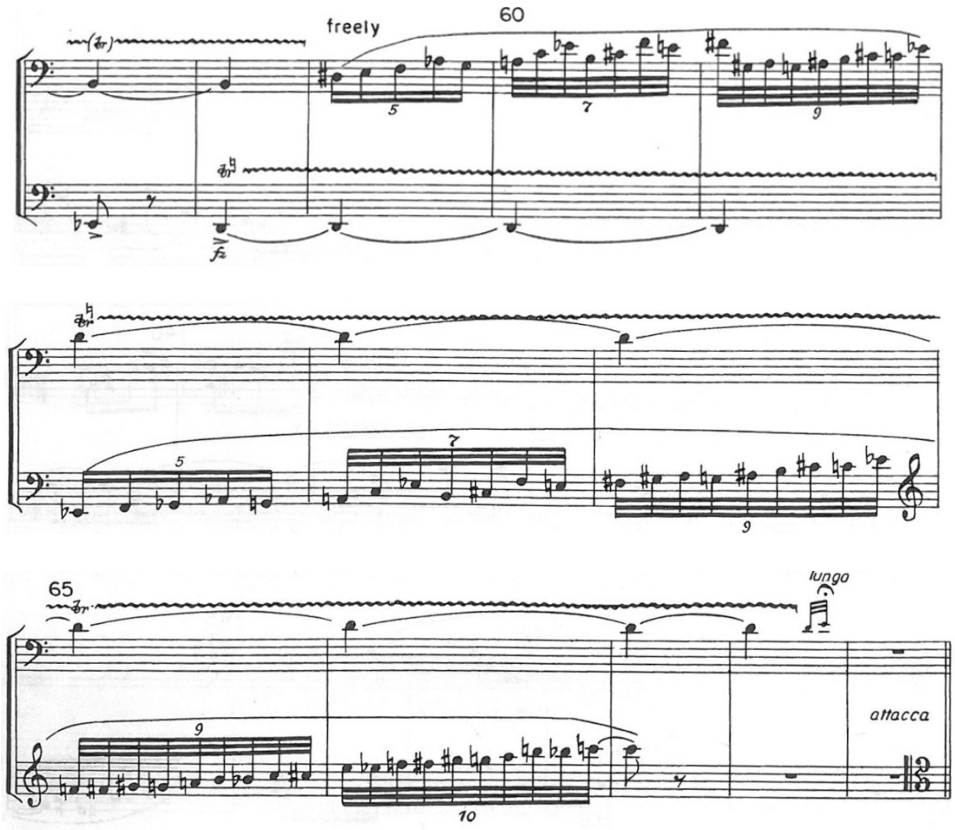
pitch-classes reflect Crawford's concern towards chromatic saturation. The trill feature then takes a break for eleven measures, reappearing in the bassoon in m. 46. Similarly, at the beginning of the trill, the cello is playing F♯ against the two trilled notes, F and G, creating a chromatic cluster (Figure 3.11C). In m. 49, while the bassoon is initiating a new trill between C and D, the notes in the cello are E♭ and D♭, which again creates a chromatic cluster (Figure 3.11D). The remaining trills are all in this adjoined fashion with the other voice, creating chromatic clusters.

Figure 3.11 – Beginning of trills.



Additionally, the first pitch of the movement, D, is significantly emphasized by the trills that occur at the end of the movement (see Figure 3.12). Starting from m. 58, the trilled D is held first in the cello for four measures, then immediately handed over to the bassoon in m. 62 till the end. The movement departs from pitch-class D and returns to it; this structure was intentionally planned and carefully executed by Crawford.

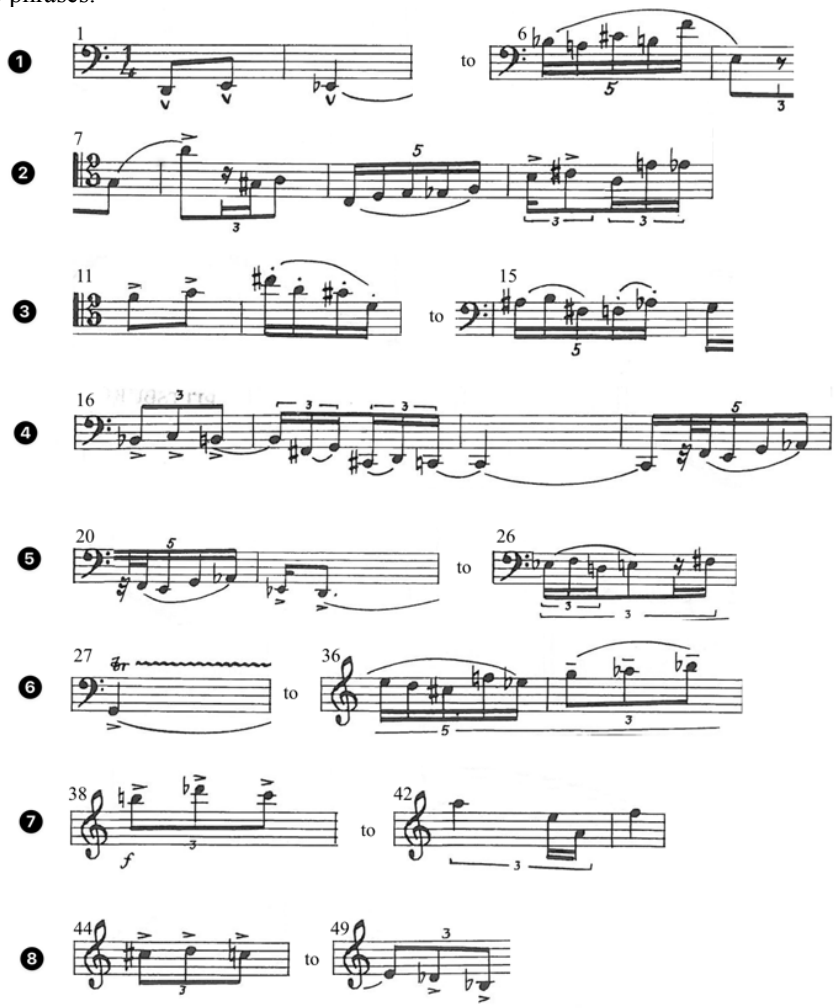
Figure 3.12 – Measures 58-69 (end).



Another element that is related to the large-scale compositional plan is the form of this movement. If we return to the beginning three-note motive, it keeps being repeated, as if the cello melody starts again and again. By defining each motive, especially the first two eighth notes, accented, a major second apart, as well as considering other factors such as the use of neumes, articulations, and pacing, the cello melody before m. 50 can be divided into eight phrases. Phrase one starts at the beginning of the movement and ends at the clef change in m. 7. Phrase two picks up where phrase one leaves off, at the end of m. 7, and ends in m. 10. Phrase three begins on m. 11 and ends on the first note of m. 16, while phrase four begins on the second note of m. 16 and goes through to m. 20. Measures 20-26 comprises phase five, and mm. 27-37 comprise phase six. Measures 38-43 make up phrase seven, and phrase eight includes mm. 44-49 (see Figure 3.13). Crawford completed the phrases with shorter-valued notes, creating the contrast of slow and fast,

repose and motion. She also used articulation, augmentation and diminution of value, adding or subtracting notes, slurs, and adding short rests to differentiate each phrase.

Figure 3.13 – Cello phrases.

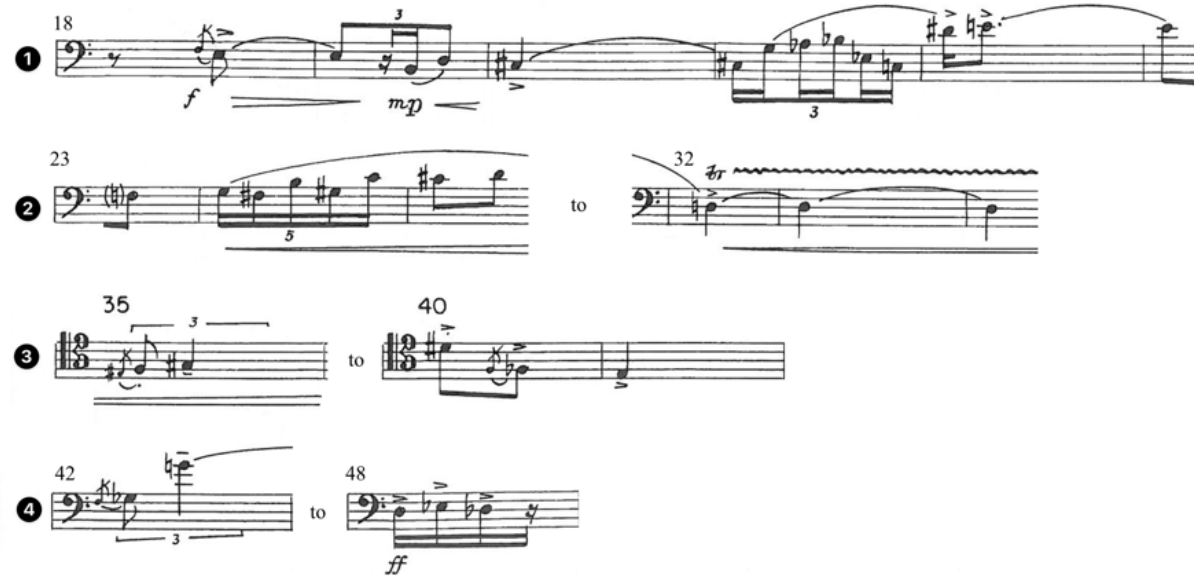


Straus explains in his book *The Music of Ruth Crawford Seeger*, that verse form (defined in the glossary) is used in the four *Diaphonic Suites*.[53] Unlike the *Diaphonic Suite No. 1*, in which phrases are marked by line breaks (yielding a variable righthand margin) and in which relative strength of phrase endings are indicated by single vs. double barlines, in the second suite the phrases in this movement are not marked or otherwise indicated by the composer. The division into phrases proposed here is somewhat intuitive. In particular, if phrases were to be divided

[53] Straus, 53.

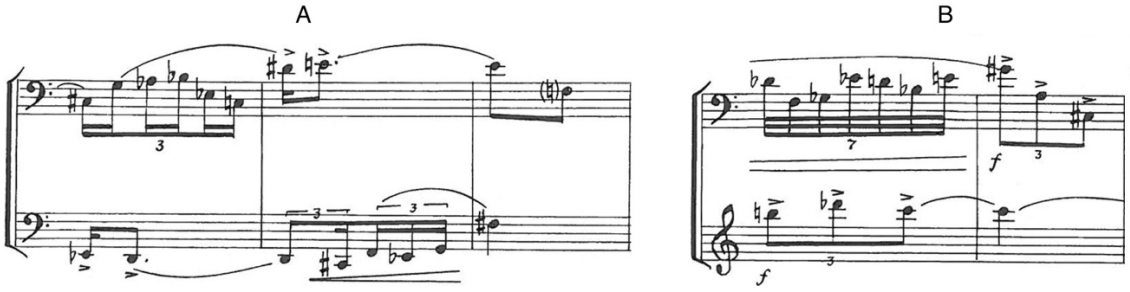
strictly based on the appearances of the motive, the first phrase in Figure 3.13 could be considered as two phrases, parting at the beginning of m. 4. It is considered as one in this analysis due to the fact that the triplet rest in m. 7 creates a stronger sense of pause. Additionally, G, A, and G♯ in mm. 7-8 have a stronger claim as the beginning of the phrase than the F♯, G and A♭ in mm. 4-5 since the latter do not possess the quality of being neume M1. These discrepancies are arguably instances of intentional nonalignment between formal parameters, an instance within the domain of form of the principle of diaphony. This is far from a unique instance of such disruptions: there are other instances when rhythmic patterns, types of neumes, and other elements such as accents do not coincide with each other, or where the coincidence with the sense of audibly beginning a new phrase is an intuitive and contingent—in a word, a musical—decision. With these factors in mind, the bassoon melody before m. 49 can be divided into four phrases (see Figure 3.14), the first being from the beginning of m. 18 to the first note of m. 23, the second lasting from the second note of 23 through m. 34, the third starting in m. 35 and ending at the end of m. 41, and the fourth spanning mm. 42-48.

Figure 3.14 – Bassoon phrases.



When comparing the phrases between the two voices, one can find that certain shared rhythmic motives are placed closely, but never coincide, as if the phrases are deliberately staggered. For example, the rhythmic pattern in the cello in m. 21 (Figure 3.15A), the sixteenth note and dotted eighth note are heard in the bassoon in the next measure, with accent marks on all four of them. This misalignment is emphasized by their pitch content. In the cello, the dotted eighth note, D, and the following note C♯ are deducting one semitone respectively from E♭. In the bassoon, the dotted eighth note, E, and the next note, F, are adding one semitone from D♯, which is also read as E♭. This creates a momentary inversional pivot (a term that will be further explained later) across the two voices, with E♭ as the axis. Another instance in which the shared rhythmic pattern reflects a sense of misalignment in the phrases is between the eighth note triplets in m. 38 in the cello and 39 in the bassoon (Figure 3.15B), again with accent marks.

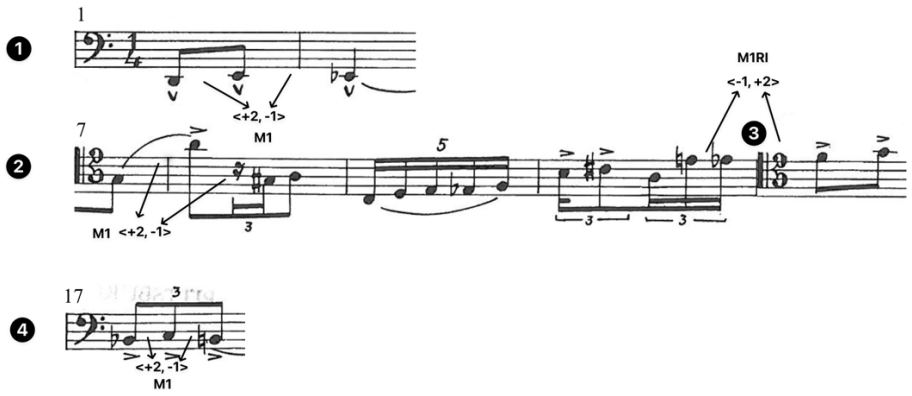
Figure 3.15 – A: mm. 21-23; B: mm. 38-39.



The intervals at the beginning and ending of each phrase use overlap to form additional neumes. Both phrases one and two of the cello melody start with the prime form of M1. The third phrase, by contrast, starts with a whole-step up, but does not immediately go to a half-step down. However, the last two notes of phrase two, E and E♭, and the first note of phrase three, F, form the retrograde inversion of M1, a neume that relies on an overlap between the two phrases. The fourth phrase returns to the earlier practice, beginning by restating the prime of M1 (see Figure 3.16). In some senses, it is almost as if Crawford mischievously decided to hide this scheme by misaligning

the neumes and the phrase; this is, however, more fruitfully understood as an earnest diaphony between neumatic and phrasal structure.

Figure 3.16 – Cello phrase neume analysis.

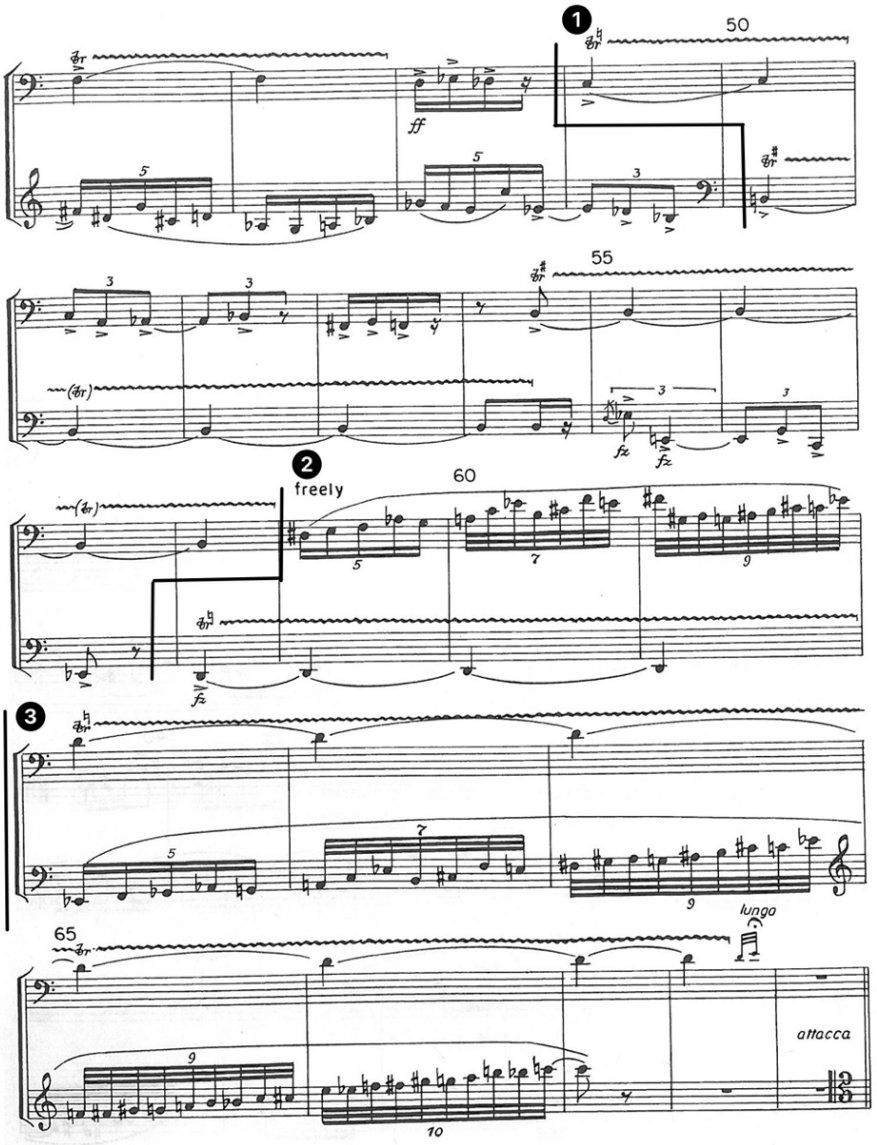


As an additional aspect of design spanning the entire movement, mm. 49-50, mark the inception of a sense of pulling towards a conclusion. Although the two lines possess rhythmic independence throughout this movement, the pitch content becomes codependent to emphasize a return to D. The clue for how to divide the phrases starting from this point is provided by Straus's analysis of chromatic completion, an additional compositional strategy that is prominent in Crawford's works, touched on briefly already. As Straus explains, "it seems to have been a deep aspect of Crawford's individual style, one that predates her contact with Seeger, and persists beyond it…Each phrase or unit tends to occupy a single chromatic zone, either in pitch or pitch-class space."[54] Straus then illustrates mm. 68 till the end of this movement as an example of chromatic saturation operating on two levels, one within the cello part in mm. 65 till the end, one with the cello and the bassoon together. He also states that "The contrast between rhythm and shape of the two parts is reinforced by their lack of pitch-class intersection. They have no notes in common, but together they comprise the entire chromatic."[55] To recap Straus's findings, there are

[54] Straus, 8.
[55] Straus, 12.

three “conclusion phrases,” as determined by chromatic completion (see Figure 3.17). The first such conclusion phrase spans mm. 49-58 in the bassoon and mm. 50-57 in the cello; the second spans mm. 59-61 in the bassoon and 58-61 in the cello, and the third spans mm. 62 until the end for both instruments. These phrases show further use of the intuitive structuring of verse form.

Figure 3.17 – Measures 46-69 (end).



Indeed, the three conclusion phrases each demonstrate and rely upon chromatic completion in the interaction of the two voices, in the manner of one voice holding a long-trilled pitch-class,

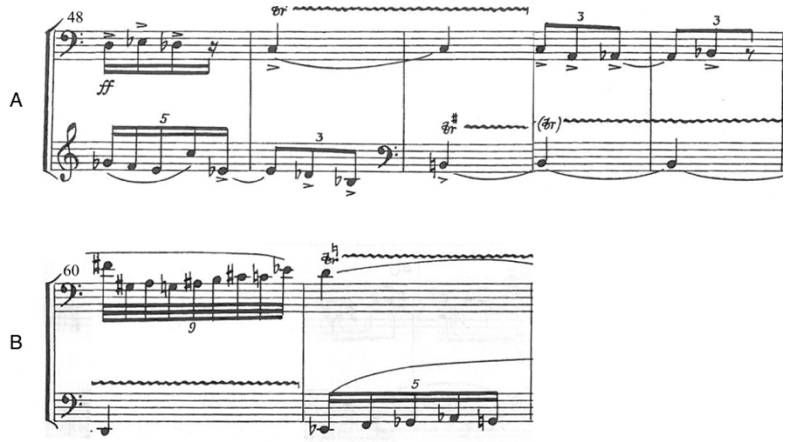
and the other voice playing the complementary set, forming an aggregate. However, Crawford did not supply the complementary pitch-classes randomly; she crafted small intricate designs within these chromatic completions. Thus the beginning motive of the cello melody is restated in the bassoon part in mm. 51-52, with accents and similar rhythmic patterns between A, A♭, and B♭. However, the M1 formed by these notes is in its transposed retrograde inversion. The motive is then repeated in shorter values in m. 53, as a transposed retrograde of M1 formed by F♯, G, and F♮. The opening rhythmic feature of the bassoon part, one grace note that moves a semitone down to an accented eighth note that is tied to a triplet eighth (mm. 18-19), is placed in the cello part in m. 55, with the melodic progression modified to be a semitone up and the rhythm of the previous main note modified to triplet eighth. By switching motivic elements to the other voice, Crawford reinforced the equal importance—and, therefore, paradoxically, the independence—of each melody, even while creating a connection between the two lines. Additionally, she combined the rhythmic motive of the two together in mm. 55-56 in the cello part, as if it was a concentrated version of the two melodies briefly coexisting next to each other.

