



MONASH University

Developing Approaches to Jazz Composition and Improvisation Informed by
the Dissonant Counterpoint Methods of Charles Seeger and Ruth Crawford.

Joseph O'Connor
BMus (Hons)

Critical commentary submitted in partial fulfilment of the requirements for the degree:

Doctor of Philosophy (PhD) in Music Performance
Monash University in 2016

Sir Zelman Cowen School of Music

Monash University – Faculty of Arts

Copyright notice

© Joseph O'Connor (2016). Except as provided in the Copyright Act 1968, this thesis may not be reproduced in any form without the written permission of the author.

I certify that I have made all reasonable efforts to secure copyright permissions for third-party content included in this thesis and have not knowingly added copyright content to my work without the owner's permission.

Recording of *Concentric Cycles* used with the permission of 3mbs Fine Music Melbourne, which recorded my performance for broadcast.

Excerpts from Johanna Beyer's *Dissonant Counterpoint* are reproduced with the permission of Frog Peak Music (A Composers' Collective).

Excerpts from Ruth Crawford's *Piano Study in Mixed Accents*, *Diaphonic Suite for Solo Flute (or Oboe)*, and *String Quartet 1931* are reproduced with the permission of Theodore Presser.

Excerpt from Marc Hannaford's *Something We Know* is reproduced with his permission.

Excerpt from Scott Tinkler's *Positively Glowing* is reproduced with his permission.

Excerpt from George E. Lewis's *Tractatus* is reproduced with his permission.

Excerpt from Henry Cowell's notebook is reproduced with the permission of John D. Spilker and the *Journal of the Society for American Music*.

All reasonable efforts were made to secure permission to reproduce excerpts from Ruth Crawford's *Diaphonic Suites II and III* and Charles Seeger's *Studies in Musicology II*.

Abstract

This project investigates how Ruth Crawford's applications of concepts from Charles Seeger's *Manual of Dissonant Counterpoint* can inform non-tonal jazz improvisation and composition. Crawford and Seeger's collaboration between 1929 and 1931 culminated in a distinctive compositional approach called dissonant counterpoint that was founded on a dialectic between the traditions of Western concert music, and experimentation with various types of dissonance. This commentary argues that innovation in jazz emerges from a similar dialectic between convention and experimentation, which is enriched by practices extrinsic to the jazz tradition. I have developed a collection of recordings for solo piano and piano trio that embody various syntheses of dissonant counterpoint and jazz. Following a critique of mainstream jazz practices, I refer to Crawford and Seeger's discourse to advances two primary aims: Firstly, to develop distinctive approaches to non-tonal pitch organisation suitable for both composition and improvisation; and secondly, to develop templates for improvisation (called referents) that encourage sophisticated, contrapuntal musical textures.

Each type of referent discussed in this commentary requires the performer to engage with the construction of reference materials while they improvise. Rather than relating to chord progressions that are unchanged during multiple repetitions (solo choruses), improvisers are provided with multilayered reference information that can be configured in a variety of ways. Some compositions provide independent, contrasting harmonic streams that are synthesised and juxtaposed by the performer as they improvise. Some referents supply metrical and rhythmic information that co-ordinates multilayered improvisations. Other compositions supply sets of modules that are sequenced, combined and varied by the improviser. Each referent engenders textural sophistication by embedding a concept of counterpoint within the information that performers relate as they improvise. I conclude by considering ways that my assimilation of modernist techniques reveals a metamodern sensibility, an emergent trend identified by cultural theorists Velmeulen and Van Den Akker.

Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.



.....

Date: February 2016

Acknowledgements

I would like to acknowledge all who have offered their advice and guidance throughout my research project. In particular, I would like to thank my main supervisor Associate Professor Thomas Reiner for his dedication and support. His insightful critiques of my writing, composing and improvising at every stage of this project have challenged me to develop a deep and nuanced understanding of my practice. I am also grateful to my associate supervisor Professor Tony Gould, whose responses to my work have provoked much thought and reflection.

I owe a great deal to my closest musical collaborators, James McLean (Drums) and Marty Holoubek (Bass), who play in my piano trio. Their generosity, honesty, and sensitivity to my musical aims have been essential to our work together. My trio would not be possible without their artistry. I would also like to thank Marc Hannaford for the pertinent advice that he offered as my composition and piano teacher during the first 18 months of this project.

Finally, I would like to acknowledge the generous assistance of Alex Raupach and my mother, Maria O'Connor, who helped me edit and refine my critical commentary.

Contents

1 Introduction	1
1.1 Overview	1
1.2 List of Compositions	5
1.3 Critique of Stylistic Limitations in Mainstream Jazz	7
1.4 Referents for Improvisation and the Ontology of My Work	12
1.5 Aesthetic Placement	15
1.6 Literature Review	17
1.6.1 Literature Associated with Dissonant Counterpoint and the Music of Ruth Crawford	17
1.6.2 Literature Associated with Jazz Performance and Pedagogy	19
1.7 Methodology	20
1.7.1 Research-Led Practice	21
1.7.2 Practice-Led Research	22
1.8 Summary of Chapters	24
2 Developing Dissonant Melody and Harmony in Composition and Improvisation	27
2.1 Chapter Overview	27
2.2 Non-Repetition and OPEN/FILL	27
2.3 OPEN/FILL Using Octave Displacement and Transferred Register Spaces	31
2.4 Pitch Symmetry and PIVOT	33
2.5 PIVOT and Register Transfer	36
2.6 PIVOT in the Notation of <i>Fractured Symmetry</i>	40
2.7 Contour Analysis Techniques as a Generative Approach to Seeger's Theory of Neumes	41
2.8 Dissonant Scales	47
2.9 Dissonant Scales in <i>Accidental Hipster</i>	50
2.10 Chapter Conclusion	55
3 Referent Type 1 - Oppositional, Interpenetrating Harmonic Streams	57
3.1 Chapter Overview	57
3.2 Dissociated Harmonic Layers in Hannaford's <i>Something We Know</i>	57
3.3 Oppositional, Interpenetrating Melodies in the Fourth Movement of Crawford's <i>String Quartet 1931</i>	58
3.4 Adapting Dissociative Counterpoint in the Referent of <i>Sotto Voce</i>	60
3.5 Combining the Two Streams in a Dialectical Improvisatory Process	64
3.6 OPEN and FILL in <i>Sotto Voce</i>	67
3.7 Chapter Conclusion	69
4 Referent Type 2 - Rhythmic Referents	71

4.1 Chapter Overview	71
4.2 Introduction to the Rhythmic Character of Dissonant Counterpoint	71
4.3 Basic Definitions	74
4.4 Composition and Interpretation in the Rhythmic Features of <i>Lady Lachs Schinken</i>	79
4.5 Improvising in <i>Lady Lachs Schinken</i> Using Polyrhythm and Metric Modulation	82
4.6 Intermusicality in My Trio's Rhythmic Approach	90
4.7 Rotational Serialism in the Rhythmic Organisation of <i>Accidental Hipster</i>	92
4.8 Improvising in <i>Accidental Hipster</i>	100
4.9 Chapter Conclusion	103
5 Referent Type Three - Modular Referents	104
5.1 Chapter Overview	104
5.2 Modular referents in American Avant-Garde Jazz	104
5.3 Modular construction in Compositions by Ruth Crawford and Johanna Beyer	107
5.4 Thematic Processes in <i>Dissonant Counterpoint I</i> by Johanna Beyer	109
5.5 Composing Modular Referents informed by Beyer's <i>Dissonant Counterpoint I</i> ...	114
5.6 Concentric Cycles	120
5.7 Chapter Conclusion	122
6 Conclusion	124
6.1 Conclusion	124
References	131
Appendices	136
Appendix A: <i>Fractured Symmetry</i> Score	136
Appendix B: <i>Salad Days</i> Score	139
Appendix C <i>Accidental Hipster</i> Score	141
Appendix D: <i>Sotto Voce</i> Score	144
Appendix E: <i>Lady Lachs Schinken</i> Score	149

Audio Recordings

- Track 1: *Fractured Symmetry* 2:54
Joseph O'Connor, piano
James McLean, drums
Marty Holoubek, bass
- Track 2: *Dissonant Counterpoint III (After Johanna Beyer)* 4:08
Joseph O'Connor, piano
- Track 3: *Salad Days* 6:44
Joseph O'Connor, piano
- Track 4: *Accidental Hipster* 8:16
Joseph O'Connor, piano
James McLean, drums
Marty Holoubek, Bass
- Track 5: *Sotto Voce* 6:44
Joseph O'Connor, piano
James McLean, drums
Marty Holoubek, bass
- Track 6: *Lady Lachs Schinken* 4:45
Joseph O'Connor, piano
James McLean, drums
Marty Holoubek, bass
- Track 7: *Dissonant Counterpoint I (After Johanna Beyer)* 2:37
Joseph O'Connor, piano
- Track 8: *Dissonant Counterpoint II (After Johanna Beyer)* 2:48
Joseph O'Connor, piano
- Track 9: *Concentric Cycles* 4:15
Joseph O'Connor, piano

List of Figures

Figure 1. Transcription of an excerpt from Kurt Rosenwinkel’s <i>Homage a’ Mitch</i> (1:35 – 1:51)	10
Figure 2. Gestural information in <i>Dissonant Counterpoint II (After Johanna Beyer)</i> with indeterminate pitch	23
Figure 3. The first sixteen notes of Crawford’s <i>Piano Study in Mixed Accents</i> . The brackets surround a twelve-tone aggregate in which the first four notes open a register space, which is filled chromatically by the next eight notes	29
Figure 4. OPEN/FILL of a major seventh interval between C and B, resulting in a 12-tone row	29
Figure 5. A further instance of OPEN/FILL of a major third, embedded in twelve-tone example shown in figure 1.....	30
Figure 6. Two further instances of OPEN/FILL that are embedded within the smaller intervals that make up the five note melody in figure 2. (A) is an opened and filled minor third and (B) is an opened and filled major second that occurs frequently in Crawford’s music.....	30
Figure 7. M1 motive shown in its four permutations	30
Figure 8. Two realisations of OPEN/FILL that are bound together by ADJOIN.....	31
Figure 9. OPEN/FILL with register space transfer.....	32
Figure 10. OPEN/FILL spread across different registers, melodically and chordally	32
Figure 11. Pivoted pitches expanding and contracting by equal intervals either side of a pivot tone.....	33
Figure 12. The first three bars of Crawford’s <i>Diaphonic Suite No. 1</i> . The initial D becomes a pivot note about which the second and third notes are symmetrically inverted to derive notes four and five.....	34
Figure 13. Permutations of the M1 motive arrived at in (a) by open and fill and in (b) by pivot.....	35
Figure 14. Three melodies that demonstrate different degrees of integration of pivot	35
Figure 15. Two versions of a five note melody generated by symmetrically inverting two notes about a pivot tone. In the second example, the inverted notes are placed an octave higher	37
Figure 16. A four-note melody pivoted about two pivot tones, separated by a tritone. (c) demonstrates registral variety generated by improvising in relation to a virtual pivot tone a tritone from the actual pivot tone	38
Figure 17. Score for <i>Dissonant Counterpoint III (After Johanna Beyer)</i> , which organises improvisations based on the interaction of two melodies pivoted about different pivot tones	39

Figure 18. Transcription of an improvisation that I performed, concentrating on the integration of OPEN/FILL, PIVOT, ADJOIN and the M1 motive	39
Figure 19. Harmonies and melodies in bars 15-16 of <i>Fractured Symmetry</i> that are pivoted about a G. Each number states the number of semitones that separates each pitch-class from the pivot tone. Brackets group together each instance of pivot	40
Figure 20. Contour repetitions in <i>Salad Days</i> , labelled using Seeger's line and twist neumes	42
Figure 21. Different pitch sets that are equivalent in terms of contour	44
Figure 22. Registeral order sequence in Crawford's <i>Piano Study in Mixed Accents</i> . 3 represents the highest pitch in a sequence of four notes, 0 the lowest	44
Figure 23. Contour repetitions in <i>Salad Days</i> , expressed with greater specificity using contour segments	45
Figure 24. Transcription of an improvisation performed while concentrating on transformations of a [02134] contour segment	46
Figure 25. Construction of a dissonant scale, stacking major and minor trichords a semitone apart	47
Figure 26. Construction of a dissonant scale, stacking major and minor trichords a semitone apart	47
Figure 27. Trichords in the violin parts in the first three bars of <i>String Quartet 1931</i> , second movement	48
Figure 28. Dissonant scalar movement formed by the composite of the violin melodies from Figure 26	48
Figure 29. Interaction between an A ^b major chord and a dissonant scale commencing on A ^b	49
Figure 30. Interaction between a dissonant scale and an A ^b major chord, commencing with dissonant hexachords	49
Figure 31. Dissonant scalar run that transitions into other types of pitch material	45
Figure 32. A selective identification of possible harmonies in the first trichord grouping from <i>Accidental Hipster</i>	50
Figure 33. Clash of triadic chord and dissonances drawn from a dissonant scale	50
Figure 34. Voicing of harmony build from dissonant scales	52
Figure 35. Middle-register voicings with strong implied tonality in <i>Accidental Hipster</i>	54
Figure 36. Transcription of the opening of Smythe's <i>Walls/Fats</i>	55
Figure 37. Quintuplets in Marc Hannaford's <i>Something We Know</i> , implying two rates of harmonic movement within the referent	58
Figure 38. Referent for improvisation from <i>Sotto Voce</i>	60
Figure 39. Classifications of intervallic dissonance from <i>TENM</i>	62

Figure 40. A dissonant species counterpoint exercise from Henry Cowell's notebook. Vertical intervals are labelled	62
Figure 41. Vertical intervals and voice-leading in the upper stream of the <i>Sotto Voce</i> Referent	64
Figure 42. A selective identification of dissonances formed between chord tones in the lower stream, and pitches in the upper stream of <i>Sotto Voce</i>	65
Figure 43. Sonorities derived by combining pitches from the two streams	65
Figure 44. Performing OPEN/FILL in relation to intervals from the upper stream of <i>Sotto Voce</i>	67
Figure 45. Performing OPEN/FILL between two different combinations of chord tones from <i>Sotto Voce</i>	68
Figure 46. Delaying the filling of opened register spaces	68
Figure 47. OPEN/FILL combined with register transfer in <i>Sotto Voce</i> : melodic and chordal applications	69
Figure 48. Seeger's example of a sinuous rhythmic type	71
Figure 49. <i>Diaphonic Suite No. 2</i> , first movement, bars 36-41	73
Figure 50. <i>Diaphonic Suite No. 3</i> , first movement, bars 6-10	73
Figure 51. Implied triplet pulse within a fragmented rhythmic surface	75
Figure 52. Crotchet beat duration, divided into quaver triplet subdivisions in a performance of <i>Lady Lachs Schinken</i> (2:29 - 2:34)	76
Figure 53. Polyrhythms formed between a crotchet pulse and a superimposed pulse in the notation of <i>Lady Lachs Schinken</i>	78
Figure 54. Melodic Order 4 in Crawford's <i>Diaphonic Suite No. 3</i> , first movement, bars 6-15	79
Figure 55. Rigorous rhythmic independence in the first movement of <i>String Quartet 1931</i> by Ruth Crawford	80
Figure 56. Rhythmic independence and contrast of constructing principles between the Piano and Bass melodies in bars 2-5 of <i>Lady Lachs Schinken</i>	81
Figure 57. Expressive microtimings in Ahmad Jamal Trio's 1958 performance of <i>But Not For Me</i> , from on <i>At The Pershing</i> , commencing at 1:10	82
Figure 58. Destabilising interruptions in the bass part of <i>Lady Lachs Schinken</i>	82
Figure 59. The referent to <i>Lady Lachs Schinken</i>	83
Figure 60. Polyrhythms practiced by my trio in <i>Lady Lachs Schinken</i>	84
Figure 61. Examples of Hannaford's two approaches to metric modulation. A) A pulse that forms a polyrhythm with the beat in an initial tempo becomes the beat in a new tempo. B) The speed of a subdivision in one tempo is the same as the speed of a different subdivision in a new tempo	85
Figure 62. Two examples of metric modulation applied within bars 41-46 from <i>Lady</i>	

<i>Lachs Schinken</i> . A and C show two streams of pulsations that form polyrhythms with the beat. B and D show how these pulsation streams can be manipulated to modulate the tempo	86
Figure 63. Transcription of an excerpt of my trio's improvisation in the recording of <i>Lady Lachs Schinken</i> from <i>Praxis</i> (2:29 – 2:52)	88
Figure 64. Metric modulation in the drum improvisation of <i>Lady Lachs Schinken</i> (2:41)	89
Figure 65. Holoubek's bass notes during a metric modulation in the drums (2:41)	90
Figure 66. Comparison between McLean's ironic drum feel in <i>Lady Lachs Schinken</i> (2:47), and the drum feel from <i>But Not For Me</i> performed by the <i>Ahmad Jamal Trio</i> (1:10)	91
Figure 67. Subversion of the beat in Scott Tinkler's <i>Positively Glowing</i> , by the grouping of quintuplets	93
Figure 68. Serial rotations of pitch material in Ruth Crawford's <i>Diaphonic Suite No. 1</i>	94
Figure 69. Serial rotations applied in the rhythm of <i>Accidental Hipster</i>	95
Figure 70. All permutations of the rhythmic series that underpins the notation of <i>Accidental Hipster</i>	96
Figure 71. Rhythmic template for <i>Accidental Hipster</i>	97
Figure 72. Notated Section of <i>Accidental Hipster</i>	98
Figure 73. Statement of the duration series between the left and right hands in the last two bars of the notated section in <i>Accidental Hipster</i>	99
Figure 74. Different groupings within instances of durations of five semiquavers in the notation of <i>Accidental Hipster</i>	100
Figure 75. Subversion of the beat in Seeger's <i>TENM</i> by grouping subdivisions	100
Figure 76. Referent for <i>Accidental Hipster</i>	101
Figure 77. An excerpt from the piano part of George Lewis's <i>Tractatus</i> , which requests improvised versions of detailed notation	105
Figure 78. Three excerpts from Smythe's <i>Walls/Fats</i> . Track timings are indicated above each of the excerpts	106
Figure 79. The first three lines of Beyer's <i>Dissonant Counterpoint I</i>	110
Figure 80. The opening figures of the first, second and third lines of Johanna Beyer's <i>Dissonant Counterpoint I</i>	111
Figure 81 - Excerpts from the first two lines of Beyer's <i>Dissonant Counterpoint I</i> , showing pitch repetition in the treble staff combined with different rhythmic materials	112
Figure 82. Contour similarity between the first and third lines of the left hand in Johanna Beyer's <i>Dissonant Counterpoint I</i> , labelled with contour segments	113
Figure 83. Graphic representation of contour relationships between the first and third lines of the left hand in Beyer's <i>Dissonant Counterpoint I</i>	113
Figure 84. Lines one and three of Beyer's <i>Dissonant Counterpoint I</i> , demonstrating the use	

of shifting contrapuntal relationships to derive variation between recurrent types of musical material	114
Figure 85. Referent for <i>Dissonant Counterpoint I After Johanna Beyer</i> , with formal modules boxed, and contour repetitions labelled	115
Figure 86. Pitch-class series repetition combined with differing rhythms and contrapuntal relationships in <i>Dissonant Counterpoint I (After Johanna Beyer)</i>	115
Figure 87. Vertical intervals formed between the two melodies that comprise <i>Dissonant Counterpoint I (After Johanna Beyer)</i> . Consonances are preceded and followed by dissonances	116
Figure 88. <i>Dissonant Counterpoint I (After Johanna Beyer)</i> expressed as disconnected fragments of contrapuntal material	117
Figure 89. Referent for <i>Dissonant Counterpoint II (After Johanna Beyer)</i> , comprised of five modules that supply different materials for improvisation	118
Figure 90. Bars 1-12 of Johanna Beyer's <i>Dissonant Counterpoint II</i> . Boxes identify recurrent types of musical materials that have informed the formation of modules in my own referent	119
Figure 91. The modular referent for <i>Concentric Cycles</i>	121

1.1 Overview

This research project explores the incorporation of an idiosyncratic compositional theory called dissonant counterpoint in my approach to contemporary jazz performance. The major performance outcomes of my research are documented in a collection of recordings, which are complemented by the following critical commentary. This commentary examines how my composing and improvising are informed by the American modernist composer, Ruth Crawford, and the compositional approaches proposed by her mentor, the musicologist and theorist Charles Seeger.¹ Crawford and Seeger were prominent figures in a group of composers that referred to themselves as the ultra-moderns, which flourished between the end of World War I and the beginning of the Great Depression. This group included composers as diverse as Ruth Crawford, Charles Ives, Edgard Varèse, Henry Cowell, Dane Rudhyar and Carl Ruggles, all of whom shared a commitment to the creation of an independent American music that eschewed European harmonic, gestural and formal models.² The close collaboration between Ruth Crawford and Charles Seeger during 1930 and 1931 resulted in Seeger's major theoretical work entitled *Tradition and Experimentation in (the New) Music*³ (referred to as *TENM*). It includes his *Manual of Dissonant Counterpoint* and was influenced markedly by his intensive period of collaboration with Crawford. Roa argues,

[Crawford's] contribution to Seeger's compositional treatise was fundamental and significant. It can be best observed in the evolution of the treatise's main topics during its formation, which spanned the course of her compositional study.⁴

Crawford's mature compositions represent the most comprehensive practical realisation of Seeger's compositional ideas, which reflect the major concerns of both European and American modernism around the year 1930. Seeger's treatise and Crawford's compositions reveal a desire for unity and balance in the organization of atonal music.⁵ In this respect, they shared a strong affinity with Arnold Schoenberg, whose music was enormously influential in both European and American modernism. In his essay *Composition with Twelve Tones*, written retrospectively in 1941 about practices that he developed in his compositions of the 1920s, Schoenberg describes his method for

¹ Crawford married Charles Seeger and is referred to as either 'Ruth Crawford Seeger' or 'Ruth Crawford' in the literature. I will refer to her as Ruth Crawford so that it is always clear whether I am referring to her or Charles Seeger.

² Joseph N. Straus, *The Music of Ruth Crawford Seeger* (Cambridge: Cambridge University Press, 1995), 215.

³ Charles Seeger, *Studies in Musicology II: 1929-1979* (California: University of California Press, 1994).

⁴ N. Y. Rao, "Ruth Crawford's Imprint on Contemporary Composition," in *Ruth Crawford Seeger's Worlds*, eds. Ray Allen and Ellie M. Hisama (Rochester: University of Rochester Press, 2007), 114.

⁵ Straus, *The Music of Ruth Crawford Seeger*, 219.

composing with permutations and combinations of a tone-row, an ordered set of all twelve pitches that contributes to a global sense of unity through its variation.⁶ Seeger praised the organization of Schoenberg's music, but had other ideas about how a unified balance between internal organization and continuous moment-to-moment flow might best be achieved.⁷ In *TENM*, Seeger proposed an approach to form based on the manipulation of small musical units called neumes that can be developed in various ways to achieve an organic musical continuity. Seeger also urged composers to pursue an ideal balance between all the characteristics of music by developing methods for organising rhythm, timbre, dynamics and articulation that are comparably rigorous to those applied to pitch organisation.⁸ Although Seeger's treatise was not published until 1994, and was therefore inaccessible to subsequent generations of composers, Greer notes that it anticipated the innovations of Messiaen, Boulez, Stockhausen and Babbitt, who later applied serial procedures to the organization of elements other than pitch.⁹

Crawford was familiar with some of Schoenberg's twelve-tone compositions and was fascinated by them, though neither she nor Seeger adopted his method of composing with twelve-tone rows.¹⁰ Crawford was not a serialist, though her pitch rotation strategies and use of inversion, retrograde and retrograde inversion reveals processual similarities with Schoenberg and his disciples. Straus argues, "While her music is highly original, and strongly inflected by the concerns of the American ultra-moderns, particularly Cowell and Seeger, it does have affinities with contemporaneous European music, and deals with similar compositional problems."¹¹

Crawford composed with a theoretical rigor based on Seeger's concepts of heterophony and neume transformation, as well as pre-compositional schemes of her own invention. Straus describes Seeger's idiosyncratic definition of heterophony as a musical texture in which "component melodies have a very high degree of independence, and little attention is paid to the intervals or sonorities formed between them."¹² He elaborates that

⁶ Arnold Schoenberg, *Style and Idea: Selected Writings of Arnold Schoenberg* (New York: St Martins Press, 1975), 244.

⁷ Seeger intersperses both praise and critique of Schoenberg's practice at a number of points in *TENM*, two examples of which are cited in the following citation. Seeger, *Studies in Musicology*, 192 and 146-47.

⁸ *Ibid.*, 89-90.

⁹ T. Greer, "Critical Remarks," in *Studies in Musicology II: 1929-1979*, ed. Ann M Pescatello (California: University of California Press, 1994): 38.

¹⁰ Matilda Gaume, "Ruth Crawford: A Promising Young Composer in New York, 1929-30," *American Music* 5:1 (Spring, 1987): 76-77.

¹¹ Straus, *The Music of Ruth Crawford Seeger*, 2.

¹² Straus, *The Music of Ruth Crawford Seeger*, 218.

the “taut polyphony of independent lines” in Crawford’s music poses her greatest challenge to the rich, chordal harmonic practices of late European romanticism.¹³ It is in Crawford’s approach to counterpoint that she most influenced later American composers, particularly Elliott Carter, whose string quartets are also characterized by rigorous melodic and rhythmic independence between different parts.¹⁴ The individual melodies Crawford’s counterpoint are organized using Seeger neumes, which are similar to motives in many respects.¹⁵ Neumes are musical shapes, consisting of at least three events, from which other shapes can be derived.¹⁶ They seek to impart a logical flow on melodies as they gradually transform, emphasizing melodic progress rather than adherence to particular sets of musical content.¹⁷

My research investigates how the conceptual foundations of dissonant counterpoint, including neumes and heterophony, can be adopted as a framework for developing innovative compositional and improvisatory approaches that challenge the hegemony of inherited conventions in the field of contemporary jazz performance. Though Seeger’s theory refers to counterpoint, his discourse is wide-ranging and is equally concerned with the properties of individual melodies. Two of Crawford’s compositions that are discussed later in this commentary, *Piano Study in Mixed Accents* (1930) and *Diaphonic Suite No.1*(1930), are studies in solo melodic line.¹⁸

My recordings and critical commentary respond primarily to the question: how can Ruth Crawford’s applications of concepts from Charles Seeger’s *Manual of Dissonant Counterpoint* inform non-tonal jazz improvisation and composition? This research investigates this question within a broad range of musical features including melody, rhythm, counterpoint, form and the aesthetics that inform my synthesis of jazz and dissonant counterpoint. This synthesis is explored theoretically in this commentary, but it is most substantially embodied in the music itself, in my improvisations and the compositional features that they expand upon. It is my hope that the recordings submitted with this commentary embody contemporary interpretations of dissonant counterpoint that are compelling and idiosyncratic.

¹³ Ibid., 218.

¹⁴ Ibid., 218-19.

¹⁵ Ibid., 20-21.

¹⁶ Ibid., 21.

¹⁷ Ibid., 21.

¹⁸ Piano Study Score reproduced in L. E. Burkett, “Linear Aggregates and Proportional Design in Ruth Crawford’s Piano Study in Mixed Accents,” in *Ruth Crawford Seeger’s Worlds*, eds. Ray Allen and Ellie M. Hisama (Rochester, NY: University of Rochester Press, 2007), 60-63.
Ruth Crawford Seeger, *Diaphonic Suites*, New York: Continuo music Press, 1972.

The work of Ruth Crawford and Charles Seeger may seem an unusual point of departure for contemporary jazz research, but there are parallels between the rationale for my own post-tonal explorations and the circumstances that fuelled Crawford and Seeger's project. Like Crawford and Seeger, I aspire for my music to challenge inherited orthodoxies. Much of my musical background is in idiomatic jazz performance. I specialised in jazz piano at the Queensland Conservatorium (BMus completed in 2010) and have performed alongside some of Australia's most respected jazz improvisers, including Scott Tinkler, Paul Williamson, Danny Fischer, Phillip Rex and the late Allan Browne. During the final two years of my undergraduate studies, I became interested in the possibility of enriching my musical approach by appropriating aesthetic and theoretical characteristics from Western art music, and twentieth century modernism in particular. My practice in the last six years has explored this intersection of improvised and notated traditions in a variety of ways. Though I concentrate on my original works for solo piano and piano trio in this commentary, I have also explored modernist influences in works for quintet, sextet, the Monash Art Ensemble and the Bennetts Lane Big Band, which I have directed since 2014.¹⁹ In all of these settings, I have referred to modernist compositions as a source of ideas that can be applied to improvisation and composition in ways that resist the normative pull of jazz convention.²⁰

Crawford and Seeger also founded their aesthetic on an effort to find alternatives to the theoretical and practical legacies that they had inherited in the form of traditional tonality.⁵ Burkett summarises Seeger's subversion of convention:

Dissonant counterpoint as presented in *TENM* may be understood as a direct affront, not only an alternative, to traditional tonal practice, an attempt to confound, confuse, deny, and disturb every aspect of traditional tonality that a listener might cling to for aural guidance and clarity. Any material, procedure or concept associated with traditional tonal practice - for example, canon, meter, melody or any formal procedure- may be dissonated.⁶

¹⁹ *Confluence* was composed for the Monash Art Ensemble and was premiered in October 2014. It applies Seeger's concept of heterophony to the stratification of different subsections of the ensemble that move with different degrees of animation. Interstice III & IV for the Joe O'Connor Quintet/ Sextet were composed and performed in 2012-2013 and were closely modeled on the third and fourth movements of Crawford's *String Quartet 1931*. *Splinch* was composed in 2013 and was performed by the Bennetts Lane Big Band throughout 2014-2015. It was also adapted for full big band and was performed by the Sydney Conservatorium Big Band in 2014. It draws on the sustained sonorities in Crawford's *String Quartet 1931*, third movement, and is also informed by the dense dissonant sonorities of Carl Ruggles who was another exponent of dissonant counterpoint.

²⁰ During my honours year (2010), I researched how the music of Marc Hannaford, Andrea Keller and Paul Grabowsky has been informed by their study of Western art music.

Burkett's description of dissonant counterpoint projects a vehement avoidance of traditional compositional practices. In this performance research, I am concerned with the development of innovative alternatives to formulaic, widely practiced performance models within contemporary jazz. Seeger's *Manual of Dissonant Counterpoint* has proved an invaluable resource because it resists many of the musical conventions that I have sought to reform in my own practice. This commentary illustrates how Seeger's subversive approaches have informed my approach to music. It identifies instances where I have tried to invigorate the conventions of mainstream jazz by combining them with contrasting approaches from dissonant counterpoint. My intention is not to reconstruct dissonant counterpoint extemporaneously but to use Crawford's music and Seeger's theory to guide the development of distinctive performance approaches that eschew standardised jazz conventions.

My distinctive appropriations of dissonant counterpoint are realised in recordings of nine original compositions that explore different aspects of the theory through solo and trio improvisation. Concepts from dissonant counterpoint are used to develop musical practices that support the improviser's impulse towards spontaneity and ensemble interaction within preordained compositional environments. Each composition is an example of what Pressing calls a referent, which he defines as "an underlying formal scheme or guiding image specific to a given piece, used by the improviser to facilitate the generation and editing of improvised behaviour on an indeterminate time scale."⁷ Each referent is designed to engender distinctive approaches to melody, harmony, rhythm and formal development. My improvisations are closely related to their compositional underpinnings and, conversely, my compositions are designed to provide fertile environments for improvisation. Improvisation and composition are therefore inseparable in my music and discussion of both is intertwined throughout this commentary.

1.2 List of Compositions

The first four pieces listed below were written for my trio, which has been developing and performing my music since early 2013. All of the trio recordings submitted with this commentary feature Marty Holoubek on double bass and James McLean on the drum set. All of these compositions, with the exception of *Accidental Hipster*, were

recorded on my trio's album *Praxis*²¹ in April 2014, and have been regularly featured in our performance repertoire since that time.

Compositions for piano trio:

Sotto Voce (2013)

Fractured Symmetry (2014)

Lady Lachs Schinken (2013)

Accidental Hipster (2015)

The remainder of my recordings are solo piano works. Crawford only composed one piece for solo piano during her intensive collaboration with Seeger. It is entitled *Piano Study in Mixed Accents* (1930). To assist a broader view of the pianistic applications of dissonant counterpoint, I studied two piano works by Johanna Beyer as I developed solo repertoire.²² Johanna Beyer was a student of Crawford's during 1933 and 1934, and her suite of piano miniatures entitled *Dissonant Counterpoint* "bear clear signs of Crawford's influence".²³

Compositions for solo piano:

Salad Days (2015)

Dissonant Counterpoint I, II and III (After Johanna Beyer) (2014)

Concentric Cycles (2015)

Each composition defines particular musical materials that form the locus for improvisations. Some compositions establish harmonic conditions, some supply rhythmic templates, and others provide small modules of thematic material that coordinate improvised behaviour. The body of this commentary details how these materials have been informed by dissonant counterpoint. It also situates my work within the field of jazz performance by identifying aesthetic similarities with other contemporary practitioners who pursue alternatives to conventional performance models. As background to the detailed discussion of my recorded performances later in this commentary, the following critique

²¹ Joe O'Connor Trio, *Praxis*, independent release, 2014, Compact disc.

²² Johanna Beyer, *Dissonant Counterpoint Solo Piano*, Lebanon: Frog Peak Music, 1996.

²³ Rao, "Ruth Crawford's Imprint," 136.

examines particular performance practices from mainstream jazz that my work seeks to diverge from.

1.3 Critique of Stylistic Limitations in Mainstream Jazz

I use the term ‘mainstream jazz’ to refer to a broad set of practices derived from bebop, which are prevalent in contemporary jazz performance and are cultivated in jazz pedagogy. These practices are flexible and can be realised diversely, but they nevertheless exert a standardising pull on all aspects of performances including harmony, melody, rhythm, instrumental role and the relationships between composition and improvisation. By examining referents for improvisation and formulas for their interpretation, this critique identifies ways that convention can inhibit innovation in contemporary jazz performance. In doing so, it identifies areas where practical alternatives to the mainstream might be developed by appropriating Crawford and Seeger’s compositional methods, which are designed to resist the normative gravity associated with traditional tonality.

Theodor Adorno’s essay *Perennial Fashion – Jazz* is instructive because it criticises musical traits that he argued were pervasive in mainstream jazz performances.²⁴ Gary Peters writes that Adorno critiques jazz immanently, evaluating the music in terms of claims that it enacts freedom and individuality.²⁵ A review of these terms in the jazz literature reveals that they are deployed frequently in the discourse surrounding the music by both scholars and musicians (see footnote for examples).²⁶ Adorno argues that the standardised and formulaic characteristics of jazz cannot be reconciled with the genuine realisation of freedom and individuation.²⁷ I will refer to Adorno’s arguments in my own evaluation of contemporary jazz because he articulates the main musical concerns that have shaped the emergence of my musical approach.

At the outset, it is instructive to clarify Adorno’s relationship to works of art and the way that this influences his evaluation of jazz. Theories such as Adorno’s, which rely on

²⁴ T. Adorno, “Perennial Fashion – Jazz,” in *Critical Theory and Society: A Reader*, eds. Stephen E. Bronner and Douglas M. Kellner (New York: Routledge, 1989), 199-212.

²⁵ Gary Peters, *The Philosophy of Improvisation* (Chicago: University of Chicago Press, 2009), 76-78.

²⁶ Duke Ellington states, “Jazz is freedom. Jazz is the freedom to play anything, whether it has been done before or not. It gives you freedom.” Cited in:

M. Tucker, ed., *The Duke Ellington Reader* (New York: Oxford University Press, 1993), 253.

Rinzler includes chapters on both freedom and individualism in:

Paul Rinzler, *The Contradictions of Jazz* (Lanham, Md.: Scarecrow Press, 2008).

References to freedom appear in the titles to numerous publications, for example:

John Litweiler, *The Freedom Principle: Jazz After 1958* (New York: W. Morrow, 1984).

²⁷ Peters, “The Philosophy of Improvisation,” 76-78.

Western concepts of aesthetics, have been criticised when applied to jazz because they treat musical works (performances in the case of jazz) as fixed art objects and evaluate them on the basis of structural aspects. Such evaluations tend to overlook subjective, social, interactive and processual meanings that are central to the experience of both performance and reception for many advocates of improvisation.²⁸ However, dismissal of structural critiques of jazz based on these omissions implies that the objective features of an improvised work are secondary or unimportant when considering the impact of performances.²⁹ This view doesn't fully acknowledge that the performance and reception of music involves a dialogue between objective musical features and the cultural context of their emergence, which changes over time. Charlie Parker's recordings no longer elicit the vehement response that they did in the early 1940s. The objective features of Parker's bebop performances, which represented a radical reaction against the swing era's comparatively restrictive vocabulary, have since been subsumed into the conventional to such an extent that they are common points of reference for most institutional models of jazz education. However charged Parker's music may have been with subjective, social and processual meaning, fragments of his melodic constructions (licks or phrases) have been abstracted from his improvisations, learned, and reproduced by countless musicians in ways that isolate them as art objects.³⁰ According to Louth,

The *praxis* of improvisation is thus predicated on an ongoing relationship between action and art object... Improvisations themselves are not best perceived as art objects (recordings are another matter); however, the musical statements appropriated for the task - the crystallised musical fragments with which improvisers negotiate, can be viewed as such.³¹

As Louth describes, idiomatic musical fragments are learned and reproduced so widely that they lose their original contextual urgency. Gary Peters associates these iterative mimetic acts with inevitable aesthetic decay.³² He states,

Aesthetic forms grow old and tired, their textural richness and the promise therein become threadbare, schematic, and formulaic. The mimetic movement such forms allow is increasingly reduced to well-worn gestural paths demarcated and authorized by ever-more sclerotic codes of practice.³³

Peters would likely attribute a loss of aesthetic impact to the imitation and repetition of particular musical fragments, such as those from Parker's music, that are identified with

²⁸ Joseph P. Louth, "An Approach to Improvisation Pedagogy in Post-Secondary Jazz Programmes Based on Negative Dialectics," *Music Education Research* 14:1 (2012): 13.

