Aspects of Pitch Structure and Pitch Selection in Post-War Irish Composition: An Analytical Study of Tonal and Post-Tonal Referential Collections in Selected Works by Irish Composers

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Declaration

I hereby declare that this thesis represents my own work and has not been submitted, in whole or in part, by me or another person, for the purpose of obtaining any other qualification.

Signed: _Hazel O'Farrell_

Dated: _20/9/'02_

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I would like to offer my sincere gratitude to everyone who has assisted me in the completion of this thesis. In particular, I thank Dr. Gareth Cox for his invaluable guidance, patience and humour in his role as supervisor. I also thank Anne Farrell whose support never wavers.

Abstract

This dissertation examines aspects of pitch structure, processes of pitch selection and the treatment of referential collections in the works of selected post-war Irish composers. The first chapter reviews the literature available on twentieth-century Irish art music highlighting the exiguous nature of published reference sources in this area and is followed by a discussion of the methodology used. The second chapter comprises an analytical study of the atonal and serial pitch structure of Seóirse Bodley's *Prelude, Toccata and Epilogue* (1963) and his *Ariel's Songs* (1969), and the compositional process employed in the first of these songs is examined in detail using Bodley's sketches. The third chapter considers the use of the octatonic scale and its subsets as a source of pitch selection in the works of several Irish composers, and focuses on the first movement of Philip Martin's Piano Concerto No. 1 (1986). Gerald Barry's use of quotation as a method of pitch selection is addressed in the fourth chapter and is followed by an exploration of aleatoric pitch structure in works by Barry, Fergus Johnston, Sweeney and in particular in Frank Corcoran's Piano Trio (1978). The final chapter examines the use of Irish traditional music as a source of pitch selection in the work of Eric Sweeney; his absorption of Irish traditional pitch material into a minimalist compositional idiom is explored in general in *Duo* (1991) and in greater detail in his String Quartet (1996).

Musical Examples

Chapter 1

Literature Review and Methodology

There is only a small store of published information on twentieth-century Irish art
music. Axel Klein's, *Die Musik Irlands im 20. Jahrhundert* (Hildesheim: Georg Olms
Verlag, 1996) remains the most significant work to date. Klein divides the book into
three main sections: *Musikgeschichte, Werkbetrachtungen* and *Biographien*. The first
section comprises an overview of the history of Irish contemporary music from the
end of the eighteenth century to 1995 in which Klein documents key-points in the
history of music in twentieth-century Ireland including the development of the *Feis
Ceoil*, the Dublin Festival of Twentieth Century Music, and the rise of the composer
Seán Ó Riada. The second section presents analytical studies of 55 different
compositions dating from 1901–1994. This is the main body of the work and
although the analysis is not very detailed, Klein does provide an overview of the
various compositional styles of each composer. The compositions chosen by the
author perhaps, in his view, best reflect typical stylistic features of the composers
represented, however, in his review of the book,[1] Harry White comments that "… I
don't believe that Klein's choice of works before 1930 adequately reflects the attempt
to produce two idioms of Irish art music which can be found in the music of Charles
Villiers Stanford, Hamilton Harty and Michele Esposito as a means (however
unsuccessful) of resolving the difficulty of reconciling indigenous and European
elements in Irish music".[2] Also regarding this section of the book, Gareth Cox

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[1] "Irish Art Music in the Twentieth Century", *Irish Review* xxiv (1999), p. 141. Additional reviews
include Gareth Cox, *Music and Letters*, lxxviii/4 (November, 1997), pp. 624–625, Michael Zywietz,
Die Musikforschung, lii/1 (1999), p. 140, Jürgen Schneider, *Irland Journal* viii, 1/97 (1997), p. 86 and
Lutz Leslie, *Neue Zeitschrift für Musik*, clviii/6 (1997), p. 81.
[2] Further, White observes that "The omission by Klein of any work by Arnold Bax seems to me a
serious difficulty here, particularly because Bax stands alone as the only composer to have received

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comments that "since his discussions rarely rise above empirical descriptions, he might with advantage have dealt with fewer works but in more analytical detail … however, this part of the book is headed 'Werkbetrachtungen', and, as such, Klein's accounts constitute useful beginnings".[3] The final section consists of biographical details of 76 Irish composers but also includes several of other nationalities who have spent the majority of their compositional career in Ireland. This is an excellent reference section representing a substantial number of composers of the twentieth-century in Ireland; however, there are some notable omissions: Harry White comments that "to have entries on Elaine Agnew, Rhona Clarke, Michael Holohan and Donal Hurley, for example, is unquestionably of interest. But such figures, I would submit, attain unwarranted significance when one realises that Klein has been unable (or even in some cases unwilling) to offer information on Shaun Davey, Jim Doherty, Joseph Groocock, Ronan Guilfoyle, Paul Hayes, Piers Hellawal, T.C. Kelly, David Morris and Adrian Thomas".[4] Klein tends to represent composers of art music rather than those who fall into the popular and folk traditions i.e. Mícheál Ó Súilleabháin, Bill Whelan etc. and therefore, White's suggestion that the book should be more aptly titled "Irish Art Music in the Twentieth-Century" is appropriate. However, the value of the information compiled by Klein in this volume far outweighs any criticisms and the substantial bibliography and discography constitute extremely useful reference sources.