Another significant melodic process found in the last three phrases and referenced previously is what Straus calls "inversional pivoting." Inversional pivoting is a method Crawford used to create connections between different voices. Straus states that "whatever the intervals formed between them, one melody occasionally exerts a gravitational pull on the other. A single note sustained in one melody can become the fulcrum around which note in the other melody find themselves balancing."[56] While he demonstrates how Crawford used this technique in the second movement of Diaphonic Suite No. 2, I shall demonstrate its relevance to understanding the first movement as well, citing mm. 48-52, 61-62, and 65-67.

[56] Straus, 91.

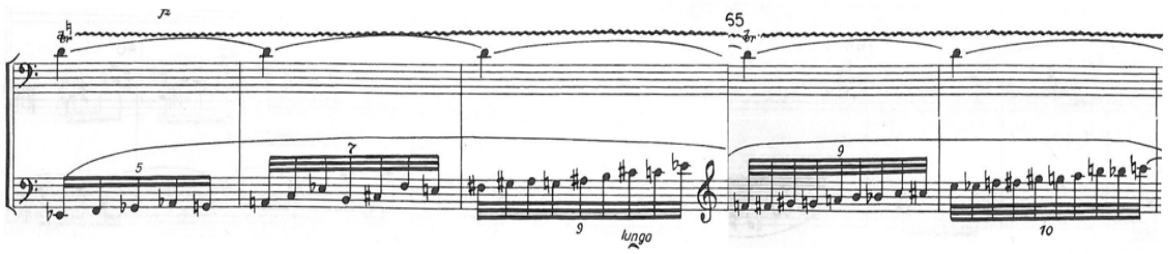
The A, A♭, and B♭ in the bassoon part in mm. 51-52, can be understood as being pivoted from the D, E♭, D♭ that previously occurred in m. 48 about a fulcrum of B and C, which are the starting pitches of the trills in each voice in mm. 49-50 (Figure 3.18A). Inversional pivoting can be found again in m. 62, in which the E♭, F, and G♭ in the cello melody is created as a pivot from the A♯, B, and C♯ in m. 61 in the bassoon melody, with the fulcrum being the D in m. 62 being trilled in the bassoon (Figure 3.18B).

Figure 3.18 – Inversional pivoting.



In the last few measures of the cello line, the melody is running upwards in small values. In m. 62, we see a sequence begin to emerge with the notes E♭,F,G♭,A♭, G, and A (see Figure 3.19). Starting at the last note of m. 64, the whole sequence in its entirety repeats two octaves higher, additionally appending to the previous six notes the supplementing pitches B, B♭, and C. This full sequence is repeated one final time in m. 66, bringing the cello part to a close.

Figure 3.19 – Measures 62-66.



Crawford was able to embed a great number of techniques and disciplines into her melody writing; her large-scale compositional plan is also intricately designed and carefully thought through. She crafted two independent melodic lines that, by many measures, barely share anything in common: at no instance do the two of them play the same rhythmic patterns, the same melodic progressions, or possess the same articulation, contour, or dynamics. The phrases are staggered between the two voices, as if having the two lines begin and end at the same was strictly forbidden. However, the lines interact and influence each other. Once the bassoon melody comes in, the rhythm of the cello melody becomes contrapuntally complementary without compromising its own integrity. For example, when one voice is holding a long note, the other plays fast runs. After establishing the trill feature in each voice, from roughly the middle part of the movement, the number of notes in both melodies are gradually increased, rhythmic values are shortened, and register moves up until it arrives at mm. 38-40, the climax or significant moment of the movement. In these culminating measures, the cello restates the beginning motive in the prime of M1, which is immediately followed by the retrograde of M1 in the bassoon, made strongly emphatic with accents and in a forte dynamic. Nor is the integrity of the bassoon line neglected, since immediately afterwards—in the second half of m. 40—the bassoon restates its beginning motive, a grace note embellishing an eighth-note with the pitch progression of a descending semitone. The melodies then continuously evolve toward the conclusion, with new formal revelations yet to come. The inversional pivoting in the two trills in mm. 48-52 marks the beginning of the conclusion section, as well as creating a bridge between the two lines through their intervallic relations. The conclusion highlights chromatic aggregation, with emphasis towards the beginning pitch-class, D. Needless to say, the neume M1, along with its variants and different forms, are constantly woven and intertwined between the lines. Despite their profound diaphony, then, these melodies are anything

but a random juxtaposition, demonstrating instead a sense of togetherness that is created through the many devices discussed and demonstrated above.

Why does Crawford's music embody such a unique and compelling style? To understand this, we have to return to Seeger's theory of dissonant counterpoint. The ultramoderns intended to abandon the long-reigning European musical influence and seek original paths for American modern music. Seeger, the principal theorist of ultramodernism, was a strong proponent of dissonance, and sought to establish an American identity in the domain of atonality. According to Straus, Seeger believed that "while traditional music was built on a consonant framework with dissonance occurring incidentally within certain conditions, new music should be built upon a dissonant framework within which consonance occurs incidentally and under certain conditions."[57] He suggested that traditional consonant intervals that imply chordal harmony and tonality – major and minor thirds and sixths, perfect fourths and fifths – should be avoided. Any emphasis of a single note or pitch-class could be seen as an implication of tonic, therefore, all notes should be treated as equal in pitch hierarchy, and repetition of any note or pitch-class should be avoided as well. Furthermore, the concept of dissonation should extend beyond pitch organization to all elements of music composition, including rhythm, dynamic, accent, tempo, and form.[58]

Seeger also proposed the idea of heterophony as a framework for dissonant counterpoint. "Heterophony may be accidental, as, for instance, a radio-reception of Beethoven's 'Eroica' intruded upon by a phonograph record of a Javanese gamelan. But from an artistic point of view, a high degree of organization is necessary (1) to assure perfect non-coincidence and (2) to make the undertaking as a whole worthwhile."[59] Straus further explains that "Dissonance is crucial in

[57] Straus, 17.
[58] Straus, 18.
[59] Ibid.

this enterprise, because it guarantees the independence of the parts, their mutual repulsion. When individual lines are bound to each other by consonance, the result is traditional polyphony; when individual lines have exclusively dissonant relations to each other, the result is Seeger's heterophony."[60] That is, Seeger (with input from Crawford and Cowell) devised a strategy for ensuring that two lines would be independent; paradoxically, this independence is achieved by rigorously adhering to the same rules. After gaining understanding and insight into Seeger's theories of dissonant counterpoint, it becomes clear that at this point in her career, they are firmly embedded into Crawford's compositional style.

[60] Straus, 80.

Chapter IV: Analysis of "In Tall Grass"

As previously mentioned, Crawford was introduced to Carl Sandburg while living in Chicago. She composed two cycles, *Five Songs* (1929) and *Three Songs* (1932), based on Sandburg's poems. *Three Songs* was written between 1930 and 1932; "In Tall Grass" being the third and final movement in this cycle, the first two being "Rat Riddles" and "Prayers of Steel." Analysis of "In Tall Grass" demonstrates Crawford's continuation of her characteristic compositional strategies, especially neumes and their transformations, chromatic saturation, manipulation of long strings of pitches, and misalignment. These traits are not merely continued but are expanded, and new elements are added, especially elements of indefinite pitch: unpitched percussion and string glissandi.

The instruments of the cycle are divided into two groups. The foreground group, named "concertanti," includes alto vocalist, oboe, piano, and percussion (high and low Chinese blocks, triangle, tambourine, tam-tam, suspended cymbal, and bass drum). The background group, named "ostinati," comprises clarinet, bassoon, horn, trumpet, trombone, two violins, viola, cello, and double bass. The concertanti-only version of the song was written in 1930 before Crawford's departure to Europe, while the ostinati was added after her return, when she was living in New York. According to Seeger, it was he who suggested that Crawford add the orchestral accompaniment as she prepared *Three Songs* to be published in Cowell's *New Music Quarterly* and submitted to the 1933 ISCM festival in Amsterdam.[61] This addition created a new level of diaphony, which is now expressed between groups as well as between instruments.

Crawford noted in the performance instructions that the cycle can be performed with or without the ostinati. The instructions also state that "the ostinati should be seated apart from the

[61] Tick, 184.

concertanti – if possible, at the rear of the stage." The ostinati serves as what Crawford called "masses of sound" in this movement. She stated that "The various dynamic ostinati should not stand out as individual tones; the rhythmic pattern made by their *crescendi* and *diminuendi* (particularly in the violins and violas) must be distinguishable as unified pulsating masses of sound. The wind ostinati must not intrude."[62]

The text of "In Tall Grass" is:

> Bees and a honeycomb and the dried head of a horse in a pasture corner, —
> a skull in the tall grass and a buzz and a buzz of the yellow honey-hunters.
> And I ask no better a winding sheet (over the earth and under the sun).
> Let the bees go honey-hunting with yellow blur of wings
> in the dome of my head, in the rumbling , singing arch of my skull.
> Let there be wings and yellow dust and the drone of dreams of honey, —
> who loses and remembers? — who keeps and forgets?
> In a blue sheen of moon over the bones and under the hanging honeycomb
> the bees come home and the bees sleep.

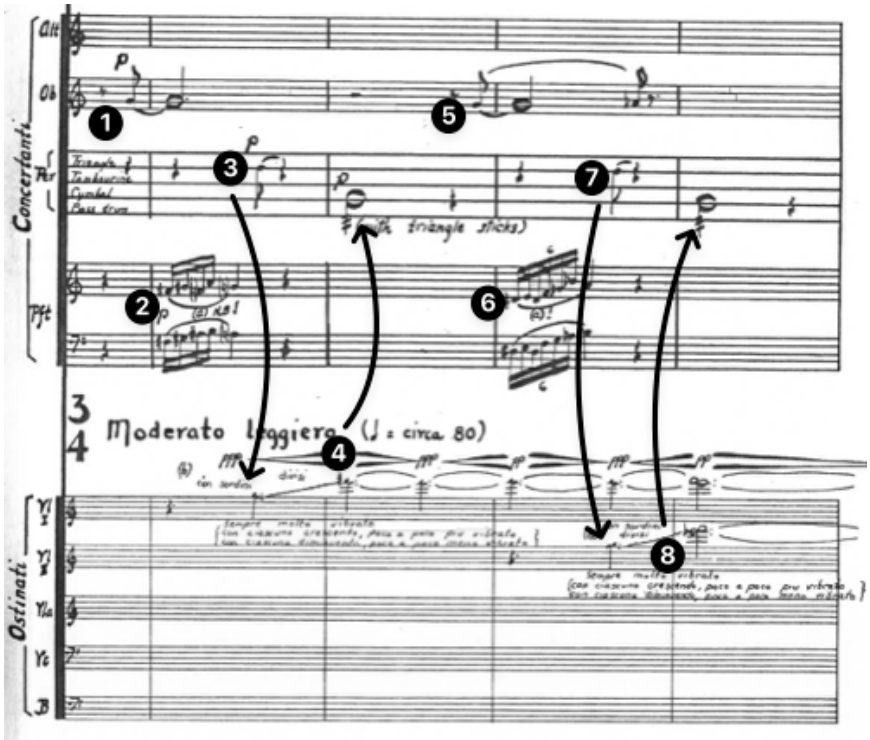
The poem text is in the form of five sentences. In Roger Lee O'Neel's dissertation,[63] he declares that the form of this movement is based on the "shift of mood" of the poem. He divides the movement into four sections, combining the third and fourth sentences into one. Measures 1-19 are the first section, the "narrative description of the nature scene"; mm. 20-39 are the second section, the "poetic musing"; mm. 40-71 are the third section, the "commands, discussion of action"; and mm. 72-93 are the last section, the "return to narrative description."[64] Indeed, the musical structure reflects this division, especially in the concertanti group.

The instrument entrances demonstrate not just patterning, but also misalignment. In the first section, the entrance of each instrument in the concertanti group is in a sequence, and certain concertanti instruments trigger various events in the ostinati group. The movement begins with the

[62] Ruth Crawford, *Three Songs*, (Bryn Mawr, Pennsylvania: Theodore Presser Company, 1931).
[63] Roger Lee O'Neel, "Pitch organization and text setting in songs of Charles Seeger, Ruth Crawford Seeger, and Henry Cowell," PhD diss., (University at Texas at Austin, 1996), 137.
[64] Ibid, 138.

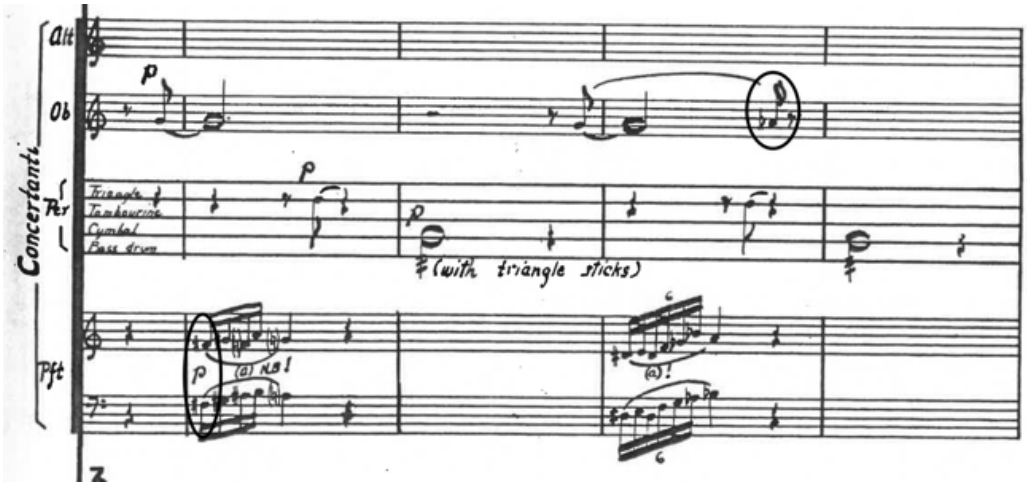
oboe playing G4 for three-and-a-half beats. An eighth note after the oboe starts, the piano comes in on the downbeat of m. 1. Here we also see Crawford begin two different percussion instruments that align with events happening in other instrument or instrument groups. For example, the triangle attacks one-and-a-half beats after the piano entrance, and at the same time, violin I in the ostinati group joins in with a glissando. The violin attack coincides with the triangle (see Figure 4.1). The end of the glissando is timed to coincide with the cymbal at the beginning of m. 2. One half-beat after the cymbal roll finishes, the oboe starts playing G4 again. The piano joins in again a half-beat later, and after another beat-and-a-half, the triangle strikes again, accompanied by another glissando (this time on violin II). In the next measure, the cymbal rolls for two beats again, while both violin I and violin II are sustaining long notes in the upper register. At the beginning of m. 5, cello and double bass join in with Violin I and II, as does the wind ostinati, which are triggered by the bass drum. The sequence in which the instruments begin to play is triggered or signaled by a previous instrument, and this sequence is clearly initiated by the oboe.

Figure 4.1 – Instrument entries.



Another significant feature in the first section is one familiar from the *Diaphonic Suite no. 2*: pitch centricity—in this case, around G. The movement starts with G in the oboe. After another statement of G, the line moves up to A♭ in m. 3. Through inversional pivoting, the A♭ is balanced by the F♯s (the first notes on both hands in the piano) (see Figure 4.2). The pitches in the right-hand part of the piano in m. 1 (F♯, G♯, F♮, A, and G♮) are inversional around G. Furthermore, the pitch centricity is emphasized by the inversional axes. All the pitch-classes in m. 1 in the piano can be seen as inversional around pitch-class 8, and all the pitch-classes in m. 3 can be seen as inversional around pitch-class 6. These two axes are respectively one half-step above and below pitch-class 7, creating axial pitch-class centricity around G.

Figure 4.2 – Pitch centricity around G.

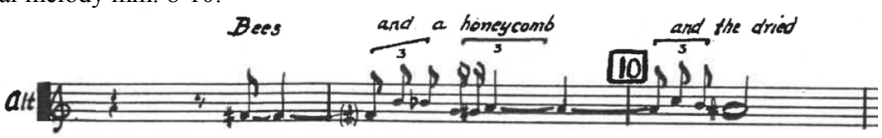


The ostinati group is divided into two subgroups throughout the song, with violin I, II, and viola being in one, and the winds and the cello and double bass in the other. The violins and viola are highly characterized by the use of glissandi. While the continual pitch change of glissandi is an important new element of indefinite pitch, the end points of the glissandi also participate in others of Crawford's characteristic strategies, especially chromatic collections. The first glissando on violin I goes from pitch-classes 5 and 7 to 4 and 6, creating a chromatic cluster. At the same

time, the four pitch-classes are organized into two major seconds. The first glissando on violin II, from pitch-classes 5 and 7 to 3 and 5, also form two major seconds. The first glissando on viola in m. 6 goes from pitch-classes 9 and 11 to 1 and 2. Although pitch-classes 1 and 2 are no longer a major second apart, they form a chromatic cluster along with the pitch-classes in violin I and II (1+2, 3+5, 4+6) in m. 7. The intervallic distance between the instruments in this subgroup and their dynamics keep changing throughout the piece. On the other hand, the other subgroup, the wind and the low string ostinati instruments – cello and double bass – are constantly playing the same pitches each time they appear. In m. 5, the wind ostinati's pitch-classes are T, 0, 8, 3, and 2, and the cello and double bass pitch-classes are 1 and 9 while the upper strings pitch-classes are 3, 5, 4, and 6. The pitches-classes missing from the aggregate are 7 and E. Pitch-class E appears a measure later in the viola part, and pitch class 7 is avoided in the ostinati because it is the focus of the oboe. Thus the ostinati create a texture that is at the same time dependent upon the concertanti through shared intervallic content and attack triggering, independent of it through radically distinct playing techniques (especially glissandi), and interrelated with it through chromatic completion.

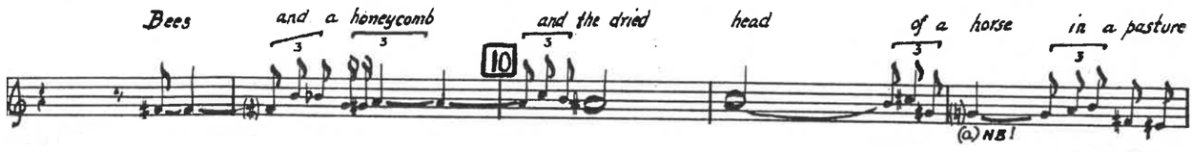
We can also see melodic processes being executed in the vocal melody (see Figure 4.3). It enters in m. 8 by asserting F♯4, followed by B4, therefore creating an opening of five semitones. The dyadic center of this opening, A♭4 and A4, are heard two notes later. The remaining pitches in the opening, G and B♭, are then filled in. The next note, C, is a result of pivoting the beginning F♯ over the previous A. Additionally, the melody is composed of multiple chromatic clusters. For example, the first seven pitch-classes are, in order of entry, 6, E, T, 7, 8, 9, and 0. Chromatic clusters can be found frequently throughout this song.

Figure 4.3 – Vocal melody mm. 8-10.



Since we are considering a song, with the inclusion of a text, Crawford's approach to text-setting deserves examination. The first half of the first sentence of the poem, "Bees and a honeycomb and the dried head of a horse in a pasture corner" contains a number of physical objects such as "bees," "honeycomb," "head," "horse," and "pasture corner." The pitches assigned to these words are almost static, with long note values in step motion. Contrarily, the words connecting these objects, such as "and a" after the first word "Bees," and "and the" after "honeycomb" have shorter values, and are introduced by a leap (see Figure 4.4). For example, the words "and a" on pitches B4 and B♭4 are introduced by the aforementioned five-semitone leap from the previous F♯4. The words "and the" are introduced through a three-semitone leap from A4 to C5. The note values for these connecting words are triplet eighths, a shorter value in comparison to the note values assigned for the objects. Crawford used contrast in both pitch and rhythm to categorize and differentiate words by parts of speech in a manner similar to the pitch contour and rhythmic declamation of ordinary conversation.