²⁹ *Ibid.*, 16.

³⁰ Martin, cited in Louth, "An Approach to Improvisation Pedagogy," 17.

³¹ Louth, "An Approach to Improvisation Pedagogy," 19.

³² Peters, *The Philosophy of Improvisation*, 102.

³³ *Ibid.*, 102.

particular styles of performance. In my reading of Adorno's critique of jazz, I will focus on the types of small musical fragment referred to by Louth. I will consider how they relate to the harmony that they are embedded within, and evaluate their aesthetic consequences for the working of an improvisation. Although Adorno's negative appraisal of jazz has been criticised for its formalist orientation and its misrepresentation of jazz culture, he raises points that resonate with my own concerns regarding the standardisation of jazz practice.³⁴ In particular, he is critical of the predominance of standardised harmonic and rhythmic materials that betray the simplicity of the schema used to organise improvisations. Though large parts of Adorno's *Perennial Fashion – Jazz* are dedicated to framing this standardisation as a by-product of the cultural industry's commoditisation of jazz, I am concerned with the following passage that specifically addresses musical characteristics.

Thus, the so-called improvisations are actually reduced to the more or less feeble rehashing of basic formulas in which the schema shines through at every moment. Even the improvisations conform largely to norms and recur constantly... The ban on changing the basic beat during the course of the music is itself sufficient to constrict composition to the point where what it demands is not aesthetic awareness of style but rather psychological regression. The limitations placed on metre, harmony and form are no less stifling. Considered as a whole, the perennial sameness of jazz consists not in a basic organization of the material within which the imagination can roam freely and without inhibition, as within an articulate language, but rather in the utilization of certain well-defined tricks, formulas and clichés to the exclusion of everything else.³⁵

Though Adorno's critique, originally published in 1953, predates many major developments in jazz performance practice, his incisive remarks are directed at traits that continue to pervade contemporary jazz. In particular, the relationship that he criticises between improvisations and their underlying harmonic schemes can be observed in many contemporary performances. Mainstream jazz is often characterised by melodic content (primarily triadic, pentatonic and scalar) that correlates closely with a pre-determined chord progression within a fixed metric scheme. Substantial formal and conceptual invention isn't supported by such compositional schemes that are rooted in standardised chord progressions, which hold limited interest in themselves, however well crafted they might be. To demonstrate this relationship between referent and improvisation, I have transcribed an excerpt from *Homage a' Mitch* (2014) by Kurt Rosenwinkel, shown in Figure 1, which contains harmonic and melodic approaches typical of mainstream jazz.³⁶ I have chosen to transcribe Rosenwinkel because he has been an influential figure in the mainstream of

³⁴ Dustin Bradley Garlitz, "Philosophy of new jazz: Reconstructing Adorno" (M.L.A., University of South Florida, 2007), 32.

³⁵ Adorno, "Perennial Fashion," 201.

³⁶ Kurt Rosenwinkel, *Star of Jupiter*, WOMMUSIC, 2012, MP3 file, downloaded 2014, iTunes.

contemporary jazz since the 1990s, though I could also have discussed excerpts from other mainstream artists such as Wynton Marsalis, Branford Marsalis, Brad Mehldau, Aaron Parks, Robert Glasper or Mark Turner.

Figure 1. Transcription of an excerpt from Kurt Rosenwinkel’s *Homage a’ Mitch* (1:35 – 1:51).



The harmony of *Homage a’ Mitch* is a succession of (ii – v) progressions (sometimes embellished using substitute chords) in which dominant chords either resolve to the tonic, or are followed by a new tonal area to form a deceptive cadence. Such harmonic approaches have been commonplace in the standard jazz repertoire since its earliest decades, albeit in simpler formations. In performances, melodies are improvised that are closely related to the harmonic progression. Each melody in the excerpt can be interpreted in terms of scales and arpeggios that are associated with their corresponding chord. In the third bar, for example, the first beat articulates the 3rd, 5th and 7th of the D^b major7 chord embellished with chromatic passing tones, the second beat is a diatonic circling of the tonic, the 3rd beat ascends the D^b major scale with an added #4, leading to the 5th, which commences a descending root position triad with an added 9th during the fourth beat. Rhythmically, the excerpt contains crotchets, quavers and semiquavers that contribute to a clearly articulated, unvarying 4/4 meter, in which beats are frequently emphasised by changes in melodic direction.

This analysis of *Homage a’ Mitch* describes a way of conceiving melody and harmony governed by chord symbols. These symbols are abstractions that describe general categories for concrete and particular elements and practices.³⁷ Abel voices a concern that the chord symbol’s attempt to capture a virtually limitless array of pitch combinations in

³⁷ Mark Abel, “Radical Openness: Chord Symbols, Musical Abstraction and Modernism,” *Radical Philosophy* 195 (2016): 26.

one simple formula “cannot fail to reduce the breadth and richness of creative possibilities.”³⁸ He elaborates,

It is easy for the harmonic element, understood as the chord sequence, to begin to take precedence in the compositional process, despite its supposedly supportive, accompanying status. This is an odd reversal which is brought about by the notion that the melody must ‘fit’ the harmony... The resulting tendency is that harmony dominates the music such that all other elements are in service of the chord progression, which tends to fall into regular repeating four – and eight-bar sections. We might go so far as to characterise this subservience of melody to harmony as representing the demise of melody proper.³⁹

The most detrimental effect of the chord symbol in Abel’s description is the loss of melody’s capacity to determine harmony. Unlike a renaissance or baroque polyphony, in which harmony emerges from the intricate entwining of distinct melodies, chord symbols determine the global harmony prior to the conception of melody. Abel argues that a binary separation emerges, chord versus melody, which marginalises “any more fluid dialectical understandings of musical texture,” as well as precluding “alternative textural models of a more sophisticated nature”.⁴⁰ Despite this binary separation, the melody is so tied to the harmony that the two are conflated; melody collapses into harmony. Because of this subservience of melody to harmony, I am sympathetic to Adorno’s argument that the harmonic schemes conventionally used in jazz prevent improvisations from engaging deeply with musical form. Adorno would likely observe that “the schema shines through at every moment”, due to the directness of relation between the chord symbols in the referent and the melodic formulas used in performance.⁴¹

Though it is possible to perform in an unconventional manner with reference to conventional harmonic progressions, this necessitates elaborate processes of departure that loosen the confines imposed by the schema. In such performances, the aesthetic is founded on a thorough resistance to its own method of formal derivation. I believe that more powerful aesthetic statements can be made by rethinking the nature of the referent itself. This commentary describes referents that provide materials that cannot be received passively by performers. The referent’s various features are actively combined and sequenced during performances with the aim of realizing the kinds of sophisticated, dialectical models of musical texture that Abel suggests are lacking in music conceived in relation to chord symbols alone.⁴²

³⁸ Ibid., 29.

³⁹ Ibid., 30.

⁴⁰ Ibid., 30.

⁴¹ Adorno, “Perennial Fashion,” 201.

⁴² Abel, “Radical Openness,” 30.

Though I cannot find precedents for the application of dissonant in counterpoint in jazz, there are numerous musicians who, like myself, use theoretical enquiry as a means of distinguishing their practices from the conventional. It is my contention that the music of contemporary performers such as Henry Threadgill, Matt Mitchell, Cory Smythe, Marc Hannaford, Scott Tinkler and Kris Davis, is particularly engaging because it successfully realises alternatives to the conventional. This is not to say that tradition is rejected entirely. Rather, it is augmented and adapted to form music that is idiosyncratic both in its surface level materials and in the templates that guide improvisations.

1.4 Referents for Improvisation and the Ontology of My Work

It is common in mainstream jazz performances for the harmonic, rhythmic and formal points of reference that coordinate improvised behaviour to be inferred without difficulty by educated listeners. These inferences are based on the performers' choices of musical materials. If a jazz ensemble improvises on a twelve bar blues form (a common example of a referent), a listener with prior knowledge of the relevant harmonic and formal conventions will most likely recognise the underpinning referent and use their knowledge to interpret the performer's musical choices. The nature of the referent itself is never subject to interrogation by the listener because of its transparency. In my experience, the most engaging, challenging and satisfying improvised performances occur when I can hear the presence of a structural underpinning in recurrent types of ensemble co-ordination, but am provided with insufficient information to determine what that underpinning might be and how each performer is relating to it. In some cases, my inability to infer the nature of the referent is due to a degree of complexity or intricacy that resists recognition without a specialised understanding of the performer's approach. These listening experiences involve an active interpreting of the relationships between each sounded part and, additionally, the relationship of these parts to an unfamiliar common point of reference.⁴³ In performances of such referents, the musical surface could be said to form a kind of virtual counterpoint with its formal underpinnings that are never explicitly revealed. The musical surface is constantly related to the referent, though the referent itself is not a sounded musical event.

⁴³ The type of listening that I refer to is based on my personal interests that may not align with those of many other listeners. However, other musicians have asked me on a number of occasions following a performance if they could view a score of one of my pieces to see how particular musical features were organised. This indicates to me that jazz musicians other than myself also try to infer referents based on what they hear in the musical surface.

Improvised realisations of these referents reveal an affinity with Boulez's virtual theme, which he explains in relation to Webern's *Op. 27 Variations* (1936).⁴⁴ Paraphrasing Boulez, Campbell describes that the images that comprise Webern's variations are not derived from a primordial idea that is made explicit. Instead, they are "diverse occurrence of an idea which never itself becomes perceptible and which is only ever perceived in its multifarious variations."⁴⁵ Boulez's attributes an athenatic quality to the virtual theme, which isn't fixed in a defined form at the beginning of a composition, but can appear throughout the development explicitly, in vague amorphous forms, or anywhere between the two.⁴⁶ Campbell's discussion of Boulez's realisation of virtual themes focuses particularly on *Sonatine* for flute and piano (1946).⁴⁷ Similar to virtual themes, referents are only observed in improvisation through their diverse occurrences, and are never overtly stated in their entirety. Their presence, however, is apparent because of recurrent behaviours that are guided by harmonic, rhythmic and formal preconditions. I aspire to have listeners engage critically with the relationships between the composed and improvised in my performances. I want them to draw connections between diverse realisations of referents that function similarly to Boulez's virtual theme.

The referent's virtual presence in my music unifies the actual musical events and enables performance approaches that belie the relationship between improvisations and their guiding precondition. Each referent establishes an aesthetic space that is inclusive of the entire potential associated with my musical experience, and that of my collaborating musicians. Within this total potential, harmonic, rhythmic and formal preconditions introduce a hierarchy that emphasises certain types of gesture and ensemble interaction. In doing so, composed preconditions define distinctive musical spaces that emerge as works, which are nevertheless unfixed in live performances. This mediation between the composed and improvised shapes the ontology of my work. The practical outcomes of my research are embodied within musical scores and improvised performances that depart from these scores. Performance outcomes are also documented by recordings that are ontologically distinct because they impart fixity to a particular interpretation of a composition.

⁴⁴ Anton Webern, *Variationen Für Klavier*, Vienna: Universal Edition, 1936.

⁴⁵ Edward Campbell, *Music After Deleuze* (Sydney: Bloomsbury, 2013), 14.

⁴⁶ Boulez, cited in Edward Campbell, *Boulez, Music and Philosophy* (Cambridge: Cambridge University Press, 2010), 161.

⁴⁷ *Ibid.*, 160-192.

Pierre Boulez, *Sonatine*, Vienna: Universal Edition, 1946.

Within Western composition, the score is often treated as the definitive embodiment of a work. By comparison, the centrality of improvisation to my own performances shifts the ontological significance of notation. My works include notated sections that are the same in each performance (notwithstanding discrepancies in execution). These fully notated parts are intimately related to the preconditions supplied by referents. *Lady Lachs Schinken*, for example, uses the metrical structure of the notated section as a template for rhythmic improvisation. Though such templates are designed to coordinate improvisation, notated sections also form general aesthetic templates by privileging particular harmonies, rhythms and gestures that inform improvisation. The whole score is essential to the referent, though there are various degrees of notational precision at different points within compositions. Notated scores are incomplete without the improvisations that they are designed to engender, and it is only through performance that subtle aesthetic information is communicated. I make a distinction between score and referents because the latter refers particularly to the preconditions supplied in parts of a composition where the majority of behaviour is improvised. The fullest embodiments of my works are performances that respond to the preconditions supplied by referents.

Paradoxically, however, no individual performance can be viewed as a definitive or singular realisation of a given work. The work's identity is tied to its embodiment of an improvisational potentiality, which ceases to exist within any given performance once it has run its course. It is for this reason that improvisers have often questioned the suitability of recordings as the primary mode of documenting and distributing improvised music because they lend authority to a particular realisation of a work in ways that devalue its openness. As guitarist Derek Bailey suggests, recordings "introduce endgame to something that is for [him] not primarily about endgame."⁴⁸ In effect, recordings close a performance context predicated on openness. It is easy to overlook that the familiar forms of many iconic jazz recordings could have emerged entirely differently in ways that may have been equally compelling, and that this ontological flux is the most compelling feature of improvised performances. On the other hand, recordings are included and transcribed as a part of this commentary because they demystify a host of practical and theoretical concerns that can only be adequately addressed by delving into the structure of particular performances.

⁴⁸ Bailey cited in David Grubbs, *Records Ruin the Landscape: John Cage, the Sixties, and Sound Recording* (Durham: Duke University Press, 2014), 107.

The fullest conception of my work takes into account all of these various manifestations, including scores (as referents), recordings, and live performances. Each of these embodiments plays a necessary role in the conception of my work, which is best considered as a total practice that encompasses all of these forms and the relationships between them.

1.5 Aesthetic Placement

My musical explorations are driven by a sense that the subjective, expressive potential engendered by a particular set of musical materials decreases as they ossify into formal conventions. I have developed musical approaches that fall outside the conventional to resist aesthetic forms that, to me, have grown tired. I have situated these approaches within referents that oppose the simplicity and prescription that I find problematic in the composition and interpretation of conventional referents. Simplicity is replaced by dialectical performance models where the improviser mediates between the pull of opposing tendencies that are embedded within referents. Dissonant counterpoint informs the technical means of composing these referents that are energised by negotiations between opposing harmonic or rhythmic possibilities.

My pursuit of alternative theoretical and conceptual avenues to mainstream jazz aligns my practice with contemporary trends in both Australian and American avant-garde jazz. Chapters two and three elaborate on the influence of Australian improvisers Marc Hannaford and Scott Tinkler. Chapter two briefly examines Hannaford's composition *Something We Know* (2008) as a precursor for my own referents that combine contrasting harmonic schemes for improvisation.⁴⁹ The influence of Hannaford's composition, and Tinkler's *Positively Glowing* (2000), is also examined in chapter three with a focus on the creation of fluctuating rhythmic characters through polyrhythm.⁵⁰ Additionally, I identify stylistic and conceptual similarity with the music of contemporary American improvisers and composers Cory Smythe and George Lewis. In particular, the influence of Smythe's harmonic approaches on my composition is discussed in chapter two, focusing on the juxtaposition of tonal allusion and dissonance in his composition *Walls/Fats* (2011).⁵¹ Affinities in formal construction between my own work and compositions by Lewis and Smythe are also explored in chapter five, focusing on referents built from brief modules of

⁴⁹ Marc Edward Hannaford, "Elliott Carter's Rhythmic Language: A Framework for Improvisation" (Masters, University of Melbourne, 2012), 109.

⁵⁰ Scott Tinkler, *Positively Glowing*, unpublished score, N.D.

⁵¹ Cory Smythe, *Pluripotent*, Independent release, 2011, MP3 file, downloaded 2014, Bandcamp.

musical information. An examination of the influence of these musicians situates my research within contemporary performance practices that eschew conventional approaches in favour of personal and innovative methods of composition and improvisation.

There are various other precedents for the influence of modernist compositional theory on jazz composition and performance, including applications of serial techniques. I won't present a lengthy discussion of examples because my work doesn't engage with serialism beyond Ruth Crawford's rotational strategies, which are different in kind to the serial application of tone-rows. However, I will suggest how my project differs from prominent examples of twelve-tone materials in jazz. Martin summarises the three dominant ways that serial influences appear in jazz. The first is face-value synthesis, exemplified by Bill Evans' *Twelve Tone Tune* (1971), whereby tone rows inform the composition process but bare little or no relation to improvisation.⁵² The second is an intuitive synthesis, exemplified by Paul Bley's album *12 (+6) In a Row* (1990), whereby the performer intuitively references the character of a tone row in improvisations in a way that is non-systematic.⁵³ The third method, described by Martin as a 'synthesis by radical reconsideration', is the most systematic and involves the "development of techniques uniquely suited to jazz improvisation derived from the central ideas of serialism."⁵⁴ Martin discusses John Coltrane's application of materials from Slonimsky's *Thesaurus of Scales and Melodic Patterns*, and his use of interval cells in *A Love Supreme* (1965) as early examples of this approach.⁵⁵ However, in Coltrane's *A Love Supreme*, the materials developed are used primarily as chromatic options in triadic or modal harmonic environments. This is also true of the approaches that Martin developed by exploring serialism and the chord stranding methods of Lutosławski in jazz improvisation. This is a major point of difference with my own project that seeks to reform the harmonic and rhythmic templates referenced by improvisers in ways that more profoundly unsettle conventional performance approaches.

⁵² Christopher Robert Martin, "A Radical Reconsideration of Serialism and Chord Stranding, Applied to a Personal Jazz Style" (Ph.D., University of Adelaide, 2008), 12.

Bill Evans, "Twelve Tone Tune," *The Bill Evans Album*, Columbia C30855, 1971, compact disc.

⁵³ Martin, *A Radical Reconsideration*, 13.

Paul Bley, *12 (+6) In a Row*, hat ART 6081, 1995, compact disc.

⁵⁴ Martin, *A Radical Reconsideration*, 13.

⁵⁵ *Ibid.*, 14-15.

Nicolas Slonimsky, *Thesaurus of Scales and Melodic Patterns*, Amsco: New York, 1947.

John Coltrane, *A Love Supreme: The Complete Masters*, Impulse! 5899452, 2002, compact disc.

1.6 Literature Review

The following section identifies literature that has informed the development of my performances and establishes areas that I seek to expand upon in this commentary. The discussion will be conducted under two subheadings. The first subheading identifies a range of primary and secondary theoretical resources that offer insights into the theory of dissonant counterpoint, and which have shaped my performance research. The second subheading examines how the performance and composition techniques described in my critical commentary situate my research within the field of jazz pedagogy. Literature on jazz performance and improvisation that has informed my research will be discussed under this second subheading.

1.6.1 Literature Associated with Dissonant Counterpoint and the Music of Ruth Crawford

Charles Seeger's *Tradition and Experimentation in (The New) Music* is the most substantial primary source that documents the theoretical milieu that nurtured Crawford's mature compositional approach⁵⁶. Concepts from *TENM* pervade her mature works from 1939 to 1932, including the *String Quartet 1931*, *Diaphonic Suites 1-4* (1930) and *Piano Study in Mixed Accents* (1930). According to Rao, "The concepts articulated in this treatise, as well as the pragmatic compositional practice inscribed in them, embody the methods used by Crawford in her music during the 1930s."⁵⁷ For this reason, Seeger's treatise has been a key point of reference that has guided my own responses to Crawford's music.

Of particular relevance to my research have been core concepts that permeate virtually every aspect of Seeger's recommendations: dissonation, heterophony and neume (which is similar in meaning to motive but with a particular emphasis on contour).⁵⁸ When applied together, these concepts engender a lean contrapuntal modernism that realises theoretical alternatives to traditional tonal and rhythmic practice. However, Seeger's concepts are sometimes problematic when applied in a contemporary theoretical discourse due to his use of certain terminology, which is out of step with current nomenclature. I draw on contemporary theoretical literature to aid the clear articulation of concepts when Seeger's terms are ambiguous or archaic. Seeger's treatise is designed as a compositional

⁵⁶ Seeger, *Studies in Musicology*.

⁵⁷ Nancy Yunhwa Rao, "Partnership in Modern Music: Charles Seeger and Ruth Crawford, 1929-1931," *American Music* 15, no. 3 (1997): 356.

⁵⁸ Heterophony is defined and discussed in chapter three. Neumes are similar to motives but emphasise the direction of melodic movement over specific pitch content.

aid and requires significant interpretation for its concepts to be appropriated for improvisation due to the specificity of its guidelines. My research addresses the broad concerns that underpin Seeger's specific processes relating to melodic dissonance, harmonic dissonance, rhythm and form.

*The Music of Ruth Crawford Seeger*⁵⁹ by Joseph N Straus is the most extensive enquiry into the theoretical features of Ruth Crawford's music. It has been a primary point of reference in my development of an understanding of Crawford's music because it comprehensively examines each facet of her compositional approach, including melody, harmony, counterpoint, rhythm and formal schemes, as well as providing six analyses of her compositions. Due to the intimate correspondence between Crawford's work and Seeger's theory, Straus evaluates many of Crawford's processes in terms of Seeger's concepts, though his analyses also deal with the characteristics of her compositions on their own terms.

Of particular relevance to my research has been Straus's analysis of the most prevalent characteristics of Crawford's melodic process. Straus identifies a range of general melodic processes that can be observed throughout Crawford's compositions.⁶⁰ These melodic processes have been most directly appropriated in my practice, though their function is shifted from analytical tool to generative procedure for improvised melody. The tendency identified by Straus for Crawford's melodies to gravitate towards gaps between previous pitches, and her use of inversional symmetry about pivot tones have proven to be particularly suitable for application in improvisation. Improvising with symmetry in melody has a strong precedent in the music and writing of Steve Coleman, whose article *Symmetrical Movement Concept* describes improvising with a similar melodic symmetry to that identified by Straus in Crawford's compositions.⁶¹ Coleman's discussion of symmetry is focused on melody, and does not explore extensions of the concept applied to harmonic generation and counterpoint. These will be addressed in the body of this commentary.

Various other analyses of Crawford's music including those by Rao, Nelson, Burkett and Tick have been referenced but are less central to my own explorations.⁶²

⁵⁹ Joseph N. Straus, *The Music of Ruth Crawford Seeger* (Cambridge: Cambridge University Press, 1995).

⁶⁰ *Ibid.*, 41-45.

⁶¹ "Symmetrical Movement Concept," Steve Coleman, accessed July 28, 2012, <http://m-base.com/essays/symmetrical-movement-concept/>

⁶² Rao, *Partnership in Modern Music*.

Mark D. Nelson, "In Pursuit of Charles Seeger's Heterophonic Ideal: Three Palindromic Works by Ruth Crawford," *The Musical Quarterly* 72, no. 4 (1986).
Burkett, *Linear Aggregates*.

Though informative, the foci of these articles are of limited relevance to my own research. They have nevertheless been referenced briefly in my commentary to ground my own interpretations of Crawford and Seeger's theoretical approach within a broader discourse surrounding dissonant counterpoint.

1.6.2 Literature Associated with Jazz Performance and Pedagogy

The primary contribution of this research is the performative exploration of dissonant counterpoint and its potential to open new avenues in the field of jazz performance. This focus aligns my work with other theories that address the development of post-tonal approaches to jazz performance. John O'Gallagher's *Twelve-Tone Improvisation*⁶³ is an excellent example of such a pedagogical resource. It nevertheless exemplifies areas of oversight within the literature that could benefit from further development.

Twelve-Tone Improvisation proposes a method for incorporating tone rows in improvisation that are derived from hexachord pairs built by combining trichords. This particular method of tone-row generation greatly reduces the number of possible aggregates, and O'Gallagher discusses how the structures can be varied through transposition and rotation. It briefly addresses the expression of trichords and hexachords as harmonic units and details types of similarity and compatibility between twelve-tone and major, minor and dominant chord types.

O'Gallagher's method is both rigorous and flexible but it does not engage deeply with the aesthetic implications of improvisation and composition with tone rows, or elaborate on the incorporation of improvised tone rows in compositions founded on comparable serial or non-tonal techniques. I argue that there are significant aesthetic implications associated with the combination of non-tonal melodic features within triadic harmony that are not addressed, and that O'Gallagher's study does not examine the compatibility of non-tonal melody with particular approaches to rhythm or form. This commentary seeks to address some of these issues by exploring a theoretical method predicated on aesthetic continuity between improvised and composed elements. It addresses how non-tonal harmony and melody are fused with Seeger's dissonant rhythms in my composition and improvisations. This commentary also suggests how the

Judith Tick, "Dissonant Counterpoint Revisited: The First Movement of Ruth Crawford's *String Quartet 1931*," in *A Celebration of American Music: Words and Music in Honour of H. Wiley Hitchcock*, ed. Richard Crawford et al. (Michigan: University of Michigan Press, 1990), 412.

⁶³ John O'Gallagher, *Twelve-Tone Improvisation* (Mainz: Advance Music, 2013).

intertwining of contrasting influences from jazz and modernist composition establish dynamic spaces for musical production.

Pressing's concept of referent from his article *Cognitive Processes in Improvisation* has become important within my research because it aids the articulation of the particular relationship between composition and improvisation realised in my music.⁶⁴ I have expanded on this concept by defining particular types of referent that I have developed throughout this research. Chapters three, four and five expand on three sub-categories of Pressing's referent that I have applied in my music.

A range of additional resources that discuss jazz performance have also informed this research. Marc Hannaford's *Elliott Carter's Rhythmic Language: A Framework for Improvisation* has been consulted for its various rhythmic terminologies and its affirmation of the unique spaces for musical creation that are opened by the interplay of contrasting stylistic media.⁶⁵ Ingrid Monson's concept of 'intermusicality' from her book *Saying Something* provides a framework for discussing intertextual reference and ironic stylistic allusion in my music.⁶⁶ Scores and recordings by artists such as Marc Hannaford, Scott Tinkler, Cory Smythe and George Lewis form a kind of aural literature that has markedly shaped performance outcomes.⁶⁷ The influences of these musicians will be addressed in the body of this commentary. The possibility of an aural literature implies the embodiment of research concepts in performances themselves, a notion that has been increasingly accepted in recent decades with the growing popularity of artistic research by creative practitioners.

1.7 Methodology

My research methodology can be summarised in terms of Hazel Smith and Roger Dean's two primary approaches to research in the arts: practice-led research and research-led practice.⁶⁸ The term 'research' refers to activities undertaken with a view towards generating outcomes that contribute to knowledge. According to Smith and Dean, these outcomes may be arrived at through a broad spectrum of interrelated activities including

⁶⁴ Pressing, "Cognitive Processes in Improvisation."

⁶⁵ Hannaford, "Elliott Carter's Rhythmic Language."

⁶⁶ Ingrid Monson, *Saying Something: Jazz Improvisation and Interaction* (Chicago: University of Chicago Press, 1996).

⁶⁷ Marc Hannaford, *Sarcophile*, Independent Release, 2012, MP3 file, downloaded 2012, Bandcamp.

Scott Tinkler, *Sofa King*, Buzz Records, 1999, MP3 file, downloaded 2015, iTunes.

Smythe, *Pluripotent*.

The Monash Art Ensemble and George Lewis, *Hexis*, Jazzhead, 2014, Compact Disc.

⁶⁸ Hazel Smith and Roger T Dean, *Practice-led Research, Research-led Practice in the Creative Arts* (Edinburgh: Edinburgh University Press, 2009).

“basic research carried out independent of creative work (though subsequently applied to it); research conducted in the process of shaping an artwork; or research which is the documentation, theorisation and contextualisation of an artwork – and the process of making it – by its creator”.⁶⁹ Smith and Dean describe a research model characterised by flexible cross-referencing and alternation between practice-led and research-led enquiry that is consistent with my own methods of musical production.⁷⁰ My methodology is summarised below in terms of these two primary approaches.

1.7.1 Research-Led Practice

My research-led methods are founded upon the substantial body scholarship that examines the idiom of dissonant counterpoint in Seeger’s theory and Crawford’s compositions. I have developed a repertoire of theoretical knowledge and analytic strategies by studying Seeger’s *TENM* and various analyses of Crawford’s music. Guided by this research, I have undertaken my own analyses of Crawford’s music in terms of its melodic construction, rhythmic structure and contrapuntal relationships, and have evaluated the applicability of her approaches to my improvised performances. I have also analysed piano pieces entitled *Dissonant Counterpoint* by Johanna Beyer, a student of Ruth Crawford, who applied many aspects of Seeger’s theory of dissonant counterpoint in the context of solo piano composition.⁷¹ Drawing on these analyses, I developed compositions and devices for improvisation that are compatible in terms of their non-tonal pitch organisation. Many of my compositional and improvisatory approaches incorporate organisational strategies embedded in Crawford’s compositions. These aspects of my practice are research-led.

These traditional methods of theoretical enquiry are complemented by research through aural immersion in recordings of Crawford and Beyer’s compositions.⁷² I have developed an aural impression of Crawford’s approach to dissonant melody, rhythm and counterpoint by listening extensively to recordings of her compositions. I have

⁶⁹ Ibid., 3.

⁷⁰ Ibid., 8.

⁷¹ Beyer, *Dissonant Counterpoint Solo Piano*.

⁷² Sarah Cahill, *9 Preludes: Ruth Crawford, Johanna Beyer*, New Albion Records, 1997, Compact disc. Pacifica Quartet, *Declarations: Music Between the Wars*, Cedille Records, 2006, MP3 file, downloaded 2011, iTunes.

Cheryl Seltzer and Joel Sachs (directors), *Ruth Crawford Seeger*, Naxos, 2005, MP3 file, downloaded 2012, iTunes.

Ruth Crawford, Composer Recordings Inc (Cri), 1993, MP3 file, downloaded 2012, iTunes.

Pellegrini Quartet and Ensemble Adventure, *Ruth Crawford Seeger*, CPO, 2000, MP3 file, downloaded 2013, iTunes.

complemented this listening by aural immersion in the work of contemporary jazz practitioners who are similarly concerned with the development of non-tonal approaches to improvisation. I have also practiced Crawford's *Piano Study in Mixed Accents*, which typifies key aspects of Crawford's melodic approach including non-repetition, intervallic variety and thematic applications of contour. Learning to play compositions that have a strong idiomatic identity can be an invaluable way of absorbing stylistic characteristics. Pianist Robert Levin writes that his ability to improvise in a classical style was aided by the hundreds of compositions he had memorised that imbued an awareness of idiomatic melodic, harmonic and rhythmic figures and the ways that they were compositionally combined.⁷³ Aural research methods resonate particularly with my practice as a jazz musician in which sound recordings are the primary point of reference for developing awareness of stylistic and theoretical information.

All of my research-led practice methods are complementary and intertwined. My understanding of dissonant counterpoint is developed by my concurrent engagement with theory, literature, original analysis, aural literature, repertoire practice and my own practical applications of new ideas. Each of these pathways to the acquisition of understanding is distinct and necessary; they are mutually enriching.

1.7.2 Practice-Led Research

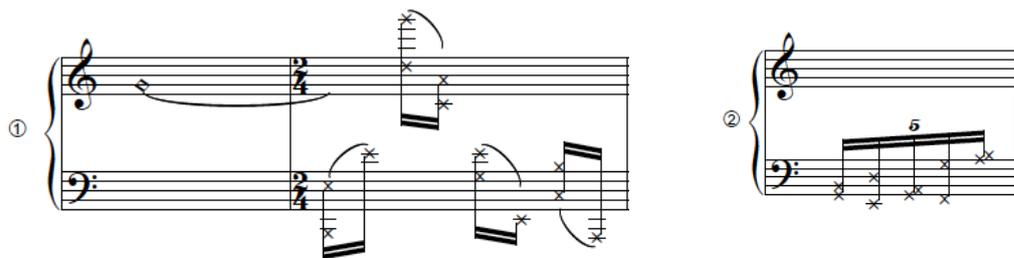
The performance outcomes of my research are influenced by insights that emerge in the process of practicing, rehearsing and reflecting on performances. My music is designed to challenge my melodic, harmonic, rhythmic, dynamic and formal conception. The expansion of my capacities in each of these areas is a central aim of practice, and my compositions function as etudes that target the development of a particular improvising skill. The act of composing also allows me to practice new musical materials slowly and to fix arrangements of these materials that are internalised through repetition and which form a body of referents for improvisation. The composition and practice of referents shapes my musical development, adapting and expanding on insights developed through research-led practice. The preparation of referents for performance involves heuristic methodologies.

Heuristic research methods such as trial and error are particularly valuable when negotiating new theoretical ideas. Heuristic trials are often framed by particular challenges that arise while preparing referents for performance. For example, my composition

⁷³ Robert Levin cited in Aaron L. Berkowitz, *The Improvising Mind* (Oxford: Oxford University Press, 2010), 83.

Dissonant Counterpoint II contains short modules of detailed gestural information that are indeterminate in terms of pitch. Two of these are shown in Figure 2. Using trial and error, I sought to pair this gestural information with pitches that reflect the preference for strong dissonances evident in other parts of the composition, while observing the register, rhythm, interval character and contours within the modules. During practice, effective pitch arrangements were practiced, and less successful options were consciously avoided. In general, heuristic research methods involve trials of numerous variations of a technique and reflection on the success of each application in terms of pre-existing criteria. The most effective applications are integrated into my ongoing musical practice, while less effective approaches are discarded or modified.

Figure 2. Gestural information in *Dissonant Counterpoint II* (After Johanna Beyer) with indeterminate pitch.



The performance outcomes of this research are guided by a wealth of practical experience, which plays a decisive role in the collaborative phases of my project. A new work often begins with a theoretical starting point that I explore through notated parts of the composition, and then express in a simplified form as a referent for improvisations. During the compositional phase, my interpretations of dissonant counterpoint are guided by the specialised skills and aesthetic preferences of collaborating musicians. For example, my trio compositions *Lady Lachs Schinken* and *Accidental Hipster* include rhythmic templates that are made practical for ensemble performances by McLean's exceptional control of polyrhythm and changes of subdivision. Following the compositional phase, performance strategies emerge from collaborative problem solving in rehearsals. I endeavour to present new challenges to my trio with each new composition, and the negotiation of these challenges often requires specialised ensemble strategies because the music avoids the conventional harmonic and metrical signposts of less complex jazz repertoire. In compositions where beat and meter are varied or obscured, we often develop musical cues that can be referenced to signal arrival at particular points in the referent. These cues are

determined by suggestions from McLean and Holoubek about which musical features are most clearly recognisable in the parts of each performer.

The collaborative process also has a substantial influence on the aesthetics of the music, beyond the technical practicalities of performances. Each performer's approach to density, dynamic growth, instrumental tone, pitch and rhythm is fundamental to the identity of each musical work. This is particularly pronounced in the drum parts, which are developed by McLean in reference to each composition's mood, and its metrical and rhythmic properties. The aesthetic influence of collaboration is also evident in the way that my trio performances intermingle diverse stylistic traits. My trio draws on groove-based rhythmic approaches, contemporary jazz harmony, jazz ensemble practices and Western art music. Holoubek, McLean and I work frequently in musical styles that have tonal harmony and groove as central components.⁷⁴ Though these influences contravene the aesthetics advocated by Crawford and Seeger, I have found that a degree of stylistic fluidity strengthens my contemporary appropriations of dissonant counterpoint. Some of my most compelling performance outcomes have emerged by intertwining historically divergent compositional procedures, and constructing hybrids that are sensitive to the concerns implicit in various types of stylistic musical material. The referent to *Sotto Voce* discussed in chapter 3 is an excellent example of such a hybrid. My project does not attempt to reconstruct dissonant counterpoint but explores how its concepts can enter into a dialogue with existing practice and other stylistic influences. By making music collaboratively with Holoubek and McLean, and by embracing their particular skills and points of view, the evolution of my performance research has been guided markedly by practice. The interpenetration of research and practice, which is central to Smith and Deans research model, is particularly suited to my explorations that aim to develop innovative practices of improvisation informed by my research of dissonant counterpoint.

1.8 Summary of Chapters

My research concentrates on three broad categories of referents that co-ordinate improvisation in ways that diverge significantly from conventional performance practice.

⁷⁴ Vijay Iyer, "Microstructures of Feel, Macrostructures of Sound: Embodied Cognition in West-African and African-American Musics," (PhD Diss., University of California, 1998), 15.

Iyer describes groove in the following way: "An isochronous pulse that is established collectively by an interlocking composite of rhythmic entities. A groove tends to feature a high degree of regularity but also conveys some sense of animation."

Additionally, it examines methods of pitch organisation that are suitable for application in all of these referent types. Pitch organisation will be discussed in chapter two, followed by an examination of three different types of referent in chapters three, four and five. Chapter six summarises my research findings and presents concluding reflections on my research project.

Chapter two of this commentary examines the approaches to pitch organisation that I have developed through my study of dissonant counterpoint. These approaches to pitch are suitable for the non-tonal interpretation of both triadic and non-tonal reference information. Specifically, I will examine my interpretations of pitch strategies that are prevalent in Crawford's music. These include the opening and filling of the register spaces between pitches, symmetrical movement about pivot tones, dissonant scales and thematic process based on contour repetition and variation. I will also examine my idiosyncratic compositional interpretations of these melodic strategies from dissonant counterpoint through the discussion of my compositions *Fractured Symmetry*, *Accidental Hipster*, *Salad Days* and *Dissonant Counterpoint III (After Johanna Beyer)*.

Chapter three examines a form of referent that employs oppositional, interpenetrating harmonic and rhythmic streams. *Sotto Voce* is discussed to demonstrate the effect of a performative mediation between two types of stylistically contrasting harmonic information. This type of dual stream referent demonstrates the translation of Seeger's contrapuntal ideas to the preconditions that organise improvised performances.