In the preface to *The Keeper's Recital: Music and Cultural History in Ireland, 1770–1970* Harry White explains that "although this is the first book to survey the

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into his music the full impact of the Irish Literary Revival, of which he himself was a part". op. cit., p. 141.
[3] Gareth Cox, op. cit., p. 624. Other reviews include Barra Boydell, *Music and Letters* lxxx/2 (May 1999), pp. 294–297 and Barra Ó Seaghdha, *Graph* 3.3 (Summer 1999), pp. 16–20.

development of musical thought in modern Irish cultural history, *The Keeper's Recital* is not a history of music in Ireland … This study does not therefore comprise an unbroken narrative of Irish music between 1770 and 1970. Its purpose rather is to register the function of music as a dynamic agent in the history of Irish ideas during this period".[5] In chapter five "Music and the Literary Revival", White identifies the literary revival as "the most significant event in modern Irish cultural history"[6] and goes on to discuss the contribution of Yeats while also recognising "Yeats's absolute indifference to music".[7] This is followed by a commentary on several musical figures prominent in the nineteenth century including Sir John Stevenson, Joseph Robinson, Sir Robert Prescott Stewark and James Culwick, all of whom were associated with the Protestant establishments of Trinity College, Christ Church and St. Patrick's Cathedrals. References to the work of Balfe, Wallace, Stanford, Harty, Bax and Esposito are also included in this chapter. In the following chapter on "Seán Ó Riada and the Crisis of Modernism in Irish Music" White refers to Ó Riada as "the crucial figure in Irish music of the twentieth century"[8] and goes on to describe how he attempted to absorb European compositional characteristics into his own cultural background, thus making "the journey … from serialism to *sean nós* and stumbl[ing] upon their anguished irreconcilability".[9] *Hercules Dux Ferrariae* (1957) and *Nomos No. 2* (1965) are identified as being two of Ó Riada's most innovative works in that they demonstrate a successful embracement of the European idiom, however Acton refers to the latter as Ó Riada's "farewell" to his European training as he choose to

[4] White, op. cit., pp. 142–143.
[5] Harry White, *The Keeper's Recital: Music and Cultural History in Ireland 1770–1970*, Critical Conditions: Field Day Essays and Monographs, vi (Cork: Cork University Press, 1998), ix. Reviews include Barra Boydell, *Music and Letters* lxxx/2 (May 1999), pp. 294–297 and Barra Ó Seaghdha, *Graph* 3.3 (Summer 1999), pp. 16–20.
[6] Harry White, op. cit., p. 94.
[7] Ibid., p. 97.
[8] Ibid., p. 125.
[9] Ibid., p. 126.

retreat to the relative safety of his Irish roots. White discusses the formation of Ceoltóirí Cualann as providing "Ó Riada with the means of rehabilitating the traditional repertory as a substitute for creative composition".[10] The film scores *Mise Éire* (1959), *Saoirse?* (1960) and *An Tine Bheo* (1966) are also discussed in this chapter. The identity crisis arising from an attempt to establish a compositional voice relying on European rather than Irish influences is also presented in relation to composers including Fleischmann, Larchet, May and Boydell.

The second edition of *The New Grove Dictionary of Music and Musicians* ed. Stanley Sadie (2001) contains 36 entries on Irish composers.[11] This is a substantial increase from Sadie's first edition (1980) which only included twelve entries[12] and the Blom edition (1954) which contained a mere three articles on Irish composers.[13] *The New Grove Dictionary of Opera* (1992, 1994) also includes four entries on Irish composers.[14] In addition to the increase in Irish composers documented in the latest *Grove*, there is also an improvement in the information contained in the various articles that previously appeared in the first Sadie edition. The information is naturally more up-to-date and reflects contemporary musicological discourse but has also been expanded considerably in some cases, notably in the Ó Riada and Larchet entries re-written by Harry White.[15] Due to the increase in writings on Irish