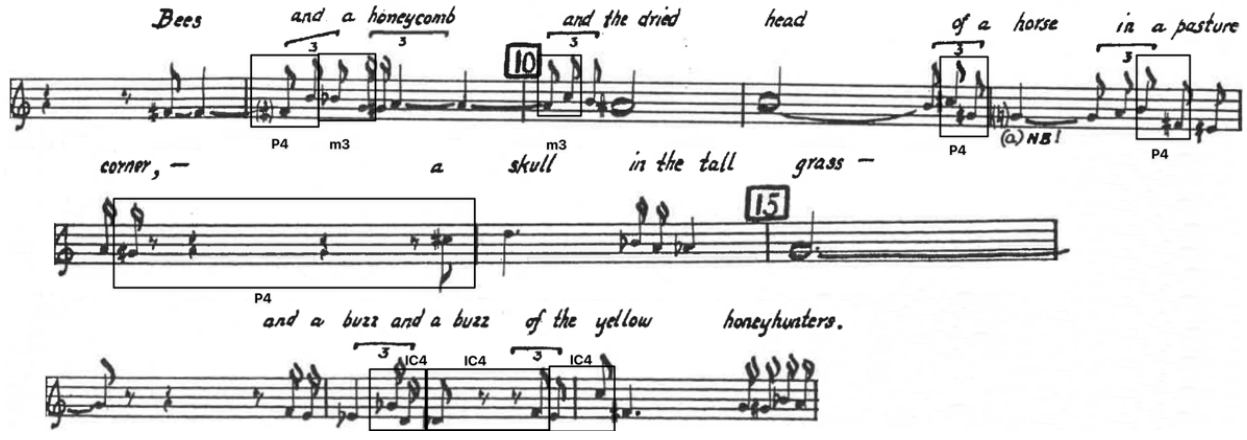
Figure 4.4 – Vocal melody mm. 8-12.



Another element to consider regarding the vocal melody is the recurrence of the specific intervals (see Figure 4.5). The word "honeycomb" in m. 9 is framed by two minor thirds – from B♭4 to G4 in m. 9 and A4 to C4 in m. 10. The perfect fourth between F♯ and B can be found between the words "bees and" at the beginning of the vocal melody, and the "a pas(ture)" in m. 12, with yet another perfect fourth between C♯5 and G♯4 on "of a" in m. 11 between them. The first half of this phrase and the second half, divided by the comma, are connected by another perfect fourth between G♯4 and C♯5 in m. 13. Measures 17-18 (see Figure 4.5) includes three instances

of interval class 4 in the melody, the first is between G♭ and D on "and a", the second is between D♭ and F on "buzz of", and the third is between E and C on "the yel(low)". These instances of ic 4 create links connecting the words in the text. This careful coordination of intervals with text reinforces Tick, who states that "Another powerful influence on linear applications of dissonant counterpoint came from Seeger's interest in the relationship between music and language."[65] She further states that Seeger proposed that many devices such as a particular neume, or a characteristic interval, can recur at different parts of a phrase. She illustrates the reappearance of characteristic intervals through Seeger's song "The Letter," which Crawford had praised for its usage of multiple fifths.[66] Tick further states that Crawford "worked out these principles with great finesse" in her own music. She then demonstrates how Crawford set the text in "Rat Riddles," a text that is shaped by assonance and alliteration rather than rhyme.[67] The recurrence of the intervals listed above stands out from other parts of the melody that are almost in step-motion, creating a secondary sense of scansion.

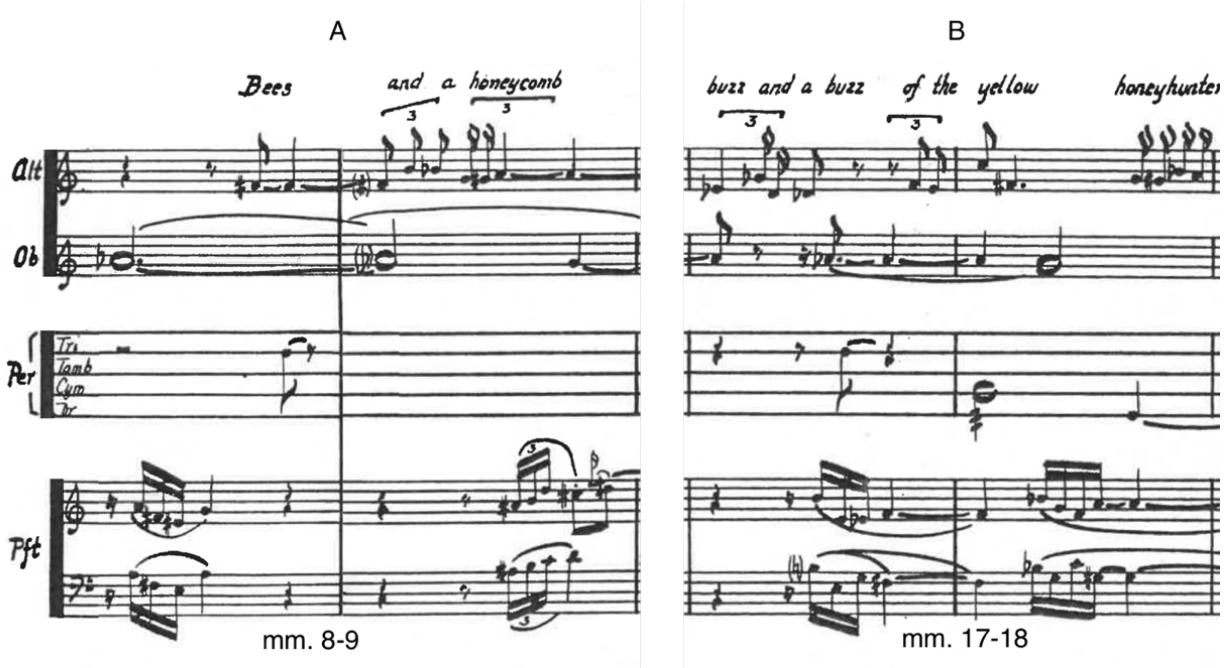
Figure 4.5 – Vocal melody mm. 8-18.



[65] Judith Tick, *Ruth Crawford Seeger: A Composer's Search for American Music*, (New York: Oxford University Press, 1997), 204.
[66] Ibid, 206.
[67] Ibid.

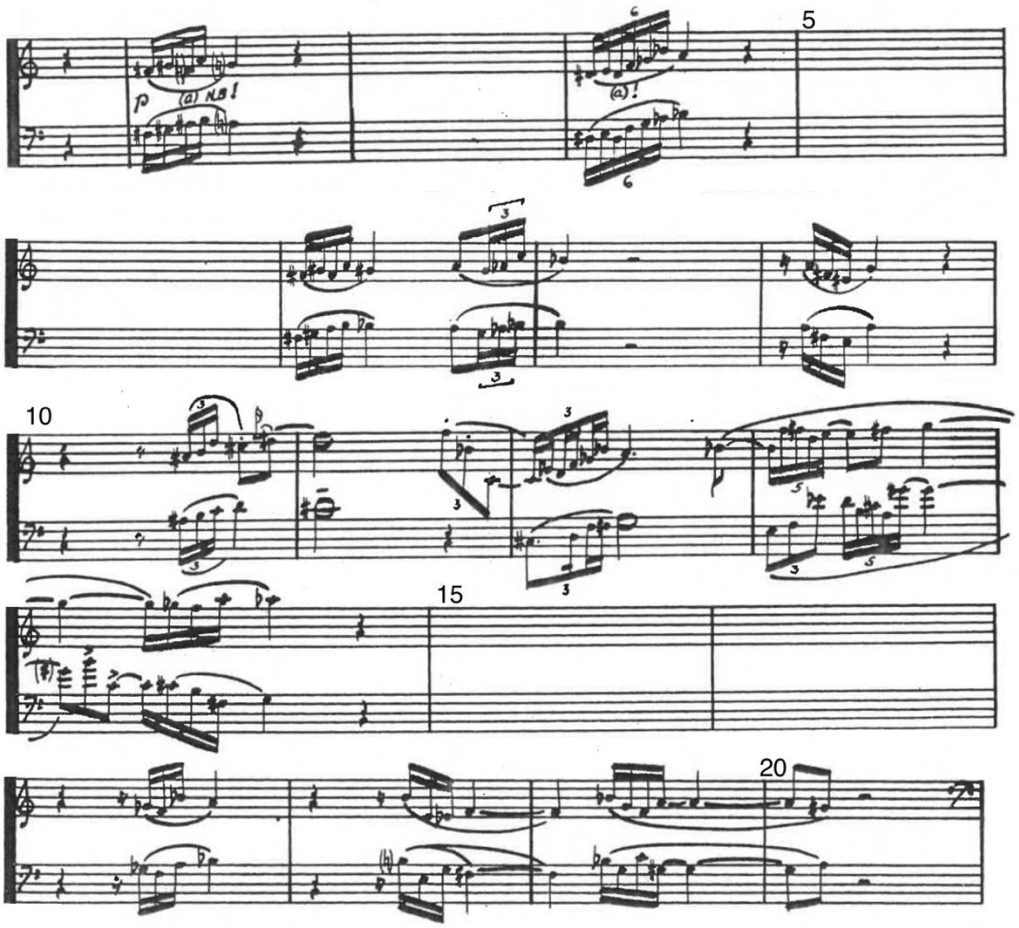
As previously stated, the instrumental entrances are in a fixed order at the beginning. However, changes to the timing between successive events of this pattern emerge, beginning in m 8 (see Figure 4.6A). While the order of instruments stays the same here, the timing is altered, since the piano comes in a mere sixteenth note after the oboe, which is a sixteenth note earlier than before. It is followed by the triangle one-and-three-quarters beats later, which is a sixteenth note later than before. Furthermore, the triangle appears by itself, without its counterpart – the cymbal – in m. 9. These cumulative small changes in the timing of the instrument entrances eventually result in the order of their entrances being altered. By m. 17, the oboe and the piano come in at the same time, and the triangle follows a mere sixteenth note later (see Figure 4.6B). Nonetheless, the bass drum still comes in on the same beat with the wind and low strings ostinati in m. 18. In the context of Crawford's musical language, this can be seen as dissonating (or misaligning) a serial ordering of instrumentation.

Figure 4.6 – Dissonating a serial ordering of instrumentation, A: mm. 8-9, B: mm. 17-18.



The piano part from m. 1 to the first two beats of m. 10, then again from m. 16 to m. 19, repays close analysis, since its details not only demonstrate many of Crawford's characteristic melodic strategies, but also demonstrate their growth. The first pattern to be explored concerns the change from octaves to note-against-note counterpoint. That is, at each entrance, both hands begin with octave doubling, then drift apart into counterpoint (see Figure 4.7). Moreover, from m. 1 to m. 10, the rhythmic pattern of this move from octaves to counterpoint keeps changing, with different numbers of amount of notes in an octave and in counterpoint, and these changes create a larger design. The first entrance has two notes in an octave, and three notes in counterpoint. The second has four notes in an octave, and three notes in counterpoint. The next entrance in m. 6 has two notes in an octave, and three in counterpoint, and so forth. This identical pattern is repeated later in the piano part in section three. The culmination of this pattern of generalized growth arrives in the last beat of m. 10, where the left and right hands become completely contrapuntal. The next passage addresses a second strategy, the transformation of neumes. The C, E♭, D, and F in the right-hand part in m. 11 result in the inversion and the retrograde of neume M5 <+1, -3> (which is a partial expansion of the retrograde of M1), with two notes overlapping. A final strategy demonstrated in this passage is that of chromatic completion or saturation. This is not as relevant at the beginning of the counterpoint, starting with the anacrusis on m. 10, and it is not coincidental that the rhythmic patterns between the two hands are mostly different here. However, after the first beat in m. 13, the rhythm in both hands become identical again. It is at this point of rhythmic unity, which arrives in m. 13, that the right hand has the five notes G, G♭, F, A, and A, which are inversionally complementary around G. This not only further demonstrates pitch centricity around G, but also creates a chromatic cluster.

Figure 4.7 – Piano mm. 1-19.

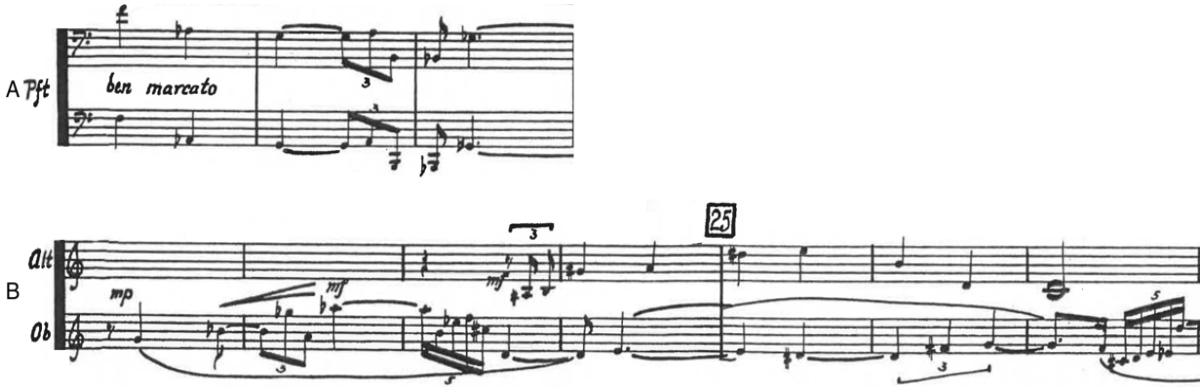


Crawford made small adjustments to the distances between the instruments, causing their phrases to stagger and misalign until the pattern disappeared. We see this start to unfold in section two. The staggering of phrases throughout section one results in the change of the order of instrument entrances in this section. At the beginning, after the last cymbal roll in m. 20, the piano comes in on the second beat. One-and-a-half beats later, the oboe follows, and then the voice comes in four-and-a-half beats after the oboe's entrance. The order of entrance of the oboe and piano is reversed from the beginning of section one, and the distances between the entrances among the three concertanti instruments are different as well. There is no more counterpoint in the piano in this section; notes in both hands move in parallel octaves. The closely-related combination of triangle-cymbal takes a short absence until m. 38. Furthermore, the lines in all three instruments

(voice, oboe, and piano) become more continuous, with fewer rests in between the phrases. These changes indicate that this is a new section.

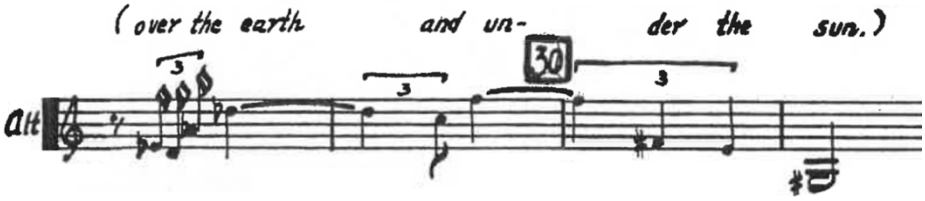
The melodies often go to their chromatic neighbors to form larger chromatic collections. For example, the pitch-classes of the first piano phrase in mm. 20-25, within hyphens to emphasize the semitones, are 4-5, 8-7, 9, E-T, and 6 (see Figure 4.8). Note that 9 is chromatically related to both the previous and the subsequent dyad, and that the whole forms an eight-note chromatic cluster. These pitch-classes can also be seen as inversionally complementary about the axis 7/8. Moreover, chromatic completion is formed not just within voices but also between them. For example, the first phrase in the oboe melody from m. 21 to the first note of m. 24 contains pitch-classes 1, 2, 3, 5, 6, 7, 8, 9, T, and E, lacking only 0 and 4 to form a complete aggregate. The second phrase starts with the absent pitch-class 4. The remaining missing pitch-class from the aggregate, 0, cannot be found in the oboe melody until m. 30. However, it occurs in the vocal part, assigned to the word "sheet," in m. 27. At the same time, the pitch-classes in the voice for the phrase "And I ask no better winding sheet" are 0, 2, 3, 4, 8, 9, T, and E. The remaining pitch-classes from the aggregate (1, 5, 6, and 7) can be found in the oboe part in mm. 26-27. Such cross-voice chromatic completion creates a connection between the lines.

Figure 4.8 – Chromatic clusters and inversions, A: piano mm. 20-25, B: voice and oboe mm. 22-25.



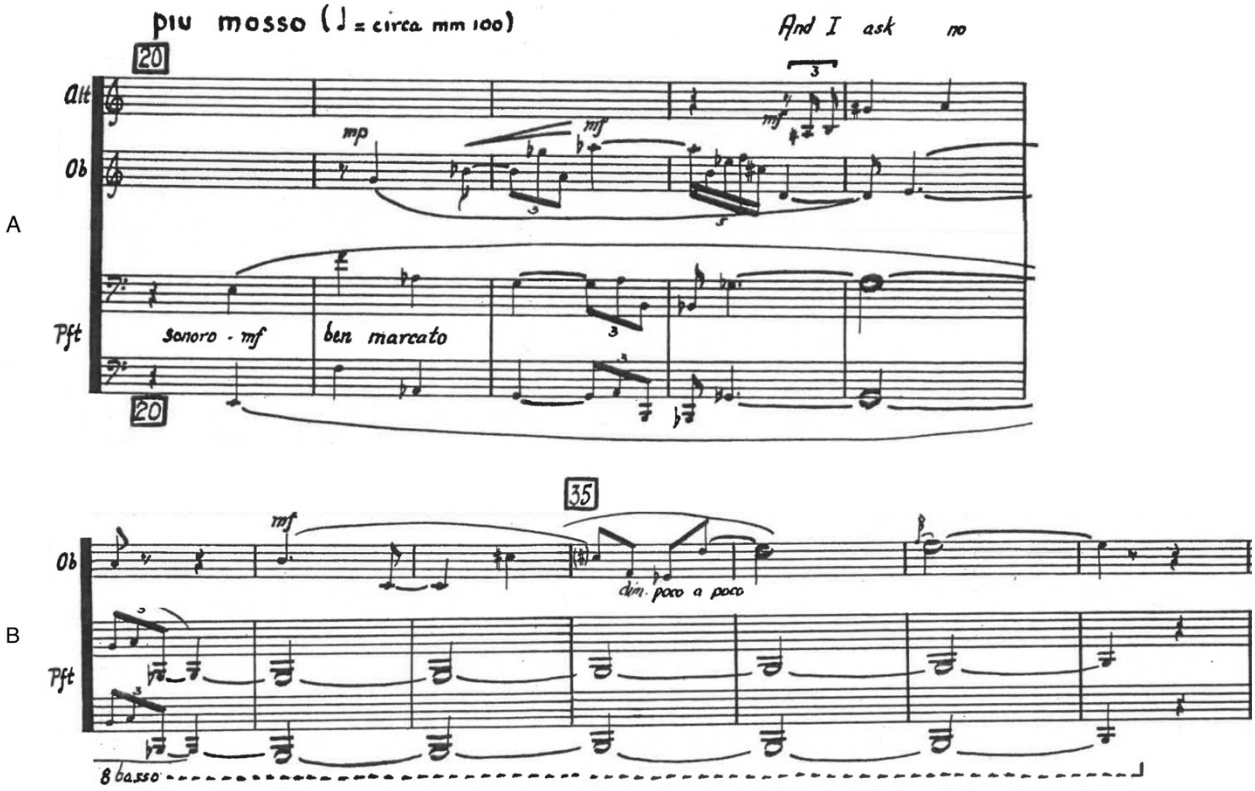
The vocal melody includes a point of text-painting, allowing consideration of Crawford's strategy in this area. Specifically, mm. 28-29 contains two progressions of perfect fourths, between A♭4 and D♭5, and C5 and F5 (see Figure 4.9). What is interesting about this line, is that the text "over the earth" is assigned to an ascending line, and "under the sun" is assigned to a descending line, with the word "under" on the highest note in the vocal part, F5, and the word "sun" being the lowest note in this vocal part, G♯3, demonstrating the upper and lower registral boundaries. This type of text painting does not have a strong presence in this piece. This phrase demonstrates Crawford's ability to assimilate the meaning of the text into her music, showing that the lack of such text painting in other places was a deliberate artistic choice.

Figure 4.9 – Vocal melody mm. 28-31.



This section, too, shows Crawford's characteristic melodic processes. Just as in section one, the oboe melody begins with G4. The beginning pitch-class of each line, T in the voice, 7 in the oboe, and 4 in the piano form an inversional pivot, with T and 4 inversionally complementary around 7. Another inversional pivot occurs between the oboe and the piano. In m. 32, the three pitch-classes in the piano are E, 0, and T. The pitch-classes in the oboe in the following two measures are E, 0, and 1. Pitch-class 1 can be seen as a result of pivoting pitch-class T about the axis of E and 0 (Figure 4.10 A). The oboe's pitch classes in mm. 33-38 (E, 0, 1, 5, 3, 2, 5, and 4) create a chromatic cluster. They can be understood as inversionally complementary about an axis of D (Figure 4.10 B). This reflects the consistency of Crawford's melodic process.

Figure 4.10 – A: ostinati group mm. 20-24, B: oboe and piano mm. 32-38.



The beginning of the third section is another demonstration of Crawford's typical procedures. Notes that are inversionally complementary can be found between three voices of the pitched concertanti instruments. For example, the pitch-classes in mm. 43-44 in the oboe melody (see figure 4.11) are 8, 9, T, 7, and 6. They are inversionally complementary around 8. The last three pitches in the previous measure (B4, B♭3, and C4) are, as pitch-classes E, T, and 0, the chromatic neighbors of the previous chromatic collection. The pitches in m. 45 (E5 and F4), considered as pitch classes 4 and 5, are also chromatic neighbors to the previous collection, creating an even larger chromatic collection.