Chapter four analyses referents that use metrical and rhythmic information to engender multiple, simultaneous rhythmic possibilities for improvisation. These referents coordinate rhythmic behaviour by supplying either multiple simultaneous streams that specify rhythmic relationships, or single layer metrical structures that activate polyrhythm and metric modulation. My approaches to rhythm in composition and improvisation are discussed in relation to *Lady Lachs Schinken* and *Accidental Hipster*.

Chapter five examines referents that structure improvisation in relation to discreet modules of notated or conceptual material that can be sequenced and combined in various ways. My analysis of Johanna Beyer's *Dissonant Counterpoint I and II* (1930s, exact year not known) shows how modular referents have grown out of my study of dissonant counterpoint. Modular referents are discussed in relation to *Concentric Cycles* and *Dissonant Counterpoint I and II (after Johanna Beyer)*. This chapter also suggests the kind of listening experience that is invited by iterative processes of repetition and variation

based on a concise set of modules, and examines the influence of Cory Smythe and George Lewis's music on the development of my modular referents.

Chapter six discusses this research in light of its response to broader cultural trends. It discusses the relationship between Crawford and Seeger's modernist aesthetic and the postmodern milieu in which my work emerges. This final chapter also makes concluding remarks about how my study of dissonant counterpoint has been productive, and suggests ways in which this commentary might be valuable as a resource for musicians who share my interest in innovative jazz performances that realise viable theoretical alternatives to the conventional mainstream.

Chapter 2: Developing Dissonant Melody and Harmony in Composition and Improvisation

2.1 Chapter Overview

This chapter describes how Ruth Crawford's melodic approaches have been adapted so that I can apply them in both improvisation and composition. It focuses particularly on my interpretations of melodic strategies, identified by Straus, that occur frequently in Crawford's compositions.⁷⁵ These melodic strategies are adapted so that their non-tonal intricacy can be emulated in improvised performance. In an overview of the "ultramodern" movement of composers that included Ruth Crawford and Carl Ruggles, Straus summarises key features of dissonant counterpoint:

Dissonant counterpoint involves (1) melodic lines that avoid repetition of notes or intervals and avoid outlining consonant triads; but which nonetheless maintain a high degree of motivic consistency; and (2) independence of such melodic lines within a contrapuntal texture; with the traditionally dissonant intervals (especially minor seconds, major sevenths, and their compounds) formed between them.⁷⁶

This chapter addresses all of these major characteristics of dissonant counterpoint. It examines how I have generated melodies that exhibit non-repetition using devices called OPEN/FILL and PIVOT, which Straus argues are common characteristics of Crawford's melodies⁷⁷. The potential for these devices to generate harmony is also examined, as are my melodic and harmonic applications of Seeger's dissonant scales. My discussion of these scales concentrates on harmonic ambiguity that emerges by combining trichords that imply conflicting tonalities, using my composition *Accidental Hipster* as a case study. The generation of motivic consistency within dissonant melody is also examined using techniques of contour analysis and Seeger's theory of neumes. My composition *Salad Days* is examined in terms of recurrent contours that link different melodies.

2.2 Non-Repetition and OPEN/FILL

The non-repetition of tones in close proximity is a common characteristic of melodies in dissonant counterpoint.⁷⁸ In the *Music of Ruth Crawford Seeger*, the most

⁷⁵ Straus, *The Music of Ruth Crawford Seeger*, 41-44.

⁷⁶ *Ibid.*, 11-12.

⁷⁷ *Ibid.*, 41-44.

Straus refers to OPEN, FILL and PIVOT in upper case. I find that this clarifies when these words refer specifically to devices as musical events, as opposed to actions. That is, as an instance of OPEN as opposed to the action 'to open'.

⁷⁸ Straus, *The Music of Ruth Crawford Seeger*, 5.

extensive theoretical exploration of her work to date, Straus makes particular note of Crawford's adherence to this principle and links its origin to Seeger's *Manual of Dissonant Counterpoint*:

Crawford's melodies, particularly in the period following her work with Seeger, generally avoid emphasising any note through repetition. Notes rarely recur before several others, usually six or more, have intervened, thus following an explicit recommendation in Seeger's treatise: 'Avoid repetition of any tone until at least six progressions have been made.'⁷⁹

Though non-repetition can be achieved without excessive difficulty compositionally, the extemporaneous nature of improvisation makes it prohibitively difficult to choose each pitch from the set of five or six tones that have not been stated in the previous six or seven. To do so would involve multiple cognitive steps before each new pitch is selected and would require a constant focus on the recollection of pitch classes as they are being played. Though it may be possible to develop this ability over an extended period of time, I have aimed to develop approaches that can be assimilated relatively quickly as a matter of practicality. I found a simpler method of achieve pitch variety and non-repetition in the music of Ruth Crawford.

Straus observes that Crawford's melodies have a strong tendency to gravitate towards spaces opened in the melody, contributing to a state of "chromatic plenitude."⁸⁰ When gaps are opened, they are often filled promptly, giving the impression that they are opened with the specific intention to provide pitch spaces to fill.⁸¹ He describes this tendency to open melodic gaps that are subsequently filled as OPEN and FILL. When these devices are used in conjunction, they are referred to as OPEN/FILL. In the following chapters, OPEN/FILL refers to the statement of an interval (OPEN), followed by one occurrence of each pitch or pitch class that lies between these first two notes (FILL), resulting in a melodic representation of a chromatic cluster. The melodic gaps that are opened by the statement of an interval are subsequently referred to as register spaces, which can be filled by the pitch-classes that they enclose.

The melody at the start of Crawford's *Piano Study in Mixed Accents* exemplifies her application of OPEN/FILL.⁸² The bracketed passage in Figure 3 is an example of a twelve-tone aggregate in which the first four notes open a space between E and D# that is filled chromatically by the subsequent eight tones. Crawford's melody is differentiated

⁷⁹ Straus, *The Music of Ruth Crawford Seeger*, 5.

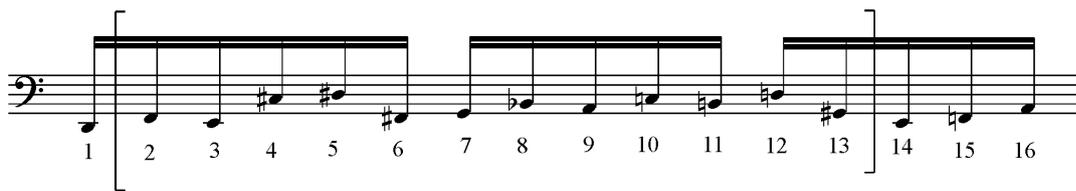
⁸⁰ *Ibid.*, 8.

⁸¹ *Ibid.*, 8.

⁸² Score reproduced in Burkett, "Linear Aggregates," 60-63.

from many of the examples of OPEN/FILL that will be discussed in this chapter in that a register space is not opened by a single interval at the beginning of the device. Instead, a register space is opened more gradually by the first four pitches. Though a more gradual approach to OPEN can be emulated while improvising, opening a register space with one interval that is immediately filled simplifies this device by establishing a locus for the pitches immediately following an initial interval.

Figure 3. The first sixteen notes of Crawford's *Piano Study in Mixed Accents*. The brackets surround a twelve-tone aggregate in which the first four notes open a register space, which is filled chromatically by the next eight notes.



Improvising with OPEN/FILL reduces the difficulty of pursuing non-repetition. It simplifies the cognitive steps required to achieve a high degree of pitch variety by temporarily limiting pitch choices to those that are enclosed within an interval. Within this reduced register space, it is quite achievable to store pitches in short term memory as they are being played, making it possible to choose pitches that have not yet been stated in a particular realisation of OPEN/FILL. This memorisation of the pitches stated within a reduced register space is aided by the visual memory of their layout on the keyboard. Though overreliance on visual memory could result in disconnection between the execution of OPEN/FILL and the musical results, it is nevertheless a useful tool (for pianists), particularly when the device is unfamiliar. In addition to aiding non-repetition, the multilayered character of OPEN/FILL encourages melodic intricacy. Consider, for instance, the chromatic filling of a major seventh in Figure 4.

Figure 4. OPEN/FILL of a major seventh interval between C and B, resulting in a 12-tone row.



In Figure 4, an initial interval of a major seventh is stated, followed by one instance of each pitch that falls between these first two notes. When a major seventh is chromatically filled in this way, the resulting sequence of pitches becomes a twelve-tone

row, creating non-tonal pitch variety without any repetitions. Within this pitch arrangement, there are also smaller filled register spaces created by OPEN/FILL. Consider pitches 3-7 from Figure 4, which are isolated in Figure 5. Figure 6(A) and (B) show two further instances of OPEN/FILL that are embedded in Figure 5.

Figure 5. A further instance of OPEN/FILL of a major third, embedded in twelve-tone example shown in figure 1.

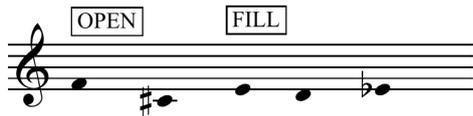
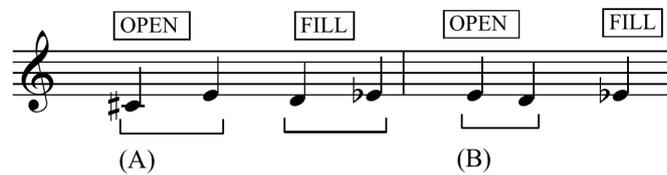


Figure 6. Two further instances of OPEN/FILL that are embedded within the smaller intervals that make up the five note melody in figure 2. (A) is an opened and filled minor third and (B) is an opened and filled major second that occurs frequently in Crawford’s music.



The three-note motive in Figure 6(B) recurs frequently in Crawford’s compositions and exemplifies OPEN/FILL in its most condensed form. It consists of either a tone followed by a semitone in the opposite melodic direction, or a semitone followed by a tone in the opposite melodic direction. This motive serves a variety of musical functions and occurs frequently in Crawford’s melodies. It is referred to by Straus as the M1 motive in each of the permutations shown in Figure 7. Straus asserts that “at the most obvious level, it acts simply as a marker, a fingerprint, a point of departure and return for chains of evolving neumes.”⁸³ The employment of the M1 motive in improvisation, in conjunction with the opening and filling of larger intervals, serves multiple purposes. Not only does it suggest an affinity with Crawford’s melodies, it creates melodic intricacy by embedding small filled register spaces within more extensive realisations of OPEN/FILL.

Figure 7. M1 motive shown in its four permutations.



⁸³ Straus, *The music of Ruth Crawford Seeger*, 28.

Neumes will be defined and discussed in chapter five. The term can be substituted for motive in the present context.

In all of the musical examples up to this point, OPEN/FILL occurs within discreet phrases of no more than twelve notes. However, this strategy can be integrated into larger phrases with the aid of ADJOIN.⁸⁴ This term refers to Crawford's tendency to commence a new melodic motion on a pitch that is a semitone higher or lower than a register space that the melody has already filled, extending the filled space by one semitone. In Figure 8, the register space opened by the major sixth between C and A is filled chromatically. A second smaller OPEN/FILL is then commenced on B^b, a semitone above this filled register space. In this manner, ADJOIN can bind together small melodic fragments that are ordered by OPEN/FILL, yielding longer melodies that are linked procedurally by Crawford's melodic principles.

Figure 8. Two realisations of OPEN/FILL that are bound together by ADJOIN.



The combination of OPEN/FILL and ADJOIN forms an approach to non-tonal melody that constantly renews its generative potential. Each new register space that is filled invites new movements to be adjoined. The properties of OPEN/FILL also imply a pitch hierarchy that emphasises the interval that opens a register space. This hierarchy may not extend to the reception of melodies generated using OPEN/FILL but it does assist the embedding of the device within referents. The embedding of OPEN/FILL within a referent is explored in chapter three in relation to *Sotto Voce*.

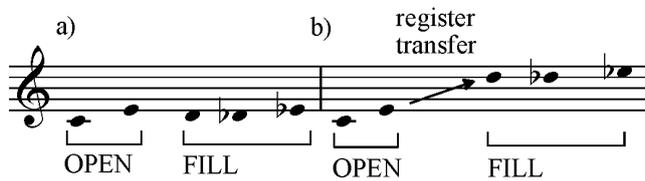
2.3 OPEN/FILL Using Octave Displacement and Transferred Register Spaces

A greater variety of register and contour can be achieved in OPEN/FILL by displacing pitches by one or more octaves, realising what I call a register-space transfer. Register space transfer is an extension to the concept of register transfer that refers to the continuation of a melody in a different register (octave) to which it was commenced. When a register space is transferred, the space opened by a particular interval is transposed to a different register and is subsequently filled by melodic or chordal materials. Figure 9(a)

⁸⁴ Straus, *The Music of Ruth Crawford Seeger*, 42.

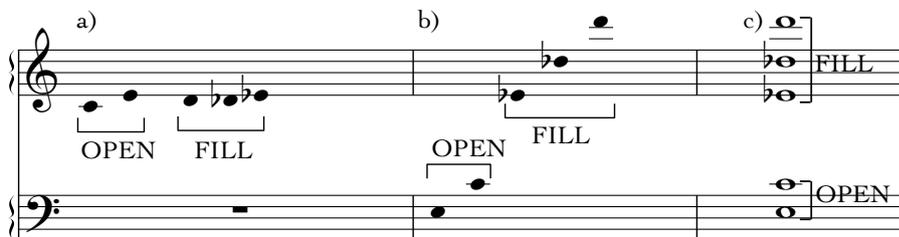
shows a brief OPEN/FILL between C and E. In 9(b), the opened register space between C and E is transposed an octave higher and is filled by a three note melody.

Figure 9. OPEN/FILL with register space transfer.



When register-space transfer is applied to OPEN/FILL, the pitches enclosed by the opening interval can be conceived as an unordered pitch-class set. The melodic motion formed in relation to this set might be situated in a single register or spread across two or more octaves. Figure 10(b) takes the OPEN/FILL with register transfer from Figure 9 and spreads both the opening and filling pitches into different registers. If these pitches are sustained or sounded concurrently, the OPEN/FILL becomes harmonic as well as melodic. Figure 10(c) demonstrates a harmonic application of OPEN/FILL.

Figure 10. OPEN/FILL spread across different registers, melodically and chordally.



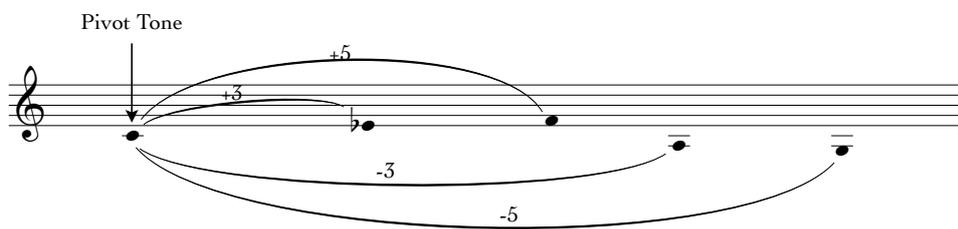
Because OPEN/FILL is a melodic realisation of a pitch cluster, strong dissonances are always formed between the opening interval and filling pitches. Harmonic applications of OPEN/FILL tend to be most effective when various register transfers are applied to the filling pitch-classes, spreading the range of the pitch cluster across two or more octaves. Figure 10(c) demonstrates this registral spread and the emergence of vertical dissonance. In 10(c), for example, the intervals formed between the three pitches in the treble staff include a minor 7th, a major 7th and a minor 9th - three of the most dissonant intervals. Seeger designates that the chord shown in the treble staff of figure 10(c) is the archetypal dissonant

chord.⁸⁵ It is a harmonic representation of Crawford’s M1 motive, the most concise realisation of OPEN/FILL.

2.4 Pitch Symmetry and PIVOT

OPEN/FILL is closely related to another of Crawford’s melodic strategies, described by Straus as PIVOT.⁸⁶ When executing PIVOT, a pitch temporarily becomes an axis, or pivot tone, about which melodies are inverted symmetrically.⁸⁷ For example, if C is chosen as a pivot tone, followed by an E^b and F (+3, +5 semitones with respect to C), these notes can be symmetrically inverted about C to give A and G (-3, -5). This example is shown in Figure 11. While there are precedents for pitch symmetry in improvisation, it is not widely practiced. Steve Coleman developed a similar system to PIVOT in his article *Symmetrical Movement Concept* that describes a melodic process characterised by the expansion and contraction of pitches on either side of an axis pitch by equal intervals, hence the term symmetry.⁸⁸

Figure 11. Pivoted pitches expanding and contracting by equal intervals either side of a pivot tone.



Coleman’s symmetrical movement concept closely resembles the symmetrical devices I examine in this chapter. Coleman asserts that the symmetrical properties of pivoted melodies “will not be heard by the average person, especially given the speed of execution, but it will be felt and it does have an effect.”⁸⁹ What will be apparent to many listeners is an approach to melody that doesn’t follow tonal or triadic conventions. The basic principle that underpins Coleman’s symmetrical movement concept and Crawford’s PIVOT is the same, but there are two major points of differentiation. Firstly, Coleman follows each individual pitch with its symmetrical counterpart, whereas groups of pitches

⁸⁵ Seeger, *Studies in Musicology*, 219.

⁸⁶ Straus, *The Music of Ruth Crawford Seeger*, 44.

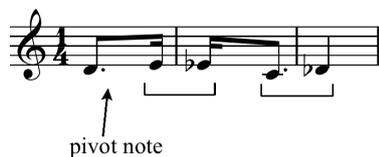
⁸⁷ All intervals that are labelled in notated examples of pivot refer to the interval formed between pitches and the pivot tone.

⁸⁸ Coleman, “Symmetrical Movement Concept.”

⁸⁹ Coleman, “Symmetrical Movement Concept.”

are often symmetrically inverted in Crawford's music. For instance, in the opening phrase from her *Diaphonic Suite No.1*, shown in Figure 12, a two-note motive is stated, and is then inverted about a D pivot tone.⁹⁰ By inverting groups of pitches, or motives, a type of melodic variation is generated within the device. Secondly, Coleman's article described melodic applications of pivoted pitches, and does not expand on the possibility for harmony to be generated by symmetrical procedures. I will explore harmonic applications of PIVOT later in this chapter. My discussion of PIVOT is also distinguished by its intertwinement with other melodic strategies including OPEN, FILL, CENTRE and ADJOIN, which I will now examine.

Figure 12. The first three bars of Crawford's *Diaphonic Suite No. 1*. The initial D becomes a pivot note about which the second and third notes are symmetrically inverted to derive notes four and five.

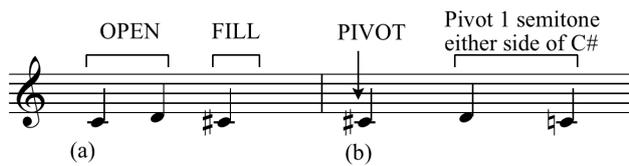


In some instances, OPEN/FILL and PIVOT perform complementary functions, though there are significant differences between them. According to Straus, Crawford's melodies tend to gravitate towards the centre of opened register spaces and this tendency is abbreviated by the term 'CENTRE.'⁹¹ When an interval opens a register space, it is consistent with Crawford's melodic tendencies to commence a fill from the pitch at the centre of this space. However, if this central pitch is re-configured as a pivot tone, the second tone of the initial interval can be interpreted as the symmetrical inversion of the first, so long as the initial interval can be symmetrically bisected. All intervals made up of a whole number of major seconds, including the major 2nd, major 3rd, augmented 4th, minor 6th and minor 7th, can all be bisected by a single pivot tone that lies equidistantly between the two notes of the interval. The three pitches could equally be described as a realisation of PIVOT, or the beginnings of an instance of OPEN/FILL. This link between these functions is demonstrated by two permutations of M1 shown in Figure 13.

⁹⁰ Straus, *The Music of Ruth Crawford Seeger*, 44.

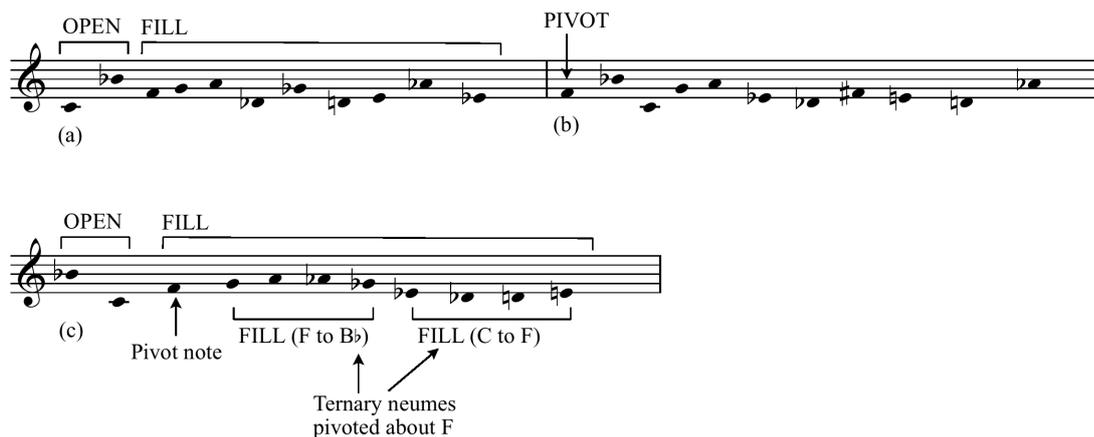
⁹¹ *Ibid.*, 41-42.

Figure 13. Permutations of the M1 motive arrived at in (a) by open and fill and in (b) by pivot.



Two different permutations of the same M1 are realised by OPEN/FILL in Figure 13, section (a), and by PIVOT in 13, section (b). The theoretical links between OPEN, FILL, CENTRE and PIVOT allow these procedures to be integrated within individual melodies. The three examples in Figure 14 demonstrate how the characteristics of OPEN/FILL and PIVOT can be combined in short phrases.

Figure 14. Three melodies that demonstrate different degrees of integration of pivot.



Each of the examples in Figure 14 exhibits a different degree of integration between PIVOT and OPEN/FILL. 14(a) employs OPEN/FILL primarily, though the third note F lies symmetrically at the centre of the opening interval and could be considered a pivot tone for the two initial pitches. In Figure 14(b) PIVOT is used primarily. An F is followed by a series of melodic movements that are immediately inverted, generating symmetrical counterparts on the other side of the pivot tone. Like OPEN/FILL, these movements have been chosen so that pitches are not repeated and the pitch space opened by the second and third notes is filled chromatically. Thus, PIVOT can generate similar pitch variety to OPEN/FILL when large intervals are filled. These examples also exhibit the link demonstrated earlier in relation to M1 motive. The same three note motive that opens

Figure 14, (a) and (b), is realised in a different order by OPEN/FILL and CENTRE in (a) and PIVOT in (b).

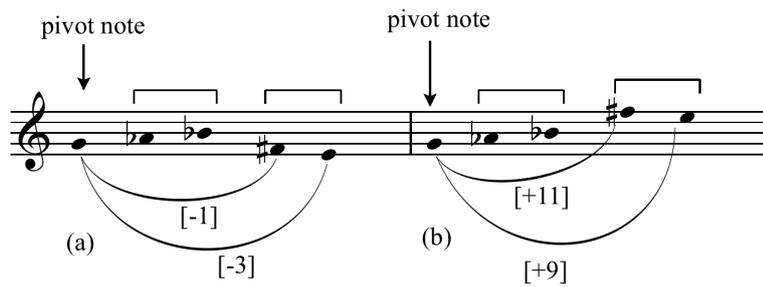
Figure 14(c) demonstrates the most comprehensive integration of OPEN/FILL and PIVOT. A minor 7th is opened between B^b and C, followed by a movement to F at the centre of the initial pitches. F then becomes a pivot tone around which the ensuing pitches are oriented. Notes 4-7 form a four-note motive that is symmetrically inverted about the F to give the inversion of the motive in notes 8-11. These motives are bracketed in Figure 14(c). These two inversely related four note motives fill the two opened spaces on either side of the pivot note, formed with the initial B^b and C. The entire melody in 14(c) also forms a chromatically filled minor 7th, making it a large realisation of OPEN/FILL.

2.5 PIVOT and Register Transfer

In all examples of PIVOT described thus far, symmetrically related pitches have been contained within an octave, but they can also be transposed into different registers. Similar to the transferred register spaces discussed in relation to OPEN FILL, pivoted pitches can be treated as pitch-classes and played in any octave to allow for greater variety. This is demonstrated in Figure 15.⁹²

⁹² In figure 15a, the first sequence of five notes includes a pivot tone followed by an ascending A^b and B^b, which are then symmetrically inverted to give F# and E. The intervals formed in 15a between the pivot tone and notes four and five are -1 and -3 respectively. In the second sequence of five notes shown in 15(b), the final two pitches are written one octave higher. The intervals formed between the pivot tone and these displaced notes in 15(b) are the octave complements of those formed between the axis and notes four and five in 15(b). This means that when the interval sizes are added together, they form an octave (12 semitones). The intervals 1 and 11 are octave complements, as are 3 and 9. The four note symmetrical movement following the pivot tone in 15(b) is also registrally higher than the pivot tone due to the transposition of the final two pitches.

Figure 15. Two versions of a five note melody generated by symmetrically inverting two notes about a pivot tone. In the second example, the inverted notes are placed an octave higher.

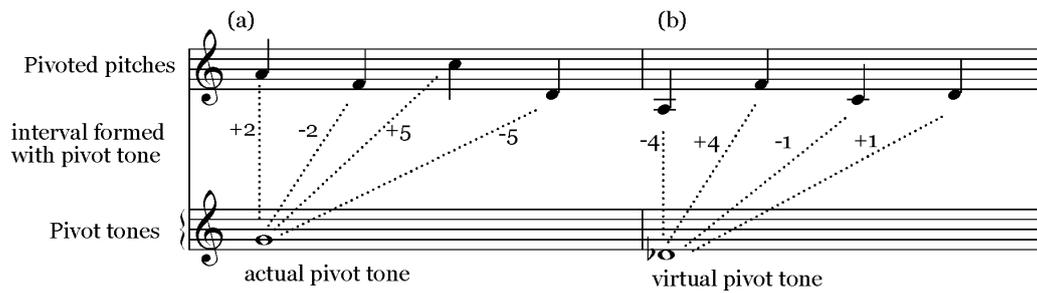


These extensions of PIVOT are more difficult to execute in improvisation. Pivoting pitches that are positioned symmetrically within a few tones either side of a pivot note (as in Figure 15(a)) is quite achievable in real time. It is far more difficult to improvise extended melodies that employ octave displacement and intervals larger than a tritone. This difficulty can be reduced, however, by manipulating the symmetrical features of PIVOT, particularly in instances where the pivot tone is a single pitch.⁹³ In these cases, pivoted pitches are also symmetrical about the pitch-class a tritone away from the original pivot note, because this pitch-class is equidistant both above and below the pivot tone. Consider the example in Figure 16.⁹⁴

⁹³ Pivots can also be executed using an axis consisting of two pitches. These applications of PIVOT will not be discussed in this commentary.

⁹⁴ Figure 16(a) shows a four-note melody derived by pivoting an A and a C about a G pivot tone. 16(b) shows the same four pitch-classes pivoted about a D^b pivot tone, which is a tritone away from the G pivot tone. The second pivot point occurs because, as melodies diverge symmetrically from a pivot note by a given interval, they approach the pitch-class a tritone away by the same interval both above and below the pivot tone. In 16(a), the A and F diverge from G by a tone in an ascending (+2) and descending (-2) direction, and approach D^b by a tone both above and below the pivot tone. A and F both lie a major third away from a D^b pivot tone (-4 and +4 respectively).

Figure 16. A four-note melody pivoted about two pivot tones, separated by a tritone. (b) demonstrates registral variety generated by improvising in relation to a virtual pivot tone a tritone from the actual pivot tone.

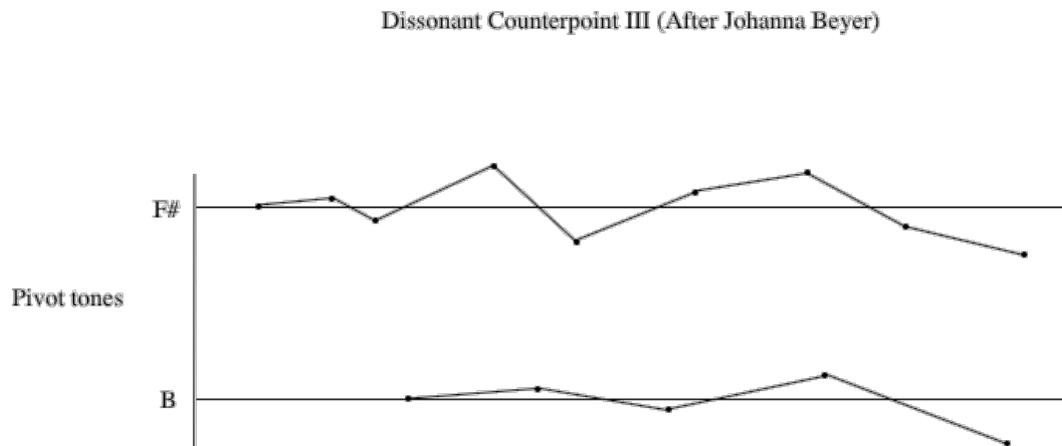


When improvising symmetrically in relation to a single pivot tone (e.g. G in Figure 16), pitches can be pivoted about a virtual secondary pivot tone a tritone away (e.g. D^b). The resulting melodies are symmetrical about the original pivot tone in terms of pitch-class, but include octave transpositions. When the melodic pitches from 16(a) are considered in relation to a D^b pivot tone, the intervals formed between the symmetrically related pitches and the D^b are octave complements of one another (i.e. 8+4=12 and 11+1=12). All the melodic pitches in this instance fall above the D^b, preventing pitches from becoming confined to the tones immediately surrounding the pivot tone. Thus, registral variety is achieved by imagining a D^b pivot tone during a period where the primary pivot tone is G, or vice-versa.

I composed *Dissonant Counterpoint III (After Johanna Beyer)* as an etude to develop fluency with PIVOT in improvisation.⁹⁵ The brief score, shown in Figure 17, describes an interaction of two melodies, each generated by pivoting about a different pivot tone. Though the score indicates two pivot tones of B and F#, I have also practiced the piece with other pivot tones, separated by different intervals. Following from the technique explained in relation to Figure 16, I am able to achieve registral variety in each of the two melodies by imagining virtual pivot tones of C and F, which fall a tritone away from F# and B respectively.

⁹⁵ *Dissonant Counterpoint III (After Johanna Beyer)* is modelled on Beyer's *Dissonant Counterpoint IV* (1930s, exact date not known) that is also constructed around two pivot tones, an F and a C#.

Figure 17. Score for *Dissonant Counterpoint III (After Johanna Beyer)*, which organises improvisations based on the interaction of two melodies pivoted about different pivot tones.



In less prescribed pitch environments, melodic variety can also be encouraged by regular changes of pivot tone, and by combining PIVOT with other melodic approaches including OPEN/FILL and ADJOIN. Figure 18 is a transcription of a melodic improvisation that I recorded while concentrating on the integration of these procedures. As well as demonstrating the thorough integration of melodic strategies adapted from Crawford in my improvised melodies, Figure 18 exhibits Seeger’s ideal of pitch non-repetition.

Figure 18. Transcription of an improvisation that I performed, concentrating on the integration of OPEN/FILL, PIVOT, ADJOIN and the M1 motive.



2.6 PIVOT in the Notation of *Fractured Symmetry*

The symmetrical pitch techniques described are particularly useful for improvising pitches in non-tonal environments, but I have also applied PIVOT rigorously in my composition *Fractured Symmetry* to generate all of the notated pitch relationships (full score in Appendix A). An excerpt from *Fractured Symmetry*, shown in Figure 19, illustrates PIVOT applied to the organisation of notated pitch.

Figure 19. Harmonies and melodies in bars 15-16 of *Fractured Symmetry* that are pivoted about a G. Each number states the number of semitones that separates each pitch-class from the pivot tone. Brackets group together each instance of pivot.

The musical score for Figure 19 consists of three staves: Piano (Pno.), Upright Bass (U. Bass), and Drums (Dr.).

- Piano (Pno.):** The treble clef staff starts at bar 15 with a pivot tone G. A bracket groups the first three notes with intervals [+2, +4] and [-2, -4]. The next two notes are bracketed with intervals [-2, -4] and +6. In bar 16, a chord is shown with intervals +5 and -5, and a final note with interval 0. The bass clef staff has intervals +1 and -1. A vertical list of intervals (+8, +5, +1, -1, -5, -8) is on the right. Dynamics include *pp*.
- Upright Bass (U. Bass):** The bass clef staff has intervals +2, -2, and +6. It features triplets in bars 15 and 16. A note in bar 16 is bracketed with interval +6.
- Drums (Dr.):** The drum set staff shows a 3-bar triplet swing with an abrupt stop at the end.

In this excerpt, the harmonic and melodic motion is calculated in relation to a G Pivot tone that is treated as a pitch-class. About this pivot tone, pitches or groups of pitches are symmetrically related. The brackets in Figure 19 indicate pitches that are symmetrically related to each other. In the first brackets in the treble staff of bar 15, for example, the A and B are a major second and a major third higher than the pivot tone [+2, +4]. The two following pitches invert this motive to derive F and E^b, which are a major second and a major third respectively below the pivot tone [-2, -4]. Because the pivot tone is treated as a pitch-class, this motion is not confined to a particular register, illustrating the octave displacement of pivoted pitches discussed earlier. Figure 19 also illustrates harmony derived by symmetrically inverting pitches about a pivot tone. In bar 16, a chord is generated by inverting a three-note pitch arrangement about the G pivot tone. The three

upper pitches within the chord form the intervals [+1, +5, +8] with the pivot tone, and the three lower pitches are inversely related and form the intervals [-1, -5, -8].

2.7 Contour Analysis Techniques as a Generative Approach to Seeger's Theory of Neumes

Seeger's *Tradition and Experimentation* describes melodic development in terms of the combination and transformation of neumes. Neumes are essentially synonymous with motives, though they emphasise melodic contour over specific intervallic relationships. Seeger classifies neumes in terms of the number of constituent pitches and the contour of melodic progressions that follow an initial pitch. He calls three-note neumes 'binary neumes' because an initial pitch is followed by two melodic movements.⁹⁶ He calls four-note neumes 'ternary neumes' because they are formed by three melodic movements following an initial pitch.⁹⁷ Within neumes, a continuation of the melodic direction established by the previous two pitches forms a 'line', while a reversal of the melodic direction forms a 'twist'.⁹⁸ In terms of these classifications, a four-note neume that commences with two ascending intervals, followed by one descending interval, is called a ternary line-twist-neume. Seeger's theory of neumes implies that contour is one of the most easily recognisable features of non-tonal melody that can be manipulated to connect different melodic fragments. I frequently apply contour as a means of making connections between different phrases. To demonstrate this, contour similarities between different phrases are examined in my composition *Salad Days*, shown in Figure 20 (full score in Appendix B).

⁹⁶ Seeger, *Studies in Musicology*, 139.

⁹⁷ *Ibid.*, 139.

⁹⁸ *Ibid.*, 139.

Figure 20. Contour repetitions in *Salad Days*, labelled using Seeger's line and twist neumes.

Salad Days

J. O'Connor

The musical score for *Salad Days* is presented in two systems, A and B. System A (measures 1-4) features a right-hand melody with contour labels [L L T T L T] and chords Ab-, G(add,b9), DΔ#11, and Eb-. System B (measures 5-8) features a right-hand melody with contour labels [L L T T L L] and chords B, F7#11/b9, E-9, Bsus4, F#, and Eb-. The score includes various musical notations such as slurs, ties, and fingerings.

Salad Days features overlapping phrases between the right and left hands that are linked by similarities in contour. The opening phrases in the right hand of the composition are shown in Figure 20 and are labelled using Seeger's lines and twists, which are labelled L for lines and T for twists. The contour [L,L,T,T,L,T] becomes a template that is referred

to by subsequent phrases. The right hand phrase in bars 3-5 follows a very similar contour [L,L,T,T,L,L] that differs only in its continuing ascent at the end of the phrase. This precise contour emerges again in bar 8 in a rhythmically condensed form. Contour similarity can be applied in this way to draw connections between phrases that exhibit variety in terms of pitch and interval. A sense of repetition is created without exact repetition or transposition.

Though the melodic directions described by lines and twists have a great deal of influence on melodic contour, register is also significant. The specificity of contour description can be increased by considering the registral relationships within a phrase, using contemporary approaches to contour analysis. Seeger's emphasis on contour as a generator of links between different phrases is reinforced by empirical evidence that suggests that listeners are more easily able to perceive similarity or equivalence between contours than pitch-class sets.⁹⁹ Marvin and Laprade, and Morris, have proposed methodologies for analysing contour relationships in non-tonal melodies that have informed analyses of dissonant counterpoint.¹⁰⁰ Key concepts from these theories are introduced subsequently because they have informed my methods for improvising and composing with neume transformations.

Morris defines contour space as a type of musical space in which elements are "arranged from low to high, disregarding the exact intervals between the elements."¹⁰¹ These elements (termed c-pitches) are numbered from low to high, beginning with 0 for the lowest pitch, up to n-1 for the highest, where n is the number of elements being examined (n is referred to as the cardinality of the segment).¹⁰² Because contours are, by definition, ordered, Marvin and Laprade further define a contour segment (cseg) as an ordered set of c-pitches in contour space.¹⁰³ The pitch segment in Figure 21(a) can be described by the contour segment <1320>, which is represented graphically in 21(b). This contour segment is not unique to the pitch segment in 21(a), but describes all equivalent contours that share the same properties in contour space.¹⁰⁴ Figure 21(c) shows one such equivalent melodic contour.

⁹⁹ Elizabeth West Marvin and Paul A. Laprade, "Relating Musical Contours: Extensions of a Theory for Contour," *Journal of Music Theory* 32/2 (Autumn, 1987): 225-67.