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[10] Ibid., pp. 146–147.
[11] Denis Aplvor, Gerald Barry, Walter Beckett, Seóirse Bodley, Michael Bowles, Brian Boydell, Ina Boyle, John Buckley, Rhona Coghill, Frank Corcoran, Shaun Davey, Edgar Deale, Raymond Deane, Jerome De Bromhead, Roger Doyle, Arthur Duff, Eibhlís Farrell, Howard Ferguson, Aloys Fleischmann, Carl Hardebeck, Herbert Hughes, T.C. Kelly, John Kinsella, John Larchet, Frederick May, Robert O'Dwyer, Éamonn Ó Gallchobhair, Jane O'Leary, Seán Ó Riada, Mícheál Ó Súilleabháin, Geoffrey Palmer Molyneux, A. J. Potter, Eric Sweeney, Joan Trimble, Gerard Victory and James Wilson.
[12] Denis Aplvor, Seóirse Bodley, Brian Boydell, Howard Ferguson, Aloys Fleischmann, John Larchet, Frederick May, Éamonn Ó Gallchobhair, Seán Ó Riada, A.J. Potter, Gerard Victory and James Wilson.
[13] Denis Aplvor, Howard Ferguson and John Larchet.
[14] Gerald Barry, A.J. Potter, Gerard Victory and James Wilson.
[15] Originally written by Seóirse Bodley and Anthony Hughes respectively.

composers, many of the bibliographies have been extended thus providing a valuable research source. However, the question may be raised why Irish composers such as Philip Martin and Ian Wilson are excluded while relatively insignificant contributors to Irish art music such as Éamonn Ó Gallchobhair and Herbert Hughes are included.

The long-time music critic of *The Irish Times*, Charles Acton published a short series of interviews with notable composers in *Éire/Ireland* in the late 1960s and early 1970s, thus providing one of the only sources of information on Irish contemporary music available at the time.[16] Gareth Cox has published articles on various Irish composers including "Octatonicism in the String Quartets of Brian Boydell" in *Irish Musical Studies* iv (1996), "Irish Modernism: Seóirse Bodley's String Quartet No. 1 (1968)" in *Irish Musical Studies* vii (at press)[17], and "The Musical Language of Brian Boydell: Octatonic and Diatonic Interaction" in the forthcoming publication *The Life and Music of Brian Boydell*[18]. Cox was the first to apply rigorous set-theory techniques to these composer's music in order to clearly identify their stylistic features.

The life of Aloys Fleischmann has been documented in *Aloys Fleischmann (1910–1992): A Life for Music in Ireland remembered by Contemporaries*,[19] however this

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[16] Composers interviewed include Seóirse Bodley (1970), Brian Boydell (1970) and Seán Ó Riada (1971).
[17] Other articles include "Influences on Twentieth Century Irish Art-Music" (1998), "The Development of Twentieth Century Irish Art Music" (1994) and "The Music of Gerald Barry as an introduction to Contemporary Irish Art-Music: Twentieth Century Music in the New Leaving Certificate Syllabus 1999–2001" (1998).
[18] Gareth Cox, Axel Klein, and Michael Taylor (eds.), (Dublin: Irish Academic Press, at press). The contents will include "Brian Boydell: Of Man and Music" by Axel Klein, "Our Musical State Refined: The Musicology of Brian Boydell" by Harry White, an interview with Boydell conducted by Michael Taylor and several appendices listing the compositions and writings of the composer including an extensive bibliography and discography.
[19] Ruth Fleischmann (ed.) (Dublin: Mercier Press, 2000).

book comprises a compilation of recollections edited by his daughter Ruth
Fleischmann rather than any analytical study of his work.

In addition to his book mentioned above, German musicologist Axel Klein has also
published a substantial number of articles on Irish contemporary music and has also
contributed to the German publications *Komponisten der Gegenwart* (KdG)[20] with
articles on Bodley, Boydell, Buckley, Deane, Fleischmann, May, Moeran, Victory and
James Wilson[21] and *Die Musik in Geschichte und Gegenwart* (MGG)[22] with
biographical articles on Bewerunge, Bodley, Boydell, Boyle, Coghill, Corcoran (with
more to follow). Michael Dungan has published a series of journalistic articles in
New Music News[23] on Irish composers including Barry, Bodley, Deane and Kinsella.[24]

Composers writing about their own music always constitutes a useful source and the
programme booklets for The Dublin Festival of Twentieth Century Music contains
many programme notes written by Irish composers introducing their own works.[25]
The short-lived journal, "The Irish Composer: Essays on Contemporary Music" also
contains notes by John Buckley on his Symphony No. 1, Gerard Victory on his
Ultima Rerum and Eric Sweeney on his Symphony No. 2.[26] Frank Corcoran has
written articles on his own work including "I'm a Composer: You're a What?" in *The*