Figure 4.11 – Oboe mm. 42-45.

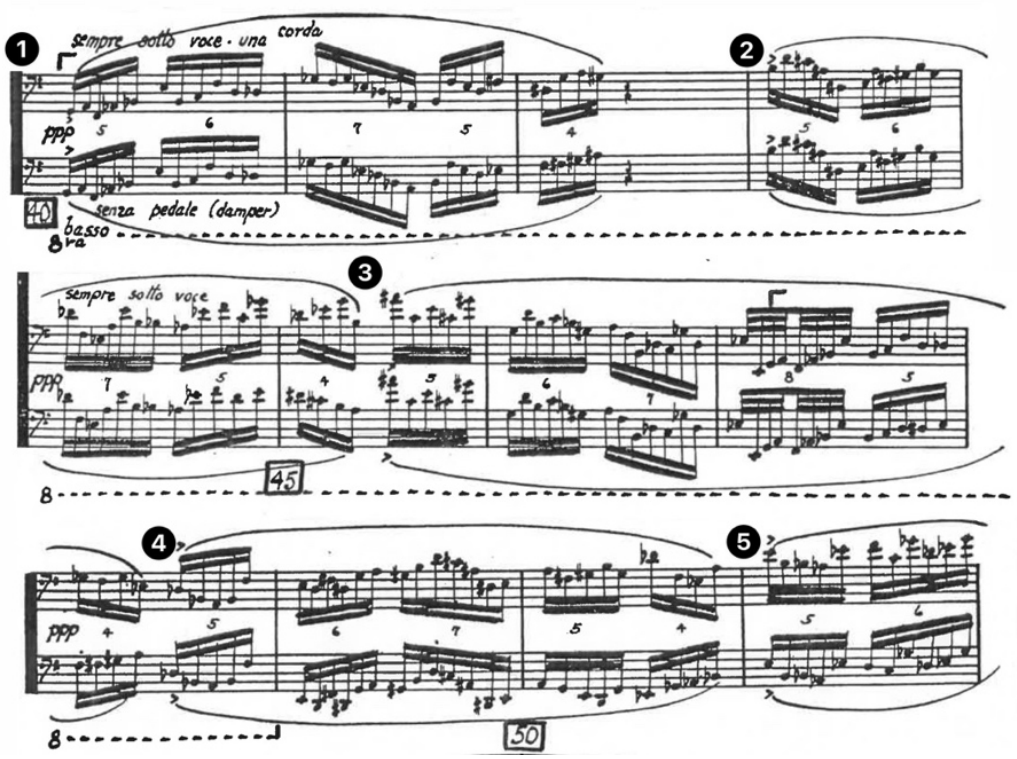
Meanwhile, the most significant feature of this section is in the piano part. This passage, the heart of the movement, requires and merits close scrutiny. The piano part is very distinctive for several reasons, all of which have to do with initiating and modifying patterns. First, there is a seventy-four-note sequence that is repeated four times, with the last entry truncated. This sequence is addressed by Straus in his discussion of precompositional plans and patterns.[68] Since Crawford used brackets to indicate the beginning of each repetition of the sequence, her structural intent is clear. Second, Straus also points out that the entire piano part can be divided into nine rhythmic phrases based on a 5-6-7-5-4 notes-per-beat sequence, with two phrases (three and seven) expanded, and with the last phrase truncated. Crawford used slurs to indicate the rhythmic phrases (see Figure 4.12). Third, both hands play the same pitch-classes in octaves at the beginning of each rhythmic phrase, then drift into counterpoint at the end. This structure can be traced back to the piano part in section one, where a similar pattern is used in shorter successions. When the two hands are playing in counterpoint, the seventy-four-note sequence continues in the right hand; the left hand plays counterpoint in the same rhythmic pattern as the right hand. Fourth, in each rhythmic phrase, the number of notes in an octave keeps reducing by one, and the number of notes in counterpoint keeps increasing by one (except for the expanded phrases three and seven). In the first phrase, there are twenty-two notes played successively in an octave and five in counterpoint. In the second phrase, there are twenty-one notes in octave and six in counterpoint. If phrase three were to keep following this scheme, it would have twenty notes in octave, but instead, it has twenty-eight. However, the number of notes in counterpoint is seven, which fits the scheme. The same applies with phrase seven: the number of notes in counterpoint follows the pattern, but the number of notes in octave is expanded from sixteen to thirty-one, with fifteen notes added. Lastly,

[68] Straus, 119.

the seventy-four pitch-classes do not stay in the same octaves in each repetition. In m. 52, the lines on both hands are shifted an octave higher than before by changing register of the last note in the measure, G♯. One note later, the lines are shifted another octave higher through the B in m. 53. Both hands then stay in these octaves for roughly four beats, until changing registers once again in m. 55. In m. 63, both the left and right hands are respectively three and four octaves higher than their original appearance.

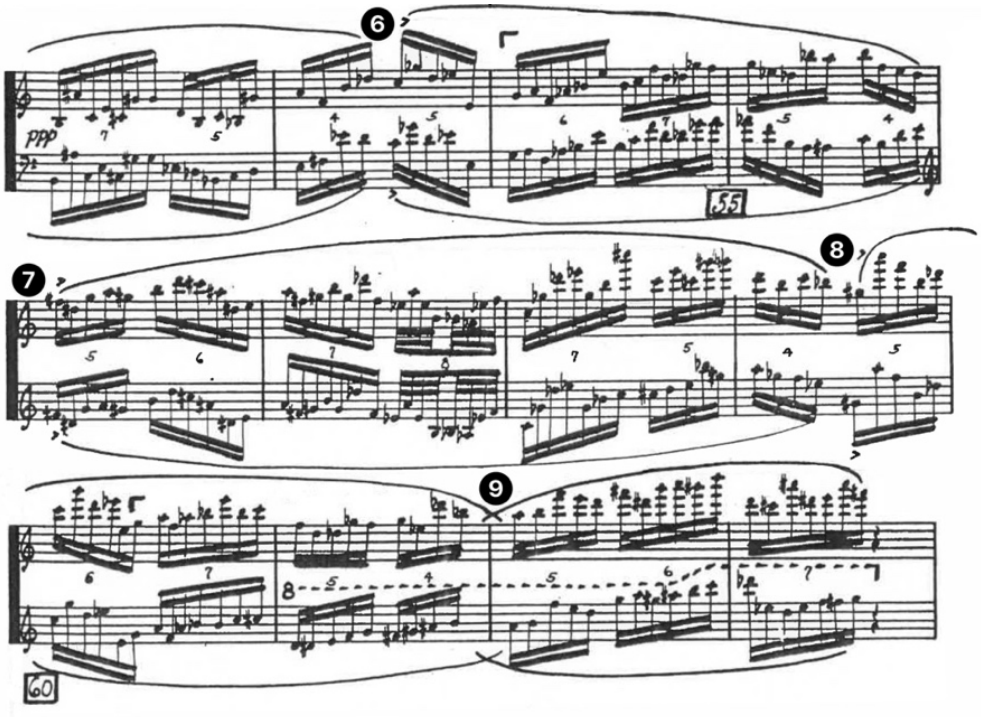
This combination of multiple layers of pattern, with change, is a remarkable achievement, yielding a dense and rich musical structure. Straus notes "The musical dimensions, melody and rhythm, are organized independently and, in their constantly shifting relationship, offer interesting perspectives on each other."[69] The impressive breadth of the structure also must not be overlooked.

Figure 4.12 – Piano, mm. 40-63, with indication of phrases.



[69] Straus, 121.

Figure 4.12, continued.



When examining the piano sequences, Straus states that "Rhythm and pitch are both rigidly patterned, but shift constantly in relation to each other… One can imagine, for example, that the rhythmic groups provide a lens that focuses on whatever part of the melody happens to pass beneath it."[70] Indeed, Crawford created the rhythmic pattern to carry out the repetition of the seventy-four-note sequence, allowing different parts of the sequence to be emphasized through it. By expanding phrases three and seven (see Figure 4.12), not only did it allow Crawford to add variations to the rhythmic pattern, but it also allowed her to choose which parts of the sequence were to be played in octave and which parts to be heard with a counterpoint. Straus further illustrates, "For example, the groups of four notes that end the second, fourth and fifth phrases…all are members of the same tetrachord-type… In other words, the fixed rhythmic pattern, as it shifts in relation to the melody, picks out and associates groups of notes that also have intervallic

[70] Straus, 119.

affinities."[71] The tetrachord that is mentioned belongs to set (0248). Other tetrachords are also repeated, weaving the material more tightly: the four ending notes of phrases three and seven belong to the set (0124), and both ending four notes of phrases six and nine belong to the set (0136) (see Figure 4.13).

Figure 4.13 – List of the portions of the 74-note-sequence in counterpoint in numeric notation, with set classes below. The numbers with underlines are the portions in counterpoint. The numbers in red indicate the beginning of each repetition of the sequence.

7958T 4E0521 65731T9 E5426 3798
(0136) (0126)

E21T3 4968E7 15394ET 83506 137E
(0136) (0248)

T0418 72E0T8 95E1062 3479 58T4 E0521 6573
(0146) (0146) (0136) (0124)

1T9E5 426379 8E21T34 968E7 1539
(0146) (0248)

4ET83 506137 ET04187 2E0T8 95E1
(0124) (0248)

06234 7958T4 E052165 731T9 E542
(0146) (0136)

63798 E21T34 968E715 394ET835 06137ET 04187 2E0T
(0136) (0126) (0124)

895E1 072347 958T4E0 52165 731T
(0136) (0124) (0258)

9E542 63798E 21T3496
(0136)

Regarding the seventy-four pitches, perhaps the best way to describe the pattern would be that Crawford tried to avoid any consistent pattern. This is Crawford's signature style, with no single pitch-class or intervallic distance emphasized through repetition. Nevertheless, connections and relationships can be observed, beginning with the use of chromatic clusters. Pitch-classes and their chromatic neighbors are grouped in close proximity to create these chromatic clusters, however their order is rotated to create a more interesting contour.

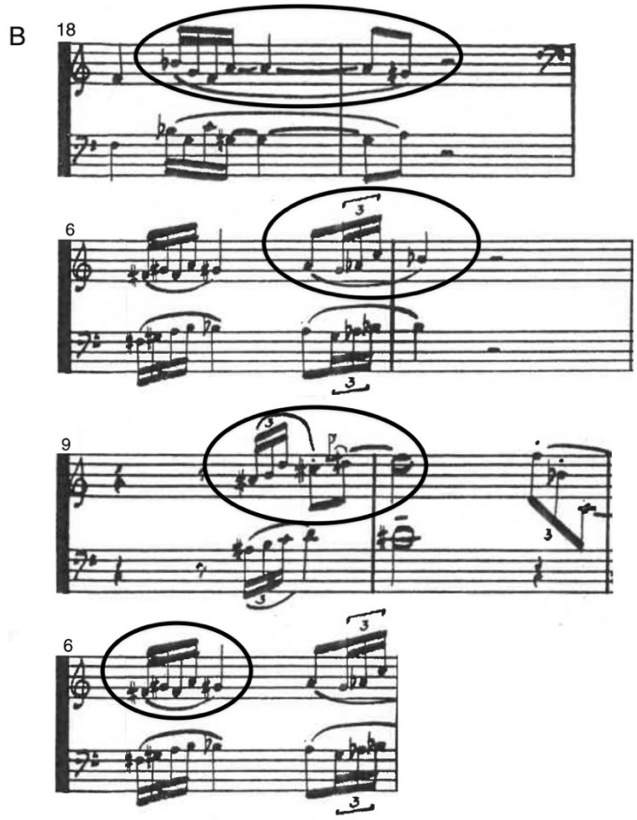
[71] Ibid.

Near-chromatic sets that include a single instance of ic 2 also create cohesion through repetition. Interestingly, the first five pitch-classes in the sequence are identical to the five pitch-classes in the piano right hand from the second beat in m. 18 to m. 19, in a different order (see Figure 4.14). They belong to the set (01235), which recurs. The pitch-classes in the piano's right hand from the third beat of m. 6 to m. 7 (9, 7, 8, 0, and T) belong to the same set, and so do the thirty-fourth pitch-class to the thirty-seventh pitch-class in the sequence (9, 6, 8, E, and 7). The pitch-classes from the sixteenth to the twenty-first pitch-class in the sequence (3, 1, T, 9, E, 5, and 4) are identical to pitch-classes thirty-nine through forty-five (1, 5, 3, 9, 4, E, and T), but are once again in a different order. Furthermore, pitch-classes twenty-eight through thirty-three in the sequence (E, 2, 1, T, 3, and 4) are identical pitch-classes to the right-hand piano pitch-classes in m. 9 and the first two beats of m. 10 (T, E, 2, 1, 4, and 3), yet again in a different order. The pitch-classes of the right-hand piano part, in the first two beats in m. 6 (6, 8, 5, 9, and 8) can be found as number twelve and thirteen, and number twenty-six and twenty-seven in the sequence, on the two opposite side of two 7s. Needless to say, 5, 6, 8, and 9 are inversions around pitch-class 7, therefore the placement of these pitch-classes in the sequence is rather interesting. There are other instances where either certain pitch-classes in the sequence are identical to the certain pitch-classes from the piano part in section one, or they belong to the same set, or a portion, or subset, in the same order or in a different order. These connections are only speculations. Whether or not the sequence was designed this way is yet to be determined.

Figure 4.14 – A: numeric presentation of the 74-note sequence, B: piano right-hand melodies.

A
7958T4E052165731T9E54263798E21T34968E
715394ET83506137ET041872E0T895E106234

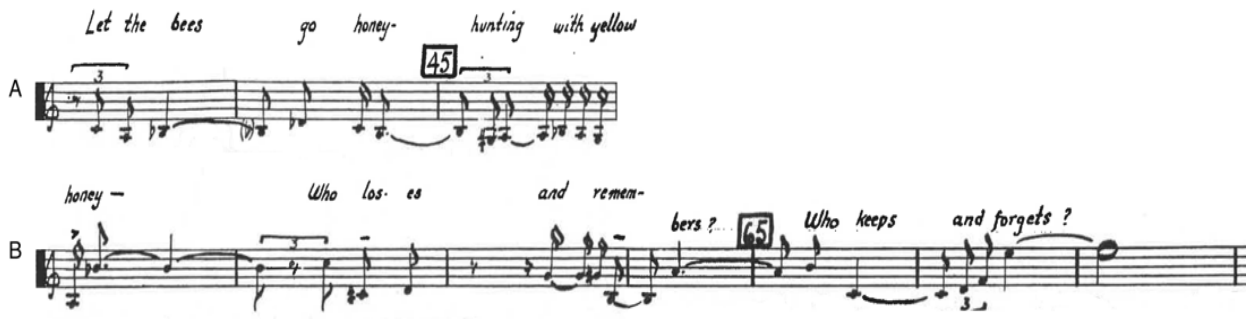
Figure 4.14, continued.



The vocal melody continues in a similar fashion as before, with continuing recurrence of certain characteristic intervals. For example, three occurrences of minor thirds can be found between C4 and A3 in m. 43 on "let the", B♭3 and D♭4 on "bees go" and B♮3 and G♯3 on "honey-hunting" (see Figure 4.15A). Starting from the ip 13 on "honey" in m. 61(Figure 4.15B), three ip (pitch interval) 11s are used in the two questions in the poem, "Who loses and remembers? Who keeps and forgets?" Note that Straus emphasizes that Crawford has a special interest in ip 11 and ip 13.[72] He notes that, in a number of Crawford's works, the pitch space span between the lowest and the highest notes are compounds of ip 11. In this song, Crawford used three ip 11s to emphasize a climactic moment, asking the questions. That is, with the inclusion of the text, she used her usual musical vocabulary for rhetorical purposes.

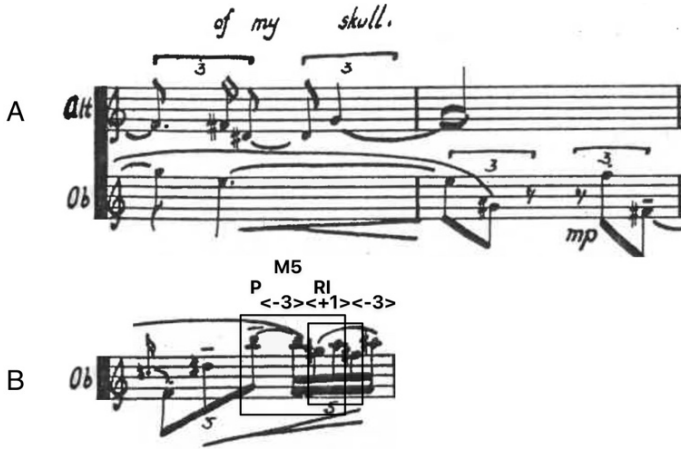
[72] Straus, 50.

Figure 4.15 – A: voice mm. 43-45, B: voice mm. 61-67.



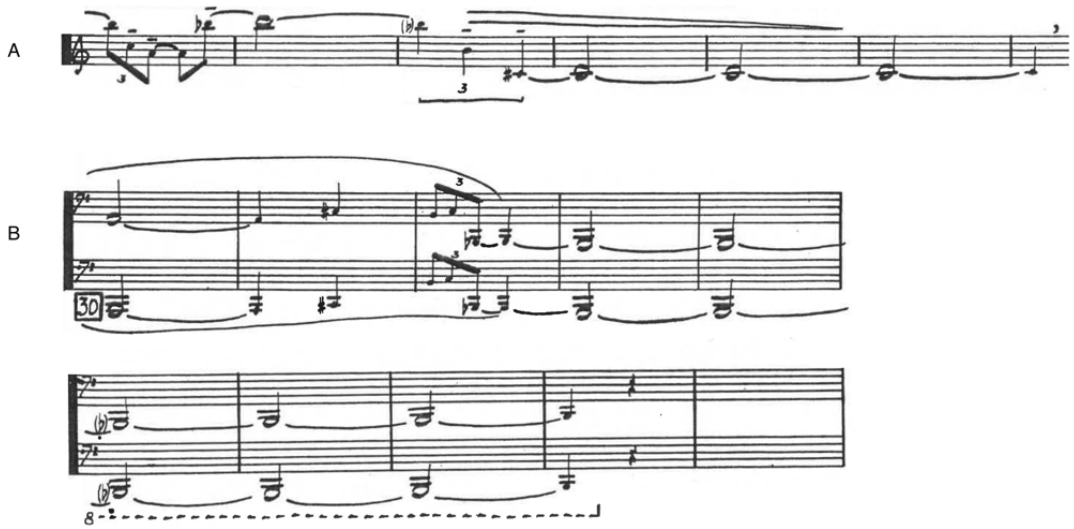
Crawford's other usual compositional processes can also be observed, and they are similarly used in interpret and illustrate the text. The heterophony created by the independent pitch and rhythmic patterns in the piano illustrates the actions of "the bees." The effect created by the glissandi in the string ostinati reinforced the sense of action, the "yellow blur of wings." In mm. 52-53 (see Figure 4.16), the pitches from the vocal line and the oboe create a single chromatic cluster, pitch-classes 3, 4, 5, 6, 7, and 8, as one voice fills in the missing pitch-classes the other is lacking (one pitch-class is shared). Additionally, there is an RI-chain of neume M5 <+1, -3> in the oboe melody in m. 50, between B, G♯, A, and F♯ <-3, +1, -3>. Although it is not the focus of the chapter, we see here how Crawford was able to implement her signature compositional techniques and melodic processes to breathe life into the scene described by Sandburg.

Figure 4.16 – A: voice and oboe mm. 52 and 53, B: oboe m. 50.



The piano ends abruptly right before "remembers?" in m. 63. This disruption is the point at which the content of the poem changed from actions back to the poet's narrative thoughts, raising pensive, philosophical questions while the oboe and string ostinati create a somber ambiance that starkly contrasts with the previously frenetic piano. The three-line counterpoint between the voice, oboe, and piano reduces to two (voice and oboe), then to one (oboe). It is worth mentioning that beginning from the second note of m. 67, Crawford used pitch classes 0, 9, T, E, and 1 to end this section on oboe. The same pitch classes can be found at the end of section two, from mm. 30-38 on the piano (see Figure 4.17).

Figure 4.17 – A: oboe mm. 67-73, B: piano mm. 30-38.