¹⁰⁰ *Ibid.*, 225.

Robert D. Morris, "New Direction in the Theory and Analysis of Musical Contour," *Music Theory Spectrum* 15/2 (Autumn, 1993): 205-28.

¹⁰¹ Morris, cited in Marvin and Laprade, "Relating Musical Contours," 226.

¹⁰² *Ibid.*

¹⁰³ Marvin and Laprade, "Relating Musical Contours," 228.

¹⁰⁴ Morris, "New Direction," 206.

Figure 21. Different pitch sets that are equivalent in terms of contour.

Two contour segments are transformationally equivalent if one can be derived by performing inversion, retrograde, or retrograde-inversion on the other. The cseg in 21(d) is transformationally equivalent to the cseg from 21(a) because the contour of the former can be derived by inverting the contour of the latter. Contour equivalence impacts the melodic development that I observe when I listen to and practice Ruth Crawford's *Piano Study in Mixed Accents*.¹⁰⁵ A particularly relevant example occurs in the second phrase of the composition from which Figure 22 is excerpted.

Figure 22. Registeral order sequence in Crawford's *Piano Study in Mixed Accents*. 3 represents the highest pitch in a sequence of four notes, 0 the lowest.

In Figure 22, three statements of the same contour segment [1023] occur in close proximity, with the last sequence of four notes stating a retrograde inversion of the initial [0132] contour segment. Within Marvin and Laprade's theory, these two contour segments are transformationally equivalent. The sequence of contour segments in *Piano Study* is audible and creates an impression of repeated thematic fragments, despite the intervallic

¹⁰⁵ Sarah Cahill, *9 Preludes*.

diversity of each cseg repetition. I have applied contour segments to generate connections between different phrases in many of my compositions, including *Salad Days*, because they describe phrase shape more precisely than Seeger's neume classifications.

The greater precision in describing phrase shape, enabled by contour segments, provides further insight into the motivic consistency that characterises *Salad Days*. The opening melody, labelled earlier using Seeger's lines and twists, can be more precisely described by a contour segment. The phrase is labelled with the contour segment [01452376] in Figure 23(A). Though there is contour similarity between many phrases in *Salad Days*, the left hand phrase in bar 6 is most similar to the opening phrase. It is described by the contour segment [0135246] that is labelled in Figure 23(B). Despite variation, the two segments are recognisably alike. In 23(B), the registral position of the pitches labelled 3 and 4 are switched relative to the first phrase. The opening phrase is also slightly longer and contains an extra melodic motion, which is reflected in the difference between the final two numbers of the two contour segments. When I compose, I often analyse the contour of a melody I have written, and use the resulting contour segment as a template for successive phrases with the aim of generating motivic consistency.

Figure 23. Contour repetitions in *Salad Days*, expressed with greater specificity using contour segments.

Figure 23 consists of two musical examples, A and B, illustrating contour segments. Example A shows the opening phrase of a piece in 4/4 time. The melody is written in the treble clef, and the bass line is in the bass clef. The contour segment [0 1 4 5 2 3 7 6] is written above the melody, with lines connecting the notes to their respective numbers. The chords are Ab-, G(add,9), DΔ#11, and Eb-. Example B shows a phrase in bar 6, also in 4/4 time. The melody is in the treble clef, and the bass line is in the bass clef. The contour segment [0 1 5 5 2 4 6] is written below the bass line, with lines connecting the notes to their respective numbers. The chords are Ab- and G(add,9).

The limitations of contour analysis are criticised by Straus because they allows for affiliations to be perceived so widely that their significance is debatable.¹⁰⁶ For example,

¹⁰⁶ Straus, *The Music of Ruth Crawford Seeger*, 37.

contour equivalence can be perceived between any three consecutive pitches that describe a change in melodic direction, regardless of the degree of audible connection. However, the generality that hampers their analytical potential actually increases their suitability for improvisation because it allows for generalised gestures to be repeated or developed, without the need to reproduce the detail of specific pitch structures. I have practiced improvising with the registral layout of particular contours, and their transformation through inversion, retrograde and retrograde-inversion. Figure 24 is a transcription of a brief improvisation, during which I concentrated on developing melodic material based on a [02134] contour. Figure 24(A) graphically illustrates the prime form of the contour segment and its three transformations. Instances of each of these transformations are then labelled in Figure 24(B).

Figure 24. Transcription of an improvisation performed while concentrating on transformations of a [02134] contour segment.

A) Prime inversion retrograde retrograde-inversion

B)

Pno.

5

10

near RI
(slight variance in
registral order)

Prime with one
added tone (boxed)

2.8 Dissonant Scales

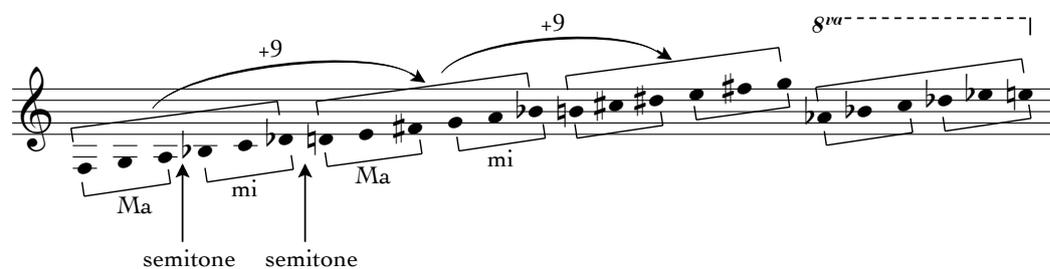
Seeger's dissonant scales are designed for application in scalar runs that are not strongly associated with a particular tonality.¹⁰⁷ His dissonant scales are made by alternating between two different stepwise trichords of a major, minor, diminished (two consecutive semitones) or augmented quality (a trichord that includes an augmented second). These different trichords are illustrated in Figure 25.

Figure 25. Four trichord type used to build dissonant scales.



Seeger argues that runs constructed from trichords are most effective when a clear clash emerges between the implied tonalities of the different trichords.¹⁰⁸ A typical dissonant scale, as described in *TENM*, is built by the alteration of two different trichords.¹⁰⁹ The hexachord that is formed by pairing the two trichords repeats in a number of transpositions until the scale begins to reduplicate. A dissonant scale is shown in Figure 26 that alternates between major and minor trichords separated by semitones. Figure 26 also indicates the pairing of trichords into four hexachords that transpose at an interval of a major 6th (+9). This scale includes four transpositions of the hexachord, meaning that the whole scale can be transposed three times to derive the twelve possible transpositions of the hexachord, making it a large mode of limited transposition.

Figure 26. Construction of a dissonant scale, stacking major and minor trichords a semitone apart.



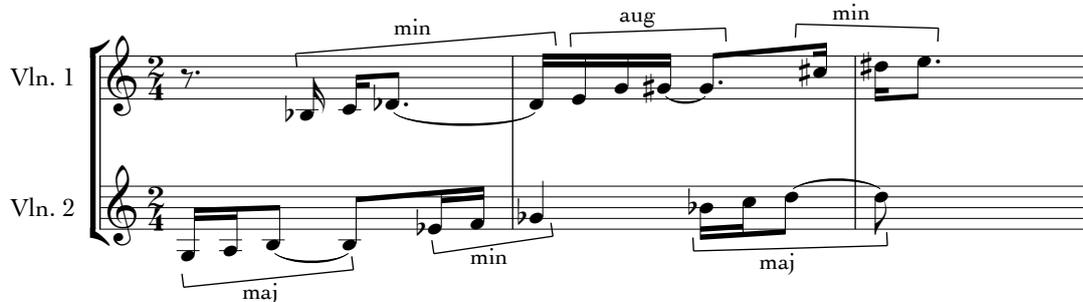
¹⁰⁷ Seeger, *Studies in Musicology*, 184-87 and 254-58.

¹⁰⁸ *Ibid.*, 184.

¹⁰⁹ *Ibid.*, 254.

Crawford's most explicit application of dissonant scales occurs in the second movement of *String Quartet 1931*. The opening bars of this movement, shown in Figure 27, demonstrate her application of dissonant scales.¹¹⁰

Figure 27. Trichords in the violin parts in the first three bars of *String Quartet 1931*, second movement.



When the first and second violins' melodies in Figure 27 are combined, they form a composite melody that exhibits a scalar character. Figure 28 illustrates this composite melody and includes a labelling of the trichords that make up the melodic motion. Crawford's approach to dissonant scales offers a slight variation on Seeger's by introducing a change of melodic direction between trichords, interrupting the strict linearity often associated with scales. In Figure 28, Seeger's dissonant scales occur most overtly in the labelled hexachords that are made up of paired trichords. Each trichord implies a different harmonic area, creating tension between moments of implied tonality and global harmonic ambiguity.

Figure 28. Dissonant scalar movement formed by the composite of the violin melodies from Figure 26.



I apply dissonant scales in two main ways. I incorporate them in scalar runs because of their ambiguous tonality, and draw on them to generate non-tonal harmony that emphasises clashes of tonal allusion between trichords. I often improvise with the first of these methods, building runs out of consecutive trichords. The technique is particularly useful when improvising within tonal progressions because the scale is able to weave in

¹¹⁰ Excerpt extracted from Rao, "Crawford's Imprint," 121.

and out of a given harmonic area, effecting harmonic clashes between the melody and underlying harmony. For example, within an A^b major harmony, a (maj + min) dissonant scale commencing on A^b begins by outlining the first five pitches of a major scale, but soon transitions to trichords that are dissonant with the dominant tonality. This is illustrated in Figure 29(A) and (B).

Figure 29. Interaction between an A^b major chord and a dissonant scale commencing on A^b .

Figure 29 consists of two musical staves, A and B, illustrating the interaction between an A^b major chord and a dissonant scale. Staff A shows a scale starting on A^b with chords A^bma , $D^b m$, $F ma$, $B^b m$, $D ma$, $G m$, $B ma$, and $E m$. Staff B shows the same scale with dissonant notes labeled as $\#4$, $b13$, $b7$, $b9$, $min3$, $b13$, and $b7$ relative to the A^b major tonality. Brackets in both staves indicate the first five notes of the A^b major scale.

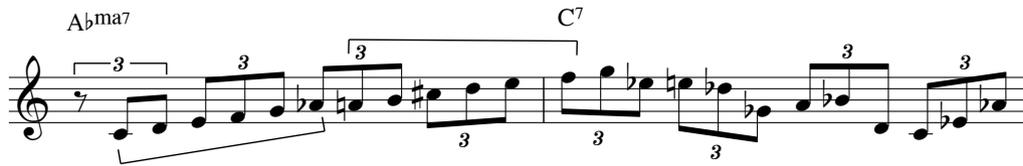
In Figure 29(A), trichords that make up the dissonant scale are labelled in terms of the tonalities that they imply. In 29(B), dissonant notes are labelled in terms of their relation to an A^b tonality and diatonic notes from A^b major are indicated by brackets. Some sections of the scale are more dissonant with the harmony than others. In this example, the scale commences consonantly with the first five notes of an A^b major scale, and reaches its point of maximum dissonance when the $[D, E, \#F, G, A, B^b]$ hexachord is played. Melodic motions can also be commenced with parts of a scale that are dissonant with the harmony. An example is shown in Figure 30.

Figure 30. Interaction between a dissonant scale and an A^b major chord, commencing with dissonant hexachords.

Figure 30 shows a musical staff with a scale starting on A^bma^7 . The scale is dissonant with the A^b major chord. Dissonant notes are labeled as $\#4$, $b13$, $b9$, $b3$, $\#4$, $b13$, $b7$, $b3$, $\#4$, and $b13$. Brackets indicate the first five notes of the A^b major scale.

In Figure 30, the most dissonant part of the scale occurs within the first two hexachords, and reaches its most consonant point in the final hexachord. Similarly to this example, I often place dissonant trichords early in a run because dissonance can be resolved or reinforced as the melody unfolds. I use dissonant scales as springboards for melodies that commence with non-tonal runs and transition into other approaches to pitch organisation. I rarely perform large segments of one of these scales, and use them instead for their most productive quality: their directional motion coupled with harmonic ambiguity. Figure 30 demonstrates how I might use dissonant scales while improvising. This example commences with the dissonant scale labelled in figure 29, and transitions to an angular melodic articulation of C7 chord tones and chromatic extensions.

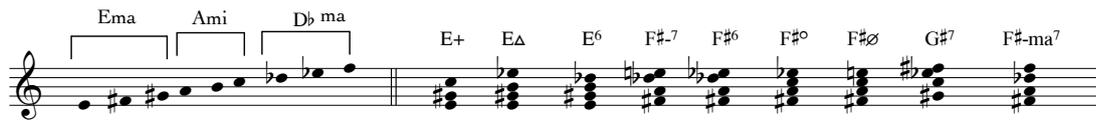
Figure 31. Dissonant scalar run that transitions into other types of pitch material.



2.9 Dissonant Scales in *Accidental Hipster*

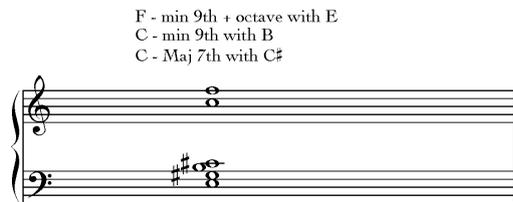
My second application of dissonant scales is integral to the fully notated part of *Accidental Hipster* (full score in Appendix C). In this composition, segments from a dissonant scale are treated as an unordered pitch-class set from which chords and melodies are built. I have interpreted these unordered pitch-class sets with sensitivity to the clashes of tonality implied by the juxtaposition of different trichords. In *Accidental Hipster*, pitch-class sets are derived by combining three consecutive trichords from the type of dissonant scale shown in figure 26. From these trichords, multiple tonal chord types can be derived. The first trichord grouping from the composition [Ema, Ami, D \flat ma] is labelled in figure 32 to indicate a sample of the chordal options available within the scale. These options include all of the common tonal chord types, including Ma7, min7, dominant7, minor-major 7, diminished7, half-diminished, Ma6, Min6 and augmented.

Figure 32. A selective identification of possible harmonies in the first trichord grouping from *Accidental Hipster*.



Each of these chords can be contrasted with other pitches from the trichord grouping that clash with their implied tonality. Consider as an example the E6 chord shown in Figure 33, which is derived from the trichord grouping in Figure 32. This chord is juxtaposed with a C and F, also from the same trichord grouping, which form a major seventh and two minor ninths with chord tones, as labelled in Figure 33.

Figure 33. Clash of triadic chord and dissonances drawn from a dissonant scale.



A number of the sonorities identified in Figure 32 occur in *Accidental Hipster*, though the basic chord types are often altered slightly to increase harmonic ambiguity. A pertinent example is shown in Figure 34, which shows the opening chord of *Accidental Hipster*.

Figure 34. Voicing of harmony build from dissonant scales.

All of the pitches in this figure are derived from the [Ema, Ami, D^bma] trichord grouping examined earlier. The left hand of the piano states a chord consisting of G^b, A^b, D^b and F. This doesn't explicitly state a trichord but implies a tonal orientation. It can be interpreted as belonging to G^bΔ7 (tonic, 9th, 5th, 7th), D^bΔadd11 (11th, 5th, tonic, 3rd), or E^bmin¹¹ (3rd, 11th, 7th, 9th). The multiple harmonic interpretations of this voicing undermine any sense of goal-directed tonal gravity. Allusion to tonality is further unsettled by the A and B in the right hand of the piano, and the E in the double bass. The A and B in the right hand of the piano subvert the tonality implied by the left hand of the piano. The A forms a minor ninth with the A^b in the left hand, and the B forms an augmented fourth with the F from the left hand. Additionally, the bass note avoids consonance with any of the suggested harmonic interpretations of the piano left hand. It grounds the harmony with a pitch that forms a dissonant major 9th with the lowest note in the piano (G^b), and a minor ninth with the F at the top of the left hand voicing. Tonality is simultaneously alluded to and undermined.

The manner of voicing is key to the effectiveness of this harmony. The tonal richness of the left hand piano voicing is not negated by the more dissonant tones in the right hand and the bass, because of their wide spacing. The E in the bass is a 9th lower than

the lowest pitch in the piano (sounding an octave lower than written). The two pitches in the right hand also span a major 9th, with the lowest pitch (A) situated a major third above the F in the left hand. The result is that the pitches situated in the mid-register of the piano during the opening chord are those that imply tonal harmony. Similar relationships between the right and left hands occur throughout the notation of *Accidental Hipster*. Lush tonally-oriented mid-register voicings are contrasted with dissonances in higher and lower registers. The boxes in Figure 35 indicate the placement of these middle-register voicings.

Figure 35. Middle-register voicings with strong implied tonality in *Accidental Hipster*.

The musical score consists of four systems, each with a treble and bass staff. Chord voicings are highlighted in boxes and labeled with symbols: $G^{\flat}\Delta^7$, $A-6$, $F^{\#}$, $E^{\flat}-$, $D^{\flat}\Delta$, G , $F^{\#}$, $E^{\flat}m(ma7)$, $B\Delta$, $B^{\flat}+$, $C^{\#}$, $D^{\flat}\Delta$, $E\Delta$, $F\Delta$, and $B\Delta$. Performance markings include 8^{va} and 3 .

The interplay of tonality and dissonance in *Accidental Hipster* illustrates one of my interpretations of Seeger’s dissonation, a subversive process by which allusions to tonality are unsettled by the insertion of dissonant tones. A similar harmonic approach can be observed in solo piano music by Cory Smythe, a contemporary improvising pianist whose

approach informed *Accidental Hipster*. Parallels can be observed between the harmony in *Accidental Hipster* and Smyth's performance of *Walls/Fats*, an original composition from his solo album *Pluripotent*.¹¹¹ An excerpt is transcribed in Figure 36.¹¹²

Figure 36. Transcription of the opening of Smyth's *Walls/Fats*.

The image shows a musical score for the opening of Smyth's *Walls/Fats*. It is a piano accompaniment in 3/4 time, spanning from 0:00 to 0:09. The score is written on two staves: a treble clef staff on top and a bass clef staff on the bottom. The treble staff contains a melodic line with various notes and rests. The bass staff contains a harmonic accompaniment with chords and intervals. Chord symbols are placed above the treble staff: *Ma3 #4*, *Bbmj6 (add 11)*, *Adim7*, and *CMA7#11*. Interval annotations include *mi 9th* (minor 9th) and *mi 3rd relative to tonic*. A dashed line labeled *8va* spans the top of the treble staff, indicating an octave shift. The score is divided into three measures, with a bar line after the first measure and another after the second. The first measure has a *7* below it, and the second has a *5* below it. The third measure has a *3* below it. The score ends with a double bar line and a fermata over the final note.

The musical texture in this excerpt from *Walls/Fats* is partitioned into three registers. Like *Accidental Hipster*, chords in the middle register allude to tonalities that are indicated by chord symbols. The treble movement clashes with the middle register harmonies at key points. During the opening chord, for instance, the major 3rd and augmented 4th (relative to the chord symbol) form strong dissonances with the minor tonality suggested by the chord in the middle register. This chord's tonal allusion remains potent because of a pronounced separation between the register of the right and left hands (the treble notes occur approximately an octave and a half above the highest pitch in the chord). The harmony takes on a dual character with distinct consonant and dissonant elements. A similar effect occurs in between the lowest left hand pitches and the middle register chords. The G^b and D^b that follow B^bmin⁶(add¹¹) and Adim⁷ respectively form minor 9ths with chord tones in the middle register. They maintain an appreciable independence from the implied harmonies by remaining below the lowest chord tones.

2.10 Chapter Conclusion

The melodic devices described in this chapter allow me to emulate features of Crawford's melodies in improvisations including symmetrical pivots, dissonant scales, and the saturation of pitch space. I am also able to draw thematic similarities between different

¹¹¹ Smyth, *Pluripotent*.

¹¹² The rhythmic approach in Smyth's performance suggests an underlying pulse but is ambiguous in its expression of this pulse and its metrical organisation. The transcription notates this example in terms of my approximation of the recording, though this is by no means the singular (or even necessarily the most appropriate) representation of his rhythmic choices.

melodic fragments by applying techniques from contour analysis and Seeger's theory of neumes. The repertoire of devices for non-tonal pitch organisation outlined in this chapter allows me to interpret melodic potential in diverse types of musical materials as they unfold. Any opened pitch space can become the locus for a non-tonal filling melody, and any individual pitch can be treated as an axis about which other pitches can be symmetrically inverted. These properties of OPEN/FILL and PIVOT enable their application in both tonal and non-tonal settings. With the exception of the precursors to PIVOT identified in Steve Coleman's article, I have not previously encountered the techniques discussed in this chapter within the jazz performance literature.

Pitch strategies from dissonant counterpoint also inform the notated aspects of the compositions that are included in my folio of recordings. Melodic pivots were applied rigorously in *Fractured Symmetry* to derive the entire pitch material of its notated parts. Recurrent contours were applied in *Salad Days* to forge motivic links between phrases composed of varied pitch and intervallic content. Finally, I examined distinctive harmonies that emphasise clashes between the various trichords that make up dissonant scales. In *Accidental Hipster*, vertical sonorities were built from dissonant scales by juxtaposing tonal fragments in the middle register of the piano with dissonant tones in different registers.

Chapter 3: Referent Type 1 - Oppositional, Interpenetrating Harmonic Streams.

3.1 Chapter Overview

I have developed referents that superimpose interpenetrating streams of contrasting reference information. The interactions of these streams form varied harmonic composites that guide improvisations. In this chapter, I discuss how my engagement with Ruth Crawford's contrapuntal approach has been integral to the development of multilayered referents for improvisation, using the fourth movement of her *String Quartet 1931* as an example. I examine this type of referent in my composition *Sotto Voce*, which coordinates improvisation in relation to a non-tonal intervallic stream that is intertwined with a chord progression.

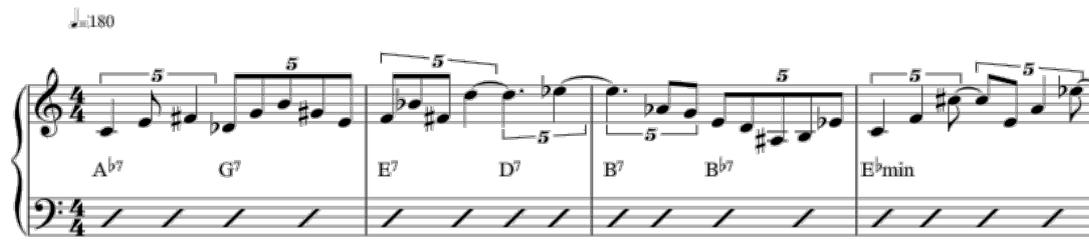
3.2 Dissociated Harmonic Layers in Hannaford's *Something We Know*

Something We Know, composed and performed by improvising pianist Marc Hannaford, is a stylistic precursor for my own compositions that supply dual interacting streams for improvisers to relate to.¹¹³ In the opening four bars of Hannaford's composition, shown in Figure 37, a triadic chord progression is paired with a melody that is embedded within the harmony but also includes substantial dissonant elements. Many of these dissonances are common chromatic extensions. During the E7, for example, the F ($b9^{\text{th}}$), the B b ($b5^{\text{th}}$) and the F# (9^{th}) are common extensions to dominant-seventh chords. However, the melody in *Something We Know* is played without chordal accompaniment, such that a pronounced sense of independence emerges between the notated melody and the harmony referenced by the bassist in performance.¹¹⁴ This independence can be understood as a type of conflict embedded in the referent, which translates to performance. The referent type discussed in this chapter underpins distinctive harmonic environments by formalising harmonic conflict between two harmonic streams.

¹¹³ Score Excerpted from Hannaford, "Elliott Carter's Rhythmic Language," 109.

¹¹⁴ Hannaford, *Sarcophile*.

Figure 37. Quintuplets in Marc Hannaford's *Something We Know*, implying two rates of harmonic movement within the referent.



3.3 Oppositional, Interpenetrating Melodies in the Fourth Movement of Crawford's *String Quartet 1931*

In the fourth movement of *String Quartet 1931*, two contrasting melodies are interlaced, moving independently but complementing each other as their distinct trajectories evolve.¹¹⁵ Each melody defines its own territory by autonomous approaches to pitch, register, rhythm, dynamics and instrumentation. The first melody, played solo by the first violin, commences with a single forceful note and increases the length of each successive phrase by one note. As the phrases increase in length, the rhythmic material becomes increasingly dense. The melody progresses urgently through organically developing motivic material with an elastic and varied combination of durations. In stark contrast to the tense lyricism of the first violin, the second melody, played by the other three instruments, is almost entirely determined by a combination of almost mechanistic organising systems. The pitch order is derived by rotating a ten-pitch series. The resulting pitches are partitioned into phrases that decrease in length as those in the first melody become longer. The opening phrase contains 20 quavers, and the length of the phrases decrease by one quaver with each successive entry until the second voice plays a single sustained note. From this point, the second half of the composition is formed by a pitch and rhythm retrograde, combined with transposition. The contrasting characters of the two melodies are heightened by inversely related dynamic schemes. The first melody begins at fortissimo, with a gradual diminuendo towards the central point of the form, while the second melody commences pianissimo with a gradual crescendo toward the same point. The rigorous differentiation across all musical parameters is key to the effective combination of the two melodies.

¹¹⁵ The analysis of *String Quartet 1931* refers to Straus, *The Music of Ruth Crawford Seeger*, 172-182.

This movement is a typical expression of a type of counterpoint that Seeger called heterophony, which is a key idea from *Manual of Dissonant Counterpoint*.¹¹⁶ From a definitional point of view, Seeger's use of the term heterophony is inconsistent with its contemporary usage. Heterophony normally refers to "the simultaneous sounding of different versions of a single melody."¹¹⁷ Seeger, on the other hand, uses the term to describe a polyphony of melodies governed and hence differentiated by contrasting constructive principles.¹¹⁸ I will replace Seeger's obsolete usage of heterophony with the term 'dissociative counterpoint', because it is this dissociation of independent melodies that is the defining feature of his counterpoint theory. Seeger refers to an "othersoundingness" or "sounding apart" that results from the effective combination of contrasting melodies.¹¹⁹ He also stresses that this "sounding apart" is strongest when melodies are independent and self-contained. He argues,

Either line of a well-constructed composition in dissonant counterpoint should be capable of solo performance as an entirely adequate and self-contained whole. The composition should be such, however, that when the two lines combine as indicated the effect will justify their combination and give the listener something he did not find in the lines separately.¹²⁰

An equal importance is placed here on the strength and differentiation of the individual melodies and the impact of their integration, a relationship that composer and theorist Claus-Steffen Mahnkopf describes as a "contrasting complementarity."¹²¹ Based on the perceivable independence of melodies in polyphonic music, Mahnkopf argues, "If polyphony is understood as the deliberate manifestation of differences as differences, then, in general, polyphonic interaction can be defined as the *dissociation of musical discursivity*".¹²² Like Seeger, Mahnkopf describes a polyphony in which interacting melodies complement each other by accentuating their differences rather than their similarities. Both Seeger and Mahnkopf conceive polyphony as a plural occurrence, within which simultaneously unfolding entities form structures rich with immanent relationships.

¹¹⁶ Seeger, *Studies in Musicology*, 211.

¹¹⁷ Stephen P. Slottow, "Carl Ruggles and Charles Seeger: Strics vs Free Imitation in Ruggles's Canons," *Music Theory Spectrum* 30/2 (Fall, 2008), 285.

¹¹⁸ Nelson, "In Pursuit of Charles Seeger's Heterophonic Ideal," 459.

¹¹⁹ Seeger, *Studies in Musicology*, 211.

¹²⁰ *Ibid.*, 211.

¹²¹ Claus-Steffen Mahnkopf, "Theory of Polyphony," in *Polyphony and Complexity*, eds. Claus-Steffen Mahnkopf, Frank Cox and Wolfram Schurig (Hofheim: Wolke Verlag, 2002), 46.

¹²² *Ibid.*

3.4 Adapting Dissociative Counterpoint in the Referent of *Sotto Voce*

Dissociative counterpoint was the conceptual point of departure for the development of referents that combine simultaneous, interpenetrating sets of contrasting, yet complementary, information. These referents instigate improvisations that exhibit a richness of immanent relationships explored through a dialectical mediation between opposing aesthetic characteristics. I will illustrate the working of these referents in relation to my original composition *Sotto Voce*. Figure 38 shows the referent for improvising in *Sotto Voce* (full score in Appendix D).

Figure 38 - Referent for improvisation from *Sotto Voce*.

The musical score is presented in three systems, each with a treble and bass staff. The first system starts at measure 16 and is marked 'SOLO FORM' and 'Open repeat'. The treble staff contains a melodic line with various ornaments and rests. The bass staff shows a series of chords: Gb7b13, A-7/B, A-7, Db7alt, E7susb9, and Bb-7/Eb. The second system starts at measure 20 and features a more active melodic line. Its bass staff chords are: G9b13, F#-11, A13, A7alt, D-7, Bb7#11, and AbΔ13#5. The third system starts at measure 24 and includes a change in time signature from 4/4 to 2/4 and back to 4/4. The bass staff chords are: E/Eb, Eb-9, C-7/F, A/F, E∅, E-/F-, and B-9b13.

Similarly to the Fourth Movement of *Crawford's String Quartet 1931*, my composition *Sotto Voce* is energised by the interaction of two strata that are composed using different organising strategies. The lower staff is a conventional contemporary jazz

harmonic progression and the upper staff is a non-tonal intervallic progression that draws on an early form of dissonant counterpoint that adapted Fuxian counterpoint pedagogy.¹²³

The lower staff includes a triadic chord progression that is reminiscent of the harmonic style innovated by jazz composers including Wayne Shorter in the 1960s.¹²⁴ Chord qualities are deprived of their normal functional effects in many instances by leading to harmonic areas that eschew dominant to tonic resolutions (the A7alt to D-7 in bars 21-22 is one exception). The movement is motivated instead by shifting sonorities of varying degrees of stability that never settle sufficiently to privilege any single key centre. This unsettled harmonic movement is assisted by a root movement that includes every pitch-class except for C within a twelve bar progression. In isolation, this progression is not atypical of contemporary mainstream jazz, however it is transformed by its combination with the upper referent stream that is an independent intervallic motion.

The upper staff of *Sotto Voce* draws on an approach to species dissonant counterpoint developed by Seeger and Henry Cowell. During the 1910s, Cowell was a student of Seeger and their collaborative work resulted in an early prototype of dissonant counterpoint that reversed many principles of Fuxian species counterpoint.¹²⁵ In his treatise *New Musical Resources* (1930), Cowell outlines a rationale for this approach to counterpoint that allocates that dissonant intervals, such as major sevenths and minor seconds and ninths, are foundational and consonant intervals are permitted as passing or auxiliary tones.¹²⁶ Dissonant species exercises were initially undertaken by Cowell and Seeger to investigate the possibility that dissonance could be established as a dominant environment, into which consonance is introduced with careful preparation. According to Cowell,

The major 7th, minor 2nd and the minor 9th and their inversions are used as the foundation, as these are the strongest dissonances. The minor 7, major 2 and 9th [,] and the aug. 4 can be used as essential intervals when it [is] practical to use them for good voice leading or variety.¹²⁷

Implicit in this passage, excerpted from one of Cowell's counterpoint notebooks, is a graduated classification of intervals into categories, depending on their degree of

¹²³ John D. Spilker, "The Origins of 'Dissonant Counterpoint': Henry Cowell's Unpublished Notebook," *Journal of the Society for American Music* 5 (2011): 488.

¹²⁴ Shorter's composition E.S.P is a good example of this approach to harmony, recorded on: Miles Davis. *E.S.P.* Columbia CS 9150, 1965, Compact disc.

¹²⁵ Spilker, "The Origins of 'Dissonant Counterpoint,'" 488.

¹²⁶ Henry Cowell, *New Musical Resources*, Cambridge University Press: Cambridge, 1996.

¹²⁷ Cowell, cited in Spilker, "The Origins of Dissonant Counterpoint," 489.

consonance or dissonance. These categories are described explicitly in Seeger's *TENM* in a table that is reproduced in figure 39.¹²⁸

Figure 39. Classifications of intervallic dissonance from *TENM*.

perfect	1	} perfect consonances
perfect	8	
perfect	5	
perfect	4	
major	3	} imperfect consonances
major	6	
minor	3	
minor	6	
tritone		more consonant chordally than melodically
major	2	} imperfect dissonances
minor	7	
major	9	
minor	2	} perfect dissonances
major	7	
minor	9	

In dissonant species counterpoint, vertical consonances only occur when they are preceded and followed by dissonant sonorities. Contrary motion voice-leading is preferred and no more than two consonant intervals of the same type should occur consecutively. These features are demonstrated in Figure 40, which is an exercise from one of Henry Cowell's counterpoint notebooks, transcribed by Spilker.¹²⁹

Figure 40. A dissonant species counterpoint exercise from Henry Cowell's notebook. Vertical intervals are labelled.

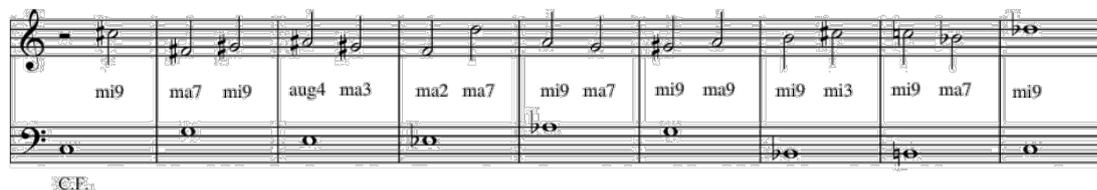


Figure 40 demonstrates Cowell's preparation of consonant intervals within a primarily dissonant framework. The dissonant species exercise is dominated by major 7ths

¹²⁸ Seeger, *Studies in Musicology*, 130.

¹²⁹ Figure excerpted from Spilker, "The Origins of Dissonant Counterpoint," 519.

and minor 9ths, which Seeger describes as perfect dissonances.¹³⁰ There are two consonant intervals in the excerpt and, in keeping with the reversal of traditional species guidelines, they occur at the less emphasised third beat of the bar as passing tones between dissonances. This positioning of consonances aims to prepare them with preceding dissonances and resolve them to subsequent dissonances, so that they occupy the same role as dissonant passing tones in traditional counterpoint. In bars 3 and 4 of Figure 40, this approach to preparation and resolution is more gradual. The major 3rd that falls on the third beat of bar 3 approaches a major 7th in the fourth bar via a weaker dissonance, a major 2nd. It is debatable whether the reversal of species guidelines activates a concurrent reversal of the listener's experience of preparation, tension and resolution associated with consonance and dissonance. From a practical perspective, however, dissonant counterpoint provided Cowell with a systematic method of composing in an early atonal idiom. Spilker identifies the direct application of dissonant counterpoint in Cowell's *String Quartet No.1 'Pedantic'* (1916), and suggests a continuing, though less explicit influence on later works such as *Seven Paragraphs* (1925) and *Suite for Woodwind Quintet* (1934).¹³¹ What I have found most instructive in Cowell's species exercises is the possibility of operating within a primarily dissonant framework that accommodates consonances by counteracting their stabilising tonal tendencies through preparation and resolution.

The succession of vertical intervals in the upper stream of *Sotto Voce* draws on Cowell's approach to voice leading and the placement of consonances and dissonances. These intervals are labelled in Figure 41 using Seeger's four part classification of interval quality: perfect dissonance, imperfect dissonance, perfect consonance and imperfect consonance.¹³² The preparation of consonance is exemplified in the boxed segment, which commences with a major seventh followed by a perfect fourth. The fourth is the most consonant interval in the progression and can be said to have been prepared by the preceding major seventh, which is a perfect dissonance. Following the fourth, the progression approaches the most dissonant interval, a minor ninth, via a weaker imperfect dissonance in the form of a major second. Contrary motion throughout this passage generates a sense of reaching towards the final perfect dissonance. Voice-leading and

¹³⁰ Seeger, *Studies in Musicology*, 130.

¹³¹ Spilker, "The Origins of Dissonant Counterpoint," 501-506.

Henry Cowell, *Seven Paragraphs: Trio*, Frankfurt: Edition Peters, 2001.

Henry Cowell, *String Quartet No.1 (1916)*, New York: Associated Music Publishers, 1965.

Henry Cowell, *Suite for Woodwind Quintet*, Bryn Mawr: Merrymount Music, 1949.

¹³² Seeger, *Studies in Musicology*, 130.

interval quality both emphasise that the concluding minor ninth is a point of particular significance in the progression.

Figure 41. Vertical intervals and voice-leading in the upper stream of the *Sotto Voce* referent.

Interval quality - PD ID PD IC PC PD PD IC PD ID PC ID PD PC ID PD

Voice leading motion - c c b c b p c p c c p c p c c c c

Key for vertical interval qualities
 - PD = perfect dissonance
 - IP = imperfect dissonance
 - PC = perfect consonance
 - IC = imperfect consonance

Key for voice leading motion
 c = contrary motion
 p = parallel motion

The sparse, rootless quality of the upper stream in *Sotto Voce* contrasts markedly with the harmonic richness of the lower chordal stream. When they are combined, the opposing pulls of the two harmonic streams establish a space for improvisation that is energised by the hybrid of jazz harmony and modernist compositional procedures. The following explores practical methods for relating to the two streams of the referent while improvising.

3.5 Combining the Two Streams in a Dialectical Improvisatory Process

Both streams of the referent are composed to be independent, responding to the possibilities implied by their own internal relationships, but they are mutually enriching when they are referred to in combination. Their combination involves a process that Seeger calls dissonation, which is a deliberate subversion of musical materials that are associated with traditional tonal practice.¹³³ This subversion does not preclude the inclusion of occasional triads but dictates that they should be positioned amidst materials that unsettle their tonal orientations.¹³⁴ The intervals in the upper stream of the *Sotto Voce* referent are crafted to form dissonances with chord tones that are imperative to the harmony in the second stream. Figure 42 shows the first four bars of the referent with a selective identification of the dissonances that occur between pitches in the first stream and the chords of the second.