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[20] (Eds.)Walter-Wolfgang Sparrer and Hans-Werner Heister (Munich , 1992).
[21] In the latest edition (in progress) Klein has contributed articles on Bodley, Boydell, Fleischmann, May, Moeran and Victory. In progress are articles on Deane and J. Wilson by Cox and Klein, and Sweeney by Cox.
[22] Kassel: Bärenreiter and Stuttgart: Metzler (1999–2004). As the *Personenteil* is compiled alphabetically over a ten-year period, the entries on Irish composers are on-going.
[23] A quarterly publication of The Contemporary Music Centre, Fishamble Street, Dublin (www.cmc.ie).
[24] "A Very ad hoc Person" (May 1998), "The Wall of Cloud" (September 1999) both on Raymond Deane, "A Messenger with Fresh News" (May 2000) on Barry, "A Significant Contribution" (February 1996) on Kinsella and "Seõirse Bodley" (September 1996).
[25] The Festival was held in 1969, 1970, 1971, 1972, 1974, 1976, 1978, 1980, 1982 and 1984.
[26] Issue No. 1 (November 1988), published by the Association of Irish Composers. Other articles include Michael Holohan, "Boulez, I.R.C.A.M. and 'Repons'" and Jane O'Leary, "Women Composers: Outside the Pale of Musical Civilisation".

Crane Bag vi (1982) and "My Music is a Four-Letter-Word ('Ceol')" in *The Journal of Music in Ireland* 1 (2001) 3 (March/April). Eric Sweeney's DPhil thesis "A Folio of Original Composition"[27] represents another rare research source as he reveals the compositional process involved in the completion of several works.

A number of academic theses on Irish contemporary music have been written. The first and oft-quoted was Kitty Fadlu-Deen's "Contemporary Music in Ireland" (UCD, MA, 1968) followed by Pádhraic Ó Cuinneagáin, "The Piano Music of Seóirse Bodley"[28], Joseph Ryan, "Nationalism and Music in Ireland"[29], Hazel Farrell, "The String Quartets of Brian Boydell"[30], and Philip Graydon, "Modernism in Ireland and its Cultural Context in the Music and Writings of Frederick May, Brian Boydell and Aloys Fleischmann"[31].

Further articles on Irish contemporary music may be found in *Irish Musical Studies* iv and vii. The majority of these articles are detailed analytical pieces rather than general overviews and therefore are valuable research sources, particularly *Irish Musical Studies* vii[32] which includes rigorous analyses of various key works such as Frank Corcoran's Symphony No. 2 by John Page, Bodley's String Quartet No. 1 by Cox (mentioned above), recent works by Ian Wilson by Michael Russ and Robin Elliott, and a consideration of "Interval Cycles and Inversional Axes in Frederick May's String Quartet in C Minor" by Robert W. Wason. *Irish Musical Studies* iv[33]

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[27] University of Ulster, (1993).
[28] MA, (Maynooth, 1992).
[29] PhD, (National University of Ireland, 1991).
[30] MA, (NCEA, W.I.T. 1996).
[31] MA, (Maynooth, 1999). An abridged version appears in *Irish Musical Studies* vii, Gareth Cox and Axel Klein (eds.), (at press), pp.56–79.
[32] Gareth Cox and Axel Klein (eds.), (Dublin: Four Courts Press, at press).
[33] Patrick Devine and Harry White (eds.), (Dublin: Four Courts Press, 1996).

includes "The Northern Composer: Irish or European?" by Hilary Bracefield and "Irish Composers and Foreign Education: A Study of Influences" by Axel Klein.[34]

As regards the composers specifically discussed in this thesis, Gerald Barry has had a number of articles written on his music, several of which stand out as being particularly insightful. One of the most substantial and valuable from a research point of view is perhaps "A Constant State of Surprise: Gerald Barry and *The Intelligence Park*" by Kevin Volans and Hilary Bracefield.[35] Although the title implies that this is an article about Barry's opera *The Intelligence Park*, Volans and Bracefield provide a detailed exploration of his compositional style, methods of pitch selection, related works and numerous musical examples. There is also a selected bibliography and work list on the final page. "The Music of Gerald Barry" by Vincent Deane[36] is another very useful piece that tackles Barry's ever-changing compositional style, examines the pitch selection in several of his works and the links between various compositions. "Breathing Space" by Barra Ó Seaghdha is an interview conducted with Gerald Barry covering his thoughts behind *The Intelligence Park* and numerous other aspects of his style.[37] "Gay Days Spent in Gladness" by Anthony Bye investigates "Why does Barry's music ruffle so many feathers?"[38] In this article Bye takes a look at the orchestral work *Chevaux-de-Frise* and, in greater analytical detail, the opera *The Triumph of Beauty and Deceit*. Other articles on Barry include Gareth Cox, "The Music of Gerald Barry as an Introduction to Contemporary Irish Art-

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[34] A similar article by Klein appears in *To Talent Alone: The Royal Irish Academy of Music 1848–1998*, ed. Richard Pine and Charles Acton (Dublin: Gill & Macmillan, 1998), pp. 419–428. *Irish Musical Studies* iv also contains Jane O'Leary, "Contemporary Music in Ireland: Developments in the Past Twenty Years".
[35] *Contact* xxxi, 1987, pp. 9–19.
[36] *Soundpost* ii (June/July 1981), pp. 14–17.
[37] *Graph* (August 1998), pp. 16–19. Barry discusses his music with Jocelyn Clarke in "Pleasantly Alienating and Strangely Seductive", *New Music News*, (February 1995), pp. 9–11.
[38] *The Musical Times*, (September 1993), pp. 496–500.