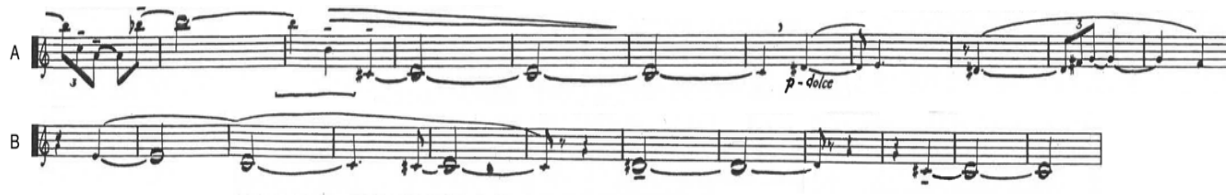


The triangle and cymbal are present in this section, however, they have lost their original format. In comparison to their earlier roles, they now portray displacement. In m. 41, the triangle eighth note is not exactly aligned with the beginning of the glissando on the viola. The cymbal roll in the next measure does not follow the triangle one beat later, as seen in their first appearances at the beginning of the movement, but is delayed for another beat. In m. 44, the triangle is played on the down beat, with the cymbal roll played a beat-and-a-half later, followed by another triangle hit on the down beat of beat two in m. 45. In m. 49, the triangle is played on the upbeat, follow by an

eighth-note tremolo with thumb on the tambourine (a new character from the percussion section). The two of them form a pair again in mm. 52-53, this time with an eighth rest between them. In mm. 55-61, the tambourine tremolo happens five times. None of these tambourine tremolo entries seem to have any correlation with the other instruments. The bass drum strikes in m. 62, where the low string and wind ostinati join in; it is so unusual in this passage to find such an alignment that it seems to demonstrate disunity. Finally, after two more tambourine tremolo entrances in m. 65 and 68, the triangle returns with one single hit in m. 70, then with a held tremolo starting in 71, which becomes the beginning of section four. The glissandi in the string ostinati in mm. 70-73 also connects the previous section with the new. Crawford's misalignment of the triangle and the cymbal must surely be a deliberate effort towards preventing literal repetition between the percussion and the string ostinati.

In the last section, the context of the poem returns to a sense of narrative description of the scene. All the remaining words of the poem, "In a blue sheen of moon over the bones and under the hanging honeycomb, the bees come home and the bees sleep" are assigned to the pitch D4, pitch-class 2 (in this case, both pitch class and register are significant). The oboe, in m. 73-77, presents the pitch-classes 3, 4, 6, 7, and 5, which are inversions of the pitch-classes of the previous five notes, 0, 9, T, E, and 1, pivoted around the 2 in the voice (Figure 4.18A). The remaining pitch-classes of the oboe, from m. 78 until the end, 4, 0, 1, and 3, are also complementary around the voice's 2 (Figure 4.18B). This pitch centricity is especially vivid in mm. 86-89, where D♯4 and C♯4 are each one semitone away from D4.

Figure 4.18 – A: oboe mm. 67-77, B: oboe mm. 78-89.



The wind and low string ostinati instruments stop in m. 73 and remain absent for the rest of this section, reinforcing their textural separation. The upper string ostinati on the other hand, contains multiple glissandi starting at m. 76. These glissandi are interweaved: the upward motion is balanced by the downward motion between the three instruments, creating a ripple effect, right around the end of the melody line in the voice.

As mentioned at the beginning of this chapter, the ostinati group serves as "masses of sound" in this movement. The most significant design of the ostinati is the patterns of the dynamic changes. In Straus's book, he states that "just as pitches and rhythms can be organized into patterns of rising and falling, or lengthening and shortening, dynamics can be organized into patterns of increasing or decreasing volume."[73] Among all the ostinati instruments, the dynamics are quite limited – only two dynamics (*ppp* and *pp*) are used – but they are still form-defining. Violin I, II, and viola are in different crescendo and diminuendo markings from the cello, double bass, and winds. This upper string ostinati group, beginning with Violin I in m. 1, gets louder for 1.5 beats,[74] gets quieter for 1.5 beats, gets louder again for 1.5 beats, and so on. After five dynamic changes that last for 1.5 beats, the diminuendo in m. 4 lasts for 4.5 beats. Another three dynamic changes that last for 1.5 beats, appears another diminuendo for 4.5 beats in mm. 7-8. The combination of five dynamic changes for 1.5 beats and one change for 4.5 beats is repeated through m. 8 to the first half of m. 12. After another three changes that each last 1.5 beats, the one 4.5-beat-long diminuendo extends to 5.5 beats, and so on. That is, there is a regular use of multiple changes lasting 1.5 beats followed by single changes lasting 4.5 beats.

On the other hand, the dynamic changes in the low strings and wind ostinati possess a different pattern. The first crescendo begins in m. 5 and lasts for 7.5 beats, immediately followed

[73] Straus, 126.
[74] Numeric representation is being used to present a clearer pattern.

by a diminuendo that lasts 6 beats. The difference of the crescendo and diminuendo is 1.5 beats in length (7.5-6=1.5). In m. 18, the crescendo last for 5 beats, followed by a diminuendo that last for 3.5 beats. The difference is again 1.5 beats. If this is intended to be perceived as a pattern based on differences between durations, it is a pattern that is then broken. In m. 32, the crescendo and diminuendo both last for 8 beats, which no longer fits the previous pattern of the difference being 1.5 beats. At the last entry in m. 62, the subgroup gets louder for 12 beats, and gets quieter for 11.5 beats, with a difference of a half of a beat.

These dynamic changes in the ostinati instruments sometimes align with the beginning of a measure, and sometimes appear in the middle of a measure. The length of the crescendo and diminuendo varies. Moreover, the subgroups change their dynamics independently. In this way, Crawford created a new type of heterophony – heterophony in dynamics. Along with the intertwined glissandi, this design in dynamics provides liveliness to the ostinati, Crawford's "masses of sound." Heterophony formed by different dynamic changes is an important feature in the third movement of her String Quartet (1931). Here, however, this texture in its entirety is placed into a heterophonic relationship with the concertanti quartet and the other ostinati instruments, demonstrating a distinct growth in musical complexity. Indeed, Crawford's program notes in the score (referenced earlier) show that the innovative compositional technique that she foregrounded in the String Quartet has here been placed in the background as just one element, and not the most prominent one, in a larger composition.

This song possesses a host of Crawford's signature compositional techniques. The concern towards neumes and chromatic saturation is made obvious by the frequency of their appearances. Pitches are designed around their inversional complements in order to emphasize the axes of inversion, therefore creating a sense of tonal center. The entrance of each instrument in the song

is in a sequence in the beginning, but small changes in the rhythmical spaces yield large results: specifically, creating misalignments that eventually break the pattern. Most importantly, Crawford demonstrates two different kinds of heterophony, one by using the domains of pitch and rhythm as independent entities, consolidating the concept into monophony instead of its usual occurrence in counterpoint; the other by using the domain of dynamics, assigning different dynamic patterns within the ostinati group.

Chapter V: Analysis of *Suite for Wind Quintet,* Mvt. III

After a break of almost twenty years, *Suite for Wind Quintet* was composed in 1952. Crawford was occupied folk research during this twenty-year compositional hiatus. When she was ready to return to her concert work, her health had declined, and unfortunately, this piece was Crawford's final work. *Suite for Wind Quintet* has three movements; it is written for flute, oboe, clarinet in B♭, horn in F, and bassoon.

The form of this movement resembles a rondo – A1 (mm. 1-17), B (mm. 18-30), A2 (mm. 31-57), C (mm. 58-84), A3 (mm. 85-100), D (mm. 101-127), and A4 (mm. 128-145). The pitch organization of each refrain (that is A section) is similar, while tempo, rhythm, articulation, and phrasing are different. Among the three episodes, section C and D share a great deal of similarity in how the rotation of the series is revealed, and in how the countermelody is structured. However, although it is obvious, it is still worth mentioning that the musical devices that traditionally support the divisions of the rondo form, such as harmony and tonality, are not used in this movement.

The compositional technique that forms the spine of the large-scale plan of this movement is systematic rotation. Rotations of four twelve-pitch-class series, or tone rows, can be found in this movement. In each A section, row one is systematically rotated twelve times, with each member of the row serving as the beginning pitch. In section B, row two is rotated twelve times. Row three is gradually revealed and then rotated six times in section C, and similarly, row four is rotated six times in section D (see Figure 5.1). Systematic rotations can be found in Crawford's other works, such as the third movement of *Diaphonic Suite No. 1*, "Prayers of Steel," and the fourth movement of String Quartet.

Figure 5.1 – Systematic rotation of rows in each section.

A^1	Row 1
B	Row 2
A^2	Row 1
C	Row 3
A^3	Row 1
D	Row 4
A^4	Row 1

Straus explains the relationship between the four rows. That is, rows two, three, and four retrograde and rotate the principal row, row one, at T_2, T_{10}, and T_5 respectively.[75] In other words, row two is the retrograde of row one, transposed up two semitones (that is T=2) and with the first pitch class rotated to the end (see Figure 5.2). Row three is the retrograde of row one, transposed down two semitones (that is, T=10) with the first seven notes rotated to the end. And lastly, the retrograde of row one moves up five semitones (T=5), first seven notes rotated to the end of the row, forming row four. Additionally, row four is exactly T_{-5} or T_{+7} of row three, since both of them rotate the first seven notes to the end.

Figure 5.2 – Transformations of the series.

Row 1: 2 4 5 3 7 9 8 6 T E 1 0
Retrograde of Row 1: 0 1 E T 6 8 9 7 3 5 4 2

Transposed at T_2: 2 3 1 0 8 T E 9 5 7 6 4
Rotation beginning on the 2nd note: 3 1 0 8 T E 9 5 7 6 4 2 (Row 2)

Transposed at T_{10}: T E 9 8 4 6 7 5 1 3 2 0
Rotation beginning on the 8th note: 5 1 3 2 0 T E 9 8 4 6 7 (Row 3)

Transposed at T_5: 5 6 4 3 E 1 2 0 8 T 9 7
Rotation beginning on the 8th note: 0 8 T 9 7 5 6 4 3 E 1 2 (Row 4)

[75] Joseph N. Straus, *The Music of Ruth Crawford Seeger*, (Cambridge, England: Cambridge University Press, 1995), 201.

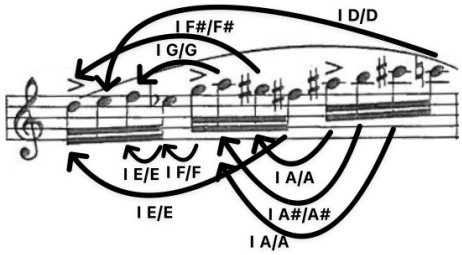
The row itself has features characteristic of Crawford's style. In the principal series, row one, pitch-classes are placed in close proximity with their chromatic neighbors, therefore forming three chromatic tetrachordal clusters. Straus explains that the second and third tetrachords are related to the first tetrachord at T_4 and T_8.[76] This requires reordering the notes in the second and third tetrachords. Pitch-classes 6, 8, 9, and 7 (second tetrachord reordered) are transposed from pitch-classes 2, 4, 5, and 3 at four semitones; pitch-classes T, 0, 1, and E (third tetrachord reordered) is transposed from pitch classes 6, 8, 9, and 7 at another four semitones. If the same transposition is to be continued on the third trichord, the pitch-classes in the first trichord, 2, 4, 5, and 3 would be the result. Therefore, Straus claims that the "sense of circling around, of an ending that leads right back to a beginning, is vital to the structure of the movement, and is felt in the rondo-like arrangement at the highest formal level."[77]

The order of the tones is also arranged with the consideration of neume M1. Prime, retrograde, and multiples of retrograde inversions of M1 can be found in the row between successive notes, as well as an RI-chain between pitch-classes E, 1, and 0 and 1, 0, and 2: that is, spanning the last three tones of the series and the first tone of its repetition, sharing 1 and 0. Crawford's other usual melodic processes are also reflected in the series. After the first pitch-class (2) is asserted, the second pitch-class (4) is added, creating an opening of two semitones. This opening is filled by the fourth tone in the row, pitch-class 3. The opening between the third and the fourth tone, pitch-classes 5 and 3, is filled by the previous tone in line, pitch-class 4. Many other pairs of OPEN and FILL can be found in the row. Since the row contains all twelve tones, and it is continuously cycling through rotations, there can be many different interpretations of PIVOT. One of the interpretations is shown in the figure below (see Figure 5.3). According to this

[76] Straus, 192.
[77] Ibid, 193.

reading, the initial D is a center for the subsequent E, which pivots about the D to generate the final C. This E becomes itself a center; the D pivots around this center to generate the F♯, while the F pivots around the E to generate the Eb. The Eb then pivots about the F to generate the G. The F♯ also serves as a center, about which the E pivots to generate the G♯. The F then pivots around the G to generate the A, after which the A becomes a center: The F pivots around A to generate C♯ and the G♯ pivots around A to generate A♯. This A♯, too, becomes a pivot about which the G pivots to generate the C♯.

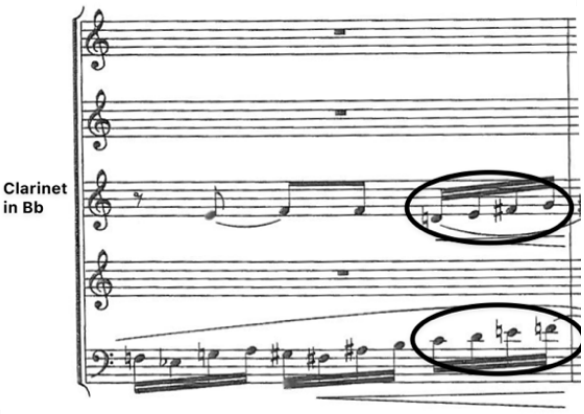
Figure 5.3 – Pivot analysis of the series.



Another significant feature that is related to the large-scale design, is the use of two ternary neumes (neumes formed by four successive notes). The successive pitch-class intervals among the last two tones (C♯ and C) and the first two tones of the series (D and E) form neume <-1, +2, +2>; because this neume is foundational to this movement, this analysis shall refer to it as TN1 (ternary neume 1). The prime of TN1, along with its inversion <+1, -2, -2>, retrograde <-2, -2, +1>, and retrograde inversion <+2, +2, -1> are used a great number of times throughout this movement. The successive pitch-class intervals among the last tone of the primary series (C) and its first three tones (D, E, and F) form another ternary neume <+2, +2, +1>, which shall be called TN2. TN2 overlaps considerably with TN1, sharing three common notes and having the same intervallic distances, but it projects a different contour. The short melodic line (C, D, E, and F) that forms TN2 is heard in unison between the countermelody and the rotation melody in each A section, which are the only instances where the counterpoint temporarily becomes one single voice in this

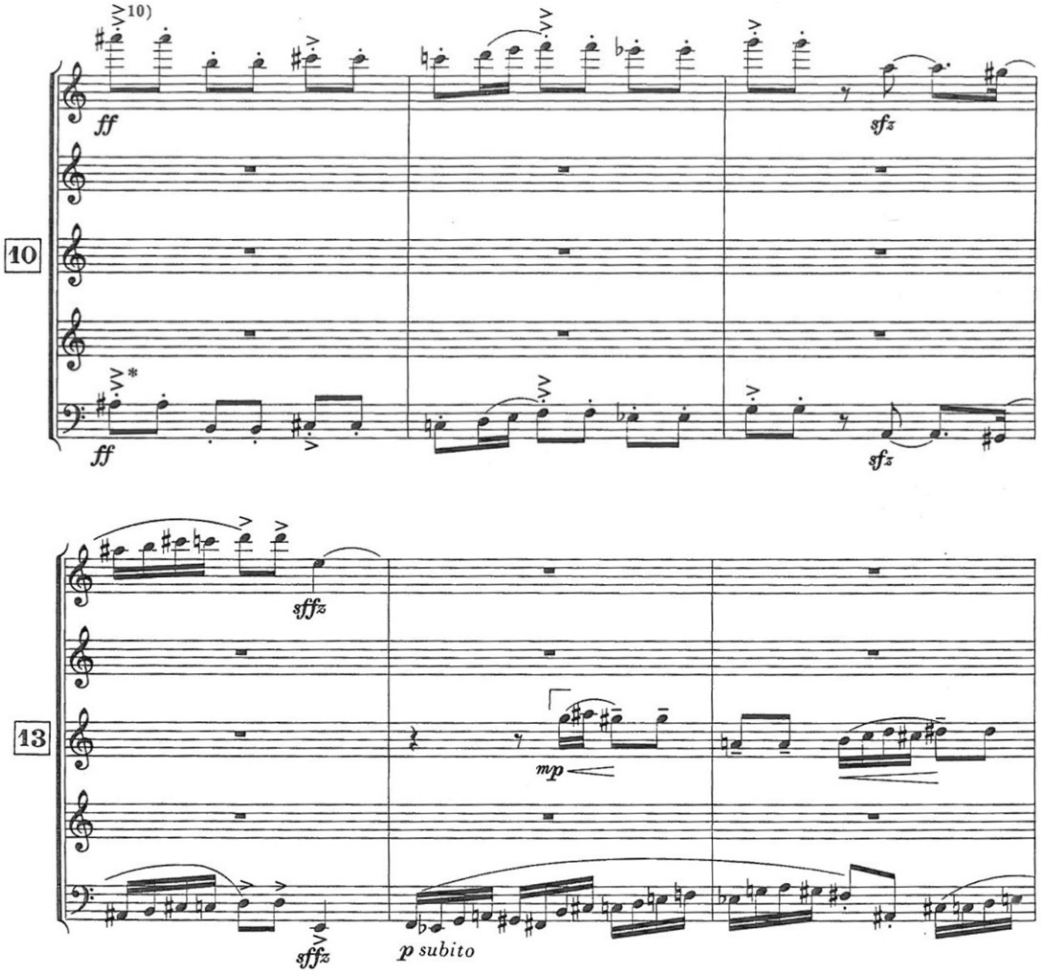
movement; the first instance is shown in Figure 5.4. Further explanations of the usage of the ternary neumes will be given separately within each section.

Figure 5.4 – C, D, E, F in unison in A1, m. 16.



Now we look at each of the sections of the movement, beginning with the A sections. In all four A sections, the first eight appearances of the series are played in the flute and bassoon three octaves apart in the same rhythm. During the ninth rotation, the flute drops out, leaving the bassoon to finish the remaining rotations alone. The countermelody emerges in the middle of that measure. In A1 and A2, the countermelody is assigned to the clarinet; in A3 it is assigned to the oboe, and in A4 to all of the instruments except for the bassoon. The rhythm of the countermelody is contrapuntal with the rotation melody and, undeniably, common rhythmic motives are shared between the rotation melody and the countermelody. For example, the rhythmic pattern of the first six notes of the countermelody in A1—two sixteenth notes followed by four eighth notes with *tenuto*—can be found during the eighth rotation in m. 11, with different articulations on the eighth notes (see Figure 5.5).

Figure 5.5 – Rhythm comparison in section A1.

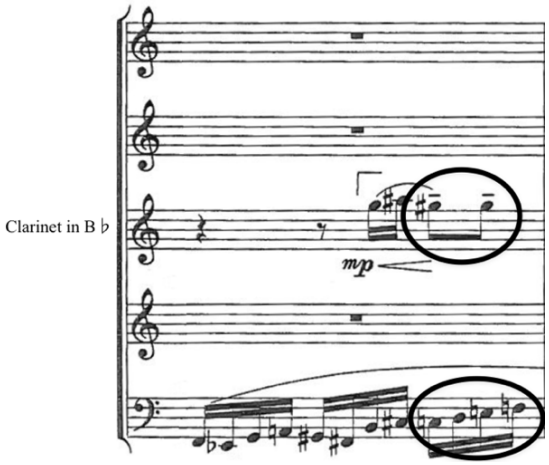


This countermelody is derived from the primary series. The first ten pitch-classes in the countermelody (5, 8, 6, 7, 9, T, 0, E, 1, and 2) are a series that comes from the eighth rotation of the retrograde inversion of the primary series (see Figure 5.6), with two changes: the position of pitch-classes 8 and 9 are switched, and pitch-class 6 is added before pitch-class 7. Rearranging the order of a melodic figure or a small group of pitch-classes is rather common in Crawford's music. However, the reason for moving pitch-class 6 from the tenth position to the third position is less clear; the most plausible reason is that it is related to TN2 (see Figure 5.6). That is, when the short melodic line (C, D, E and F) occurs in m. 14 in the bassoon, Crawford intended for the pitch-class

6 to be heard on top of the line. This creates a commonality with each A section, in which, when the two voices break off from C, D, E and F played in unison, one line always goes to F♯.

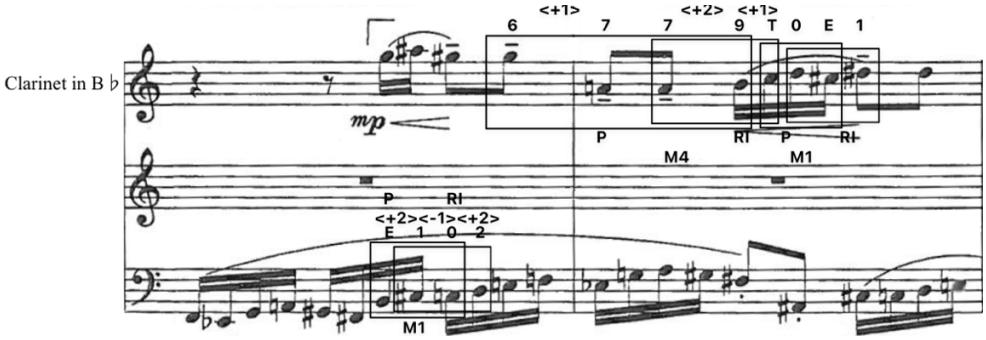
Figure 5.6 – Illustration of the countermelody row in A sections, and C,D,E, and F against F#, m. 14.