¹³³ Burkett, "Linear Aggregates," 58.

¹³⁴ This subversion of tonal orientation harkens back to the applications of dissonant scales examined in the previous chapter.

Figure 42. A selective identification of dissonances formed between chord tones in the lower stream, and pitches in the upper stream of *Sotto Voce*.

B SOLO FORM

The performative combination of the two streams activates a dialectical interplay between the lush chord qualities in the lower stream and the non-tonal starkness of the upper stream, with their synthesis forming a harmonic composite that is inclusive of both characters. The second stream alone suggests a conventional ensemble approach in which the melodies played by each instrumentalist imply the chord symbols from the referent. This conventional harmonic approach is unsettled and transformed by its combination with the non-tonal movements in the upper stream. The composite of the two streams retains a semblance of tonal movement, though tonality is largely obscured by pitch materials that respond to the intervallic stream. The conventional harmonic approaches critiqued earlier in Rosenwinkel's performance are often unsuitable in performances of *Sotto Voce* because they are only appropriate for the interpretation of the chordal stream from the referent. To demonstrate the harmonic possibilities that emerge from the synthesis of the two streams, I have notated two voicings in Figure 43 that combine pitches from the upper stream with chord tones from the lower stream.

Figure 43. Sonorities derived by combining pitches from the two streams.

Figure 43 demonstrates harmonies derived by integrating features from both streams of the referent. Intervallic structures have been chosen so that dissonances are emphasised between the pitches from the first stream and materials extracted from the chord symbol. These voicings are typical of my approach to improvising vertical harmonies by combining the two streams.¹³⁵

Vertical harmonies that emerge from the interacting streams in *Sotto Voce* should not, in and of themselves, be considered a type of dissociative counterpoint. Seeger notes that Western listeners, conditioned by exposure to diatonic harmony, are likely to recognise elements of tonality whether or not they are intended by the composer.¹³⁶ A consequence of this sensitivity to triadic harmony is that the chord progression in *Sotto Voce* is likely to be heard as the fundamental point of harmonic reference, in relation to which all other materials are organised. This may make it difficult to fully dissociate the behaviour of different musicians. However, harmonic conflict between the streams entrenches dissonation within the referent so that each member of the trio is inclined to resist the dominance of the lower stream in their choices of melodies and harmonies, and in their methods of interpreting the referent. This might mean, for instance, that one musician plays non-tonal melody in reference to the upper stream when another switches to the lower. The combination of parts is likely to be dissociative to some degree because of this cooperative resistance.

Despite triadic elements, the harmony of *Sotto Voce* is less effective when traditional scales and arpeggios are used as the basic building blocks for melodies. These melodic approaches seem out of place in an environment that has deliberately sought to unravel traditional tonal practice. Tonal materials emerge in *Sotto Voce* at times, particularly in relation to the lower stream, however they are subsumed into a broader

¹³⁵ The pitches in the bass staff of figure 42, section A, are taken from stream 2 and include the tonic and third of an A minor chord, placed above the bass note (B) prescribed by the slash chord. Within the bass staff alone, intervallic dissonance is emphasised by the minor ninth between the bass note (B) and the third of an A minor triad (C). Though the chord symbol suggests a triadic structure, the pitches extracted from the symbol obscure the chord quality by omitting the fifth and seventh and emphasising the most dissonant intervals within the indicated harmony. The chord is treated more like an unordered pitch-class set that can be drawn upon freely (though it is likely that the tonic is given a degree of emphasis by the bassist in performances). The treble staff in 42A includes the two pitch-classes notated in the upper stream, both of which form perfect dissonances with the A in the bass staff. A perfect dissonance is also formed between the highest and lowest pitch of the combined voicing, so that the entire pitch structure is bound by a major seventh, spaced by an additional three octaves. The second example notated in figure 42, section B, integrates the two streams more comprehensively by combining pitch-classes from both sets of information in both treble and bass staves.

¹³⁶ Seeger, *Studies in Musicology*, 97-98.

melodic vocabulary that I have developed with reference to melodic characteristics that are common in Ruth Crawford's compositions. This melodic vocabulary encompasses the melodic processes discussed in the previous chapter, which can be incorporated into improvisations within *Sotto Voce*.

3.6 OPEN and FILL in *Sotto Voce*

A major advantage of OPEN/FILL as a generator of non-tonal melody is that it provides a means of interpreting melodic potential in a range of harmonic materials. Opened register spaces of any kind can become the locus for melodic movement, which makes the technique particularly useful when improvising in relation to the harmonic conditions provided by referents. The following illustrate various melodic and harmonic applications of OPEN and FILL, using *Sotto Voce* as a case study.

OPEN/FILL can be applied directly to opened register spaces in the referent of *Sotto Voce*. Opened spaces can be interpreted in either stream of the referent, or between pitches drawn from both streams. Opened spaces are most apparent in the upper stream because each interval encloses a register space. A melody is notated in Figure 44 that fills the register space enclosed by the major seventh between F and E that commences the first bar of the upper stream.

Figure 44. Performing OPEN/FILL in relation to intervals from the upper stream of *Sotto Voce*.



Figure 45. Performing OPEN/FILL between two different combinations of chord tones from *Sotto Voce*.

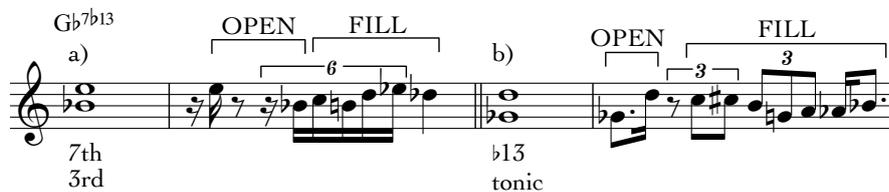


Figure 46. Delaying the filling of opened register spaces.



The opened spaces in Figure 46 are not filled immediately and are left open for future melodic movements. The initial three notes in Figure 46 open two register spaces. The lower register space between E and A^b is then filled, commencing on the fourth note of the melodic fragment. The fill that is performed within the higher register space between A^b and D is delayed while the lower space is being filled. To delay a fill while improvising requires an ongoing retention of opened register spaces. My own capacity for this retention has developed gradually throughout my study.

Instances of OPEN/FILL in *Sotto Voce* can also include register-space transfer, which was explained in the previous chapter. Figure 47, section (a), illustrates a register transfer applied to the melody from Figure 46. Pitches from within the melodic fill are distributed in multiple octaves, varying the original melodic contour and registral layout. A second possibility is shown in figure 47, section (b), which adapts the same example of OPEN/FILL, but reconstitutes the initial three pitches as a chord in the bass staff (a left hand piano voicing). The left hand pitches are chosen because they are a suitable voicing for the G^{b7(b13)} chord that commences the referent from *Sotto Voce*. By emphasising chord tones in this way, OPEN/FILL can be manipulated to embed dissonant melodies within triadic harmony. This technique has substantial potential for application in the

interpretation of standard jazz repertoire in addition to performances of my own compositions.

Figure 47. OPEN/FILL combined with register transfer in *Sotto Voce*: melodic and chordal applications.

The figure consists of two parts, a) and b), illustrating musical notation for 'Sotto Voce'.

Part a) shows a single melodic line on a treble clef staff. It begins with a $G\flat 7(b13)$ chord. The first two notes are labeled 'OPEN'. The next two notes are grouped under a bracket labeled 'FILL (register transfer)'. The following two notes are also grouped under a bracket labeled 'FILL (register transfer)'. A triplet of notes is marked with a '3' below it. The staff ends with a fermata.

Part b) shows a two-staff system with a treble clef on top and a bass clef on the bottom. The $G\flat 7(b13)$ chord is written above the treble staff. The treble staff contains a melodic line with notes and rests. The bass staff contains a harmonic line with notes and rests. Arrows point from the word 'FILL' in the treble staff to the corresponding notes in the bass staff. The word 'OPEN' is written in the bass staff with an arrow pointing to a specific note.

Figure 46(b) also demonstrates the capacity of OPEN/FILL to generate harmony and melody concurrently, and for the two to be linked by Crawford's melodic strategies. In this example, mutually exclusive pitch materials are situated in different registers, contributing to an apparent independence between harmony and melody. This independence reinforces the primary aim of this dual-stream referent type: to emulate dissociative counterpoint in improvisation.

3.7 Chapter Conclusion

This chapter explored referents that provide interacting streams of contrasting material to stimulate harmonic and melodic invention. This type of referent fosters dissociative counterpoint by drawing explicitly on the hybrid nature of my research. Improvisations in *Sotto Voce* relate to two contrasting harmonic streams; a jazz-oriented chord progression is combined with a non-tonal intervallic sequence redolent of species dissonant counterpoint in its formative phase. In performances, each improviser enacts a dialectical mediation between the pull of tendencies embedded within the contrasting

streams. The synthesis of the two harmonic streams retains a semblance of tonality but is distanced from conventional harmonic practice by its multilayered properties. The increased complexity of relationships between the referent and the musical surface ascribes a virtual quality to the referent; its multilayered intricacy prevents its features from being easily inferred by listeners. A type of counterpoint emerges that differs from traditional understandings of term.

Traditionally, counterpoint implies a note-by-note calculation of the vertical and horizontal intervals formed between simultaneously sounded melodies with a consideration of manipulated tension through voice-leading. This approach to counterpoint is applied in the first stream of *Sotto Voce* that emulates Cowell's dissonant species counterpoint. The intervallic relationships between the first and second streams are also designed to create an alternation of various degrees of vertical dissonance. When improvising, however, there is a significant loosening of these relationships, and the rigour that traditionally governs the emergence of intervallic relationships in counterpoint is no longer present.

One might be inclined to describe the interaction of different parts in *Sotto Voce* as a simultaneity: the concurrence of three independent conceptions in trio performances. This accurately describes the agency of each musician within improvised performances but it does not account for shared idiomatic knowledge, rehearsed procedures and points of harmonic and rhythmic reference that bind performances together. The counterpoint that emerges in *Sotto Voce* can be better understood in terms of the improviser's relationship with the referent. Improvisers embrace considerable flexibility when interpreting harmonic and rhythmic preconditions, but they nevertheless use these reference materials to gauge and forge links with the behaviour of other improvisers. The pull of the referent is ever present and, as a correlate, so is the pull of considered contrapuntal relationships embedded in the two harmonic streams.

Chapter 4: Referent Type 2 - Rhythmic Referents

4.1 Chapter Overview

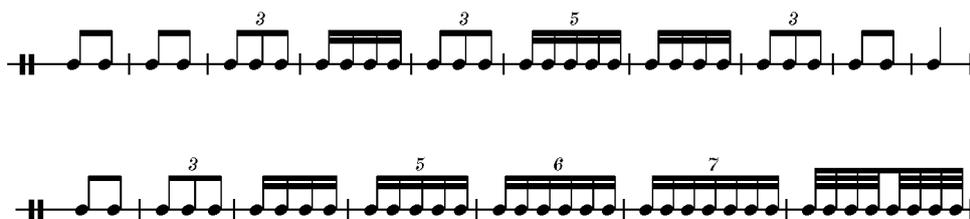
This chapter examines referents, embedded within musical scores, which supply rhythmic and metrical templates that are referenced by my trio to organise improvisations. These templates are abstracted from the traditionally notated parts of my compositions. They are designed to provide rhythmic and metrical detail that supports rich environments for ensemble interaction. Each rhythmic referent that I have composed explores some aspect of the compositional and theoretical legacy of Charles Seeger and Ruth Crawford, interpreted in the context of contemporary jazz performance. The links between dissonant counterpoint and my approach to rhythm are explored in two works: *Lady Lachs Schinken* and *Accidental Hipster* (full scores in Appendices E and C respectively). Discussion of these compositions is preceded by a brief introduction to the rhythmic character of dissonant counterpoint, followed by an investigation of key terms.

4.2 Introduction to the Rhythmic Character of Dissonant Counterpoint

In *TENM*, Seeger critiques the prevailing rhythmic practices of Western art music up until the formulation of his treatise in 1930. The following passage identifies trends that he sought to reform by recommending alternative rhythmic approaches in his *Manual of Dissonant Counterpoint*.

Hitherto, musical usage has relied mostly on the fixed metrical pattern over which a more or less free rhythmic pattern is laid. This gives to much of the music of the last few centuries a rhythmic sameness or monotony equivalent to the tonal sameness or monotony in some of the early plainsong, where the predominance of one tone, the recitation tone, is relieved only rarely by others. It seems likely that the dance, with its emphasis upon stepping and skipping, has encouraged this rhythmic usage over the more sinuous type of movement illustrated in example 31 [shown in figure 48].¹³⁷

Figure 48. Seeger's example of a sinuous rhythmic type.



¹³⁷ Seeger, *Studies in Musicology*, 120.

This passage from Seeger's treatise introduces a rhythmic practice founded on resistance to convention. Much of *TENM*, including this excerpt, can be read in terms of Burkett's description of dissonant counterpoint as a "post-tonal compositional theory and practice in its adolescence, full of anger, energy, and an urgency to move forward."¹³⁸ Burkett explains that Seeger's compositional manual proposes a regime of subversive processes of dissonation that reveal an explicit desire to undermine musical conventions.¹³⁹ In the quotation above, Seeger is critical of the predominance of unchanging metre in Western classical music. The notated example, referred to in the quotation, also reveals his preference for the fine rhythmic graduations enabled by the use of quintuplets and septuplets.¹⁴⁰ The rhythmic approaches that Seeger devised in the *Manual of Dissonant Counterpoint* are predicated on variety and constant flux as a means of resisting the historic influence of dance-forms, and their associated metrical approaches. Seeger's recommendations throughout the manual reveal his belief that this resistance could be best realised by constant variation in rhythmic durations, metre and the vertical alignment between melodies. This relentless variation, however, is offset by crafting each melody in relation to concise parameters that attribute unity to individual melodies and their contrapuntal interactions.

As a dedicated student of Seeger's dissonant counterpoint, Ruth Crawford drew explicitly on the rhythmic approaches outlined in *TENM*. The links between the treatise and Crawford's compositions are particularly notable in the *Diaphonic Suites*, from which Figures 49 and 50 have been excerpted.¹⁴¹ The first of these excerpts, shown in Figure 49, situates constantly shifting tuplets within non-metrical $\frac{1}{4}$ bars. Increases and decreases of rhythmic density generate tension and relaxation. The second example, shown in Figure 50, exhibits constant variation of the time signature, and a rhythmic stratification that is realised by contrasting rhythmic parameters in the two melodies. Due to this stratification, the two melodies seem to progress in response to their own independent imperatives. The rhythmic independence of melodies is critical to the effect of dissociative counterpoint that was discussed in chapter three.

¹³⁸ Burkett, "Linear Aggregates," 58.

¹³⁹ *Ibid.*, 58.

¹⁴⁰ Seeger, *Studies in Musicology*, 120-121.

¹⁴¹ Crawford Seeger, *Diaphonic Suites*.

Figure 49. *Diaphonic Suite No. 2*, first movement, bars 36-41

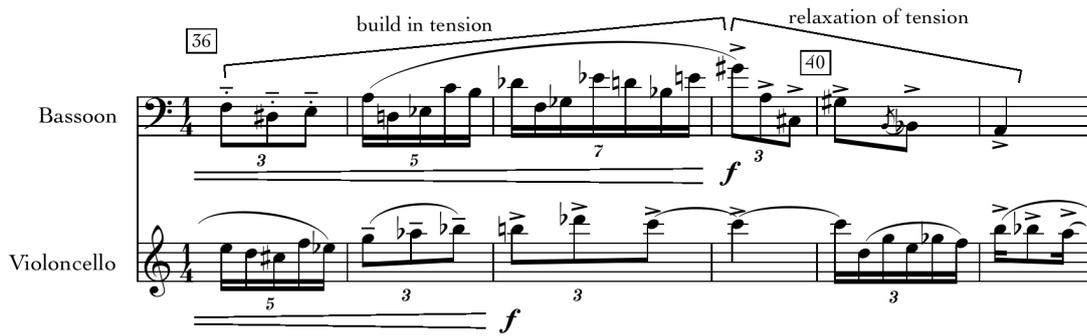
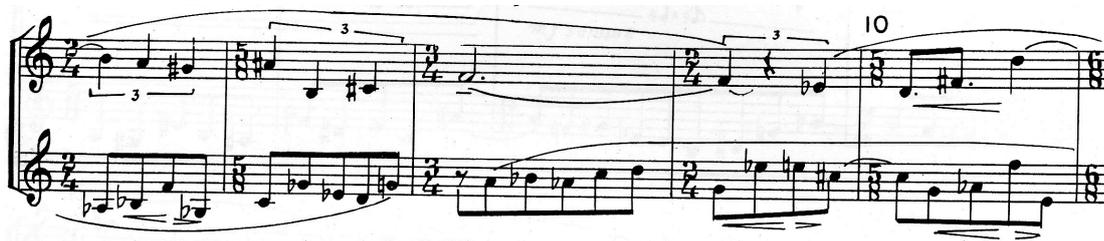


Figure 50. *Diaphonic Suite No. 3*, first movement, bars 6-10.



Both figures also demonstrate Crawford’s realisation of rhythmic plasticity, a term coined by Tick to describe a mercurial rhythmic changeability that renders conventional meter superfluous.¹⁴² The excerpts realise rhythmic plasticity by applying particular metrical and rhythmic arrangements for two-part counterpoint that Seeger calls melodic and chordal orders.¹⁴³ Though these systems are not major foci of this chapter, the excerpt shown in Figure 50 is the subject of further discussion later in the chapter as it relates to *Lady Lachs Schinken*. Figures 49 and 50 have been included here to illustrate the character of rhythmic usage in dissonant counterpoint.

The relationship between dissonant counterpoint and my own music is marked by a major point of departure from the rhythmic features of Crawford’s music described above. The centrality of groove to contemporary jazz means that I pursue the rhythmic plasticity identified by Tick by manipulating pulse and meter, particularly when I am performing with an ensemble. Iyer argues that groove can be described, but not defined, as “an isochronous pulse that is established collectively by an interlocking composite of rhythmic entities”, which exhibit both a high degree of regularity and a sense of animation.¹⁴⁴ This

¹⁴² Tick, “Dissonant Counterpoint Revisited,” 412.

¹⁴³ Seeger, *Studies in Musicology*, 179 and 199.

¹⁴⁴ Vijay Iyer, “Microstructures of Feel, Macrostructures of Sound: Embodied Cognition in West-African and African-American Musics,” (PhD Diss., University of California, 1998), 15.

chapter examines rhythmic referents that aim to infuse groove-based performances with a constant rhythmic flux that can be likened to rhythmic plasticity.

The language that Seeger uses to discuss rhythm is idiosyncratic and inconsistent with contemporary nomenclature; his terms are not adopted wholesale in this chapter for the sake of clarity. A terminology is outlined below that grounds my discussion of the rhythmic concepts from dissonant counterpoint applied in my composing and improvising.

4.3 Basic Definitions

Theorists and performers commonly use many of the terms that are defined in this chapter, including pulse, beat, meter, groove, metric modulation and polyrhythm. Despite their common usage, I have observed inconsistency in the ways that the terms are defined and understood within different discourses. For this reason, I believe that it is essential to clarify my use of these terms to enable an account of my rhythmic practice that is as detailed and precise as possible. The following definitions have been formulated by synthesising a range of contemporary theoretical literature on rhythm.¹⁴⁵

The first term to be discussed is ‘pulse’. The term ‘pulse’ is differentiated from ‘beat’ because they often occur concurrently and fulfil different functions. The definition of ‘pulse’ relevant to this chapter is closely modelled on Cooper and Meyer who define ‘pulse’ as “a series of regularly recurring, precisely equivalent stimuli” that “mark off equal units in the temporal continuum.”¹⁴⁶ Drawing on this definition, I define ‘pulse’ as a series of stimuli, either realised in audible sounds or conceived subjectively and internally, that mark off perceptually equal units in the temporal continuum. My definition of ‘pulse’ is very similar to Cooper and Meyers’ in that it emphasises the regular recurrence of stimuli that are physically present in the musical surface. For a stream of articulations to emerge as a pulse, it must continue for long enough for its periodicity to be perceived. Sounds, however, can be interpreted as part of a regular stream of pulsations despite small durational

¹⁴⁵ Jonathan D. Kramer, *The Time of Music: New Meanings, New Temporalities, New Listening Strategies* (New York: Schirmer Books, 1988).

Henkjan Honing, “Without It No Music: Beat Induction as a Fundamental Musical Trait,” *Annals of the New York Academy of Sciences* 12521/1 (2012).

Longuet-Higgins and Lisle cited in Peter Desain and Henkjan Honing, “Tempo Curves Considered Harmful,” In *Time in contemporary musical thought*, edited by Jonathan D. Kramer, *Contemporary Music Review* 7/2 (1993).

Maury Yeston, *The Stratification of Musical Rhythm* (New Haven: Yale University Press, 1976).

Justin London, *Hearing In Time: Psychological Aspects of Musical Meter* (Oxford: Oxford University Press, 2004).

Iyer, *Microstructures of Feel*.

¹⁴⁶ Cooper and Meyer cited in Jonathan Kramer, *The Time of Music*, 417.

beats.¹⁴⁹ Beats are induced by means of mental processing of musical information.¹⁵⁰

Whereas pulse describes features of the musical surface, beat refers to a specialised type of pulse, interpreted by listeners, that underpins their interpretation of rhythmic behaviour.

The time elapsed between beats is referred to subsequently as the beat duration.¹⁵¹ The term ‘subdivision’ will refer to the division of the beat duration into two or more equal parts. In Figure 52, which is transcribed from my trio’s recording of *Lady Lachs Schinken*, the beat duration of a crotchet is divided into triplet subdivisions.¹⁵²

Figure 52. Crotchet beat duration, divided into quaver triplet subdivisions in a performance of *Lady Lachs Schinken* (2:29 - 2:34).



When beats are grouped by means of a recurring cyclical pattern of accentuation, a metrical effect is created. According to Yeston, metre is “an outgrowth of the interaction of two levels – two differently-rated strata, the faster of which provides the elements [beats] and the slower of which groups them.”¹⁵³ In a bar of $\frac{3}{4}$, for example, a slower stratum of dotted minims accentuates every third crotchet beat. This accented beat, or downbeat, commences each measure and is marked for particular significance. London asserts that there is an expectation that events of the greatest significance will occur at beats subjected to the greatest accentuation.¹⁵⁴ Similarly to beat, metre is not an objective rhythmic feature but is a cognitive phenomenon. Honing states that “while rhythm can be characterized as the varying pattern of durations that is physically present in the music, meter involves our perception and, more importantly, anticipation and prediction of such rhythmic patterns.”¹⁵⁵ Honing’s and London’s statements both describe meter as a cognitive phenomenon whereby listeners identify beats and their groupings to aid the processing of surface level rhythmic activity.

As an improvising performer, beats and metre play a generative role that can be quite distinct from the listener’s reception of music, which is the key consideration in

¹⁴⁹ Kramer, *The Time of Music*, 97.

¹⁵⁰ Honing, “Without It No Music,” 85.

¹⁵¹ Longuet-Higgins and Lisle cited in Desain and Honing, “Tempo Curves,” 125.

¹⁵² Transcribed from O’Connor, *Praxis*.

¹⁵³ Yeston, *The Stratification of Musical Rhythm*, 66.

¹⁵⁴ London, *Hearing In Time*, 16.

¹⁵⁵ Honing, “Without It No Music,” 86.

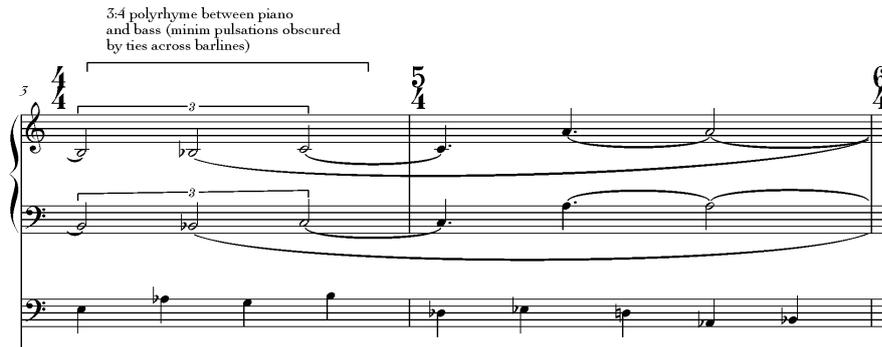
London's, Yeston's and Honing's definitions of meter. Iyer suggests that the distinction between meter as a generative principle or an information-processing strategy can be avoided by defining meter as "an internal periodic template that frames and temporally grounds both perceptions and actions."¹⁵⁶ As Iyer emphasises, metre is fundamental to both the generation and the processing of music, though the performers' conceptions of metre might not correlate with the listener's processing of the music. When I speak of meter in the following discussion of my music, I am referring to my conception of its generative role, though I make suggestions about the effect of relating to meter with a greater or lesser degree of ambiguity. My trio's applications of polyrhythm often results in a degree of metrical ambiguity.

Polyrhythm describes a particular type of interaction between two or more rhythmic streams, each of which consists of equally spaced pulsations of different durations. London states that a polyrhythm is formed by "any two or more separate rhythmic streams in the musical texture whose periodicities are non-integer multiples."¹⁵⁷ This means that a polyrhythm is formed when a whole number of pulsations in the faster rhythmic stream cannot be grouped to give the duration of the pulsations in the slower rhythmic stream. Within a bar of common time, a pulse of minim triplets forms a polyrhythm with the beat because a whole number of crotchets cannot be grouped to give the duration of a minim triplet. In this case, 3:4 is the simplest expression of the ratio between the periodicities of the two streams. An instance of a 3:4 polyrhythm in *Lady Lachs Schinken* is shown in Figure 53. In this example, a polyrhythm is formed between the crotchet beat and a superimposed pulse, though polyrhythms can also be formed between two pulses that move at different rates to the beat.

¹⁵⁶ Iyer, "Microstructures of Feel," 76.

¹⁵⁷ London, *Hearing In Time*, 66.

Figure 53. Polyrhythms formed between a crotchet pulse and a superimposed pulse in the notation of *Lady Lachs Schinken*.



The ways that different pulses align with each other lead to different degrees of rhythmic tension or relaxation. Seeger associates polyrhythm with rhythmic dissonance, and advocates for the employment of rhythmic dissonance between melodies in counterpoint.¹⁵⁸ For Seeger, rhythmic dissonance is critical to the independent movement of melodies identified earlier as a key feature of dissociative counterpoint. Both Seeger and Yeston note that a comparative rhythmic relaxation, or rhythmic consonance, occurs when the rate of any level of rhythmic motion in a piece can be multiplied or divided by an integer greater than 1 to derive the rate of any other level.¹⁵⁹ If a quaver and a crotchet stream are commenced simultaneously, they are rhythmically consonant because the duration of the quaver can be multiplied by the integer 2 to form the duration of the crotchet. Consonant and dissonant rhythms appear regularly in contemporary jazz, though they both tend to appear in clearly articulated metrical templates.

Adorno echoes Seeger's criticism of unvarying meter and the emphasis of beats in the passage from *Perennial Fashion - Jazz* included earlier in this commentary. Since the original publication of Adorno's article, metrical variety has become much more common in jazz, but metrical features of the referent are often announced clearly in the rhythmic surface. The rhythmic techniques discussed in this chapter emulate the rhythmic flux pivotal to dissonant counterpoint by obscuring the metrical templates used to organise improvisation.

¹⁵⁸ Seeger, *Studies in Musicology*, 103.

Ibid., 199.

¹⁵⁹ Yeston, *The Stratification of Musical Rhythm*, 77-78.

4.4 Composition and Interpretation in the Rhythmic Features of *Lady Lachs Schinken*

Lady Lachs Schinken draws on the first movement of Ruth Crawford's *Diaphonic Suite No. 3*.¹⁶⁰ The ensuing discussion addresses how Crawford's composition has informed *Lady Lachs Schinken*, and describes how features of her approach have been interpreted in jazz performance. In particular, the discussion will focus on a contrapuntal relationship described by Charles Seeger as Melodic Order 4.

Melodic Order 4 is one of a number of approaches recommended for dissonant composition in *TENM* that relate to metrical structure and rhythmic materials.¹⁶¹ It is characterised by changes of time signature in each bar, and a particular contrapuntal relationship between two melodies. The constant changes of time signature resist the articulation of audible metrical features that a listener might refer to in their processing of the music. Within these changing time signatures, one of the two melodies articulates a pulse that aligns with the beat, or is a subdivision of the beat duration (for example, a pulse of quavers in 3/4 or 4/4). The second melody divides the duration of each bar into an equal number of pulsations that form polyrhythms with the pulse articulated in the other melody. In the first movement of Crawford's *Diaphonic Suite No. 3*, shown in Figure 54, a pulse of quavers is notated in the second clarinet, while the first clarinet's rhythms divide each bar duration into equidistant pulsations.¹⁶²

Figure 54. Melodic Order 4 in Crawford's *Diaphonic Suite No. 3*, first movement, bars 6-15.



¹⁶⁰ Crawford Seeger, *Diaphonic Suites*.

¹⁶¹ Seeger, *Studies in Musicology*, 179 and 199-200.

¹⁶² Crawford Seeger, *Diaphonic Suites*.

The polyrhythmic characteristics of Melodic Order 4, demonstrated in Figure 54, generate rhythmic independence and a sense of dissociation between the two melodies. This independence is accentuated by the infrequency of rhythmic coincidence achieved by tying across bar lines where notes would otherwise be articulated simultaneously. There is a sinuous quality to the first clarinet melody, which weaves dissonantly and independently around the regular pulsations in the second clarinet, only coinciding occasionally. Rhythmic independence between the two melodies, created by non-coincidence, can be observed in many of Crawford's mature compositions. It is particularly prominent in the opening movement of Crawford's best know work, her *String Quartet 1931*. The excerpt in Figure 55 illustrates a rigorously independent four part counterpoint in which the only points of rhythmic coincidence occur in the unison figure played by the first violin and cello in bar 5.¹⁶³

Figure 55. Rigorous rhythmic independence in the first movement of *String Quartet 1931* by Ruth Crawford.

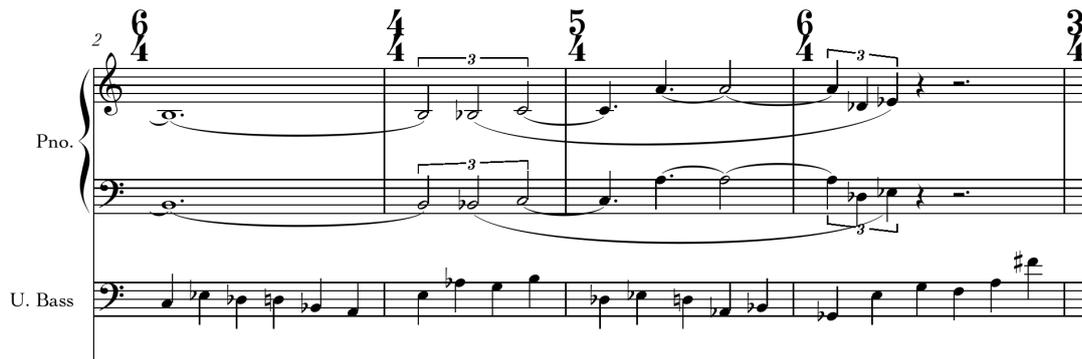


Rhythmic independence and frequent changes of meter are applied in the notation of *Lady Lachs Schinken*, an excerpt of which is shown in Figure 56. Like Crawford's work, two melodies cultivate independence through polyrhythm and the placement of ties across bar lines. I have accentuated rhythmic independence by attaching different characterisations to the interpretation of the melodies in performance. The rhythmic plasticity that Tick associates with Crawford is emulated in the piano melody of *Lady Lachs Schinken*, while the regular pulse characteristic of Melodic Order 4 is interpreted as a walking bass line.¹⁶⁴

¹⁶³ Ruth Crawford Seeger, *String Quartet 1931*, Bryn Mawr: Merion Music, 1941.

¹⁶⁴ Tick, "Dissonant Counterpoint Revisited," 412.

Figure 56. Rhythmic independence and contrast of constructing principles between the Piano and Bass melodies in bars 2-5 of *Lady Lachs Schinken*.



Walking bass is a conventional feature of a jazz rhythmic approach called ‘swing.’ Swing emerges from idiomatic emphases of rhythmic materials and is intensified by tension between subtle anticipations and delays of a pulse by different musicians.¹⁶⁵ These manipulations create groove by applying what Vijay Iyer calls expressive microtiming. According to Iyer, expressive microtimings are minute degrees of asynchrony that emerge between different rhythmic streams and a pulse¹⁶⁶. Citing Ladzekpo, Iyer writes that these minute asynchronies mark each rhythmic stream in the music as an individual, animated entity that is distinct in terms of timbre.¹⁶⁷ Sophisticated microtimings are essential to the rhythmic identity of jazz. In the Ahmad Jamal trio’s 1958 performance of *But Not For Me*,¹⁶⁸ for example, the bassist Israel Crosby minutely anticipates Vernel Fournier’s ride cymbal articulations, creating a sense of forward propulsion. This propulsion is counteracted by Jamal’s quavers that lie behind the beat to a pronounced extent. These relationships are indicated by arrows in Figure 57.¹⁶⁹ A palpable animation emerges out of ongoing tension between anticipation in one part, and delay in another. A similar articulation is observed in performances of *Lady Lachs Schinken*.

¹⁶⁵ A particularly ubiquitous feature of swing is the lengthening of quavers that fall on beats, and the delay off beat quavers.

¹⁶⁶ Vijay Iyer, “Microstructures of Feel, Macrostructures of Sound: Embodied Cognition in West-African and African-American Musics,” (PhD Diss., University of California, 1998), 107.

¹⁶⁷ Ladzekpo cited in Iyer, *Microstructures of Feel*, 114.

¹⁶⁸ Ahmad Jamal, *But Not For Me: Ahmad Jamal Live at the Pershing*, Philips B 94239 L, n.d, Vinyl.

¹⁶⁹ The long arrow above the piano part indicates that the placement of quavers lags behind the beat. The arrows above each crotchet in the bass indicate that they anticipate the placement of the beat by the other musicians.

Figure 57. Expressive microtimings in Ahmad Jamal Trio's 1958 performance of *But Not For Me*, from on *At The Pershing*, commencing at 1:10.

The image shows a musical score for three instruments: Piano (Pno.), Bass, and Drums (Dr.). The score is in 4/4 time. The piano part is in the treble clef and features a melodic line with a '15ma' (15th measure) annotation above it. The bass part is in the bass clef and features a steady eighth-note pulse with arrows above it indicating microtimings. The drum part is in the drum clef and features a pattern of slashed snare noteheads, with a note indicating they should be played as cross-sticks.

The regular swing articulation of pulse in *Lady Lachs Schinken* introduces stabilising tendencies that are resisted by polyrhythm and other features of the rhythmic notation. Stability is also resisted by constantly shifting time signatures and periodic interruptions, during which the regular pulse is discarded in favour of asymmetrical groupings of quaver triplets. The first of these interruptions is shown in the bass melody of Figure 58, which switches from a crotchet pulse to less stable off beat quaver triplets. Tension also emerges between groove in the bass and drums, and different polyrhythmic pulses in the piano that imitate characteristics of Crawford's *Diaphonic Suites*. The contrasting concerns of groove and rhythmic flux, embedded within the notation of *Lady Lachs Schinken*, become the basis for rhythmic improvisations that relate to the referent.

Figure 58. Destabilising interruptions in the bass part of *Lady Lachs Schinken*.

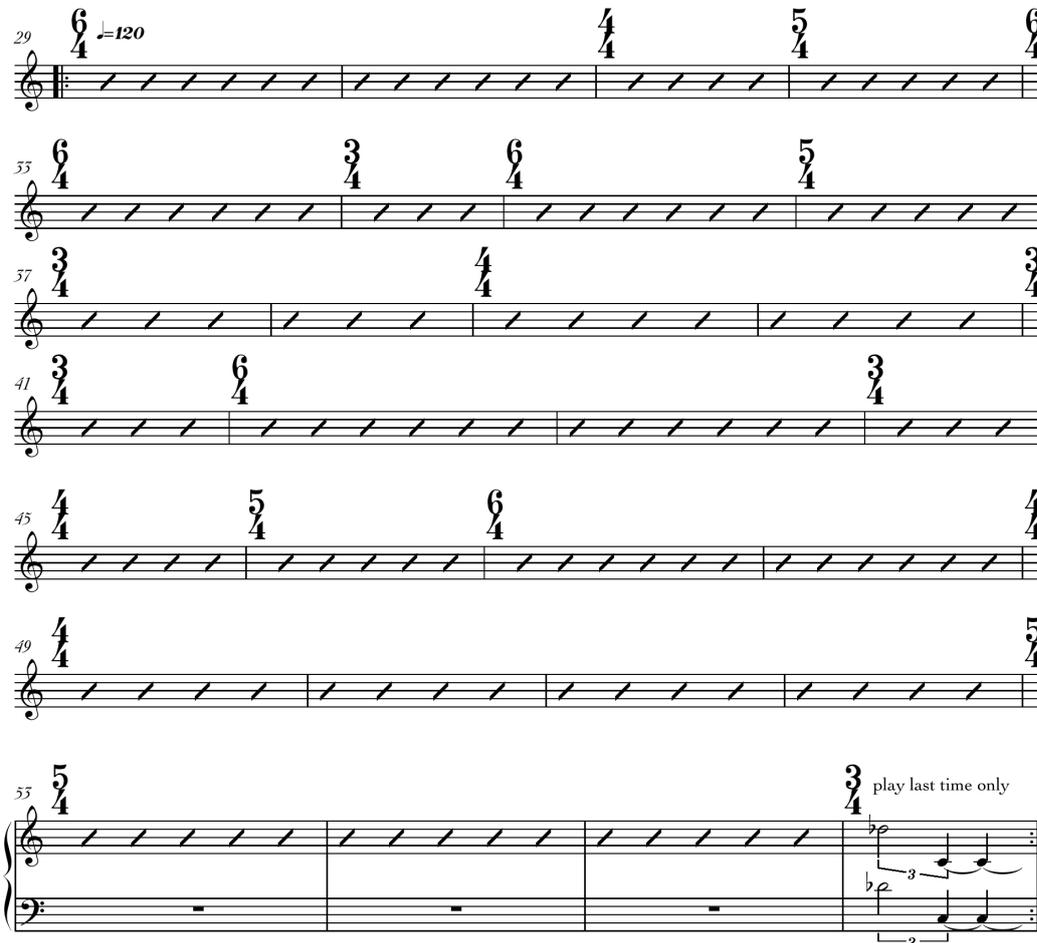
The image shows a musical score for piano and bass. The piano part is in the treble clef and the bass part is in the bass clef. The score is in 4/4 time and features a complex rhythmic structure with multiple time signatures (6/4, 3/4, 4/4) and quaver triplets. The piano part includes a melodic line with a '3' annotation above it, and the bass part includes a rhythmic line with a '3' annotation below it.