Music: Twentieth Century Music in the New Leaving Certificate Syllabus (1999–2001)[39], Adrian Jack, "Unspeakable Practices"[40], Ivan Hewett, "Bob's Your Uncle"[41] and several reviews in *The Irish Times* by Michael Dervan.

The music of Seóirse Bodley is addressed in several articles including Gareth Cox, "An Irishman in Darmstadt: Seóirse Bodley's String Quartet No. 1 (1968)".[42] This piece is particularly significant as Cox provides a detailed analysis of the first string quartet, while identifying the main stylistic features of Bodley's compositional language during his 'Darmstadt' period. In "Examining the Great Divide",[43] Malcolm Barry examines the different stages in the development of Bodley's musical language in relation to several compositions. This is a more general article but it provides a broad overview of Bodley's work. Pádhraic Ó Cuinneagáin, "The Piano Music of Seóirse Bodley"[44] deals with the piano works from 1953–1983 spanning the composers three stylistic periods. The analytical detail is quite general, however this dissertation does prove an interesting research source, as does Charles Acton, "Interview with Seóirse Bodley"[45] where the composer discusses his style, influences and several compositions.[46]

[39] *Explorations: Centenary Essays*, ed. Liam Irwin (Mary Immaculate College, University of Limerick, 1998), pp. 61–72.
[40] *Music Ireland*, (July/August 1990), pp. 7–9.
[41] *The Musical Times*, (April 1995), pp. 200–201.
[42] *Irish Musical Studies* vii, Gareth Cox and Axel Klein (eds.), (Dublin: Four Courts Press, at press), pp. 94–108.
[43] *Soundpost* (October/November 1983), pp. 4–9.
[44] Unpublished MA diss. (National University of Ireland, Maynooth 1992).
[45] *Éire/Ireland* v/3 (1970), pp. 118–133.
[46] Bodley is also included in Axel Klein, "Irish Composers and Foreign Education: A Study of Influences", *Irish Musical Studies* iv, Patrick Devine and Harry White (eds.), (Dublin: Four Courts Press, 1996), pp. 271–284.

The music of Irish composer Frank Corcoran is documented by Annette Kreutziger-Herr in her substantial *Komponisten der Gegenwart*[47] entry where she discusses his compositional style and works ranging from 1973–1992. This article also includes a discography, list of compositions and bibliography by Kreutziger-Herr/Klein. John Page, "A post-war 'Irish' Symphony: Frank Corcoran's Symphony No. 2"[48] provides a detailed analytical study of Corcoran's second symphony while also discussing the 'Irish' symphony generally with regard to Gerard Victory, Seóirse Bodley and John Kinsella. Other articles include Bernard Harris, "From a Conversation with Frank Corcoran",[49] and Michael Dervan "A Very Worried Man".[50]

There are very few reference sources for Philip Martin (who is curiously omitted from *The New Grove Dictionary of Music and Musicians*) with the exception of Robert D. Cummings, "The Jig is Up! A Great Irish Composer"[51] – an interview with the composer. Eric Sweeney has also had few articles written on his music. His own DPhil dissertation[52] and John Dunne, "Necessary Absence: A Deconstructionist Critique of the First Movement of String Quartet by Eric Sweeney"[53] are the only significant pieces.

It is evident from the above how few detailed analytical studies are available on the work of Irish composers, and more specifically, how few references there are on sources of pitch material used by the composers. The following is a study into the

[47] Walter-Wolfgang Sparrer and Hans Werner-Heister (eds.) edition text + kritik (Munich 1992), pp. 1–12.
[48] *Irish Musical Studies* vii, Gareth Cox and Axel Klein (eds.), (Dublin: Four Courts Press, at press), pp. 134–149.
[49] *Soundpost* xviii (February/March 1984).
[50] *The Irish Times* (22 September 1995), p. 12.
[51] *Classics Cosmik* (April 1998).
[52] Eric Sweeney, op. cit.
[53] Unpublished essay for MA programme (University of Limerick, 1995).

various processes of pitch selection and the treatment of pitch material in the work of selected composers. It is a fact that many composers do not follow any particular method or process while selecting their pitch material, alternatively they may rely on their ear, or sit at a piano and choose whatever pitches they consider to be aurally satisfying.[54] However, in direct contrast, some composers are meticulous in adhering to a specific method of pitch selection. They make a conscious decision to operate within the boundaries of a particular compositional style, and the pitch material is then moulded to fit into this category. It is also evident that other composers operate somewhere in between both groups. They might initially choose a specific compositional process, however it may not be applied in a strict manner and could be interspersed with pitch material that is selected aurally.