Row 1: 2 4 5 3 7 9 8 6 T E 1 0
Retrograde Inversion of Row 1: 0 E 1 2 6 4 3 5 9 7 8 T
Rotation beginning on the 8th note: 5 9 7 8 T 0 E 1 2 6 4 3



In the first half of the countermelody, three RI-chains can be found between the two voices. In the countermelody, the last pitch (F♯) in m. 14 and the first three pitches in m. 15 (G, A, and B♭), form an RI-chain of M4 <+1, +2>. Immediately, pitches B♭, C, B♮, and C♯ in m. 15 form another RI-chain of M1<+2, -1>. In the series, the last three tones (B, C♯, and C♮) form an RI-chain of M1 in combination with the first tone, D. While it is true that this RI-chain is heard every time when the four notes line up together through rotations, its occurrence in m. 14, located right before the two successive RI-chains in the countermelody, is distinctive in that it forms a three RI-chain phenomenon between the rotation melody and the countermelody (see Figure 5.7). The appearance of RI-chains in both melodies creates a connection between them.

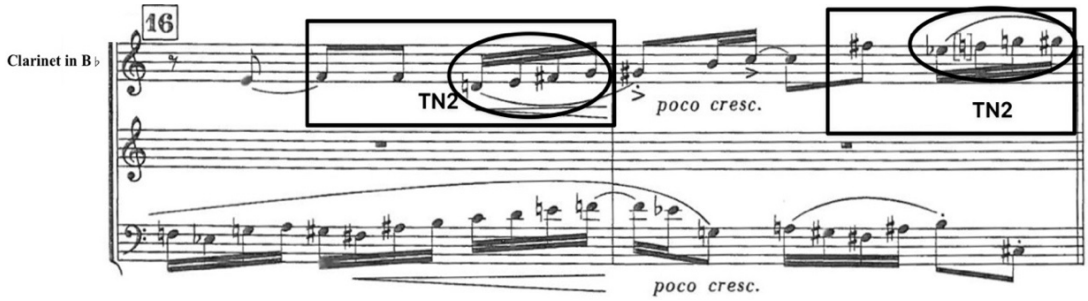
Figure 5.7 – RI-chains, mm. 14-15.



In the second half of the countermelody, after the aforementioned short melodic line (C, D, E, and F) occurs in both voices in m. 16, another progression of TN2 occurs in m. 17 on pitches D♭, E♭, F, and F♯ (see Figure 5.8). Furthermore, when including the notes before the beginning notes in the ternary neume, E♭ in m. 16 and E♮ in m. 17, the same successive pitch-class intervals <-3, +2, +2, +1> can be found among them: that is, E, D♭, E♭, F, and F♯ are transposed from E♭, C, D, E♮, and F at T_{+1}. This is an important procedure, to which Straus has given a label, Transpositional Projection, defined as "the transposition of distinctive bits of melodic material along paths that reflect either their own intervallic profile or some other significant shape."[78] What is interesting about this transpositional projection, is that both the transposed and the original pitches are in the same rhythmic pattern, an eighth note followed by four sixteenth notes. Additionally, Straus states that "this procedure was unquestionably part of Crawford's compositional style from her pre-Seeger days,"[79] and it may be found in a great number of her works, such as the Violin Sonata, and in *Sacco, Vanzetti.*

[78] Straus, 60.
[79] Ibid.

Figure 5.8 – Transpositional projection, mm. 16-17.



The remaining A sections resemble A1: in the pitch content, in how the rotation of the series is completed, and in how the countermelody is constructed. The differences between the A sections are seen in tempo, meter, rhythm, phrasing, and articulations. In A1, the tempo is quarter note equals one hundred twelve; the meter is three quarter notes per measure. Crawford used a combination of eighth and sixteen notes to occupy the twelve rhythmical units per measure. Articulations are mostly placed on the beats, including on the first eight beats: therefore for most entries, they are on every four sixteenth notes. Slurs create a different grouping: the number of notes grouped by slurs is 13, 15, 5, 3, 3, 3, and so on.

In A2, the tempo change (dotted quarter equals one-hundred-thirty-two) makes A2 faster than the B section but slower than A1 (A1 has 448 sixteenth notes/minute; B has 336; A2 has 396 eighth notes/minute), which makes the tempo changes very slight. The meter changes from simple meter to compound meter, with each measure containing two dotted quarter notes or six eighth notes. The variation between eighth and sixteenth notes in A1 subsides; the rotations are mostly laid out through eighth notes, with the only irregularities being rests, quarter notes, and—at three points— a repetition of a pitch. Accents are also placed roughly on each beat: due to the meter change, this means they occur on every three notes. Crawford also introduces accents that create a hemiola in m. 37, mm. 42-43, 46-47, 51, 53, and 55-57. Note that these grow in frequency and, in

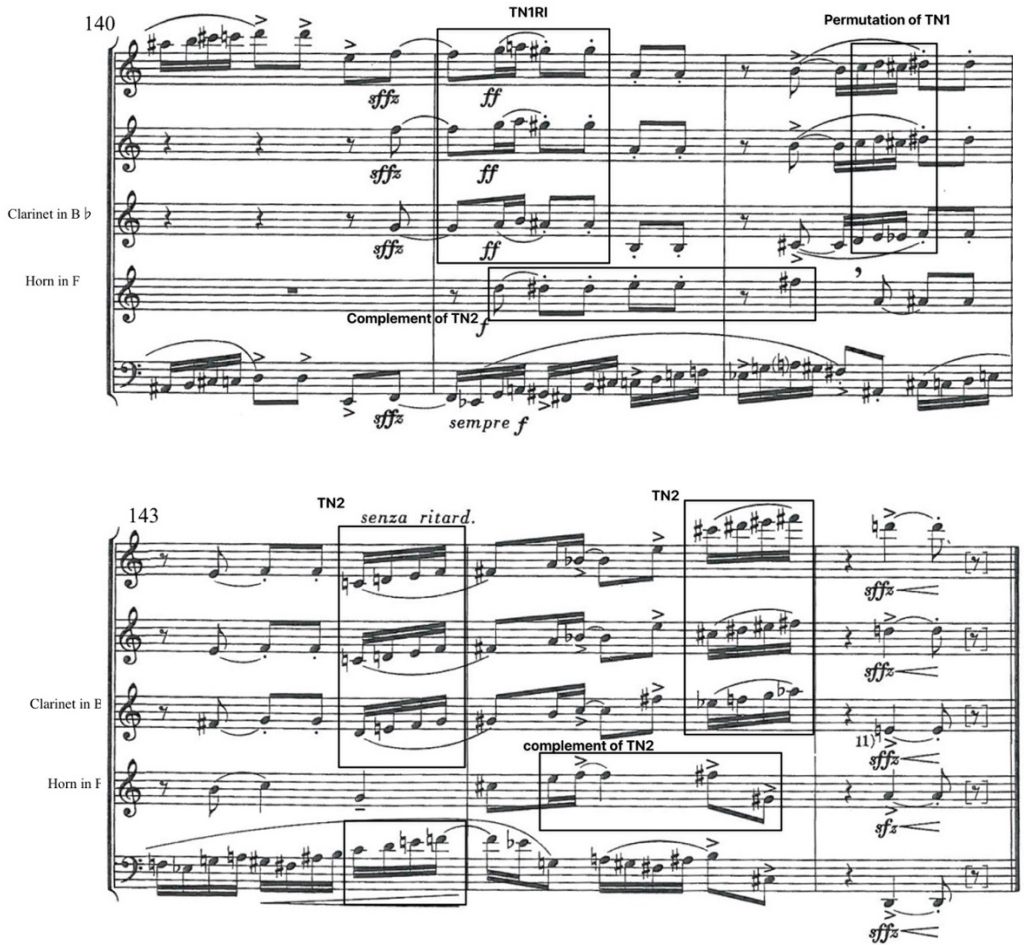
the final case, length. Each of the first several groupings of slurs showcase different amounts of notes in each from A1, which are 13, 13, 7, 2, 2, and so on.

In A3, the tempo is even faster: quarter note equals one-hundred-twenty-six with an initial subdivision of sixteenth notes, yielding 504 notes per minute. Given the metronomes of the time, this is as close as possible to continuing an arithmetic series: measured in notes per minute, sections B, A2, A1, A3 are 336, 396, 448, 504 (differences of 50, 52, 56). The meter returns to A1's three quarter notes per measure. Triplets are added in this section along with sixteenth-note patterns, as if the rhythmic motives from A1 and A2 are combined in A3. The accent marks from A1 and A2 have disappeared; phrasings that are indicated by the slurs are also divided differently, with the first several groupings containing 9, 2, 9, 4, 4, and 5 notes. With changes in tempo, meter, rhythm, and articulations, Crawford ensured that each refrain is significantly different.

A4 has the same tempo, meter, rhythmic patterns, divisions of phrasing, articulations, and systematic rotations of the primary row as A1, however, with a different ending that concludes the entire movement. Here, the countermelody is played by the flute, oboe, clarinet, and horn, with the horn joining in one beat later. In the countermelody, certain pitches are omitted from its appearance in previous A sections. The first four pitch-classes (5, 7, 9, and 8) in the flute, oboe, and clarinet in mm. 140-141 form the retrograde inversion <+2, +2, -1> of TN1 (see Figure 5.9). On the other hand, the first four pitch-classes (7, 8, 9, and E) in the horn are in the progression of <+1, +1, +2>, which can be considered to be a sort of complement of TN2, <+2, +2, +1>. Pitch-classes 0, 2, 1, and 3 in the flute, oboe, and clarinet in m. 142 are in the progression of <+2, -1, +2>, which can be considered a permutation (a palindromic one) of TN1. At the end of m. 143, TN2 <+2, +2, +1> appears in the flute, oboe, clarinet and bassoon through the short melodic line C, D, E, and F. In the next measure (m. 144), TN2 appears again with pitch-classes 1, 3, 5, and 6

in the flute, oboe, and clarinet, while the horn yet again has the progression of <+1, +1, +2> among pitch-classes 6, 9, T, and E.

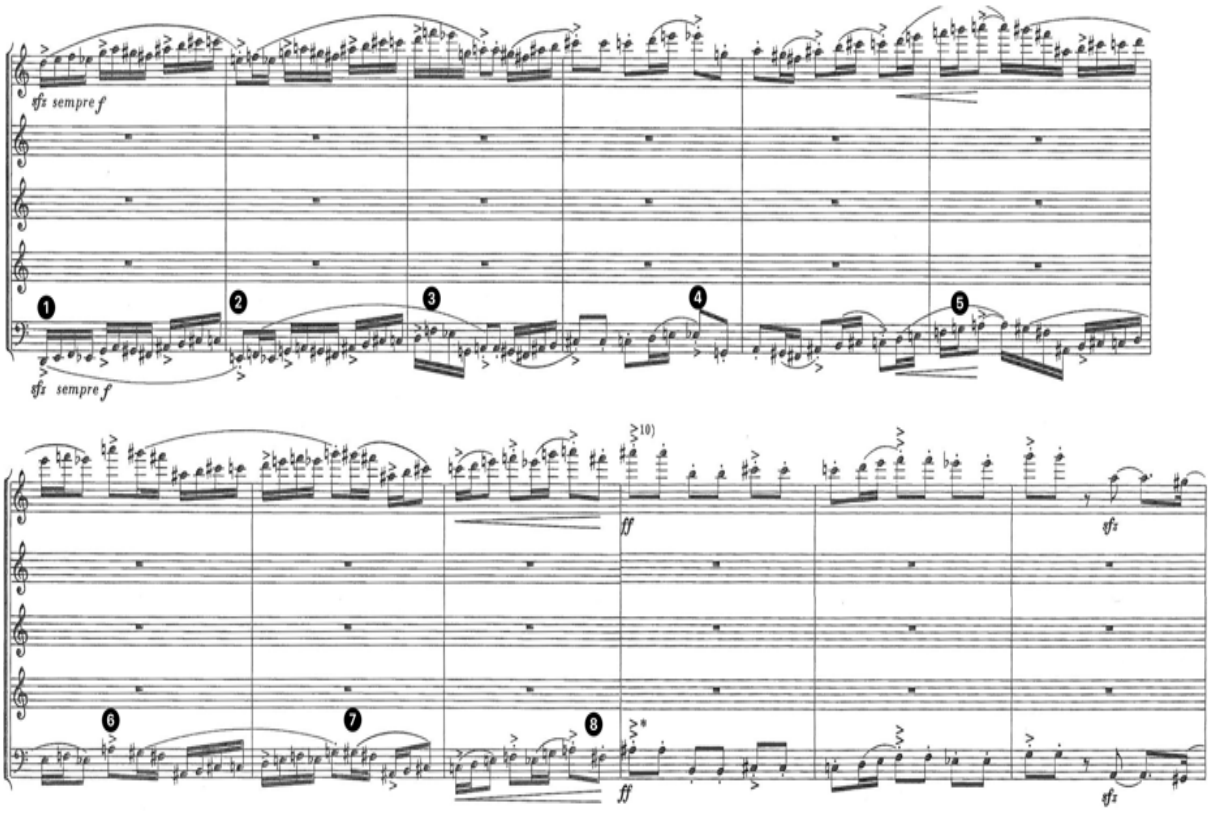
Figure 5.9 – TN1 and TN2 in mm. 140-145.



As shown in the previous analyses, misalignment of melodies or phrases is commonly used in Crawford's works. In this movement, interesting misalignments are created between the rotation of the series and rhythm. In A1, the first appearance of row one occupies the first measure. The second appearance, starting from the second note of the series (E) and ending on the first note (D), occupies from the beginning of m. 2 to the first sixteenth note of m. 3. The second rotation begins with F and ends with E; it lasts until the second beat of m. 4, and so on (see Figure 5.10). The beginning of the rotation realigns with the beginning of the measure in m. 9. Since the meter in A1

is three quarter notes, of which duration contains twelve sixteenth notes, Straus declares, "This creates the potential for an analogy between pitch and rhythm, namely, that just as a note can occupy any of twelve different locations in pitch-class space, or any of the twelve order positions within the series, it can similarly occupy any of twelve different locations in any of the measures of the passage."[80] Indeed, Crawford chose a number of tones in the series to be repeated, for instance, the A in m. 3, and so many others. She also developed the rhythmic motive so that the rhythm stays varied, therefore creating misalignment between the rotation and the rhythmical placement.

Figure 5.10 – Measures 1-12; beginning of each rotation.



[80] Straus, 196.

The alignment between the rotation and the countermelody in each A section changes. In A1, the countermelody comes in on m. 14, with six notes intervening between the last flute note (E) and the first clarinet note (see Figure 5.11A). In A2, the countermelody comes in on m. 50, one-and-two-thirds beats after the flute's last note (Figure 5.11B) — that is, with five notes intervening. In A3, the line is assigned to the oboe, which first doubles the final E of the flute in m. 96, then plays the next note, F, a-beat-and-a-half after the flute (Figure 5.11C). This has consequences for the harmonic intervals produced, since having the countermelody line coming in at slightly different rhythmic places in each A section puts the new melody against different parts of the row. For instance, in A1 the F is played against B, the beginning of the tenth rotation. In A2 the corresponding F is played against F♯, the last note of the ninth rotation. And in A3, the corresponding F is played against G and A, the tenth and eleventh notes of the ninth rotation. In the ending section, A4, again during the eighth rotation of the row, the entrance of the three instruments finally aligns on the same eighth note (Figure 5.11D). The entrances of the countermelody in each A section moves earlier each time, eventually lining up with the same pitch-class in the series, F, the seventh note of the ninth rotation (see Figure 5.11C), producing a third vertical alignment. The *sforzando* is placed to emphasize this alignment. This alignment, the culmination of a process, marks the beginning of the closing statement of the movement.

Figure 5.11 – Beginning of the countermelody in each A section.

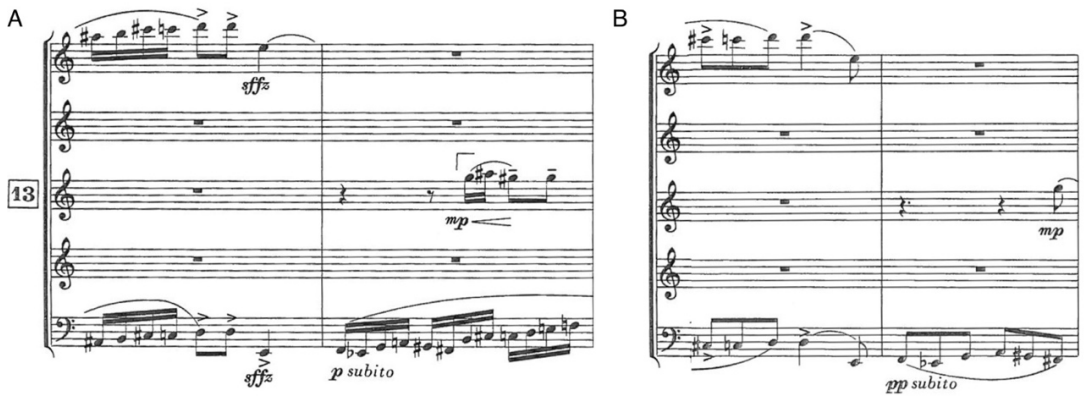
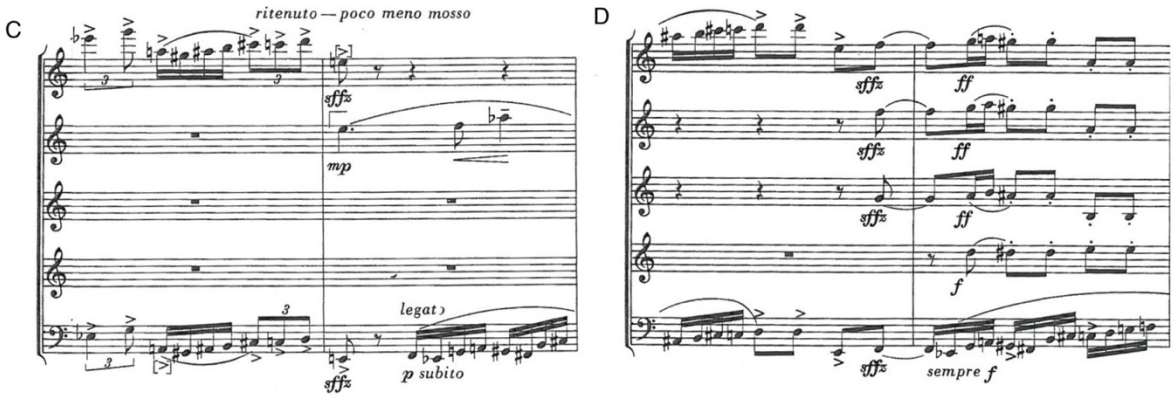


Figure 5.11, continued.



In the B section, the rotations are in continuous sixteenths, providing no opportunity to take a breath. For this reason, only ten appearances of row two are played by the clarinet. The fifth and tenth rotations, in mm. 22 and 27, are heard in the bassoon. Each rotation occupies three quarter notes, with twelve tones evenly distributed into sixteenth notes. The repetition of certain tones in the row that can be found in other sections have disappeared in this section. The result of this arrangement puts each rotation perfectly within each measure. The rotation of the row aligning with the rhythmical spaces in each measure happens only in this section in this movement.

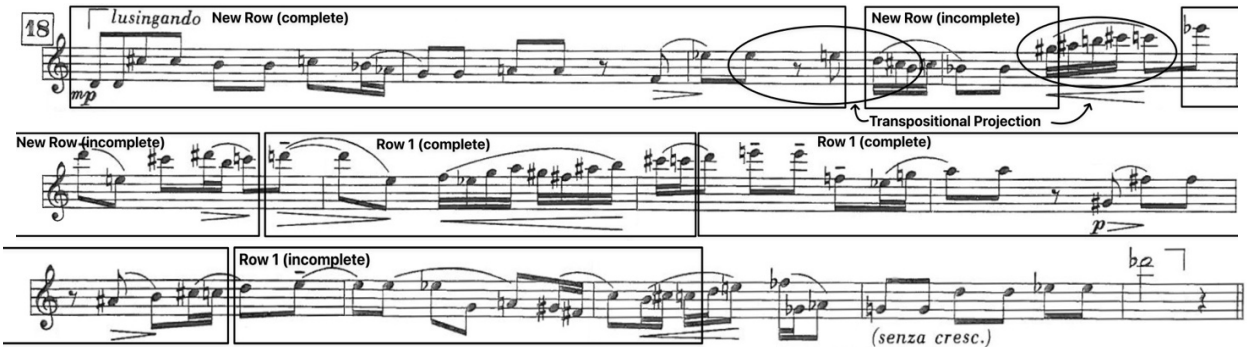
There are two countermelodies on top of the rotations, played by the flute and the oboe (see Figure 5.12). The oboe melody, made up of the first eleven pitch-classes (2, 1, E, 0, T, 8, 7, 9, 5, 3, and 4), is the inversion of the ninth rotation of row one, transposed at T_{+4}, with the absence of the last pitch-class, 6. Due to the consistent absence of pitch-class 6, it is more practical to consider that this new row only contains eleven pitch-classes.

Figure 5.12 – Illustration of the countermelody row in section B.