4.5 Improvising in *Lady Lachs Schinken* Using Polyrhythm and Metric Modulation

Rhythmic improvisation is organised in *Lady Lachs schinken* in relation to a metrical template. The referent is derived from the head (the notated part that commences

the composition) and retains the succession of changing time signatures characteristic of Melodic Order 4. The referent is shown in Figure 59.¹⁷⁰

Figure 59. The referent to *Lady Lachs Schinken*.



This template does not specify pitch relationships, making rhythm the primary vehicle for coordinating ensemble improvisation. Similarly to the head, the bass and drums commence by playing a swing feel with a walking bass line. I am able to form rhythmic dissonance by playing pulses that form polyrhythms with the crotchet pulse in the bass. These polyrhythms often divide bars into equidistant pulsations. My trio has rehearsed various polyrhythmic options for each time signature, with an emphasis on the division of each bar into either three or four pulsations. Figure 60 illustrates the resulting succession of pulses, with the upper pulsations dividing each bar by four, and the lower by three. The following polyrhythms are formed between these pulses and the crotchet beat at various

¹⁷⁰ All examples relating to my trio performances of this referent are notated with bar numbers that correspond to those in Figure 59.

points of the referent: 3:4, 3:5, 3:2, 4:5 and 4:3. These proportions can also be observed in the score to Crawford's *Diaphonic Suite No. 3*, which informed the composition of *Lady Lachs Schinken*.¹⁷¹ While polyrhythm introduces independence and rhythmic tension between melodies, a more substantial rhythmic interplay is generated by attaching metrical properties to pulses that form polyrhythms with the beat. This process is called metric modulation.

Figure 60. Polyrhythms practiced by my trio in *Lady Lachs Schinken*.



Improvising pianist Marc Hannaford provides a particularly pragmatic description of metric modulation in his exploration of Elliott Carter's rhythmic language in improvisation.¹⁷² Hannaford describes two main methods for executing metric modulation. In the first method, a pulse that forms a polyrhythm with the beat in one tempo becomes the beat in a new tempo.¹⁷³ This is demonstrated in Figure 61, section (A), in which a crotchet triplet pulse in an initial tempo becomes the beat for 4/4 bars at a faster tempo. The tempo of the crotchet beat modulates from 80 b.p.m to 120 b.p.m. In Hannaford's second method of metric modulation, a subdivision of the beat at an initial tempo is the same speed as a different subdivision in a new tempo, either lengthening or shortening beat duration.¹⁷⁴ This approach is illustrated in Figure 61(B), in which the speed of the semiquavers in the first bar is the same as the speed of semiquaver quintuplets in the second bar. In this instance, the tempo of the crotchet beat modulates from 120 b.p.m to 100 b.p.m.

¹⁷¹ Crawford Seeger, *Diaphonic Suites*.

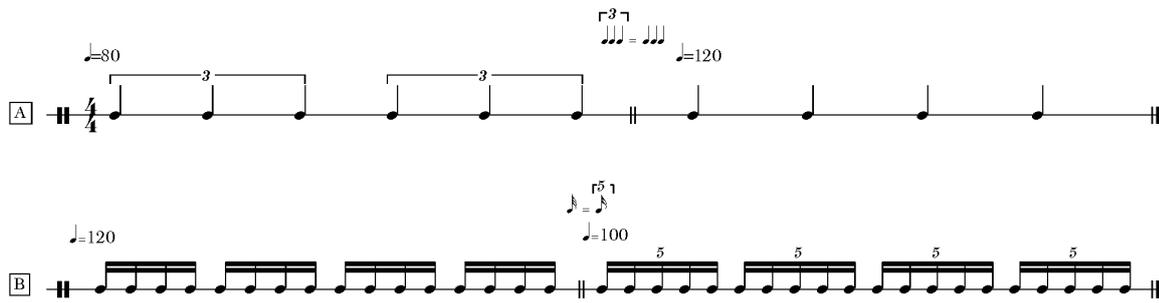
¹⁷² Hannaford, "Elliott Carter's Rhythmic Language," 19-20.

My notated examples of Hannaford's methods are significantly simpler than those presented in his masters thesis.

¹⁷³ *Ibid.*, 19. Hannaford's particular language choices have been adjusted to aid consistency with the rhythmic terminology proposed in this chapter.

¹⁷⁴ *Ibid.*, 20.

Figure 61. Examples of Hannaford's two approaches to metric modulation. A) A pulse that forms a polyrhythm with the beat in an initial tempo becomes the beat in a new tempo. B) The speed of a subdivision in one tempo is the same as the speed of a different subdivision in a new tempo.



Metric modulation has become a particularly valuable device for ensemble interaction in performances of *Lady Lachs Schinken* because it retains the groove-based performance practices of my ensemble while enabling a great deal of variety in rhythmic material. The manner in which these metric modulations are achieved is illustrated in Figure 62, which shows two alternate streams of polyrhythmic pulsations embedded within bars 41-46 of the referent from *Lady Lachs Schinken*. The first of these rhythmic streams is shown in figure 62, parts (A) and (B), and depicts a pulse of dotted quavers that is grouped into lots of four by accents. In 62(B) this pulse becomes the beat in accelerated bars of common time, generating rhythmic animation by the first method of metric modulation illustrated in Figure 61(A). The dotted quaver pulsations need not be stated once the metric modulation is effected. Rather, the new 4/4 bars can be referred to with considerable rhythmic flexibility. The second rhythmic stream, shown in 62(C) and 62(D), employs much more varied pulsation speeds, though metric modulation is only applied in bars 42 and 43.

Figure 62. Two examples of metric modulation applied within bars 41-46 from *Lady Lachs Schinken*. A and C show two streams of pulsations that form polyrhythms with the beat. B and D show how these pulsation streams can be manipulated to modulate the tempo.

The extent to which polyrhythms translate to listeners as metric modulations is largely determined by the type of drum feel played by McLean. Because of the strength of the drums as a time-keeping instrument, McLean’s choices often define the dominant metrical environment within my trio. However, this doesn’t preclude the possibility of different metrical interpretations between ensemble members occurring simultaneously. Referring back to Figure 62(B), I might play in a way that relates closely to the crotchet beat, while the bass and drums modulate to faster common time bars in the manner previously discussed. The result would be a dissonant simultaneity of rhythmic materials that imply conflicting metrical orientations.

To further demonstrate my trio’s interplay based on polyrhythm and metric modulation, an excerpt from our recording of *Lady Lachs Schinken* is transcribed in Figure 63.¹⁷⁵ In measure 31 of this transcription, two rhythmic streams interact to form a polyrhythm. One rhythmic stream maintains the crotchet pulse established in the previous two bars by McLean’s conventional 6/4 ride-cymbal pattern. This crotchet stream is referenced in the left hand of the piano and in the hi-hat. The composite created by combining these timbrally distinct rhythms articulates each beat of the 4/4 bar, demonstrating the potential discussed earlier for pulses to be formed between non-equivalent sounds. The other rhythmic stream in measure 31 forms a polyrhythm with the crotchet pulse, and is referenced in the tom toms and in the right hand of the piano.

¹⁷⁵ Joe O’Connor Trio, *Praxis*.

McLean plays crotchet triplets that form a 3:2 polyrhythm with the crotchet stream. The piano melody groups McLean's pulse into lots of two, forming a 3:4 polyrhythm with the crotchet pulse, contributing to rhythmic flux. This instance of polyrhythm is unlikely to be interpreted by listeners as a metric modulation, despite the existence of crotchet triplets and a slower grouping stratum. This is due to the absence of idiomatic metrical emphases within the triplet pulse and the retention of the crotchet pulse from the previous meter. At other points, however, modulations of tempo are executed by attaching metrical characteristics to pulses that form polyrhythm with the beat.

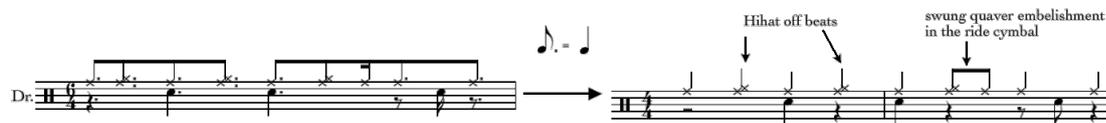
Figure 63. Transcription of an excerpt of my trio's improvisation in the recording of *Lady Lachs Schinken* from *Praxis* (2:29 – 2:52).

The musical score is divided into four systems, each containing staves for Piano (Pno.), Upright Bass (U. Bass), and Drums (Dr.).

- System 1 (Measures 29-31):**
 - Piano:** Features a melodic line with triplets and a bass line with sustained notes. A bracket above measures 30-31 is labeled "3:4 polyrhythm with crotchet stream".
 - Upright Bass:** Plays a steady crotchet stream.
 - Drums:** Features a crotchet stream pattern. A box above measures 30-31 is labeled "Polyrhythm formed with crotchet pulse".
- System 2 (Measures 32-35):**
 - Piano:** Continues the melodic line with triplets. A box above measures 34-35 is labeled "Implied metric modulation".
 - Upright Bass:** Continues the crotchet stream.
 - Drums:** Features a complex polyrhythmic pattern. A box below measures 34-35 is labeled "McLean plays 3:2 polyrhythms with the crotchet pulse".
- System 3 (Measures 36-38):**
 - Piano:** Features a melodic line with triplets and a bass line with sustained notes.
 - Upright Bass:** Continues the crotchet stream.
 - Drums:** Features a complex polyrhythmic pattern.
- System 4 (Measures 39-41):**
 - Piano:** Features a melodic line with triplets and a bass line with sustained notes.
 - Upright Bass:** Continues the crotchet stream.
 - Drums:** Features a complex polyrhythmic pattern.

A brief metric modulation is executed in bars 34 and 35 of Figure 63 by attaching idiomatic metrical approaches to the articulation of a dotted quaver pulse. This pulse is initiated in bar 34 by the drums and the left hand of the piano. The previous crotchet beat is no longer stated at this point, and the quaver triplet pulse is configured as the new beat in bar 35, resulting in a modulation to a faster tempo by applying Hannaford's first method of metric modulation (see Figure 61(A)). The new meter is implied in the piano part by the continuation of dotted quavers in the left hand that are grouped into lots of four by dotted minims in the right hand. More pronounced is McLean's interpretation of the new meter with a conventional swing feel, shown in Figure 64.¹⁷⁶ It is conventional for the second and fourth beats in a 4/4 swing feel to be marked by the hi-hats, and for the ride cymbal pattern to embellish a crotchet pulse with quavers. These quavers can be placed in various ways but are particularly common on the second and fourth beat. Monson describes this rhythm as a standard ride cymbal pattern.¹⁷⁷ Due to the ubiquity of this ride cymbal pattern, listeners are likely to recognise modulation to a faster tempo, despite its brevity.

Figure 64. Metric modulation in the drum improvisation of *Lady Lachs Schinken* (2:41).



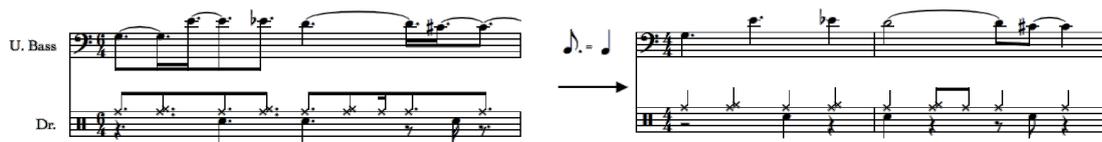
Though metric modulation is performed in the piano and the drums, the bass rhythm does not reinforce the metrical change and accentuates syncopations and off beats in the new meter. This is shown in Figure 64. Many of the modulations performed by my trio in *Lady Lachs Schinken* exhibit a degree of tension when one, or even two members of the ensemble resist a modulation that defines the dominant metrical environment. Though the rhythm in Figure 65 doesn't appear to be overtly dissonant, the conventional pairing of a walking bass line with McLean's cymbal pattern is avoided. Further tension arises between McLean's swung quavers and the straight quaver off beats chosen by Holoubek. My trio's rehearsal of various options in each meter means that changes of time signature have become points of juncture where each player can choose to converge or diverge from

¹⁷⁶ In line with jazz notation convention, the swung quavers in the ride cymbal are notated so that they appear to be of equal duration, though the first quaver is actually elongated and the placement of the second quaver is delayed.

¹⁷⁷ Monson, *Saying Something*, 53.

approaches taken by the other two performers. A sense of playfulness results from shifting allegiances within the ensemble. Tension between complicity with and resistance to the dominant metrical environment imparts an engaging rhythmic instability to performances. Rhythmic play is also supported by Monson’s intermusicality, which can be invoked by particular stylistic interpretations of metric modulations.¹⁷⁸

Figure 65. Holoubek's bass notes during a metric modulation in the drums (2:41).



4.6 Intermusicality in My Trio’s Rhythmic Approach

Monson uses the term ‘intermusicality’ to describe a type of intertextuality in sound that embodies the conflict between innovation and tradition in jazz performance through ironic quotation or allusion to existing repertoire, performances or stylistic traits.¹⁷⁹

Monson cites literary theorist Linda Hutcheon, who argues that parody involves repetition with a difference that signals a critical distance between the work and a background text being parodied. Hutcheon states:

Parody, then, in its ironic “trans-contextualisation” and inversion, is repetition with a difference. A critical distance is implied between the background text being parodied and the new incorporating work, a distance usually signalled by irony. But irony can be playful as well as belittling; it can be critically constructive as well as deconstructive. The pleasure of parody’s irony comes not from the humour in particular but from the degree of engagement of the reader in the intertextual “bouncing”... between complicity and distance.¹⁸⁰

My trio’s interplay of allusions in *Lady Lachs Schinken* reflects complicity with tradition by revelling in idiomatic rhythmic practices such as swing, that tap into a deep reservoir of shared experience performing within the conventions of mainstream jazz. However, a critical distance is established between my music and tradition by fusing stylistic references with unconventional approaches to both pitch and rhythm. The pairing of the conventional with the idiosyncratic enacts a contextual difference within repetitions

¹⁷⁸ Monson, *Saying Something*, 97.

¹⁷⁹ Hutcheon cited in Monson, *Saying Something*, 97.

¹⁸⁰ *Ibid.*, 103-104.

that Hutcheon associates with parody's irony. A sense of playfulness emerges out of this type of interaction, which Hutcheon calls 'intertextual bouncing',

The most overt intermusical reference occurs in bar 39 of Figure 63 in which McLean's approach to groove alludes to a distinctive drum feel associated with Ahmad Jamal's recording of *But Not From Me*.¹⁸¹ In Figure 66, a comparison between the drum feel from Jamal's recording and that played by McLean reveals a similar alternation between a cross stick accent on the snare drum on the second beat, and relaxed quavers played on the high tom on the fourth beat. McLean's allusion to this historically situated approach signals a brief transition to conventional rhythmic practices that are also observed in the bass and piano. Bars 39-40 of Figure 62 are the only points in the transcription where the bass plays a crotchet walking bass line while swung quavers are played in the right hand of the piano. This brief venture into standard rhythmic practice plays a key role in the aesthetic placement of my ensemble's rhythmic practice in relation to mainstream jazz.

Figure 66. Comparison between McLean's ironic drum feel in *Lady Lachs Schinken* (2:47), and the drum feel from *But Not For Me* performed by the *Ahmad Jamal Trio* (1:10).

The figure shows a musical score with three staves: Piano (Pno.), Upright Bass (U. Bass), and Drums (Dr.). The score is divided into two sections, A and B, with a double bar line between them. Section A is labeled '(JOE O'CONNOR TRIO)' and Section B is labeled '(AHMAD JAMAL TRIO)'. The Piano staff has a treble clef and a key signature of one flat. The Upright Bass staff has a bass clef and a key signature of one flat. The Drums staff has a drum clef. In section A, the piano part features a melodic line with a '15ma' (15th measure) annotation. The bass part plays a walking line. The drum part shows a cross-stick accent on the snare on the second beat. In section B, the piano part continues with a similar melodic line. The bass part continues with a walking line. The drum part shows a relaxed quaver pattern on the high tom on the fourth beat. A legend below the drum staff indicates that cross noteheads on the snare denote cross-stick.

The placement of conventional rhythmic figures amidst idiosyncratic polyrhythms and metric modulations enacts a juxtaposition of opposing stances towards conventional practice. This juxtaposition serves two main purposes. Firstly, allusion to Jamal signifies that my trio's music emerges from a tradition of performance in which production is stimulated by shared theoretic and aesthetic understanding. Secondly, the placement of this reference in an environment where conventional swing is so often undermined makes explicit a critical distance between my trio's personal approach and the conventional

¹⁸¹ Ahmad Jamal, *But Not For Me: Ahmad Jamal Live at the Pershing*, Philips B 94239 L, n.d, Vinyl.

rhythmic configuration briefly assumed. Within this personal approach, the most conventional moments signal a kind of parody, reflecting Hutcheon's observation that the deconstruction of existing discourses through parody and irony can be critically constructive in the creation of new work.¹⁸² My trio's rhythmic practice in *Lady Lachs Schinken* demonstrates Hutcheon's assertion that ironic practice allows creators to "subvert from within, to speak the language of the dominant order and at the same time suggest another meaning and another evaluation."¹⁸³

In *Lady Lachs Schinken*, the fluctuating rhythmic surface that has been the subject of previous discussion is enabled by interpretative strategies that are familiar to each musician in my trio. The referent itself provides metrical information only. However, in *Accidental Hipster*, rhythmic independence between different parts is embedded within the referent in a similar fashion to the dual-stream harmonic referents discussed in chapter three. The following explores how Crawford's rotational serialism has informed the dual-stream rhythmic referent of *Accidental Hipster*.

4.7 Rotational Serialism in the Rhythmic Organisation of *Accidental Hipster*

Ruth Crawford applied serial rotations to pitch organisation in a number of her compositions. I have explored the potential for this strategy to be adapted for rhythmic improvisation in the referent to *Accidental Hipster*. The formulation of this referent was influenced by rhythmic referents composed by Marc Hannaford and Scott Tinkler. Both musicians have composed referents that involve multiple rhythmic streams. Tinkler's composition *Positively Glowing* and Hannaford's composition *Something We Know* both set quaver-quintuplet melodies against crotchets that are emphasised in the bass.¹⁸⁴ In both compositions, quintuplets are grouped in various ways that obscure the notated bar lines. This is demonstrated in Figure 67, an excerpt from Tinkler's *Positively Glowing*.

¹⁸² Hutcheon cited in Monson, *Saying Something*, 103-104.

¹⁸³ Hutcheon cited in Helene A. Shugart, "Postmodern Irony as Subversive Rhetorical Strategy," *Western Journal of Communication* 63/4 (1999): 435.

¹⁸⁴ Tinkler, *Positively Glowing*.

Hannaford, "Elliott Carter's Rhythmic Language," 109.

Figure 67. Subversion of the beat in Scott Tinkler's *Positively Glowing*, by the grouping of quintuplets.



The referent of *Positively Glowing* implies two rhythmic streams, one that subverts the meter through various quintuplet groupings, and another that articulates the beat. In improvisations, different members of the ensemble gravitate towards different implied rhythmic streams. The rhythmic characteristics of these compositions align with Seeger's suggestion that syncopation and uneven divisions of beats and meter both contribute to rhythmic dissonance.¹⁸⁵ In *Accidental Hipster*, I have approached rhythmic dissonance by composing dual rhythmic streams that underpin both composed and improvised materials.

Accidental Hipster was written in response to my interest in forms of rhythmic organisation that satisfy two criteria: firstly, that the referent should facilitate intricate and varied rhythmic behaviour within individual melodies and their contrapuntal combination with other parts; and secondly, that different parts should be sufficiently rhythmically congruous that each musician can monitor their relationship with other contrasting melodies in reference to known points of rhythmic alignment. I have found that the most effective strategies for organising intricate rhythmic improvisations are based on rhythmic templates that are audible to the performers, but are ambiguous to listeners without knowledge of the template. This type of organisation is realised in *Accidental Hipster*, in which rhythmic counterpoint is created by combining different permutations of a series of durations.

Accidental Hipster incorporates Crawford's method of rotational serialism that she applied in a number of compositions including the third movement of *Diaphonic Suite No. 1* and the fourth movement of *String Quartet 1931*. In the third movement of *Diaphonic Suite No. 1*, Crawford established an ordered pitch set that is rotated systematically to generate the pitches for the entire movement, as shown in Figure 68.¹⁸⁶ The first 7/8 measure begins with a series of seven pitches (G, A, G#, B, C, F, C#). Straus describes that in the following seven measures, "the series is systematically rotated so that the second measure begins on the second note of the series (A), the third measure on the third note

¹⁸⁵ Seeger, *Studies in Musicology*, 175.

¹⁸⁶ Figure reproduced from Straus, *The Music of Ruth Crawford Seeger*, 73.

(G#), and so on, until the original ordering is restored in measure 8".¹⁸⁷ The pitch material for the remainder of the movement is derived by combining transposition, retrograde and inversion with this rotational strategy. The resulting pitch materials are audibly derived from altered repetitions of a relatively short pitch set.¹⁸⁸

Figure 68. Serial rotations of pitch material in Ruth Crawford's *Diaphonic Suite No. 1*.

I recognised potential for Crawford's pitch rotations to be applied to rhythm in my own compositions, such that an ordered series of durations appears in multiple rotations. I chose to work with a phrase containing forty rhythmic increments, grouped in terms of the following ordered series [3, 7, 2, 5, 4, 5, 2, 5, 3, 4]. The prime form of the rhythmic series is notated in the top staff of Figure 69. Each two-bar section following the prime form of the series articulates a version of the series, and is notated in 5/4 (10 beats with semiquaver subdivisions). The series is long enough to be divided into ten varied durations, but short enough that it recurs with sufficient frequency to provide a semblance of cyclical organisation (every two bars). I aim for resemblances to emerge between each recurrence of the series, without applying exact repetition to either pitch or rhythmic layout. Once the prime form of the rhythmic series was established, I determined the nine additional rotations by the same method of permutations that can be observed in *Diaphonic Suite No. 1*. This rotational procedure is illustrated graphically in Figure 69 and in musical notation in Figure 70.

¹⁸⁷ Ibid., 73.

¹⁸⁸ Serial procedures may not be recognised by listeners, though the effects of these procedures on the music may be noticed. In the case of *Diaphonic Suite No. 1*, the repetitive nature of the series is likely to be recognised, though the method of serial derivation that generates these repetitions may not be. Similarly, a sense of a unified pitch treatment might be recognised in twelve-tone composition, though serial procedures applied to achieve this sense of pitch unity may not be identified.

Figure 69. Serial rotations applied in the rhythm of *Accidental Hipster*.

1 (prime) 3 7 2 5 4 5 2 5 3 4

2 4 3 7 2 5 4 5 2 5 3

3 3 4 3 7 2 5 4 5 2 5

4 5 3 4 3 7 2 5 4 5 2

etc.

Figure 70. All permutations of the rhythmic series that underpins the notation of *Accidental Hipster*.

Though Crawford’s series is monophonic, I was interested in ways that the rotations in Figure 70 could be combined to form counterpoint between two rhythmic streams. I chose four combinations of rotations that yielded a balance between rhythmic independence and sufficient co-incidence to aid ensemble cohesion. These superimposed rotations were then sequenced to form the rhythmic template for *Accidental Hipster*, shown

in Figure 71. This figure is labelled to indicate the rotations that make up each two bar segment in the piano and the bass (numbered in relation to Figure 70). Though I could have pursued a totally serialised succession of rotations (as in Crawford’s serial melodies), I was inclined to choose, sequence and combine rotations to highlight variation between the bass and piano parts and between different rotations within each part. For example, every rotation within the piano part and within the bass part commences with a different duration. Serial processes are not intended to realise a fully systematised compositional approach but are productive for generating raw materials.

Figure 71. Rhythmic template for *Accidental Hipster*.

The template in Figure 71 underpins the rhythmic surface of *Accidental Hipster*. The fully notated part of the composition is shown in Figure 72. The circled numbers

indicate the presence of the durational template from Figure 71 in the notation. The left hand of the piano plays chords and intervals that articulate the rhythmic series.

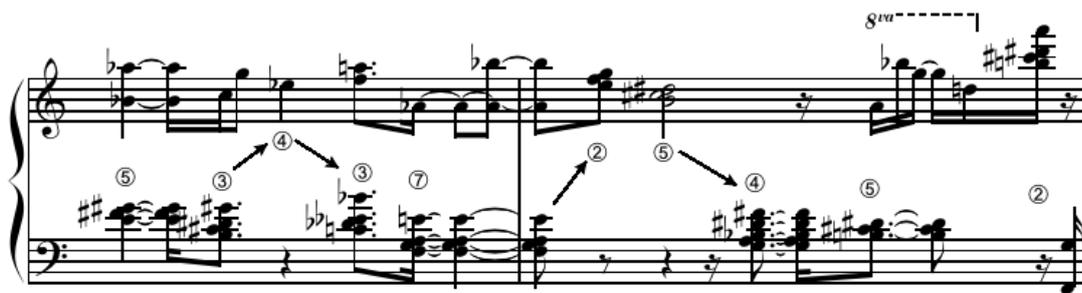
Figure 72. Notated Section of *Accidental Hipster*.

The image displays a musical score for a piano piece, consisting of four systems of notation. Each system includes a grand staff with a treble and bass clef. The notation is complex, featuring various rhythmic patterns, accidentals, and fingerings. Key features include:

- System 1 (Measures 9-10):** The right hand has a melodic line with eighth notes and slurs. The left hand plays chords and intervals. Fingerings are indicated by numbers 2-5 in the right hand and 2-7 in the left hand. A dotted line with '8va' above it spans measures 9 and 10.
- System 2 (Measures 11-12):** Similar to the first system, with eighth-note patterns and slurs. Fingerings include 2-5 and 3-7 in the right hand, and 4-7 and 2-5 in the left hand. A dotted line with '8va' above it spans measures 11 and 12.
- System 3 (Measures 13-14):** Continues the melodic and harmonic development. Fingerings include 4-5 and 2-5 in the right hand, and 3-7 and 2-5 in the left hand. A dotted line with '8va' above it spans measures 13 and 14.
- System 4 (Measures 15-16):** The final system shown, with similar rhythmic and harmonic elements. Fingerings include 2-5 and 3-7 in the right hand, and 2-5 and 4-5 in the left hand. A dotted line with '8va' above it spans measures 15 and 16.

During periods of rest in the left hand, the right hand suggests the durations that are omitted in the left hand. In bars 7-8, for example, the series emerges out of the composite of the right and left hands rhythms. The arrows in Figure 73 indicate the articulation of the series between the treble and bass staves. In performances of this notated part, and during improvisations related to the referent, rhythmic cohesion is supported by a shared downbeat between the two streams at the start of every two bar rotation. The downbeat allows each performer to rectify any rhythmic discrepancy that may have emerged in the previous two bars.¹⁸⁹ Though downbeats are not articulated by the bass and drums at the beginning of every two bar section, the start of each successive rotation is marked by the piano. The piano part becomes a cue for the other musicians at these points.

Figure 73. Statement of the duration series between the left and right hands in the last two bars of the notated section in *Accidental Hipster*.



The rhythmic template underpins an active rhythmic surface, particularly in the right hand, which divides durations of 2, 3, 4, 5 and 7 semiquavers into a range of different internal rhythms. Figure 74 illustrates various rhythms that are embedded within durations of five semiquavers from the rhythmic template. This surface level intricacy, embedded within the rhythmic series, subverts the beat and shifts its function to that of a generative concept rather than an audible phenomenon, though McLean often makes reference to the beat without stating it overtly. Subversion of the beat by the asymmetrical grouping of durations has precedent in *TENM*, particularly in the example reproduced in Figure 75.¹⁹⁰ In this example, Seeger notates syncopated groupings of three, four and five semiquavers within 1/4 bars. In performances of this excerpt, the beat would be referred to as a non-

¹⁸⁹ Due to the rhythmic difficulty of this multilayered rhythmic referent, it is quite common for a degree of inaccuracy to emerge between musicians at some point during a performance. In rhythmic referents, I aim to include cues that allow each musician to monitor their alignment with other parts and rectify inaccuracy. In *Accidental Hipster*, these cues are points of alignment between parts. In *Lady Lachs Schinken*, polyrhythmic cues serve this purpose. For instance, four dotted quavers are often situated within the 3/4 bars to audibly mark these points in the form.

¹⁹⁰ Seeger, *Studies in Musicology*, 197.

audible, generative feature that facilitates the execution of surface level rhythm. The rhythms in *Accidental Hipster* demand a fluent ability to phrase durations across the beat in a manner similar to Seeger's example. The following section discusses how the referent has been practiced to develop the rhythmic acuity necessary in ensemble performances of *Accidental Hipster*.

Figure 74. Different groupings within instances of durations of five semiquavers in the notation of *Accidental Hipster*.

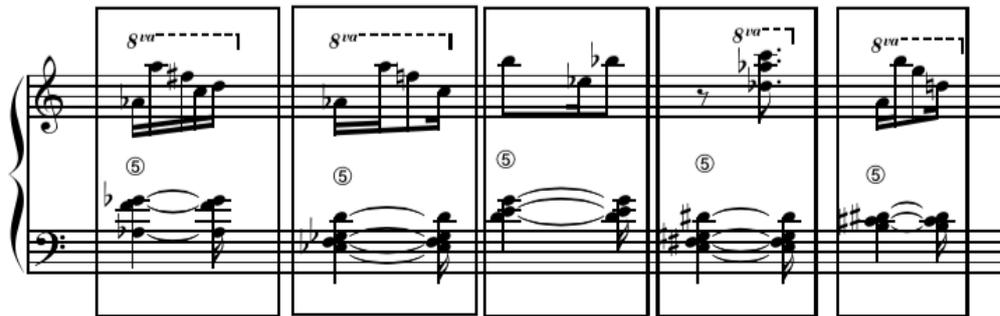


Figure 75. Subversion of the beat in Seeger's *TENM* by grouping subdivisions.



4.8 Improvising in *Accidental Hipster*

The referent from *Accidental Hipster* includes two templates for improvisation that occur at different stages of performance. The following discussion focuses on the first of these templates, and addresses how I have practiced the rhythmic preconditions that it supplies. The first template, shown in Figure 76, occurs at the beginning of performances preceding the fully notated parts in the bass and piano. It includes the bass and left hand of the piano part from Figure 72. The rhythmic template embedded within these parts is the main point of reference for each musician, though the pitch material can also be referred to. The ensuing discussion also addresses aspects of ensemble practice in *Accidental Hipster*.

Figure 76. Referent for *Accidental Hipster*.

The musical score consists of four systems, each with two staves (treble and bass clef). The tempo is marked as ♩ = 65. The key signature has two flats (Bb and Eb). The chord symbols and circled numerals are as follows:

- System 1:** Chords: EΔ/A-/D♭Δ, G♭-/B♭Δ/E♭-. Numerals: 3, 7, 2, 5, 4, 5, 2, 5, 3, 4.
- System 2:** Chords: GΔ/C-/EΔ, A-/D♭Δ/G♭-, B♭Δ/E♭-/GΔ. Numerals: 2, 5, 3, 4, 3, 7, 2, 5, 4, 5, 2, 5, 3.
- System 3:** Chords: DΔ/G-/BΔ, A♭Δ/D♭-/FΔ, BΔ/E-/A♭. Numerals: 4, 5, 2, 5, 3, 4, 3, 7, 2, 5, 4, 5, 2, 5, 3, 4.
- System 4:** Chords: D♭-/FΔ/B♭-, DΔ/G-/BΔ. Numerals: 5, 3, 4, 3, 7, 2, 5, 4, 5, 2.

The series of durations, described by the circled numerals in Figure 76, supports intricate surface-level rhythms that are co-ordinated in relation to the beat, but obscure its generative presence. Flexible improvisations, which are not confined to statements of the series, require a strong sense of beat throughout the ensemble. I have used a range of practice techniques to develop my capacity to improvise with this rhythmic material while maintaining the beat. For example, I have practiced tapping the beat while tapping or playing the series of durations in various rotations to build familiarity with its points of alignment with the beat. This practice also develops familiarity with the way that unaligned pulsations fall in relation to the beat.

Once I had developed a basic capacity to execute the beat and the series, I practiced embedding various rhythms within each duration. For example, I practiced various groupings within the five-semiquaver durations (212, 2111, 23, 32, 113) and seven-

semiquaver durations (34, 43, 2122, 2212), while maintaining a crotchet beat. I also practiced playing crotchets in my left hand while improvising in relation to the series in my right hand, applying prescribed rhythms within particular durations from the series. A more challenging approach to practice, which is directly transferable to performances of *Accidental Hipster*, involves tapping the beat and playing the notated left hand while improvising with the right hand. This practice method is very similar to actual performance, but is often undertaken with limitations that would not be observed in performance; for example, I have practiced placing semiquaver triplets in each two-semiquaver duration that occurs in the rhythmic template.¹⁹¹

Though the rhythmic template in Figure 76 is the primary point of reference in terms of rhythmic improvisation, rhythm can also be conceived more flexibly by relating to the beat. For example, I might respond primarily to the harmonic suggestions above the notated reference material and relate to metrical features to ground rhythmic behaviour, departing temporarily from the series. In such instances, a dissociative rhythmic relationship may arise between parts; the piano plays a rhythmic stream that is closely related to the crotchet beat, while drums and bass continue to play the shifting durations from the referent. Systematised rhythmic structure in one part is dissociated from a more malleable rhythmic surface in another.

The techniques that I use to practice the first template from the referent of *Accidental Hipster* are familiar to each member of my trio. McLean in particular, has devoted considerable attention to developing approaches to improvisation based on applications of odd subdivisions and groupings. This means that, despite complexity, there is a shared understanding in successful performances of how each player is approaching the referent. However, this shared understanding is still in its formative stages in performances of this composition. *Accidental Hipster* is a recent composition (April 2015) and the techniques described represent early stages of performance development. My trio's approach to any given composition becomes more nuanced over time as we internalise the music through rehearsal, performance and personal practice. This developmental period is necessary because each referent is unconventional and requires that specialised strategies be evolved for performances. This phase is an important step in the total process of theoretical enquiry that includes composition, practice, rehearsals, performances and

¹⁹¹ I have undertaken additional types of rhythmic practice to develop general rhythmic acuity that will not be addressed in this chapter because they are not directly related to my preparation of a particular referent.

reflection. Collectively, these activities feed into an ongoing and evolving artistic practice, rather than being directed solely towards the execution of particular performances.

4.9 Chapter Conclusion

This chapter explored referents that underpin fluctuating improvised rhythmic surfaces redolent of dissonant counterpoint. In *Lady Lachs Schinken* and *Accidental Hipster*, rhythmic dissonance emerges from the interaction of opposing tendencies: regularity of the beat on one hand, and variability of the rhythmic surface on the other. These referents ground rhythmic behaviour in one of two ways. In *Lady Lachs Schinken*, my trio performs polyrhythms and metric modulations that are coordinated in relation to a succession of changing time signatures, characteristic of Seeger's Melodic Order 4.¹⁹² In contrast, *Accidental Hipster* supplies simultaneous streams of rhythmic information that are referred to by my trio to generate a multilayered rhythmic surface through improvisation. In this piece, two rhythmic streams are derived by transferring Crawford's method of serial pitch rotation to the organisation of rhythmic materials. A series of durations is rotated, and different permutations are combined to form an irregular rhythmic composite of independent but related streams. The rhythmic heterogeneity that emerges in both *Accidental Hipster* and *Lady Lachs Schinken* aligns with Seeger's ideal of heterophony, a dissociative counterpoint of intertwined melodies. The distinctive ensemble practices that characterise these compositions are a synthesis of the rhythmic plasticity of dissonant counterpoint and groove-based performance practices.

My rhythmic referents respond to the earlier critique of mainstream contemporary jazz in two respects. *Lady Lachs Schinken* and *Accidental Hipster* hold rhythmic and metrical variety as central concerns, resisting the stifling limitations on meter that Adorno admonished in traditional jazz. The rhythmic behaviour facilitated by these referents also resists the transparency of organising schema criticised by Adorno. The particular characteristics of the referents are concealed by rhythmic intricacy and multiplicity in the improvised surface. The referent's presence is virtual because it is only observed through its multifarious realisations that form the actual rhythmic surface.

¹⁹² Seeger, *Studies in Musicology*, 199.