It is frequently difficult to ascertain where the pitch material is derived from unless the composer chooses to reveal his sources and many composers relish a degree of mysticism surrounding their work and are deliberately vague when questioned on the matter. Generally, even if the source of the pitch material is unclear, a particular compositional technique or style may emerge and therefore the treatment of the pitch material can still be examined. Composers frequently embrace more than one compositional style, for example aleatoricism may be found in combination with minimalism or serialism, octatonicism with chromaticism or diatonicism etc.

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[54] Michael Russ comments on the use of aurally determined pitch material in his paper on Ian Wilson's *Rich Harbour: Concerto for Organ and Orchestra, Irish Musical Studies* vii, Gareth Cox and Axel Klein (eds.), (Dublin: Four Courts Press, at press), pp. 109–133, "… there are a significant number of many-voiced chords that appear to be structured intuitively, determined by ear at the piano, rather than according to any particular system. Some are octatonic, others diatonic, and many seem freely determined", p. 116.

In her doctoral dissertation on concepts of pitch organisation in the first half of the twentieth century[55], Dixon identifies three stages in the compositional process. Firstly, she discusses the choice of raw material where the composer selects a collection of pitches upon which the composition will be based. The exact ordering of the pitch material is not important at this stage, and no one pitch is identified as being more significant than another.[56]   Secondly, she refers to pre-compositional manipulation where any possibilities or restrictions are decided upon resulting in the composition falling into a particular style or musical tradition. At this point the selected pitch material is organised in a specific order and a tonal or pitch centre, or a prominent interval-class may emerge. The final stage is the actual composition itself, however Dixon does acknowledge the fact that some composers regard the pre-compositional manipulation and the composition as one.[57]

Perhaps one of the most common methods of pitch selection is to revert back to the heritage of the particular composer's country and adopt the folk music as a pitch source. Many composers openly apply this method and may even quote directly from the original tune, however other composers seek to disguise their source and absorb the original material to such an extent that it is no longer recognisable as folk music. The derivation of pitch material from folk tunes is particularly associated with the music of Bartók. Through the collection and analysis of an abundance of Hungarian and Romanian folk tunes, he recognised a definite prevalence of certain modes, some of which could be identified as Greek or Medieval church modes, and others that were

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[55] Gail Susan Dixon, *Concepts of Pitch Organisation from 1900 to 1950: A Summary and Comparison of the Writings of Selected Western Theorists*, (unpublished Ph.D. diss., University of Toronto, 1978)
[56] Dixon also identifies three categories of pitch collections, labelling them system, genus and mode. The system is defined as the complete collection of tones derived from a specific division of the octave. Genus refers to a particular set of tones derived from the system for compositional use, and various modes are achievable as the genus is arranged in any specific order.

non-diatonic. One of these modes contains the pitches: G–A–B♭–C–D♭–E♭–F. The process employed by Bartók involved the segmentation of the mode and the extension of each segment thus providing a greater selection of pitch material to work with. For instance, the above mode may be divided into segments of whole-tone, octatonic and diatonic collections: D♭–E♭–F–G–A (Whole-tone), G–A–B♭–C–D♭–E♭ (Octatonic) and B♭–C–D♭–E♭–F (Diatonic). He then extended each segment to achieve the complete collection and employed these pitches both melodically and harmonically.[58]

Richard Cohn identifies further processes of extending these folk-derived pitch collections in: "... the combination of inversionally related materials, either simultaneously or in canon ... the combination of transpositionally related entities, either simultaneously (strict parallel motion), successively in a single voice (sequential passages), or successively in multiple voices (transpositional canons)". He also comments on Bartók's "consistent concern for intervals or interval-classes as primary compositional material".[59]

The use of folk tunes as source material is evident in the music of Irish composer Eric Sweeney, who unashamedly places Irish folk music in a minimalist context, both quoting directly from the source tunes and introducing his pitch material through additive and subtractive processes. Another technique used by Sweeney involves the reduction of the folk tune to the nucleus by omitting any repeated or decorative notes, and basing his composition on the remaining pitches. Gerald Barry, on the other

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[57] All of the above is discussed in greater detail on pp. 11–15 and pp. 151–153 of Dixon's dissertation.
[58] Further information may be found in: Elliott Antokoletz, *The Music of Béla Bartók: A Study of Tonality and Progression in Twentieth Century Music*, (Berkeley, LA and London: University of California Press, 1984), p. 204.
[59] Richard Cohn, "Bartók's Octatonic Strategies: A Motivic Approach", *Journal of the American Musicological Society* xliv (1991), p.264.

hand, inserts his own pitches on either side of those of the folk tune, thus absorbing it totally. Brian Boydell does not acknowledge any conscious Irish influence, however he does, perhaps subconsciously, adopt specific intervals, rhythms and ornamentation associated with Irish music.