Row 1: 2 4 5 3 7 9 8 6 T E 1 0
Ninth rotation of Row 1: T E 1 0 2 4 5 3 7 9 8 6
Inversion: T 9 7 8 6 4 3 5 1 E 0 2
T_{+4}: 2 1 E 0 T 8 7 9 5 3 4

After the first appearance, the first six pitch-classes of this new row (2, 1, E, 0, T, and 8) reappear in mm. 20-21 in the oboe, this time followed by the last four pitch-classes of the primary series: T, E, 1, and 0 (see Figure 5.13). The next seven notes, pitch-classes 3, 2, 4, 1, E, and 0, are selected from the beginning four tones and the last two notes of the new row, reordered. Row one then appears twice, from the last note of m. 22 through the second beat of m. 26. The next entry from the middle point of m. 26 to the middle of m. 28 contains ten pitch-classes of the series, while the last entry has only three pitch-classes of the series. The oboe melody can be understood as a transition, from the transposed inversion of the primary series, gradually changing back to the series, then disappearing. Additionally, pitch-classes 8, T, E, 1, and 0 in m. 21 happen to be the transposition at T_{+3} of the retrograde of pitch-classes 3, 4, 2, 1, and E, heard three notes before them in m. 20, creating additional connections.

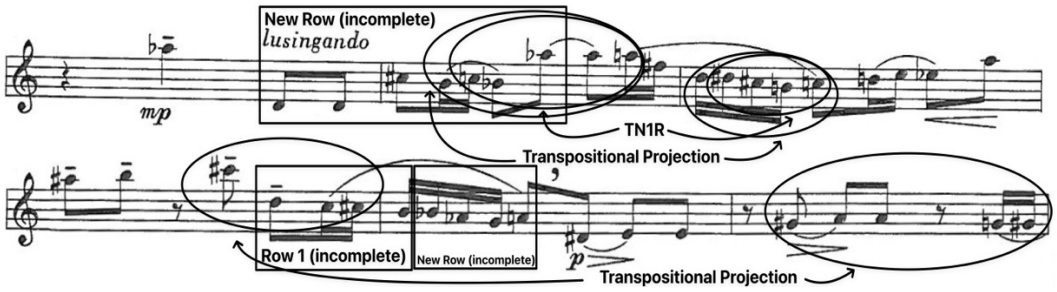
Figure 5.13 – Oboe, mm. 20-30.



The flute melody does not contain any complete entries of any row, but it does contain many meaningful fragments, showing a sort of broken unity. After the first note (A♭), which reinforces the oboe G# with which it coincides, the flute continues with the first six pitch-classes of the new row: 2, 1, E, 0, T, and 8 (see Figure 5.14). The successive pitch-class intervals between pitch-classes E, 0, T, 8, and 9 in m. 22, <+1, -2, -2, +1>, are identical to the pitch-class intervals between 2, 3, 1, E, and 0 in m. 23; they are related to transpositional projection at T_{+3}. Moreover,

this progression significantly contains the retrograde of TN1 <-2, -2, +1>. In mm. 24-25, the first and the last three tones of row one, 2, E, 1, and 0 appear (D, C, C♯, and B). They are immediately followed by the first and the last three tones of the new row, T, 8, 7, and 9 (B♭, A♭, G, A♮). Another transpositional projection can be found in m. 24 and 26, between pitch-classes 1, 2, 0, and 1, and 8, 9, 7, and 8, transposed at T_{+7}, with the common successive pitch-class intervals <+1, -2, +1>, disregarding the repetition of A4 in m. 26.

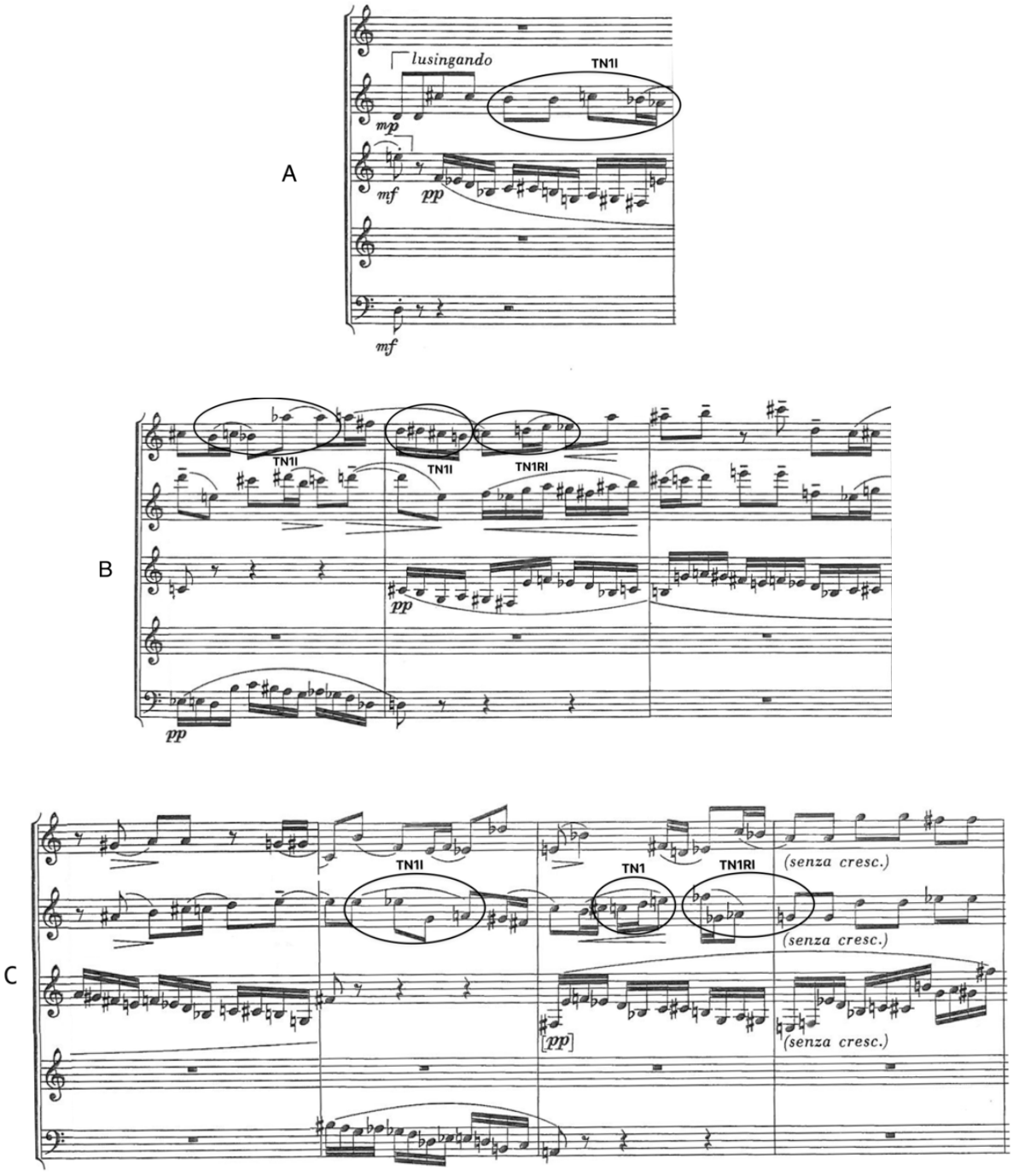
Figure 5.14 – Flute mm. 21-26.



This section heavily relies on ternary neumes. The prime of TN1 can be found in three instances when C♯, C, D, and E are lined up through rotations in mm. 24, 26, and 28 in the clarinet. The inversion of TN1 is formed by pitch-classes E, 0, T, and 8 (the third to sixth tones of the new row). Therefore, it is heard in the oboe melody in m. 18 (Figure 5.15A), and in the flute in m. 22 (Figure 5.15B), along with the aforementioned transpositional projection, between pitch-classes E, T, 0, and 8 and 2, 3, 1, and E in m. 22 and m. 23. Another entry of the inversion of TN1 can be found among pitch-classes 4, 5, 3, and 7 in the flute melody in m. 27 (Figure 5.15C). The aforementioned transpositional projection pitch-class intervals also contain the retrograde of TN1 between pitch-classes 0, T, 8, and 9, and 3, 1, E, and 0. The retrograde inversion of TN1 is formed by pitch-classes 0, 2, 4, and 3 in m. 23 in the flute (Figure 5.15B). Towards the end of the oboe melody, the prime and the retrograde inversion can be found between pitch-classes 1, 0, 2, and 4 in m. 28 and 4, 6, 8, and 7 in mm. 28-29, overlapping the same pitch-class 4 (through enharmonic

equivalence) (Figure 5.15C). Additionally, TN2 is heard twice in the oboe melody through the two complete rotations of the primary row: first in mm. 22-23, second in m. 24.

Figure 5.15 – TN1, A: m. 18, B: mm. 22-24, C: mm. 26-29.



The rhythms in the flute and oboe complement each other at first, however, they gradually become quasi-synchronized starting from m. 24. In the ending two measures of this section, the rhythm between the flute and oboe are completely synchronized, in preparing for changing the contrapuntal structure in three voices back to the structure of one single line in octaves in the next section, A2. The rhythmic motives from A1 are further developed in both of the top two voices in this section. For example, the oboe's pattern (mm. 18-19) of eighth note with two sixteen notes followed by four eighth notes changes into four sixteenth notes followed by four eighth notes in mm. 21-22, and further changes to two sixteenth notes with an eighth note followed by two pairs of eighth notes that happen twice in mm. 24-25. The same pattern is developed in the flute melody in mm. 22-24. Moreover, on four occasions the rhythmic motive is highlighted through a leap (see Figure 5.16). The first and second times are in the flute, mm. 21-22 between D4 and C♯5 (a major seventh), and in m. 22 between B♭4 and A♭5 (a minor seventh). The third and fourth times are in m. 24 at the same rhythmical place, both a major seventh: between C♯6 and D5 in the flute, and E6 and F5 in the oboe. The collaboration between the pitch and rhythmic patterns makes the motive more distinguishable.

Figure 5.16 – Flute and oboe, mm. 21-24.

Section C is the slowest section in this movement, with the tempo being one quarter note equals sixty. Less motoric and less rhythmically consistent than the other sections, Section C does not participate in the previously-discussed arithmetic scheme produced by the rhythms of the other sections, which is arguably a large-scale illustration of Crawford's principle of dissonation. The two upper countermelody lines formed among the flute, oboe, and clarinet, are most of the time in

contrary motion and in the same rhythm. The rotation of row three is shared by the horn and the bassoon, switching back and forth. However, unlike in the previous sections, the row is only gradually introduced, with three phrases added before the first complete appearance of the row in m. 69.

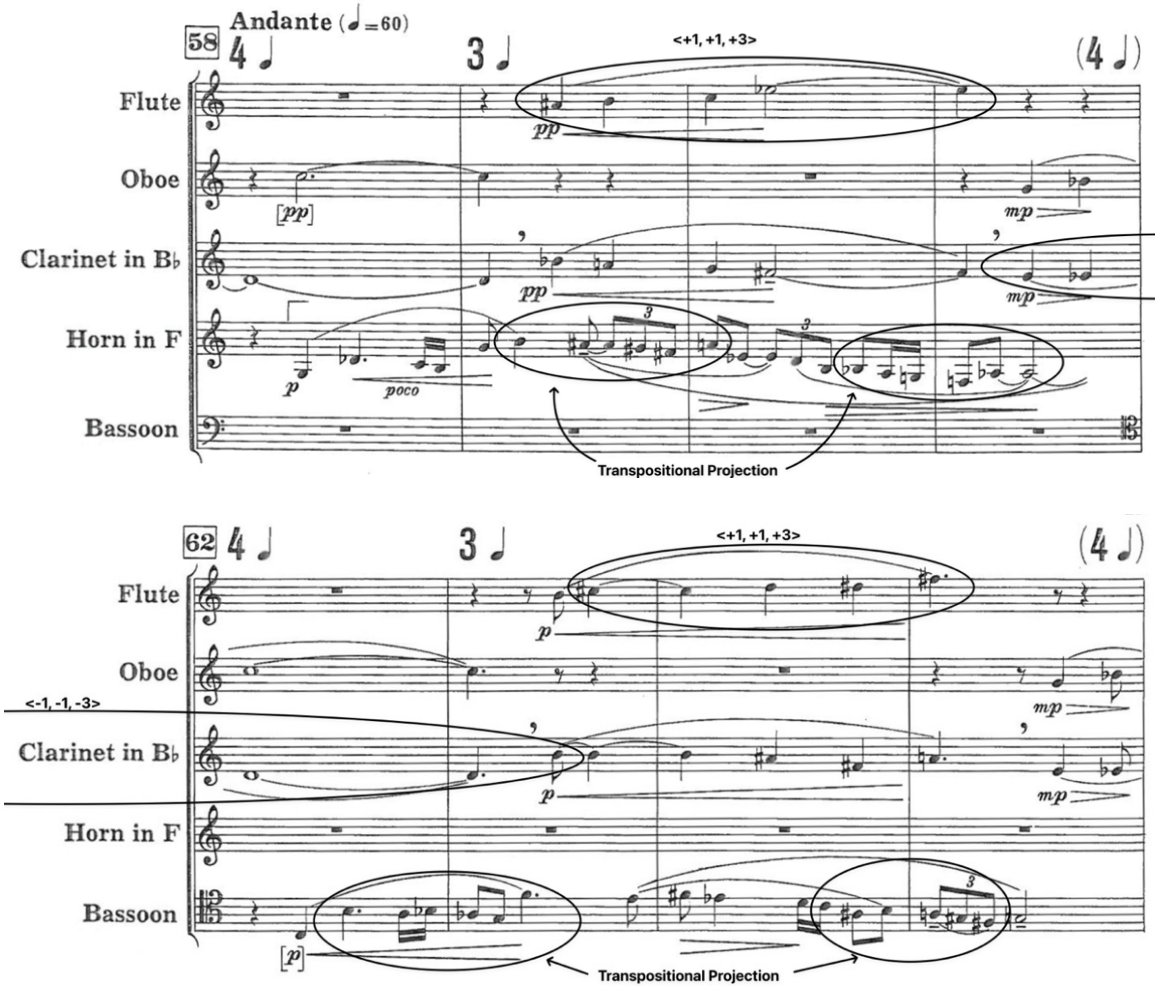
The pitch-classes in the first phrase in mm. 58-61 in the horn is the retrograde of the countermelody ending phrase in A (mm. 16-18), transposed at T_{-2}. Crawford doubled the pitch-class 0 at the beginning, as well as inserting pitch-classes 6, 5, and 4 between the two 0s.

Figure 5.17 – Illustration of the countermelody row in section C.

Pitch-classes in mm. 16-18: 3 0 2 4 5 6 9 T 4 1 3 5 6 2
Retrograde: 2 6 5 3 1 4 T 9 6 5 4 2 0 3
T_{-2}: 0 4 3 1 E 2 8 7 4 3 2 0 T 1
Resulting phrase (insertion in italics): *0 6 5 4* 0 4 3 1 E 2 8 7 4 3 2 0 T 1

As found in the countermelody ending phrase, this phrase in mm. 58-61 in the horn also contains a transpositional projection, <-1, -2, -2, +3> between pitch-classes 4, 3, 1, E, and 2 and 3, 2, 0, T, and 1, at T_{-1} (see Figure 5.18). Another transpositional projection placement involves the prime <+1, +1, +3> and inversion <-1, -1, -3> of a new ternary neume, which can be seen as a partial expansion of TN2 (see Figure 5.18). In the flute, <+1, +1, +3> can be found between pitch-classes T, E, 0, and 3 in mm. 59-61, and 1, 2, 3, and 6 in mm. 63-65. Neume <-1, -1, -3> can be found in the clarinet, between pitch-classes 2, 1, and 0 in mm. 61-63. The bassoon part in mm. 62-65 includes yet another transpositional projection: between pitch-classes E, 9, T, 8, 7, and 5 and 0, T, E, 9, 8, 6, and 7, with the common interval progressions <-2, +1, -2, -1, -2>, transposed at T_{+1}.

Figure 5.18 – Partial expansion of TN2 and transpositional projections in mm. 58-65.



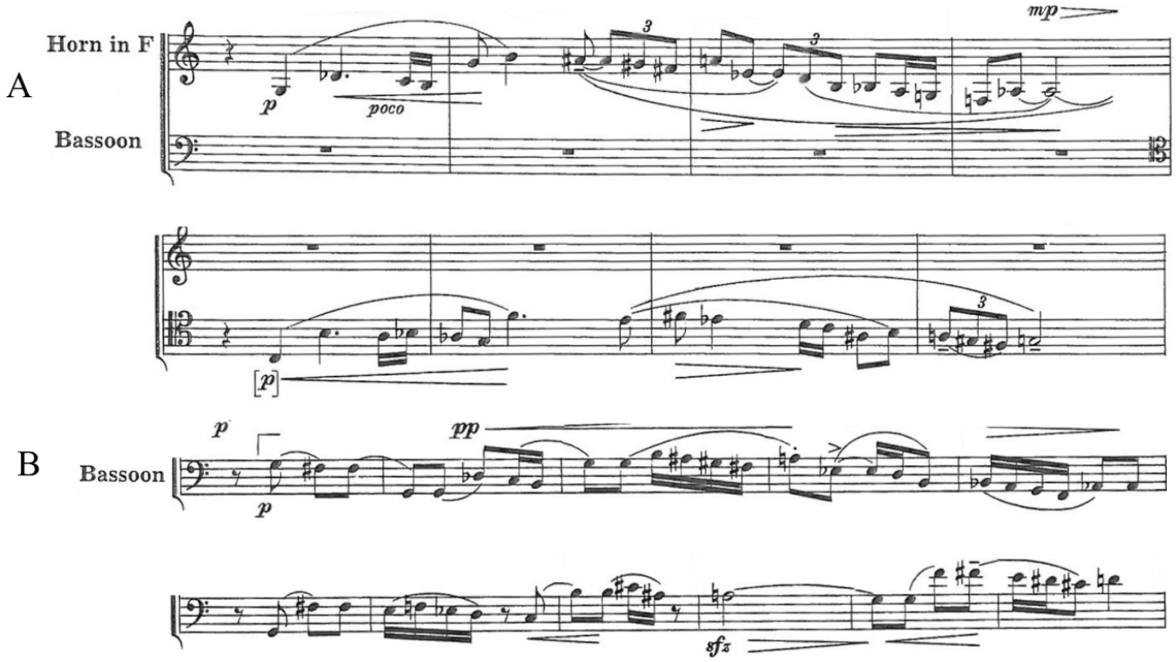
In the third phrase, which returns to the horn, the first ten tones of row three are revealed in mm. 66-67 (see Figure 5.19). The following measure, reveals the twelfth rotation of the row. The first rotation officially starts in m. 69. After the fifth rotation is finished in m. 81, the bassoon returns to the beginning phrase.

Section D is in a similar structure to section C, with the two upper countermelody lines most of the time in the same rhythm, but in contrary motion. The countermelodies are placed in the flute, oboe, and horn, while the six complete rotations of row four are jumping back and forth between the clarinet and the bassoon. The rhythm in this section is significantly different from

section C. The rhythmic patterns from A1 are further developed in the beginning phrases; they gradually evolve into small rhythmic motives in sixteenth notes through rotations.

As mentioned earlier, row four is a direct transposition of row three at T_{+7}. Crawford transposed the beginning phrases from section C at the same interval, T_{+7}, however, rearranged the pitches to create new phrases (see Figure 5.19). For instance, at the beginning of the bassoon melody in m. 101, the first pitch-class (0) of the horn melody in section C, m. 58, is transposed into three repetitions of pitch class 7, with two 6s inserted between the first two statements of pitch-class 7. The transpositional projection in the phrase is therefore delayed and is therefore heard against later parts of the countermelody lines (see Figure 5.19). In this way, misalignment and variation are created.