Chapter 5: Referent Type Three - Modular Referents

5.1 Chapter Overview

Modular referents provide short units of information, usually written in traditional notation, which are varied, combined, transformed and ordered in ever-changing ways during improvisations. This type of composition and improvisation has emerged as a common formal approach in contemporary American avant-garde jazz. Modular processes can also be observed in Ruth Crawford's rotational serialism, and in applications of verse form by Crawford and Johanna Beyer, whose work is examined in this chapter. Verse form and rotational serialism are both realised in musical forms that sequence variations of a focused body of musical traits. This chapter examines affinities between modular construction in dissonant counterpoint and contemporary improvisation, and positions my own performance outcomes in relation to both of these influences.

5.2 Modular referents in American Avant-Garde Jazz

Modular forms are common in the performance and composition practices of numerous contemporary American improvising musicians, including Tim Berne, Kris Davis, Matt Mitchell, Cory Smyth and George Lewis.¹⁹³ Thematic modules become the starting content of improvisations, and undergo transformations that cause the musical materials to diverge from their points of origin. George Lewis's composition *Tractatus* (2012) applies this technique to organise large ensemble improvisation; in each of a succession of repeated sections, musicians are supplied with detailed figures that they are instructed to repeat with variation, following an initial statement of the notation.¹⁹⁴ An excerpt from the piano part, shown in Figure 77, illustrates the types of detailed notated parameters that performers vary through improvisation. This method of composition accommodates the contribution of a large group of improvisers and prevents the music from digressing to a state of impenetrable density. I performed and recorded *Tractatus*

¹⁹³ Modular techniques feature in both composed and improvised sections of *Hard Cell (for Tom)* and *Heavy Mental (For Wayne Krantz)* from:

Tim Berne, *The Shell Game*, Thirsty Ear THI 57099.2, 2001, Compact disc.

Modular characteristics can be observed in the tracks *Good Citizen*, *KTJ 2* and *The Iron Spider* from: Kris Davis, *Good Citizen*, Fresh Sound New Talent FSNT 369, 2010, Compact disc.

Modular techniques feature in *Veins* and *Dadaist Flu* from:

Matt Mitchell, *Fiction*, Pi Records pi50, 2013, Compact disc.

Modular techniques appear in *moon:Glow*, *pre-*, *Post*, *Richard repeat* and *Walls/Fats* from:

Smythe, *Pluripotent*.

¹⁹⁴ George Lewis, *Tractatus*, unpublished score, 2012.

under the guidance of George Lewis as a member of the Monash Art Ensemble and the approaches to musical form that are examined in this chapter are influenced by my exposure to his work.¹⁹⁵ Though this commentary concentrates on modular techniques in my solo piano works, I have also experimented with similar formal approaches in a sextet composition entitled *Telost*, and a work for large ensemble called *Confluence*.

Figure 77. An excerpt from the piano part of George Lewis's *Tractatus*, which requests improvised versions of detailed notation.

13 ♩ = 140 on cue

53

V: create versions of immediately preceding passage

The modular referents included in my set of recordings are also influenced by Cory Smythe's solo piano album entitled *Pluripotent* (2011).¹⁹⁶ Smythe is a New York-based performer of new music, classical repertoire and contemporary improvised music. A number of the compositions from *Pluripotent*, including *pre-*, *moon:Glow* and *Walls/Fats* are miniatures that subject concise musical fragments to cyclical processes of variation.¹⁹⁷ To demonstrate modular construction in Smythe's music, I have transcribed an excerpt from his performance of *Walls/Fats* from *Pluripotent*, shown in Figure 78.¹⁹⁸

¹⁹⁵ Monash Art Ensemble, *Hexis*.

¹⁹⁶ Cory Smythe, *Pluripotent*, Independent release, 2011, MP3 file, downloaded 2014, Bandcamp.

¹⁹⁷ Composition titles are capitalised as per Smythe's track listing for *Pluripotent*.

¹⁹⁸ *Ibid.*

The rhythmic notation in Figure 78 is approximate.

Figure 78. Three excerpts from Smythe's *Walls/Fats*. Track timings are indicated above each of the excerpts.

The image displays three musical excerpts, labeled A, B, and C, from Smythe's *Walls/Fats*. Each excerpt is presented as a piano score with a treble and bass staff. Excerpt A (0:00 - 0:09) is marked with a tempo of 120 and a 'grw' (grace) marking. It features a complex rhythmic pattern in the right hand with a 7/4 time signature and a 5/4 time signature, and a bass line with chords and single notes. Excerpt B (0:13 - 0:16) is marked with a tempo of 65 and a 'grw' marking. It features a quintuplet phrase in the right hand and a bass line with a 2,2,1 grouping in the left hand. Excerpt C (0:34 - 0:38) is marked with a tempo of 120 and a 'grw' marking. It features a complex rhythmic pattern in the right hand with a 5/8 time signature and a 2/4 time signature, and a bass line with chords and single notes.

Figure 78 represents the opening two variations of the dominant module that recurs in Smythe's performance of *Walls/Fats*. Bars 1-3 and 4-6 are nearly identical in terms of their pitch material, the only variation being an F natural that occurs in the bass staff during the 7/4 bar. Throughout *Walls/Fats*, repeated pitch relationships are combined with intricate rhythmic and metrical variations that obscure the dominant pulse and prevent recurring modules from tending towards predictability. Though there is regular repetition of sonorities and gestures, each appearance offers something new. Figure 78, section B, shows a second module that appears periodically as a brief interlude between variations of the initial module. It is made up of three repetitions of a quintuplet phrase that emphasises a 2,2,1 grouping in the left hand.

Figure 78, section (C), combines tendencies from both 78(A) and 78 (B). The left hand in (C) retains pitch relationships from the second three bars of (A), combined with

intricate rhythmic figures (most likely improvised) in the right hand. The left hand of (B) and (C) are closely related in terms of rhythm, contour and pitch content. Like (B), Figure 78(C) begins with an implied 2,2,1 grouping of quavers, and pairs this rhythm with descending figures also reminiscent of the quintuplet figures in the left hand of (B). Both commence with a chord followed by two descending pitches. In (B) these descending tones are F and A^b, which also appear in the same register in bars two and three of (C).

Variations of the two brief modules form the basic content of *Walls/Fats*, and the mercurial rhythmic environment is never predictable despite repeated musical materials. I find that the repetitive features of these modules draw attention to each variation's points of differentiation. Similar types of modular construction occur in the theory of dissonant counterpoint and in Ruth Crawford's music.

5.3 Modular construction in Compositions by Ruth Crawford and Johanna Beyer

A kind of modular construction can be recognised in two prevalent strategies in Crawford's compositions: rotational serialism and verse form. Five of Crawford's compositions include melodies generated by serial rotations performed on an ordered pitch set, and verse form features in some of her best-known works including *String Quartet 1931* and the *Diaphonic Suites*.¹⁹⁹

The third movement of Crawford's *Diaphonic Suite No. 1* is her most comprehensive realisation of rotational serialism. This process was examined in the previous chapter but I will briefly revisit its application in *Diaphonic Suite No. 1*. The opening 7/8 measure begins with an ordered series of seven pitches (G, A, G#, B, C, F, C#).²⁰⁰ Straus describes that in the next seven measures, "the series is systematically rotated so that the second measure begins on the second note of the series (A), the third measure on the third note (G#), and so on, until the original ordering is restored in measure 8."²⁰¹ The pitch material for the rest of the movement is generated by performing transposition, retrograde and inversion on the series, and combining these transformations with this rotational strategy. When I listen to recordings of this movement, I hear constant repetitions of pitch fragments, though variation is ever present.²⁰² The transformation of modules by improvisers don't share Crawford's serial rigidity, though they have in common a creation

¹⁹⁹ Straus, *The Music of Ruth Crawford Seeger*, 73.

²⁰⁰ Ibid.

²⁰¹ Ibid.

²⁰² Christian Hommel, *Ruth Crawford Seeger: String Quartet – Chamber Works*, cpo, 2000, MP3 file, downloaded 2013, iTunes.

of repetitions energised by subtle transformations. Modular transformation can also be perceived in applications of verse form in dissonant counterpoint.

Seeger conceived of verse form as a way of drawing connections between music, language and the phrase structure of poetry.²⁰³ Tick describes, “poetic lines are defined in a variety of ways and musically notated through single and double bars that correspond to phrases and sentences.”²⁰⁴ This is reflected in the visual layout of *Diaphonic Suite No. 1*, movement four, where each musical phrase occupies one line in the score in a similar way that many poems divide text into a series of lines that inform inflection, pacing and delivery. Straus notes that the division of the piece into phrases of different lengths conveys a strong sense of balance and proportion, which is also aided by the specific materials within the phrases.²⁰⁵ Crawford created similarities between phrases by reiterating distinctive articulations, motives, intervals and rhythmic figurations at prominent points.²⁰⁶ For example, consecutive phrases might begin and end with related motives in a similar way that rhyming words fall at the end of different lines in traditional poetry. For Seeger, the reiteration of distinctive features in this way functions as the musical equivalent to rhyme and assonance. He elaborated:

Many devices of musical assonance and rhyme can be combined. For instance, a repeated tone, a characteristic interval, some particular neume, or rhythmic figure, a distinctive slurring or dotting, can recur at symmetrical intervals at the beginning, middle, or ending of each phrase.²⁰⁷

Straus attributes Crawford’s application of ‘musical rhyme’ to the varied recurrence of characteristic motives and intervals. In the fourth movement of *Diaphonic Suite No. 1*, he observes that the opening measure of each line can be interpreted as a permutation of the opening motive. The opening motive is varied by reordering or transposing pitches, by expanding its internal intervals, or by shifting pitches into different octaves to expand the motive’s registral span.²⁰⁸ Despite variations, shared traits at the beginning of successive phrases invokes Seeger’s concept of musical rhyme. More pronounced is Crawford’s commencement of each phrase from the fourth movement of *Diaphonic Suite No. 1* with a permutation of her ubiquitous M1 motive, and the conclusion of each phrase with a descending seventh. The dual concerns of thematic unity and constant

²⁰³ Judith Tick, *Ruth Crawford Seeger: A Composer’s Search for American Music* (New York: Oxford University Press, 1997), 204.

²⁰⁴ Tick, *Dissonant Counterpoint Revisited*, 408.

²⁰⁵ Straus, *The Music of Ruth Crawford Seeger*, 54.

²⁰⁶ *Ibid.*, 54.

²⁰⁷ Seeger cited in Tick, *Dissonant Counterpoint Revisited*, 408.

²⁰⁸ Straus, *The Music of Ruth Crawford Seeger*, 55.

variation embodied by musical rhyme resonate with the final point from Crawford's compositional credo. She states that in her compositions, she aimed to "experiment with various means of obtaining at the same time, organic unity and various sorts of dissonance."²⁰⁹

I am particularly interested in the way that musical rhyme achieves coherence, not through literal repetition of extended themes, but through multiple variations of a motivic template made up of small interdependent fragments. Variation implies similarity between distinct events, and this similarity is realised by isolating musical fragments, or modules, and presenting them in ever-changing formations. It is in this formal process that I observe parallels between Crawford and Beyer's compositions and works by improvisers such as Smythe and Lewis. All of these musicians unify musical forms by diverse presentations of a motivic template made up of brief melodic and gestural modules.

Drawing on Straus' analysis of *Diaphonic Suite No. 1*, I have analysed two movements from Johanna Beyer's piano suite, *Dissonant Counterpoint*, with a focus on Seeger's concepts of musical rhyme and verse form.²¹⁰ These pieces have been valuable models for the application of dissonant counterpoint in a pianistic idiom, since Crawford's only solo piano piece composed during or after her studies with Seeger is *Piano Study in Mixed Accents*. *Piano Study* is a monophonic stream of semiquavers with occasional interruptions, and doesn't explore pianistic approaches to the contrapuntal and rhythmic features of dissonant counterpoint. Beyer's suite, by contrast, realises different approaches to dissonant counterpoint in each brief movement. They were composed during her studies with Crawford in 1933-34 and closely resemble the *Diaphonic Suites*.²¹¹ The following analyses of Beyer's *Dissonant Counterpoint I and II* inform motivic templates that allow me to closely emulate the character of her works while improvising. Close correspondences with Beyer's compositions are intended to engender performative immersion in dissonant counterpoint as it was originally applied, but with improvisation as a central component.

5.4 Thematic Processes in *Dissonant Counterpoint I* by Johanna Beyer

Like the fourth movement of Crawford's *Diaphonic Suite No. 1*, Beyer's *Dissonant Counterpoint I* is written in verse form. A brief thematic template underpins each line of the score. Each of these lines, which are separated by double bar lines, can be viewed as a

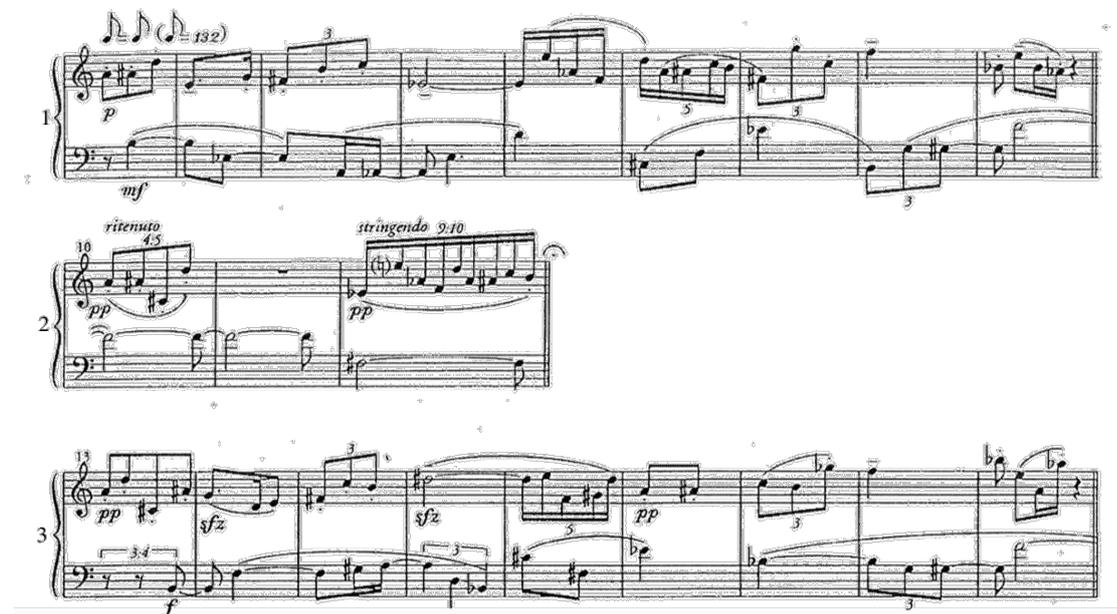
²⁰⁹ Tick, *Ruth Crawford Seeger*, 202.

²¹⁰ Beyer, *Dissonant Counterpoint*.

²¹¹ Rao, "Ruth Crawford's Imprint," 136.

variation of the initial verse. Similarity emerges between the melodic materials in each line, though repetition is never exact. Variation is introduced by slight changes in pitch order, alteration of the rhythmic material within recurrent pitch structures, introduction of new tones when motives are repeated, and by shifting the contrapuntal relationships between the treble and bass melodies. The placement of distinctive motives or gestures at similar points in different lines invokes the concept of musical rhyme discussed earlier. Beyer's application of musical rhyme can be observed in first three lines of *Dissonant Counterpoint I*, shown in Figure 79.²¹²

Figure 79. The first three lines of Beyer's *Dissonant Counterpoint I*.



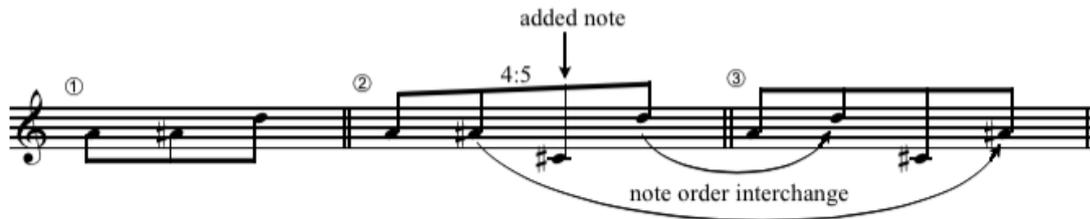
Like the fourth movement of Crawford's *Diaphonic Suite No.1*, each phrase in Beyer's *Dissonant Counterpoint I* begins with a variation of the opening motive. The second line retains the pitch arrangement of the opening three-note motive but inserts a fourth note that augments the original figure and forms a dissonant minor ninth at the end of the motive. In *TENM*, Seeger calls this method of motivic variation 'extension' and argues that it profoundly changes the neume characteristics but leaves a sense of unity.²¹³ The third phrase begins with a variation of this extended motive. The pitch content is identical but the position of the second and fourth pitches are interchanged. Figure 80 illustrates how the opening notes of the second and third lines expand on the motive that

²¹² Beyer, *Dissonant Counterpoint*.

²¹³ Seeger, *Studies in Musicology*, 152 and 183-4.

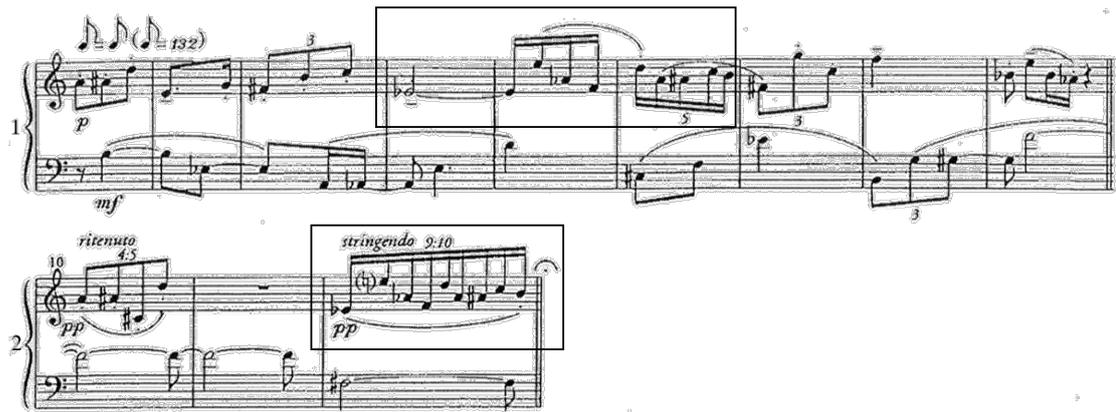
commences the movement. The extension of motives by adding tones and interchanging the order of pitches recurs frequently throughout the movement. Extension creates subtle points of differentiation between recurrent pitch structures.

Figure 80. The opening figures of the first, second and third lines of Johanna Beyer's *Dissonant Counterpoint I*.



Repeated pitch relationships such as those illustrated in Figure 80 can be paired with different rhythmic content, combining repetition in one musical parameter with variation in another. This technique was discussed previously in relation to Smythe's *Walls/Fats*, and is equally apparent in Beyer's *Dissonant Counterpoint I*. The boxed sections of Figure 81 show the same pitch order in the treble melody of the first and second lines, paired with different rhythmic material. The pitch material in the treble staff of the first line in Figure 81 is combined with shifting subdivisions that accelerate slightly following an initial held tone. In the second line of 81, the same pitches occur but are notated as nontuplets that span a condensed overall duration. Rhythmic differences introduce variation within repeated pitch materials.

Figure 81 - Excerpts from the first two lines of Beyer's *Dissonant Counterpoint I*, showing pitch repetition in the treble staff combined with different rhythmic materials.



A sense of musical rhyme emerges between these excerpts from the first two lines of *Dissonant Counterpoint I*, though the impression of pitch repetition is de-emphasised by phrasing and the relationship with the left hand. The first boxed note in the first line concludes the previous phrase, and the boxed pitches are followed by a staccato motive that flows naturally from the slurred passage. The boxed pitches in the first line are therefore distributed across three different phrases. By contrast, the boxed pitches in the second line form a self-contained gesture that leads to a fermata. In Sarah Cahill's recording of the movement, the final gesture in line two is played with a *rallentando* that pre-empt the pause at the end of the phrase.²¹⁴ The treatment of the repeated pitch succession suggests onward movement in the first line, and repose in the second. The left-hand materials support these different degrees of implied movement. The left-hand phrasing in the first line is out of phase with the right hand phrasing so that moments of rest in one melody are counteracted by movement in the other. By contrast, the left hand in the second line has ceased its movement, and sustains an F# throughout the boxed pitches until the fermata at the double bar line.

Up until this point, I have focused on the treble melody of Beyer's composition, however, like many compositions in dissonant counterpoint, the interaction of melodies and the differentiation between them are important considerations. The two melodies in *Dissonant Counterpoint I* move at different rates, the bass melody slower than the treble, and they are characterised by contrasting articulations. The left hand is legato, while the right hand alternates between legato, staccato and tenuto. The left hand melody is also

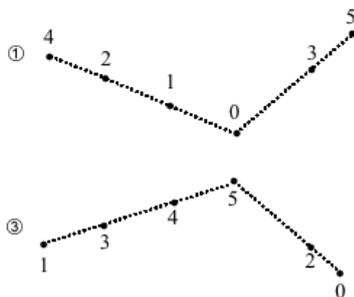
²¹⁴ Cahill, *9 Preludes*. The referenced passage from *Dissonant Counterpoint I* occurs in track 11 between 0:13 - 0:17.

distinguished by its own independent motivic character. A comparison of the first and third lines reveals an inverse contour relationship between the opening six pitches in each phrase. Their shared contour segment is notated in Figure 82, and is illustrated graphically in Figure 83.

Figure 82. Contour similarity between the first and third lines of the left hand in Johanna Beyer's *Dissonant Counterpoint I*, labelled with contour segments.

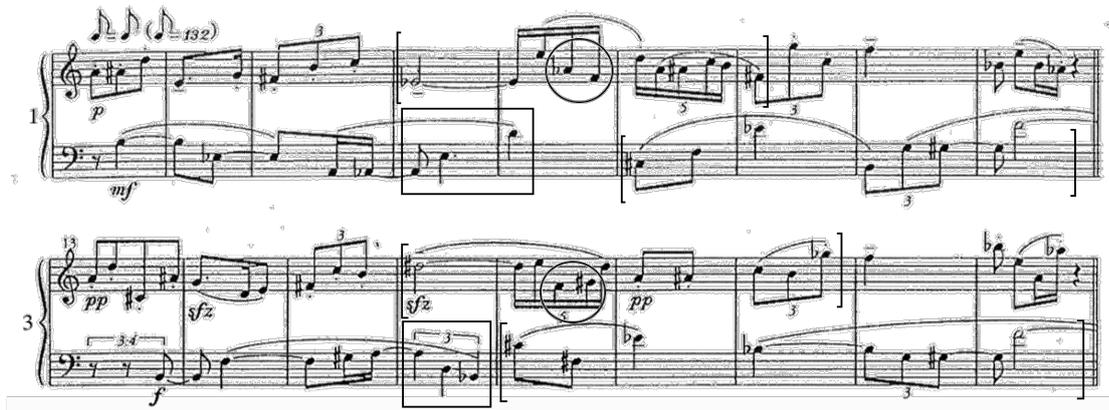


Figure 83. Graphic representation of contour relationships between the first and third lines of the left hand in Beyer's *Dissonant Counterpoint I*.



The left hand contours identified in Figures 82 and 83 commence similarly in the first and third lines in terms of pitch, but diverge significantly towards the end of the contour segment in terms of pitch and rhythm. These points of divergence are illustrated by the boxed sections in Figure 84, which is excerpted from the score of Beyer's *Dissonant Counterpoint I*. Pitch similarity is restored in the bass melody during the bracketed segments, however the condensed rhythm in the third line shifts repeated pitches into different contrapuntal relationships with repeated pitches in the treble melodies. The bracketed pitches in the treble staves are common to both lines, notwithstanding the circled instance of pitch order interchange, though they coincide with different parts of the shared left hand pitch material. In this instance, counterpoint generates variation between repeated modules of pitch materials that occur in two interacting melodies.

Figure 84. Lines one and three of Beyer's *Dissonant Counterpoint I*, demonstrating the use of shifting contrapuntal relationships to derive variation between recurrent types of musical material.



5.5 Composing Modular Referents informed by Beyer's *Dissonant Counterpoint I*

My composition *Dissonant Counterpoint I (After Johanna Beyer)* is closely modelled on Beyer's miniature of the same title, and isolates modules from the motivic template that she repeated in each line of her composition. I have emulated the phrase design of her piece and treated the combination of the first and second lines as one large verse that provides the basic material for improvisation. Like Beyer's composition, the verse contains numerous smaller modules of musical material that can be independently varied while improvising. These modules are boxed in Figure 85, which shows the whole notated referent for *Dissonant Counterpoint I*.

Melodic continuity is created between different modules by repeating contour segments and specific pitch relationships. In the first line, the contour segment of the first four pitches recurs twice, first in retrograde inversion and then in inversion. These contour segments are labelled in Figure 85, and create an impression of motivic repetition while accommodating pitch and interval variety in the manner discussed in Chapter 2. Similar to Beyer's *Dissonant Counterpoint I*, an extended pitch repetition also creates thematic links between modules in the first and second lines. The repeated pitches are boxed in Figure 86. Following the example of Beyer's piece, this pitch repetition is obscured by contrasting rhythmic treatment, phrasing, and contrapuntal relationships with the left hand.

Figure 85. Referent for *Dissonant Counterpoint I After Johanna Beyer*, with formal modules boxed, and contour repetitions labelled.

Dissonant Counterpoint 1
after Johanna Beyer

J.O'Connor

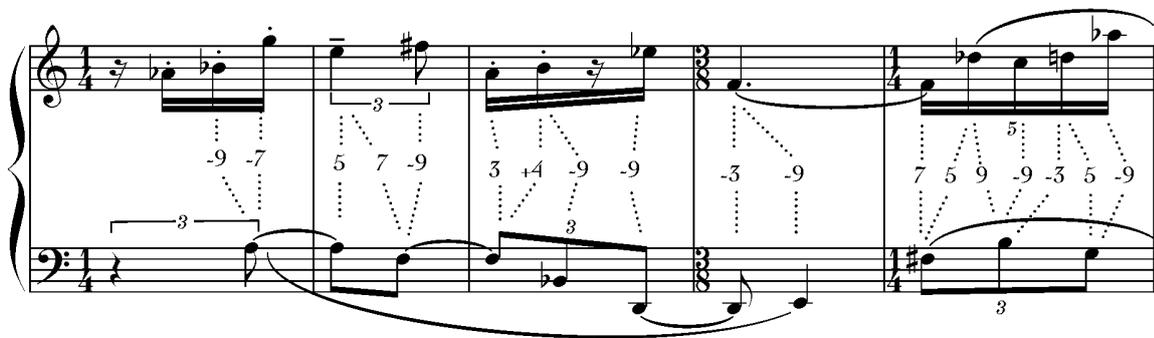
♩=100

Figure 86. Pitch-class series repetition combined with differing rhythms and contrapuntal relationships in *Dissonant Counterpoint I (After Johanna Beyer)*.

In some respects, my emulation of Beyer's *Dissonant Counterpoint I* applies Seeger's recommendations regarding intervallic and rhythmic relationships between melodies more explicitly than Beyer. There is no rhythmic coincidence between the treble and bass parts in my composition. Like Beyer, I have used bar divisions to initiate changes

of subdivision in both melodies, but I have tied one of the melodies across the bar line at each point where a simultaneous downbeat would occur. Tick identifies similar avoidance of simultaneous downbeats in Ruth Crawford’s work as a strategy for dissonant rhythm.²¹⁵ I have also observed Seeger’s preference for vertical dissonance between melodies to a greater extent than Beyer. In the first five bars of my *Dissonant Counterpoint I*, shown in Figure 87, vertical consonances are always preceded and followed by dissonances. Consecutive vertical consonances only occur once, and are bound by the minor 9ths that retain the dissonant fabric.

Figure 87. Vertical intervals formed between the two melodies that comprise *Dissonant Counterpoint I* (After Johanna Beyer). Consonances are preceded and followed by dissonances.



The notated features detailed in *Dissonant Counterpoint I* (After Johanna Beyer) are intimately related to my improvisations that interpret this referent. The notation functions as an etude for the improvisatory investigation of verse form, rhythmic non-coincidence, motivic development and resemblance. As well as establishing a motivic template, my referent supplies general characteristics that are transferred to improvisation, including the strict two-part interaction of the melodies. This strict contrapuntal character is particularly distinctive within solo jazz piano performance, which most commonly exhibits some degree of chordal orientation. Vertical dissonance between the two melodies is also emulated in my improvisation, though I don’t follow the strict placement of consonances between dissonances. Instead, I apply a concept of dissonant target tones. This involves the placement of vertical dissonances at prominent points amid flexible vertical correspondences that may include multiple consecutive vertical consonances. Target tones sustain a dissonant intervallic orientation between melodies in the right and left hands.

²¹⁵ Tick, “Dissonant Counterpoint Revisited,” 412.

In performances of *Dissonant Counterpoint I*, I often follow the verse template closely. The template guides the unfolding motivic and gestural features of my improvisation. The order of the modules that are boxed in Figure 85 is often broadly retained during improvisations. On the other hand, my inclination in performance is to privilege spontaneity over strict adherence to referent features, particularly when ensemble cohesion does not demand fidelity to a predetermined meter and harmony. Consequently, my approach to the verse template does not preclude interpretations that change the order of modules or temporarily depart from them altogether. When this approach is taken, the referent is conceived as an unordered series of contrapuntal modules, somewhat like Figure 88, which leads to more flexible sequences of information from the referent.

Figure 88. *Dissonant Counterpoint I* (After Johanna Beyer) expressed as disconnected fragments of contrapuntal material.



I have found that discontinuous presentations of modules reduce formal prescription, leading to more diverse interpretive processes.²¹⁶ I have applied this more flexible modular approach in *Dissonant Counterpoint II* (After Johanna Beyer). I modelled this composition closely on Beyer's composition of the same title.²¹⁷ Beyer's second miniature is also written in verse form, where each verse occupies one line in the score and retains recurrent types of characteristic musical material. Rather than composing a prototypical verse form, as I did in response to the first movement, I isolated five recurring types of information in Beyer's piece and composed generalised, disconnected modules that communicate thematic and

²¹⁶ Conventions of Western notation mean that readers are likely to infer a left-to-right and top down ordering to some extent, even if this is not intended.

²¹⁷ Beyer, *Dissonant Counterpoint*.

gestural information to the improviser. The modules that make up *Dissonant Counterpoint II* (After Johanna Beyer) are shown in Figure 89.

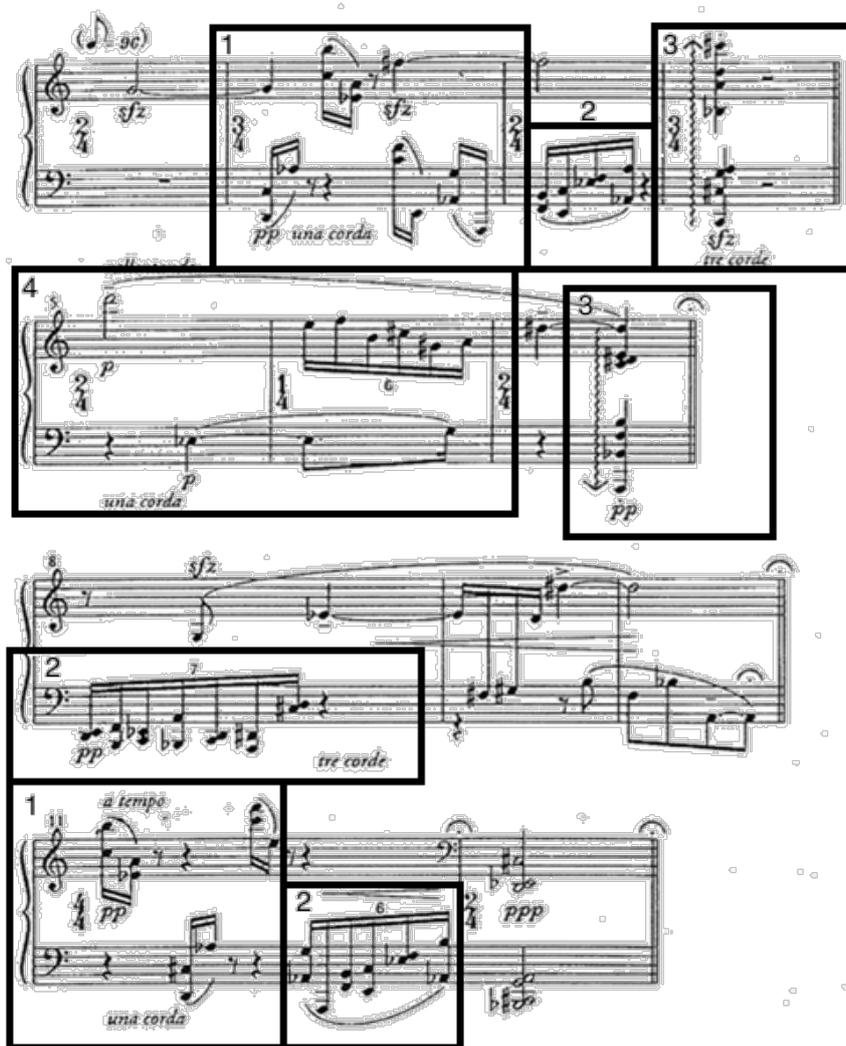
Figure 89. Referent for *Dissonant Counterpoint II* (After Johanna Beyer), comprised of five modules that supply different materials for improvisation.

Dissonant Counterpoint II
(After Johanna Beyer)

J. O'Connor

Dissonant Counterpoint II (After Johanna Beyer) consists of five numbered modules that I refer to while improvising. The first four modules in Figure 89 are sequenced in any order, and the fifth is played once in every performance as the final gesture. From Beyer's piece, I have extracted gestures in which pitch is unspecified, as well as prototypical chordal and contrapuntal phrases that guide pitch usage and rhythmic character. In Figure 90, I have boxed and numbered occurrences of characteristics in Beyer's composition that my referent emulates.

Figure 90. Bars 1-12 of Johanna Beyer's *Dissonant Counterpoint II*. Boxes identify recurrent types of musical materials that have informed the formation of modules in my own referent.



The loosening of modular sequence significantly shifts the relationship between the referent and improvisations. The verse form of *Dissonant Counterpoint I* (After Johanna Beyer) exhibits a developmental trajectory akin to theme and variation, since the motivic template is often presented in its entirety and is varied with each iteration. The formal division between each variation of the prototypical verse discloses the developmental procedure used to generate the improvisation. When motivic order is less prescribed, as in *Dissonant Counterpoint II* (After Johanna Beyer), modules are drawn into freer relations. The absence of a recurrent sequence of events invites listeners to direct their attention toward characteristics that unify diverse occurrences. The potential to move between modules and combine their elements freely results in an unpredictable form, with less apparent distinctions between the composed and the improvised. The influence of the

modular referent is ever-present, but it is less apparent to listeners exactly what materials the improviser is referring to. This character of discontinuous modular referents addresses Adorno's criticism that jazz is hampered by the predictable nature of its harmonic and metric material.²¹⁸

5.6 Concentric Cycles

My most recent modular referent, *Concentric Cycles* for solo piano, resists teleological formal conceptions. The referent is shown in Figure 91. *Concentric Cycles* represents a departure from Seeger's theory, which expounds a formal process based on neume transformation. Neume transformation describes a gradually morphing melodic development that fulfils definite implications for movement embedded within the previous motivic fabric.²¹⁹ *Concentric Cycles* is more concerned with creating a musical terrain characterised by harmonic preferences that permeate all aspects of an environment, rhythm is only loosely suggested. My treatment of sonorities from the referent changes constantly but without any sense that future events are foreshadowed by a developmental trajectory in terms of dynamics or rhythmic density. This effect could be described as 'dynamic stasis'. I achieve this effect while improvising by inhibiting impulses that are explicitly developmental over an extended period. For instance, a phrase that suggests a crescendo or an increased rhythmic density might be cut short, followed by an immediate return to a relaxed statement of one of the modules.

²¹⁸ Adorno, "Perennial Fashion," 201.

²¹⁹ Seeger, *Studies in Musicology*, 178.

Figure 91. The modular referent for *Concentric Cycles*.

Concentric Cycles
For Solo Piano

J. O'Connor

The musical score consists of four numbered modules, each presented as a system of two staves (treble and bass clef).
 Module 1: A 3-measure phrase in G major (one sharp). The right hand plays chords and a melodic line, while the left hand plays chords.
 Module 2: A 3-measure phrase in G minor (two flats). The right hand plays chords and a melodic line, while the left hand plays chords.
 Module 3: A 3-measure phrase in G major (one sharp). The right hand plays a melodic line with a slur, while the left hand plays a sustained chord. A '(G)' chord symbol is present above the right hand.
 Module 4: A 3-measure phrase in G major (one sharp). The right hand is labeled 'OPEN' and the left hand is labeled 'FILL'. The 'FILL' section consists of a series of six asterisks on a single note in the bass clef. A double bar line is at the end of the system.