Another method of pitch selection is to quote from the work of other composers. The use of quotation may involve direct quotation of a particular theme or motif, the juxtaposition of another composer's material with new material, or the more subtle approach where the quoted material becomes unrecognisable. Quotations from the work of various composers may be detected throughout the work of Gerald Barry, ranging from the subtle quotation of the passing notes of a Bach chorale to the juxtaposition of his own material with a Viennese waltz.

Aleatoric pitch selection is also quite a popular process, perhaps due to the fact that the composers may push their creativity to the limit in adopting this non-restrictive method. Under the auspices of aleatoricism, pitch material can be derived from many diverse sources including news or weather forecasts, tossing dice, the *I Ching*, non-musical charts or diagrams, names of people or places etc. Gerald Barry is mainly associated with this process, deriving pitch material inter alia from a shipping forecast, and a chart encountered by the composer whilst reading an article.

A relatively straightforward method of pitch selection is to base the composition on a referential collection or a combination of collections or scales. The octatonic collection appears quite frequently in the work of several Irish composers including Brian Boydell, Philip Martin, Raymond Deane, Fergus Johnston and Ian Wilson. The

use of octatonicism ranges from deriving the pitch material from the various subsets of the octatonic, to using the octatonic collection in its entirety at different transpositions. Octatonicism frequently appears in combination with diatonicism or chromaticism, e.g. Boydell and Deane. Gerald Barry bases his work for strings *La Jalousie Taciturne* (1996) almost entirely on the chromatic collection which appears both horizontally and vertically throughout the composition.

The use of serial pitch selection is mainly associated with Seóirse Bodley, however it is generally not applied in a strict manner in his work, with the traditional use of retrograde, inversion etc. frequently interspersed with new material. The interval-classes of the original often provide the basis for the majority of the material as opposed to using the original row in its entirety.

Although the compositional languages of the various composers discussed in this thesis vary considerably, the following four chapters employ the same methodology: a contextualisation of the relevant period and compositional method, the identification of salient pitch and interval classes and pitch-class sets in selected pieces, a discussion of the method of their selection and sources, and their relation to various tonal and post-tonal referential collections.

Chapter 2

Atonal and Serial Pitch Organisation: Seóirse Bodley's Darmstadt Period

The main body of this chapter comprises an analytical study of the atonal and serial pitch structure of Seóirse Bodley's *Prelude, Toccata and Epilogue* (1963) for solo piano and *Ariel's Songs* (1969) for soprano and piano, two works written during his "Darmstadt" period in the 1960s. This is followed by an examination of the compositional process involved in the production of the first of the *Ariel's Songs* using Bodley's own sketches and draft score, and the chapter concludes with a brief consideration of the use of serialism by Seán Ó Riada and John Kinsella.

Born in Dublin in 1933, Seóirse Bodley is one of Ireland's most prominent composers. He began his musical education at the Royal Irish Academy of Music in Dublin and continued his studies at University College Dublin, taking his B.Mus in composition in 1955 under John Larchet. The earliest work that Bodley acknowledges is his *Music for Strings* (1952) written for string orchestra. The basic idea behind this work is the combination of certain modal characteristics of Irish traditional tunes with notes alien to this context. Bodley explains that "at the time I was very much concerned with trying to develop something from the field of Irish traditional music and I tried to do this in the *Music for Strings* and indeed in quite a few subsequent works".[1] The works that followed consist of a series of short vocal pieces, most frequently with Irish texts. Similar to *Music for Strings*, *Movement for Orchestra* (1955) also reveals a juxtaposition of Irish traditional features with chromatic harmony.

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[1] Charles Acton, "Interview with Seóirse Bodley", *Éire/Ireland* iii, (1970) p. 120.

Following his receipt of a post-graduate studentship from the National University of Ireland, Bodley went to study in Stuttgart under Johann Nepomuk David (1895–1977) from 1957–1959. As a result, aspects of contemporary European culture began to penetrate Bodley's essentially tonal, Irish-based style. Evidence of this new influence is obvious in the Sonata for Violin and Piano (1958) where Bodley adopts a freer harmonic language, reminiscent of Bartók or Hindemith in places. Bodley's first substantial work; Symphony No. 1 was written in the following year. This is a composition that was regarded as a German work by those in Ireland, and very Irish by those outside of the country, however Bodley does not regard his first symphony as being particularly Irish, having consciously moved away from the traditional source of influence at this time.[2]

On his return from Stuttgart, Bodley was appointed to a lecturing position at University College Dublin and in the following year he received his DMus. He was later to become associate Professor of Music at University College Dublin. Bodley's years of study in Stuttgart provided a positive influence on his maturing compositional style, however it was his time spent in Darmstadt that proved to be a definitive turning point. The *Internationale Ferienkurse für Neue Musik* (International Summer Courses for New Music) were founded by Wolfgang Steinecke in 1946, with the express purpose of providing a platform for the latest philosophies and innovations of those at the forefront of the avant-garde. Aspiring or well-established composers had the opportunity to immerse themselves in the latest works and compositional techniques of contemporaneous avant-garde composers. With regard to these summer courses Michael Hall comments:

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[2] Ibid., p. 121.