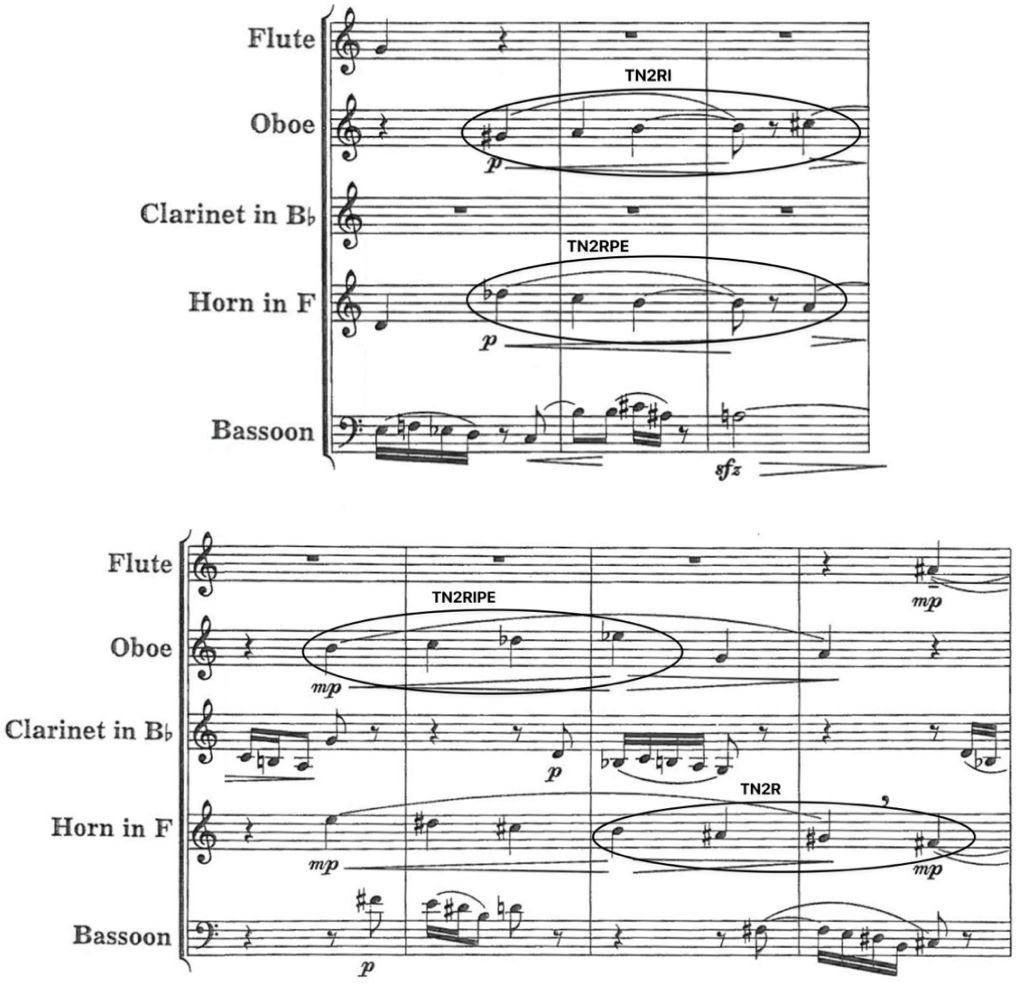
Figure 5.19 – A: countermelody in section C, mm. 58-65, B: countermelody in section D, mm. 101-111.



The countermelodies hold the retrograde and retrograde inversion of TN2. The retrograde inversion of TN2 can be found in the oboe in mm. 107-109, comprising pitch-classes 8, 9, E, and 1. The retrograde can be found in the horn in mm. 115-116, comprising pitch-classes 4, 3, 1, and

E (see Figure 5.20). Another neume that can be considered a partial expansion of the retrograde of TN2, <-1, -1, -2>, occurs in mm. 107-109 in the horn (pitch-classes 6, 5, 4, and 2), rhythmically aligned with the aforementioned retrograde inversion of TN2. The inversion of this neume, <+1, +1, +2>, occurs in mm. 113-115 in the oboe (pitch-classes E, 0, 1, and 3) before the aforementioned retrograde of TN2.

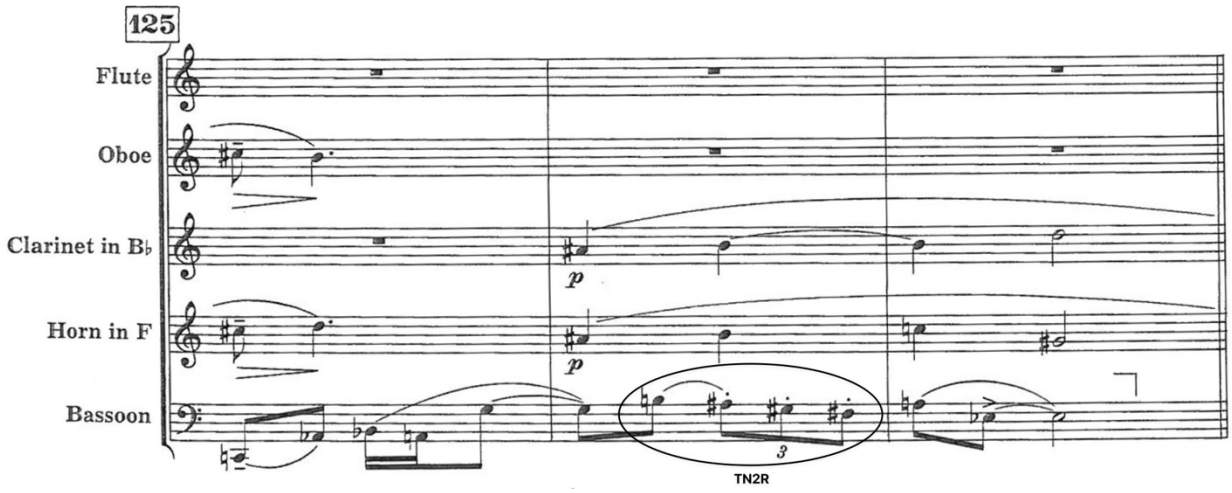
Figure 5.20 –Measures 107-109, mm.131-116.



The first full statement of the row is again prepared by partial statements. In m. 109, seven tones of row four appear in the exact order. Two more incomplete rotations of the row appear in mm. 112-115, switching between the clarinet and the bassoon (see Figure 5.21). At the end of m. 116, the first complete, or "official," rotation begins. Further complications ensue. The jumping

between the two instruments becomes more frequent, increasing to every three tones. Starting from the last note in m. 118 in the clarinet part and the second to last note in the bassoon part, the successive tones in the row are heard simultaneously at each switch. By m. 123, the D in the clarinet is placed a sixteenth note before the bassoon could finish C♯, which is the tone before D, causing an order inversion. In m. 124, the rotation is switched between the instrument at each note, with the successive tones G♭ and E, and E♭ and B being compressed rhythmically to the point of being placed vertically. The clarinet drops off from the rotation in m. 124, so the bassoon finishes the remainder of the sixth rotation alone. Unlike section C, this section ends shortly after the sixth rotation. The repetition of the beginning phrase at the end is replaced by a shorter line, with the retrograde of TN2 <-1, -2, -2> among pitch-classes E, T, 8, and 6 in the bassoon (see Figure 5.21).

Figure 5.21 – Measures 125-127.



Now that we have assembled all the pieces, we can summarize the larger design of this movement. The primary series is demonstrated in all of the A sections, the refrains of the rondo, with the completion of all the twelve rotations. In each refrain, after the content of the primary series and the rotation technique are well established, a countermelody emerges, derived from the retrograde inversion of the series, and is developed through ternary neumes and transpositional projections. The first episode, the contrasting section B, is in three-voice counterpoint with the

first voice presenting rotations of the transposed, rotated retrograde of the series, heard against the second voice, which presents a transition from the transposed, rotated inversion of the series back to the original version of the series, as well as a third voice that presents a melody that contains different forms of the ternary neumes derived from the same primary series. The second and third episodes, sections C and D, contrast with the refrains by adding new countermelodies on top of the retrograde of the primary series transposed at different intervals, along with similar procedures of the ternary neumes. Crawford used the rondo form as a device to carry out the rotations of the series, and to create contrast with different forms of the series heard against itself. Clearly, complex structural designs are intertwined by misalignments.

This pre-compositional plan requires changes in the number of voices through sections. Namely, the movement starts with one melodic line heard three octaves apart, then evolves into two lines when the countermelody first appears in m. 14, then expands into three-part counterpoint in section B, and then shifts back to one line at the beginning of A2, and so on. In all four A sections, the first eight appearances of row one are carried out by the flute and bassoon in the same rhythm three octaves apart. This is a familiar texture, since Crawford used two instruments (or, with piano music, both hands) doubling the same melody in octaves in a number of works, such as *Piano Study in Mixed Accents* and the previously analyzed "In Tall Grass." This texture, in which an instrument sometimes plays in octaves with another line, and at other times plays in counterpoint with another line, provides flexibility for Crawford to change the number of contrapuntal voices over the course of this movement. This also demonstrates the flexibility and creative freedom in Crawford's counterpoint. Melodies that are played in octaves can later drift apart into counterpoint; they could move together into one, then could separate and become two, as if they were streams of running water.

Chapter VI: Conclusion

Crawford had an eventful life. As a daughter of a minister, she and her family were constantly moving from city to city. During her formative years, she witnessed and participated in the awakening of American contemporary music. As a composer and a wife of a leading figure of the ultramodern movement, she joined her husband in the artistic forefront, creating original American music that was remarkably free of the influence of contemporary musical developments in Europe. Then later as a mother, she raised her children through the hardships of the Great Depression, and through the pivotal moments of the financial and political crises occurring across the world. As a folk music researcher, she devoted intensive labor in transcribing folk songs into accurate representations and to seeking ways to incorporate folk into children's music education. Through these changes in her life, her compositional style and techniques in most of her concert works maintained a great deal of consistency. These consistencies show that she experimented within the parameters of Charles Seeger's theories on dissonant counterpoint. Through the three analyses in this research, we can see that Crawford consistently used chromatic saturation, neume transformation, inversional pivoting, shifting alignments, and other various ways to convey Seeger's ideas of heterophony. Nevertheless, her style was not static, but changed over time, as seen in the three representative pieces analyzed in this document.

Of the first two pieces, written in Crawford's most prolific period, *Three Songs* showcases a more complex design than the *Diaphonic Suites*. This is true not only in the number of instruments and the multi-layer contrapuntal relationships created between them, but also in different types of heterophony formed by the separation of musical domains as independent devices. Crawford submitted *Three Songs* to the 1933 ISCM festival in Amsterdam. The inclusion of her piece in the festival earned her the honor of being the first American woman to participate,

and was a high point for her public recognition. This piece demonstrated her further maturity in the craft of dissonant counterpoint.

When comparing the third piece with the first two, certain traits in the Wind Quintet reflect further differences in style. First, the form of the third movement, rondo, is a traditional form that was commonly used in the classical and romantic eras. When he discussed "general procedures" of "rhythmic centricity" in his treatise, Seeger explicitly emphasized to "avoid the sectional form."[81] Crawford was faithful to this guidance in her earlier compositions: the Diaphonic Suite movement is in verse form, and the form of "In Tall Grass" is divided based on the mood of the poem; neither of them are in a traditional form with clear sectional divisions. Although the truth might never be found without asking the composer herself, one shall still propose questions, such as why did Crawford use a traditional form that contradicts one of the basic concepts in Seeger's theories? Perhaps this was Crawford shedding her mindset of being Seeger's student, therefore not feeling as compelled to abide by the rules and theories he had developed.

A second point is illustrated by what might seem a small melodic detail which appears in each A section of the rondo: the short melodic line formed by C, D, E, and F shared between the rotation and the countermelody are the first four notes of the C major scale. Although there are no other tonal implications in the piece, this four-note melody seemingly alludes to tonality. It stands out in the context of a dissonant contrapuntal structure, especially since it is played in unison. It also occurs every time in the refrain, only reinforcing its significance. Is this merely incidental, or is this an intentional design by Crawford? Considering how much detail it requires to compose pieces of this complexity, it would be a mistake to think that was not done deliberately.

[81] Charles Seeger, "Manual of Dissonant Counterpoint," in *Studies in Musicology II: 1929-1979*, 163-228, (Berkeley and Los Angeles: University of California Press, 1994), 196.

In a letter to Varèse in 1948 when Crawford was asked for a "credo" for her compositional approach, she wrote: "I could mention a few points about which I felt strongly. And I still feel strongly about them. I believe when I write more music these elements will be there, or at least striven for:

> Clarity of melodic line
> Avoidance of rhythmic stickiness
> Rhythmic independence between parts
> Feeling of tonal and rhythmic center
> Experiment with various means of obtaining at the same time organic unity and various sorts of dissonance."[82]

Crawford stated that she planned to avoid "rhythmic stickiness" as one of her compositional approaches. Rhythmic stickiness refers to when the music is stuck in the same rhythmic pattern rather than having a variety, or even avoiding patterns altogether. The rhythm of this movement reflects significant differences from this position. Comparing to Crawford's earlier works, the rhythm is simpler, more hummable, and more "sticky." Eighth and sixteenth notes are the only two rhythmic values that are used in the first two sections. The variety of different rhythmic values and patterns is limited compared to her earlier works. Why does the writing of the rhythm in the Wind Quintet contain such a contrast?

As previously stated, in 1939 Crawford finished a small orchestral work, *Rissolty, Rossolty*, a tonal work with quotations of folk tunes. Often regarded as a mere parenthesis in her compositional output, *Rissolty, Rossolty* can also be considered an important step toward the integration of folk material into formal, abstract composition. However, she did not continue writing in this way. The Wind Quintet saw a return, in many ways, to her previous style. Why did she make this decision?

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[82] Judith Tick, *Ruth Crawford Seeger: A Composer's Search for American Music*, (New York: Oxford University Press, 1997), 202.

Tick states that *Suite for Wind Quintet* "reveals a composer returning to her craft by reclaiming familiar techniques and even borrowing from her previous work in a deliberate act of self-resurrection."[83] She points out that the design of the series in the third movement of the Wind Quintet and in the fourth movement of String Quartet (1931) share a great deal of similarity—which Straus has demonstrated in detail in his analysis of the third movement of *Suite for Wind Quintet*.[84] Furthermore, the ostinato in the first movement of the Wind Quintet is almost identical to the ostinato in the second movement of the Sonata for Violin and Piano (1926).[85] The second movement came from Crawford's then-unpublished *Chant for Women's Chorus* (1930), rearranged for winds.

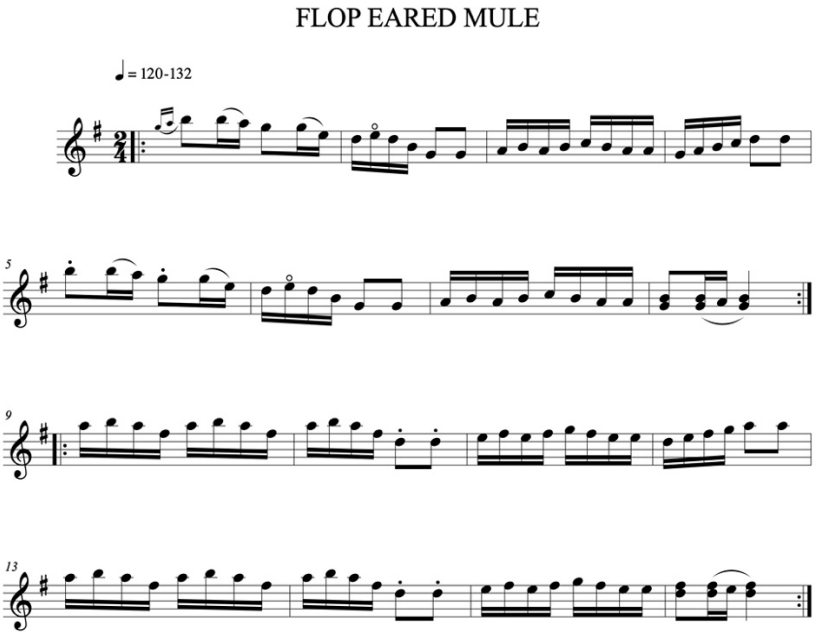
Tick claims that "The dance-like rhythms of the fourth episode behave enough like traditional fiddle tunes to raise the possibility that this movement uses material from her unfinished string quartet of 1938 and represents transformations of the standard 'Flop Eared Mule'."[86] This interesting hypothesis calls for examination.

The tune (see Figure 6.1) is in a binary form with clear sectional divisions. The first part is in G major, and the second part in D major. The rhythm is formed by eighth and sixteenth notes, with the tendency of running through sixteenth notes and stopping on the eighths. The four sixteenth notes in m. 4 and 12 are the first four scale degrees in G and D major. The intervallic distances between the four notes in both occasions are the same as the short melodic line C, D, E, and F used in the third movement of the Wind Quintet. To a certain degree, then, there are similarities between "Flop Eared Mule" and the third movement of the Wind Quintet. However,

[83] Tick, 316.
[84] Joseph N. Straus, *The Music of Ruth Crawford Seeger*, (Cambridge, England: Cambridge University Press, 1995), 192.
[85] Tick, 316.
[86] Ibid, 317.

the parallels are not exact enough to provide definitive proof, and are often based on rhythmic and melodic features shared by countless fiddle tunes. Nonetheless, if Tick's suspicion is correct, or even if it is merely suggestive and points to a more generic similarity, then it does provide some clues to the answers for the questions proposed earlier.

Figure 6.1 – the same score of "Flop Eared Mule" used in Tick's book on page 318 realized through notation software.



Crawford herself had expressed her thoughts on integrating folk music into her works. In the same aforementioned letter to Varèse Crawford also wrote:

"I am still not sure whether the road I have been following the last dozen years is a main road or a detour. I have begun to feel, the past year or two, that it is the latter – a detour, but a very important one to me, during which I have descended from stratosphere onto a solid well-travelled highway, folded my wings and breathed good friendly dust as I travelled along in and out of the thousands of fine traditional folktunes which I have been hearing and singing, and transcribing from field-recordings, for books and for pleasure… Whether I ever unfold the wings and make a start toward the stratosphere again, and how much of the dust of the road will still cling to me, is an interesting question, at least to me. If I do, I will probably pull the road up with me."[87]

[87] Straus, 213.

From this letter, it is clear that Crawford anticipated the strong possibility of combining the folk music that she worked on so intensively for more than a dozen years into her concert work. By this point, other modernists such as Cowell and Copland had already integrated folk music into their works. However, Crawford rejected their methods; instead, she and Charles admired Béla Bartók's approach. Bartók captured the essence of folk music by means of its musical devices (rhythm, modes, scales, etc.), as opposed to direct quotations of specific folk songs. If "Flop Eared Mule" was in fact an influence in Crawford's writing of the third movement of the Wind Quintet, it is clear that she took care to integrate the essence of the song instead of directly quoting the song. Furthermore, if we look at her previous works through this lens, it becomes plausible that *Rissolty, Rossolty* was an early exercise for Crawford in the integration of folk tunes into her works by means of quotation, which she then rejects in exchange for a more nuanced, organic assimilation that we see in the Wind Quintet. Perhaps, if not for Crawford's untimely demise, we would have seen further explorations of this organic integration of folk music into contemporary music.

While this research touches on Crawford's integration of folk music into her concert works, it also raises the idea that one could perceive the influence of her concert works in her contributions to folk music. On more than one occasion, it has been noted that Crawford's technical prowess was paramount in creating an accurate transcription of folk music. Her intuitive ability to portray the authenticity of folk music is a credit to American folk music. Moreover, her sensitivity and humanity towards preserving the originality of African-American folk music helped cross the divides of class and race.[88]

Crawford's music is not just a demonstration of Seeger's theories of dissonant counterpoint, but it provides examples of highly complex structures crafted using innovative techniques. Almost

[88] Tick, 255.

a century later, her music still processes tremendous expressive power. Her innovation and creativity make a case for the requirement of further research into the influence of her music on the next generation of American composers.

Glossary

interval-class (ic): An interval-class is also known as an unordered pitch-class interval. Intervals larger than an octave (compound intervals) are considered equivalent to intervals using the same pitches within the octave due to octave equivalence. Additionally, pitch-class intervals larger than six are also considered equivalent to their complements mod 12.

pitch intervals (ip): A pitch interval is the distance (in semitones) between two pitches. The number of semitones will be prefixed with a plus or minus sign if direction is relevant. This distinguishes an ordered from an unordered pitch interval.

pitch-class: A pitch-class comprises a particular note in every octave, including enharmonic equivalence. For example, pitch-class 9 (see integer notation) refers to every A, not just the A in a specific octave. On the contrary, a "pitch" does belong to a particular octave. For example, A4 is a pitch, and is a part of pitch-class 9 (A).

integer notation: Pitch-classes are represented using integer notation (as opposed to letters). Based on 0 equating to pitch-class C, 1 is C# (and Db), and 2 is D, etc. Often, instead of using double-digit numbers 10 and 11, the initial letters are used (T for ten, E for eleven).

neume: The smallest possible melodic unit, a neume is a succession of musical events in which the focus is the musical shape, and not the points of departure and arrival. It may therefore be considered a form of contour. A neume must contain at least three musical events, creating a musical shape consisting of two progressions. These events are most often pitches, but can be in other parameters, such as rhythm and dynamics. Neumes with three musical events are called "binary" neumes, whereas neumes with four musical events are called "ternary."

phrase neume: A phrase neume is based on the musical events that are found to be most formative within a phrase. The decision of "most formative" is based on criteria such as register, length, and dynamics.

motivic variants: Motivic variants are hypothetical variations of neume M1<+2,-1>. These variants share with M1 (regardless of direction) at least one common interval. For example, M6 <+1,+3> shares a common interval of 1 with M1. These variants are demonstrated by Straus on page 33 in his book *The Music of Ruth Crawford Seeger*.

ostinati: Ostinati is a term that Crawford used in *Three Songs*, and it refers to a section of instruments that is in the background. Not to be confused with the plural of "ostinato", which refers to a musical material that is persistently repeated.

concertanti: Similar to "ostinati", concertanti is a term that Crawford used in *Three Songs* to define the foreground instrument group.

verse form or metric form: an unsystematic, often intuitive sense of phrasing, similar to the lineation in a modernist poem such as those by Crawford's contemporary, e e cummings. Seeger proposed that verse form is the easiest form with which to dissonate lines as a whole.

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