The musical character that I call dynamic stasis is linked to slight variations within recurring modules that are intended to influence the listener’s experience of repetition. Once the compositional environment of *Concentric Cycles* has been established, and all the modules have been stated, there is little inclination to either depart from, or develop upon, previous material over extended time periods. The environment is relatively static as a result of repetition, but it invites the listener to attune their focus to subtle variations between recurring sonorities. These subtle variations are afforded a significance that they would not have in music that exhibits a strong inclination to progress from one musical space to another. Steve Reich makes a similar observation in “Music as a Gradual Process,” arguing that “to facilitate closely detailed listening a musical process should happen

extremely gradually.”²²⁰ Contemporary composer Bryn Harrison also suggests that “repetition... can make music present simply by being reiterative”.²²¹ The experience of this presence might be likened to sitting in the same room for an extended period of time, and shifting attention to different features of the decor. The absence of goal-direction opens a space for listening that invites the observance of minute details and subtle variations. The same room would be observed quite differently if it were passed through in transit between two different locations, an experience that would be more akin to the reception of teleological forms of music. Dynamic stasis brings to mind a fragment of John Cage’s *Lecture on Nothing*: “we are getting nowhere and that is a pleasure”.²²²

5.7 Chapter Conclusion

This chapter has explored improvised performances that are conditioned by the repetition and variation of modules. My composition *Dissonant Counterpoint I (After Johanna Beyer)* takes characteristics from Beyer’s *Dissonant Counterpoint I* and presents them in a prototypical verse form that is subjected to improvised variations. In the discussion of this referent, I have presented an original analysis of Johanna Beyer’s *Dissonant Counterpoint I*, with a focus on its motivic content and its application of Seeger’s concepts of verse form and musical rhyme. My composition *Dissonant Counterpoint II (After Johanna Beyer)* similarly extracts gestures from Beyer’s work of the same title, and presents them as a discontinuous group of modules that can be sequenced and combined in any order in improvised performances. This flexible modular sequence suggests a non-teleological formal concept that I have developed further in *Concentric Cycles*.

Concentric Cycles provides the improviser with a range of materials that are distinct but contribute to a unified harmonic environment. When interpreting this referent, I actively resist developmental tendencies by inhibiting extended crescendos, increases of rhythmic density and other trajectories that imply goal-direction. Though this non-teleological approach represents a major point of departure from Seeger’s theory of neume development, it demonstrates the flexibility of my methodology, which draws on dissonant counterpoint while being open to other musical influences. For instance, my resistance to goal-directed progression in this composition is influenced by my involvement in the

²²⁰ Steve Reich, *Writings about Music*, (Halifax: Press of Nova Scotia College of Art and Design, 1974), 9.

²²¹ Bryn Harrison, “Cyclical Structures and the Organisation of Time: A Commentary in my Recent Compositional Work,” (Ph.D., University of Huddersfield, 2007), 4-5.

²²² John Cage, *Silence: Lectures and Writings* (Middletown, Conn: Wesleyan University Press, 1961), 118.

rehearsal, recording and performance of George Lewis's *Tractatus* with the Monash Art Ensemble. Lewis emphasised immersion in the specific characteristics supplied by each repeated module, without needing to foreshadow or progress towards subsequent modules. My approach to modular referents has gradually assimilated this feature of Lewis's musical thought, resulting in a distinctive synthesis of influences.

Chapter 6: Conclusion

6.1 Conclusion

This commentary is a record of the last three and a half years of my musical work. It describes a practice that continues to evolve as I open my work to diverse influences. I have briefly surveyed points of reference: the elusive quasi-tonal harmony of Smythe's solo pieces, the rhythmic invention of Hannaford and Tinkler, the modular orchestration of Lewis, and most importantly, the musical legacy inscribed in Crawford's compositions and Seeger's treatise. The particulars of this legacy have formed a framework for interpreting and emulating characteristics of other musicians' work. Consider, for instance, the adaptation of Seeger's dissonant scales to achieve a similar harmonic effect to Smythe's *Walls/Fats*. I have drawn on dissonant counterpoint selectively to address various aims that underpin my research. I have investigated how I can improvise non-tonal melody; how I can expand my ensemble's rhythmic practice; and how I can achieve continuity between non-tonal composition and improvisation. These investigations have culminated in idiosyncratic musical responses, embodied in musical recordings, to my overarching research question: how can Ruth Crawford's application of concepts from Charles Seeger's *Manual of Dissonant Counterpoint* inform non-tonal jazz composition and improvisation? In this final chapter, I will turn my gaze to the broader context of my music, and examine how it reflects current trends in improvisation and the broader arts culture. In particular, I will reflect on the relationship between the music created during this research project and the modernism that it draws on for inspiration.

Many of the improvisatory devices that I have described throughout this commentary are appropriated from an American modernist aesthetic that was a product of the 1920s. Crawford and Seeger intensively pursued an authentic American mode of modernist expression. Their work reveals a modernist inclination toward grand narratives and teleological historicism, with its correlating desire for the new. In contrast, my practice embraces stylistic and methodological plurality and an overt intermingling of old and new. Innovation is situated less in my specific materials and forms than in the particular ways that different musical approaches are combined. In *Sotto Voce*, neither stream of the referent is innovative in itself, though the improvised harmony that emerges from their composite is an unusual blend of rich tonal harmony and sparse, non-tonal intervallic

movement. It situates the improviser as a mediator between two modes of harmonic thinking: tonal and non-tonal.

What is distinctive here is the clash of paradigms that comes from incorporating ideas from different styles and eras. This practice resonates with a postmodern attitude that rejects grand narratives, stylistic uniformity, and the idea of linear, teleological progress, both in music and the culture that it is a part of. As Lyotard describes, the postmodern condition is the result of grand narrative in Western thought ceasing to be credible, these being based on the conception of history as the record of progress towards freedom, or emancipation, in human space and time.²²³ With the decline of the idea of cultural production reflecting a linear historical progress, postmodern art embraces a post-historical stance inclusive of eclecticism and intertextuality.²²⁴ The musical response to the postmodern condition often embraces irony, contradictions, fragmentation and discontinuities, as well as references and quotations from many traditions and cultures.²²⁵ The deconstructive effect of these devices can carry with it pessimistic undertones, since postmodernism does not share modernism's bold confidence in its own project. The postmodern deconstructive stance can emerge as a critical detachment that can make earnest or sincere expression problematic. Though I discussed postmodern irony in my trio's rhythmic practice, the critical distance that emerges between tradition and my performances does not operate through dismissal or condescension towards tradition but through a playful heterogeneity that seeks to reinvigorate convention.

A truly ironic, critical stance is not prevalent in my music. Instead, my work tries to reconcile modern and postmodern attitudes. Cultural theorists Timotheus Vermeulen and Robin van de Akker have observed this alternation as one of a number of emergent trends in contemporary culture that they describe collectively as 'metamodern'.²²⁶ Metamodernism describes a turning away from certain attitudes that have come to be associated with postmodernism, and a concurrent embrace of particular modernist tendencies. They explain:

Ontologically, metamodernism oscillates between the modern and the postmodern. It oscillates between a modern enthusiasm and a postmodern irony, between hope and

²²³ Jean-François Lyotard, "Music and Postmodernity," *New Formations* 66 (Winter 2008), 37.

²²⁴ J. D. Kramer, "The Nature and Origins of Musical Postmodernism," in *Postmodern Music/ Postmodern Thought*, eds. Judy Lochhead and Joseph Auner (New York: Routledge), 14-17.

²²⁵ *Ibid.*, 16.

²²⁶ Timotheus Vermeulen and Robin van den Akker, "Notes on Metamodernism," *Journal of Aesthetics & Culture* 2 (2010).

melancholy, between naïveté and knowingness, empathy and apathy, unity and plurality, totality and fragmentation, purity and ambiguity.²²⁷

Metamodernism affirms the productive capacity of modernism's idealistic pursuit of progress, tempered by a postmodern skepticism in the notion of society's progression towards a predetermined telos.²²⁸ It proceeds as if guided by a narrative movement towards the realisation of a full rational, moral and political potential, while recognising that this goal can never be realised.²²⁹ Vermeulen and Akker state that "metamodernism moves for the sake of moving, attempts in spite of its inevitable failure; it seeks forever for a truth that it never expects to find."²³⁰ Metamodern art may be introspective, earnestly exploring the self with an awareness of its limited capacity for communion.

I observe metamodern tendencies in much contemporary jazz that, like my own music, searches for novel approaches and fresh contexts for existing ones. The metamodern sensibility in contemporary jazz might be due in part to the impermanence of improvisation. The absence of any tangible art object that stands independent of its creator makes it difficult to conceive a separation between the improviser's intent and the work, making postmodern ironic detachment an uncomfortable fit. Contemporary improvisation is often stylistically diverse, plural, sometimes ironic and often fundamentally sincere in its exploration of the self. It is not naive. It often critiques aspects of its own discourse but does so in a way that Peters associates with Heidegger's sense of the uncanny, which speaks of "an incessant unsettling of the given with all of its overbearing familiarity, resulting in a fascination with the manner in which the given is given in ever-new ways"²³¹. This unsettling is not detached or impartial, but is performed within the discourse it critiques. My trio's rhythmic interactions in *Lady Lachs Schinken* might be conceived in this way. Our approach is energized by a deep engagement with idiomatic jazz time-feel, but we critique clichéd aspects of this convention by presenting ubiquitous rhythmic approaches in unconventional sequences and combinations. When clichés are referenced, the ensemble takes pleasure in their emergence, and revels in the character temporarily assumed. The attitude is one of engagement not antipathy.

Equally indicative of the metamodern in improvisation is the embrace of theory and concepts that, due to the structure of improvisation as a medium, can never be entirely

²²⁷ Ibid., 5-6.

²²⁸ Ibid., 5.

²²⁹ Ibid., 5.

²³⁰ Ibid., 5.

²³¹ Peters, *The Philosophy of Improvisation*, 120.

fulfilled. Instead the work oscillates between unity and plurality, totality and fragmentation. *Fractured Symmetry* is an example of this tension in my work. Its symmetrical pitch organization was touched upon in Chapter 2 but its rhythmic organisation also articulates a large scale retrograde, so that the rhythms diverge symmetrically from the central point of the notation. The surface level rhythms after the centre point embellish the underlying palindrome. Notwithstanding these rhythmic embellishments, the composition can be aptly described as a study in symmetry as a totalising modernist approach to rhythm and pitch organisation. And yet the improvisation that follows the opening referent vandalises the formal rigor of the notated parts. The improvisation fragments and generalizes, developing features of the notation without fidelity to their method of theoretical derivation. The resulting music would not have emerged without suspending scepticism in the value and relevance of symmetrical compositional process in a work that could not possibly sustain this method of development throughout. When I composed the notated materials in *Fractured Symmetry*, I embraced the productive potential of Seeger's ideal of theoretical unity and formal balance knowing that this ideal would not translate to performance. The resulting tension between composed unity and improvised plurality, between the attempt and the certainty of failure, reflects the metamodern sensibility. This attitude can also be observed in the processes of other contemporary improvisers, including Marc Hannaford whose work was identified earlier as a significant influence on my own.

Hannaford's intensive study of Elliott Carter's rhythmic and harmonic techniques has defined his unique approach as an improvising pianist.²³² Similar to my music, his works draws on a modernist theoretical framework that can only partially be realised in improvisation. It appears that he strives towards the ability to improvise within Carter's rhythmic and harmonic approaches as a totalising framework, though the impossibility of this aim must be accepted in ensemble improvisation particularly. Strict adherence to Carter's approaches is immediately compromised, if not discarded, as soon as improvisation becomes communal, interactive and conditioned by factors outside of the framework of Carter's techniques.²³³ Double bassist Vincent Meelberg attributes this tension between the will to control improvisation and the openness to sounds produced by others to improvisation more generally. He argues, "it is impossible to unite these two

²³² Hannaford has practiced numerous features of Carter's music including, but not limited to, all-interval twelve-note chords, all-interval tetrachords and all-triad hexachords. He has also assimilated long, medium and short range polyrhythms in his music.

²³³ If Hannaford was to improvise using an all-interval twelve-note chord, it is unlikely that the pitch materials deployed by other improvisers would reflect the theoretical properties of the chord.

stances, but musicians sincerely try to do so anyway, by entering into a state of self-deceit during the performance”.²³⁴ This self-deceit, characteristic of the metamodern, ensures that the rifts that emerge between the aspirations and limitations of a particular musical situation are productive rather than debilitating. By striving towards an unattainable aim as if it were possible, metamodern works are distinguished from postmodern works in terms of their musical characteristics. A stylistic consistency emerges in performances of each of my compositions as a result of my pursuit of particular modernist approaches. The postmodern can also be inclusive of modernist approaches, though stylistic consistency would often be replaced by a considered juxtaposition of different stylistic traits with the aims of subversion and deconstruction.

The recorded outcomes of this project reflect a long established trend for innovative jazz performances to incorporate modernist theory and aesthetics.²³⁵ However, this project also exhibits traits that distinguish it from the work of other contemporary musicians, though it is difficult to clearly articulate the nature of these traits. I noted earlier that the recordings submitted with this commentary are diverse in their influences and stylistic affiliations. What remains consistent across the whole project is a disinclination to opt for conventional solutions to the challenges of composition and improvisation, an attitude that aligns with Crawford and Seeger’s discourse. Despite this prevailing attitude, the musical outcomes are varied; it is very difficult to draw conclusions that describe the common musical threads in *Lady Lachs Schinken* and *Concentric Cycles*, which are so different in their relationships to Western music and the jazz tradition.

Furthermore, many distinctive characteristics of this project cannot be summarised because they are found in the finest musical details, in tendencies that might be more apparent to an impartial analyst. These fine details are overshadowed by more pervasive musical features when formulating the kind of global image of performances that would

²³⁴ "Playing Touchy-Feely," Vincent Meelberg, published 25 September, 2012, <http://www.metamodernism.com/2012/09/25/playing-touchy-feely-musical-improvisation-as-metamodern-performance/>.

²³⁵ This trend can be observed in the contemporary works of many of the musicians referenced earlier in this paper including the music of pianists Marc Hanaford and Kris Davis. There are strong precedents in the work of earlier innovators such as Anthony Braxton, Bill Dixon. Hanaford discussed the influence of Elliot Carter’s rhythmic approach on his music in: Hanaford, *Elliott Carter’s Rhythmic Language*. Influences from Ligeti and Berio in Kris Davis’s music are discussed in: Bradley Bambarger, “Kris Davis: New Approaches,” *Downbeat*, December, 2013, 23. Influences from modernist composition on the music of Anthony Braxton and Bill Dixon are referenced in: Andrew Raffo Dewar, “Searching for the Center of a Sound: Bill Dixon’s Webern, the Unaccompanied Solo, and Compositional Ontology in Post-Songform Jazz,” *Jazz Perspectives* 4/1, 2010, 73-77.

enable comparison with the work of other artists. For example, a comparison of my folio of recordings with other contemporary jazz improvisation might identify similar approaches to polyrhythm, semi-composed performances based around referents, and non-tonal melody and harmony. More specific comparisons might reveal a lesser emphasis on groove than Craig Taborn; more overt jazz references than Cory Smythe; and a more romantic, rubato phrasing than Marc Hannaford. These observations, because of their specificity, are limited in their ability to place my music within the expansive world of contemporary improvisation.

Nevertheless, my study of dissonant counterpoint has been productive, and this in itself distinguishes my music and artistic practice from that of my peers. I have not encountered any other improvisers that cite Charles Seeger or Ruth Crawford as major influences, and the particular collection of ideas present in their work differentiates my music from that of my contemporaries. The theory of dissonant counterpoint has provided a point of view extrinsic to contemporary jazz, in relation to which I have revised and developed my practice of improvisation and composition. The broad range of materials discussed by Seeger in *TENM* make his theory applicable in diverse situations. Dissonant counterpoint has been a valuable source of musical ideas in environments that are contrapuntal, chordal, tonal, non-tonal, infused with jazz rhythmic approaches, or organized by notated modules. It is quite uncommon within jazz composition and improvisation to have such a broad array of approaches guided by a single theoretical framework, however flexibly this framework is interpreted. It is also uncommon for these approaches to be quite accessible for other musicians to assimilate.

The applications of dissonant counterpoint in this research realise Seeger's dissonation, the formulation of dissonant relationships between distinct sets of musical materials in terms of pitch and rhythm. The musical processes developed in this project are designed to be applied in real-time, to reduce the cognitive burden of improvising non-tonal pitch materials. Most of these processes require little more than an ability to transpose and invert intervals, and a capacity to perform various simple polyrhythms. As a result, many of the concepts discussed in the commentary can be assimilated without intensive theoretical preparation. This is not to say that they are necessarily easy to improvise with. They take considerable practice to execute quickly and fluently and with sensitivity to the musical environment, but the path to application is far less arduous than approaches that require expansive bodies of specialised theory to be internalised. These relatively

accessible approaches to non-tonal jazz composition and improvisation are embodied in the recordings that accompany this commentary. Together, they make a valuable contribution to the field of jazz performance and the literature surrounding it. It is my hope that this research proves valuable to other musicians who are searching for non-tonal methods suitable for jazz improvisation and composition.

References

- Adorno, T. "Perennial Fashion – Jazz." in *Critical Theory and Society: A Reader*, edited by Stephen E. Bronner and Douglas M. Kellner, 199-212. New York: Routledge, 1989.
- Bambarger, Bradley. "Kris Davis: New Approaches." *Downbeat*, December, 2013.
- Berkowitz, Aaron L. *The Improvising Mind*. Oxford: Oxford University Press, 2010.
- Berne, Tim. *The Shell Game*. Thirsty Ear THI 57099.2, 2001. Compact disc.
- Beyer, Johanna. *Dissonant Counterpoint Solo Piano*. Series ed. Larry Polansky, Associate series eds. John Kennedy and Charles Wood, edition ed. David Fuqua. Lebanon: Frog Peak Music, 1996.
- Bley, Paul. *12 (+6) In a Row*. hat ART 6081, 1995. Compact disc.
- Boulez, Pierre. *Sonatine*. Vienna: Universal Edition, 1946.
- Burkett, L. E. "Linear Aggregates and Proportional Design in Ruth Crawford's Piano Study in Mixed Accents" in *Ruth Crawford Seeger's Worlds*, edited by Ray Allen and Ellie M. Hisama, 57-72. Rochester, NY: University of Rochester Press, 2007.
- Cage, John. *Silence: Lectures and Writings*. Middletown: Wesleyan University Press, 1961.
- Cahill, Sarah. *9 Preludes: Ruth Crawford, Johanna Beyer*. New Albion Records, 1997. Compact disc.
- Campbell, Edward. *Boulez, Music and Philosophy*. Cambridge: Cambridge University Press, 2010.
- _____. *Music After Deleuze*. Sydney: Bloomsbury, 2013.
- Coltrane, John. *A Love Supreme: The Complete Masters*. Impulse! 5899452, 2002. Compact disc.
- Cowell, Henry. *New Musical Resources*. Cambridge University Press: Cambridge, 1996.
- _____. *Seven Paragraphs: Trio*. Frankfurt: Edition Peters, 2001.
- _____. *String Quartet No.1 (1916)*. New York: Associated Music Publishers, 1965.
- _____. *Suite for Woodwind Quintet*. Bryn Mawr: Merrymount Music, 1949.
- Crawford Seeger, Ruth. *Diaphonic Suites*. New York: Continuo music Press, 1972.
- _____. *String Quartet 1931*. Bryn Mawr: Merion Music, 1941.
- Davis, Kris. *Good Citizen*. Fresh Sound New Talent FSNT 369, 2010. Compact disc.

- Davis, Miles. *E.S.P.* Columbia CS 9150. 1965. Compact disc.
- Dean, Roger T., and Hazel Smith, *Practice-led Research, Research-led Practice in the Creative Arts*. Edinburgh: Edinburgh University Press, 2009.
- Desain, Peter, and Henkjan Honin. "Tempo Curves Considered Harmful." In *Time in contemporary musical thought*, edited by Jonathan D. Kramer, *Contemporary Music Review* 7/2 (1993): 123-138.
- Dewar, Andrew R. "Searching for the Center of a Sound: Bill Dixon's Webern, the Unaccompanied Solo, and Compositional Ontology in Post-Songform Jazz." *Jazz Perspectives* 4/1 (2010): 59-87.
- Evans, Bill. "Twelve Tone Tune," *The Bill Evans Album*. Columbia C30855, 1971. Compact disc.
- Garlitz, Dustin Bradley, "Philosophy of new jazz: Reconstructing Adorno" M.L.A., University of South Florida, 2007.
- Gaume, Matilda. "Ruth Crawford: A Promising Young Composer in New York, 1929-30." *American Music* 5/1 (Spring, 1987): 74-84.
- Greer, T. "Critical Remarks." In *Studies in Musicology II: 1929-1979*, edited by Ann M. Pescatello, 127-138. California: University of California Press, 1994.
- Grubbs, David. *Records Ruin the Landscape: John Cage, the Sixties, and Sound Recording*. Durham: Duke University Press, 2014.
- Hannaford, Marc Edward, "Elliott Carter's Rhythmic Language: A Framework for Improvisation." Masters, University of Melbourne, 2012.
- _____. *Sarcophile*. Independent Release, 2012, MP3 file. Downloaded 2012. Bandcamp.
- Harrison, Bryn, "Cyclical Structures and the Organisation of Time: A Commentary in my Recent Compositional Work." Ph.D., University of Huddersfield, 2007.
- Hommel, Christian. *Ruth Crawford Seeger: String Quartet – Chamber Works*. Cpo, 2000, MP3 file. downloaded 2013. iTunes.
- Honing, Henkjan. "Without It No Music: Beat Induction as a Fundamental Musical Trait," *Annals of the New York Academy of Sciences* 12521/1 (2012): 85-91.
- Iyer, Vijay, "Microstructures of Feel, Macrostructures of Sound: Embodied Cognition in West-African and African-American Musics." Ph.D., University of California, 1998.
- Jamal, Ahmad. *But Not For Me: Ahmad Jamal Live at the Pershing*. Philips B 94239 L, n.d, Vinyl.
- Joe O'Connor Trio. *Praxis*. Independent release, 2014. Compact disc.

- Kramer, J. D. "The Nature and Origins of Musical Postmodernism." In *Postmodern Music/ Postmodern Thought*, edited by Judy Lochhead and Joseph Auner, 13-26. New York: Routledge, 2002.
- _____. *The Time of Music: New Meanings, New Temporalities, New Listening Strategies*. New York: Schirmer Books, 1988.
- Laprade, Paul A., and Elizabeth West Marvin. "Relating Musical Contours: Extensions of a Theory for Contour." *Journal of Music Theory* 32/2 (Autumn, 1987): 225-67.
- Lewis, George and The Monash Art Ensemble. *Hexis*. Jazzhead, 2014. Compact Disc.
- Lewis, George. *Tractatus*. Unpublished score, 2012.
- Litweiler, John. *The Freedom Principle: Jazz After 1958*. New York: W. Morrow, 1984.
- London, Justin. *Hearing In Time: Psychological Aspects of Musical Meter*. Oxford: Oxford University Press, 2004.
- Louth, Joseph P. "An Approach to Improvisation Pedagogy in Post-Secondary Jazz Programmes Based on Negative Dialectics" *Music Education Research* 14:1 (2012): 9-24.
- Lyotard, Jean-François. "Music and Postmodernity." *New Formations* 66 (Winter 2008): 37-45.
- Mahnkopf, Claus-Steffen. "Theory of Polyphony," in *Polyphony and Complexity*, edited by Claus-Steffen Mahnkopf, Frank Cox and Wolfram Schurig, 38-53. Hofheim: Wolke Verlag, 2002.
- Martin, Christopher Robert, "A Radical Reconsideration of Serialism and Chord Stranding, Applied to a Personal Jazz Style." Ph.D., University of Adelaide, 2008.
- Mitchell, Matt. *Fiction*. Pi Records pi50, 2013. Compact disc.
- Monson, Ingrid. *Saying Something: Jazz Improvisation and Interaction*. Chicago: University of Chicago Press, 1996.
- Morris, Robert D. "New Direction in the Theory and Analysis of Musical Contour." *Music Theory Spectrum* 15/2 (Autumn, 1993): 205-28.
- Nelson, Mark D. "In Pursuit of Charles Seeger's Heterophonic Ideal: Three Palindromic Works by Ruth Crawford." *The Musical Quarterly* 72/4 (1986): 458-475.
- O'Gallagher, John. *Twelve-Tone Improvisation*. Mainz: Advance Music, 2013.
- Pacifica Quartet. *Declarations: Music Between the Wars*. Cedille Records, 2006, MP3 file. Downloaded 2011. iTunes.

- Pellegrini Quartet and Ensemble Adventure. *Ruth Crawford Seeger*. CPO, 2000, MP3 file. Downloaded 2013. iTunes.
- Peters, Gary. *The Philosophy of Improvisation*. Chicago: University of Chicago Press, 2009.
- Pressing, J. "Cognitive Processes in Improvisation," in *Advances in Psychology 19: Cognitive Processes in the Perception of Art*, edited by W. R. Crozier and A. J. Chapman, 345-366. Amsterdam: Elsevier Science Publishers, 1984.
- Rao, Nancy Y. "Ruth Crawford's Imprint on Contemporary Composition." in *Ruth Crawford Seeger's Worlds*, edited by Ray Allen and Ellie M. Hisama, 110-147. Rochester, NY: University of Rochester Press, 2007.
- _____. "Partnership in Modern Music: Charles Seeger and Ruth Crawford, 1929-1931." *American Music* 15/3 (1997): 352-380.
- Reich, Steve. *Writings about Music*. Halifax: Press of Nova Scotia College of Art and Design, 1974.
- Rinzler, Paul. *The Contradictions of Jazz*. Lanham, Md: Scarecrow Press, 2008.
- Rosenwinkel, Kurt. *Star of Jupiter*. WOMMUSIC, 2012, MP3 file. Downloaded 2014. iTunes.
- Sachs, Joel and Cheryl Seltzer (directors). *Ruth Crawford Seeger*. Naxos, 2005, MP3 file. downloaded 2012. iTunes.
- Seeger, Charles. *Studies in Musicology II: 1929-1979*. California: University of California Press, 1994.
- Schoenberg, Arnold. *Style and Idea: Selected Writings of Arnold Schoenberg*. New York: St Martins Press, 1975.
- Shugart, Helene A. "Postmodern Irony as Subversive Rhetorical Strategy." *Western Journal of Communication* 63/4 (1999): 433-455.
- Slonimsky, Nicolas. *Thesaurus of Scales and Melodic Patterns*. Amsco: New York, 1947.
- Slottow, Stephen P. "Carl Ruggles and Charles Seeger: Strics vs Free Imitation in Ruggles's Canons." *Music Theory Spectrum* 30/2 (Fall, 2008): 283-303.
- Smythe, Corey. *Pluripotent*. Independent release, 2011, MP3 file. Downloaded 2014, Bandcamp.
- Spilker, John D. "The Origins of 'Dissonant Counterpoint': Henry Cowell's Unpublished Notebook," *Journal of the Society for American Music* 5 (2011): 481 - 533.
- Straus, Joseph N. *The Music of Ruth Crawford Seeger*. Cambridge: Cambridge University Press, 1995.

- Tick, Judith. "Dissonant Counterpoint Revisited: The First Movement of Ruth Crawford's *String Quartet 1931*." in *A Celebration of American Music: Words and Music in Honour of H. Wiley Hitchcock*, edited by Richard Crawford et al., 405-422. Michigan: University of Michigan Press, 1990.
- _____. *Ruth Crawford Seeger: A Composer's Search for American Music*. New York: Oxford University Press, 1997.
- Tinkler, Scott. *Positively Glowing*. Unpublished score, N.D.
- _____. *Sofa King*. Buzz Records, 1999, MP3 file. Downloaded 2015. iTunes.
- Tucker, M., ed. *The Duke Ellington Reader*. New York: Oxford University Press, 1993, 253.
- Van den Akker, Robin, and Timotheus Vermeulen. "Notes on Metamodernism." *Journal of Aesthetics & Culture* 2 (2010): 1-13.
- Various Artists. *Ruth Crawford*, Composer Recordings Inc (Cri), 1993, MP3 file, downloaded 2012, iTunes.
- Webern, Anton. *Variationen Für Klavier*. Vienna: Universal Edition, 1936.
- Yeston, Maury. *The Stratification of Musical Rhythm*. New Haven: Yale University Press, 1976.

Appendices

Appendix A: *Fractured Symmetry* Score

Fractured Symmetry

J. O'Connor

$\text{♩} = 60$

Pno.

Pno.

U. Bass

Dr.

A

A

3 bars of triplet swing with an abrupt stop at the end

16

Pno. *pp*

U. Bass

Dr.

19

Pno.

U. Bass

Dr.

immediately dampened cymbal hit

brushes on snare

one bar of triplet time

22

Pno.

U. Bass

Dr.

25

Pno.

U. Bass

Dr.

hit cymbal and
let ring

7

5

7

3

3

7

5

3

28

Open Improvisation

Pno.

U. Bass

Appendix B: *Salad Days* Score

Salad Days

J. O'Connor

A

Musical notation for system A, measures 1-4. The score is in 4/4 time. The right hand (treble clef) features a melodic line with slurs and fingerings (7, 7, 7). The left hand (bass clef) provides harmonic accompaniment with chords: Ab-, G(addb9), DΔ#11, and Eb-.

Musical notation for system A, measures 5-8. The right hand continues the melodic line with slurs and fingerings (3, 3, 3). The left hand accompaniment includes chords: B, F7#11/9, E-9, Bsus4, F#, and Eb. There are also triplets and a 5-fingered note in the bass line.

B

Musical notation for system B, measures 6-9. The right hand features a melodic line with slurs and fingerings (3, 3, 3). The left hand accompaniment includes chords: Ab-, G(addb9), DΔ#11, and Eb-. There are also triplets and a 5-fingered note in the bass line.

Musical notation for system B, measures 8-11. The right hand features a melodic line with slurs and fingerings (5, 5, 7, 7). The left hand accompaniment includes chords: B, F7#11/9, E-9, Bsus4, F#, and Eb. There are also triplets and a 5-fingered note in the bass line.

11

Ab- G(add,b9) DΔ#11 Eb-

13

B F7#11 E-9 Bsus4 F#- Eb

16

Ab- G(add,b9) DΔ#11 Eb-

18

B F7#11 E-9 Bsus4 F#- Eb

Appendix C: Accidental Hipster Score

Accidental Hipster

IMPROV FORM 1

J.O'Connor

$E\Delta/A-/D\flat\Delta$ $G\flat-/B\flat\Delta/E\flat-$

$\text{♩} = 65$

$G\Delta/C-/E\Delta$ $A-/D\flat\Delta/G\flat-$ $B\flat\Delta/E\flat-/G\Delta$

5

$D\Delta/G-/B\Delta$ $A\flat\Delta/D\flat-/F\Delta$ $B\Delta/E-/A\flat$

5

$D\flat-/F\Delta/B\flat-$ $D\Delta/G-/B\Delta$

7

9

Musical score for measures 9-10. The system consists of three staves: a treble clef staff at the top, a grand staff (treble and bass clefs) in the middle, and a bass clef staff at the bottom. The key signature has two flats (B-flat and E-flat). Measure 9 features a complex chordal texture in the grand staff with various fingerings (3, 7, 2, 5, 4) and a slur over the top staff. Measure 10 continues with similar textures and fingerings (5, 3, 4, 3, 7, 2, 5, 4, 5, 2). A dynamic marking *sfz* is present above measure 10.

11

Musical score for measures 11-12. The system consists of three staves: a treble clef staff at the top, a grand staff (treble and bass clefs) in the middle, and a bass clef staff at the bottom. Measure 11 features a complex chordal texture in the grand staff with various fingerings (2, 5, 3, 4, 3, 7) and a slur over the top staff. Measure 12 continues with similar textures and fingerings (2, 5, 4, 5, 2, 5, 3). A dynamic marking *sfz* is present above measure 12.

13 (8)

Musical score for measures 13-14. The system consists of three staves: a treble clef staff at the top, a grand staff (treble and bass clefs) in the middle, and a bass clef staff at the bottom. Measure 13 features a complex chordal texture in the grand staff with various fingerings (4, 5, 2, 5, 3, 4) and a slur over the top staff. Measure 14 continues with similar textures and fingerings (3, 7, 2, 5, 4, 5, 2, 5, 3, 4). A dynamic marking *sfz* is present above measure 14.

15

Musical score for measures 15-16. The system consists of three staves: a treble clef staff at the top, a grand staff (treble and bass clefs) in the middle, and a bass clef staff at the bottom. Measure 15 features a complex chordal texture in the grand staff with various fingerings (5, 3, 4, 7) and a slur over the top staff. Measure 16 continues with similar textures and fingerings (2, 5, 4, 5, 2, 5, 4, 5). A dynamic marking *sfz* is present above measure 16.

Appendix D: *Sotto Voce* Score

Sotto Voce

Joseph O'Connor

4 $\text{♩} = 55$

Pno.

U. Bass

$\text{♩} = 55$

G^b7^{b13} A-7/B A-7 D^b7^{alt}

4

A

A

$E^7_{\text{sus}^b9}$ B^b-7/E^b G^9^{b13} $F^{\#-11}$ A^{13} A^7^{alt}

7

D-7 $B^b7^{\#11}$ $A^b\Delta^{13\#5}$ E/E b E^b-9

Musical score for measures 10-12. The score is in 4/4 time and features a piano accompaniment with a right-hand melody and a left-hand bass line. Measure 10 starts with a treble clef and a bass clef. The right hand has a melody with a flat and a sharp. The left hand has a bass line with a triplet of eighth notes. Chords are indicated below the bass line: C-7/F, A/F, Eø, E-/F-. Measure 11 continues the melody and bass line. Measure 12 features a ritardando (rit.) marking and a change to 2/4 time, with a B-9b13 chord indicated. The piece concludes in 4/4 time.

Musical score for measures 13-15. The score is in 4/4 time and features a piano accompaniment with a right-hand melody and a left-hand bass line. Measure 13 starts with a treble clef and a bass clef. The right hand has a melody with a sharp and a flat, marked "a tempo". The left hand has a bass line with a sharp and a flat. Measure 14 continues the melody and bass line, marked "3/4". Measure 15 features a 3/4 time signature and a 5-fingered chord in the right hand. The piece concludes in 4/4 time.

B SOLO FORM
Open repeat

16

B

$G^{\flat}7^{\flat}b^{13}$ A-⁷/B A-⁷ D^b7^{alt} E⁷sus^{b9} B^b-⁷/E^b

20

$G^{\flat}b^{13}$ F[#].11 A¹³ A⁷alt D-⁷ B^b7^{#11} A^b Δ ¹³^{#5}

24

E/E^b E^b-⁹ C-⁷/F A/F E \emptyset E-
F- $\frac{2}{4}$ B-⁹^b¹³ $\frac{4}{4}$

HEAD OUT

28 $\frac{4}{4}$ retain original pitch structure
but improvise rhythm/placement

play freely in relation to
Piano r.h intervals, changes,
or otherwise

$\frac{4}{4}$ Gb7b13 A-7/B A-7 Db7alt E7susb9 Bb-7/Eb

32

G9b13 F#-11 A13 A7alt D-7 Bb7#11

35

AbΔ13#5 E/Eb Eb-9 C-7/F A/F

38 In time, about half the original tempo

E∅ E-F B-9b13

40 $\frac{4}{4}$ a tempo

$\frac{3}{4}$

$\frac{4}{4}$ a tempo

$\frac{3}{4}$

5

Appendix E: *Lady Lachs Schinken* Score

LADY LACHS SCHINKEN

J.O'Connor

Musical score for measures 1-6. The piece is in 6/4 time with a tempo of 120. The score is written for piano and includes a drum set. The piano part features a melody with triplets and slurs. The bass line is a simple accompaniment. The drum set part consists of a steady eighth-note pattern in the first four measures, followed by a rest in the fifth measure and a single cymbal hit in the sixth measure.

Musical score for measures 7-11. The tempo remains 120. The piano part continues with complex rhythmic patterns, including triplets and slurs. The bass line provides harmonic support. The drum set part features a steady eighth-note pattern in the first four measures, followed by a rest in the fifth measure and a single cymbal hit in the sixth measure.

Musical score for measures 12-15. The tempo remains 120. The piano part features a melody with triplets and slurs. The bass line is a simple accompaniment. The drum set part consists of a steady eighth-note pattern in the first two measures, followed by a rest in the third measure and a single cymbal hit in the fourth measure.

Musical score system 1 (measures 17-20). It features a grand staff with treble and bass clefs, and a percussion line below. The time signature changes from 4/4 to 5/4, then to 6/4, and back to 4/4. The music includes triplets and slurs. The percussion line shows rhythmic patterns with 'x' marks.

Musical score system 2 (measures 21-23). It features a grand staff with treble and bass clefs, and a percussion line below. The time signature is 4/4. The music includes triplets and slurs. The percussion line shows rhythmic patterns with 'x' marks.

Musical score system 3 (measures 24-26). It features a grand staff with treble and bass clefs, and a percussion line below. The time signature changes from 4/4 to 5/4. The music includes triplets and slurs. The percussion line shows rhythmic patterns with 'x' marks.

Musical score system 4 (measures 27-28). It features a grand staff with treble and bass clefs, and a percussion line below. The time signature changes from 4/4 to 3/4. The music includes triplets and slurs. The percussion line shows rhythmic patterns with 'x' marks.

29 $\frac{6}{4}$ Open repeat for solos $\frac{4}{4}$ $\frac{5}{4}$ $\frac{6}{4}$

35 $\frac{6}{4}$ $\frac{3}{4}$ $\frac{6}{4}$ $\frac{5}{4}$

37 $\frac{3}{4}$ $\frac{4}{4}$ $\frac{3}{4}$

41 $\frac{3}{4}$ $\frac{6}{4}$ $\frac{3}{4}$

45 $\frac{4}{4}$ $\frac{5}{4}$ $\frac{6}{4}$ $\frac{4}{4}$

49 $\frac{4}{4}$ $\frac{5}{4}$

53 $\frac{5}{4}$ $\frac{3}{4}$ play last time only

57 $\frac{6}{4}$ $\frac{3}{4}$ $\frac{4}{4}$

This musical score consists of four systems, each containing piano and percussion parts. The piano part is written in treble and bass clefs, while the percussion part is on a single staff with 'x' marks for notes. Measure numbers 61, 64, 67, and 69 are indicated at the start of their respective systems. Time signatures change throughout: 5/4, 6/4, 4/4, 4/4, 5/4, 5/4, and 6/4. The score includes numerous triplets and slurs, indicating complex rhythmic patterns. The percussion part features rhythmic patterns corresponding to the piano accompaniment, with some measures showing rests.