In a musical culture where the 12–note system was beginning to be accepted as perfectly compatible with music of the past, the ideas and music of the Darmstadt school of composers came as a shock. In the early days very little of their music was heard outside the confines of Darmstadt, but in May 1952 when Boulez published an article in *The Score* called *Schoenberg is Dead*, the musical world was left in no doubt that the aim of the avant-garde was to reject tradition *in toto*.[3]

Many influential figures have been associated with Darmstadt through the years. In 1948, René Leibowitz (1913–1972) who was a pupil of Schoenberg, taught at the summer course where the music of Schoenberg was discussed and performed. Hans Werner Henze was also a pupil in this year. Messiaen became a prominent figure at Darmstadt between 1949 and 1951, conceiving his *Mode de Valeurs et D'Intensities* there in 1949 – a composition which was to become the main discussion point in 1951 with students such as Stockhausen, Nono and Maderna. From 1953 onwards, Darmstadt was dominated by a new generation of composers with teachers such as Stockhausen, Boulez, Berio, Nono, Maderna and Pousseur making their mark. However, with such strong personalities and so many diverse opinions and aims, it was perhaps inevitable that there would be a certain element of discord. This became a reality for Henze, who gave a lecture at Darmstadt in 1955 on the importance of melody in composition, and subsequently found himself alienated from the avant-garde. This split was irreparably worsened in 1958 when Stockhausen, Boulez and Nono walked out during a performance of Henze's *Nachtstücke und Arien* at Donaueschingen.

Both Boulez and Maderna remained as central figures at Darmstadt until the mid-1960s, with Stockhausen continuing until the early 1970s and Maderna settling there. The courses were held biennially rather than annually from 1970 onwards, followed by a new generation of composers taking responsibility for the courses in the late

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[3] Michael Hall, *Leaving Home* (London: Faber and Faber, 1996), p. 206.

1970s, a new group led by Brian Ferneyhough (b. 1943) who advocated the total serialism of Boulez.

Seóirse Bodley first arrived at Darmstadt in the summer of 1963, returning for the following two courses in 1964 and 1965.[4] He encountered the teachings and philosophies of Boulez and Maderna, resulting in him abandoning extended tonality for atonal and international contemporary influences. Bodley's *Prelude, Toccata and Epilogue* for solo piano was composed in the autumn of 1963 after the first summer course attended by him. This piece shows Bodley experimenting with new techniques and developing his compositional language by incorporating post-serial elements into his style. However, it also reveals a fascinating and perhaps unconscious reluctance to totally eschew tonality as exemplified in his consistent use of quasi tonal intervals.

Bodley's *Prelude* and *Epilogue* are both free-form structures constructed almost entirely of *tremulo* figures exploring the different registers and dynamic levels of the piano. These outer movements are practically identical and there is a notable absence of bar lines and time signatures. However, Bodley is quite specific in his direction regarding the duration of each movement (stipulating a maximum length of one minute) and in his extreme dynamic indications. Unlike the *Toccata* the outer movements are not based on any particular pitch-class sets and it is perhaps a coincidence that the *tremuli* in systems 1, 2 and 4 are constructed from Set 4 pitches. The idea of pitch centricity may be a consideration as each *tremulo* group for the first seven systems contains the note A. This pitch is replaced by the tritone D# in system 8 and is followed by an ic4 resolution on the enharmonic equivalent (E♭) in system 10.

Most of the pitch material in both the *Prelude* and *Epilogue* is derived from the ics 1,

3 and 4 implying a tonal basis within an atonal context:

EXAMPLE 2.1
Seóirse Bodley, *Prelude, Toccata and Epilogue*, Prelude

Bodley's *Toccata*, as might be expected within the genre of toccata, demands a high

level of technical virtuosity in performance within a free-form structure. The piece

divides into three broad sections. The first section (bars 1–71) introduces and

develops Sets 1, 2 and 3 with practically all of the material related in some manner to

these sets. Bodley then introduces another set at the beginning of the second section

(bars 72–119) only to abandon it again after thirteen bars in favour of the further

development of Set 1, 2 and 3 material. The final section (bars 120–174) does recall

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[4] The Irish composer Gerard Victory also went to Darmstadt in 1965, however he did not attend the lectures as did Bodley. It was perhaps the atmosphere of change that influenced Victory's

several of the main ideas encountered in the previous sections, however this could not be considered a traditional recapitulation as Bodley continues to develop the material from each of the four main sets using devices such as augmentation, canon and unison textures. The *Toccata* loosely resembles a ternary form structure, however the fact that Bodley develops his material indiscriminately throughout the piece irrespective of which section any set material refers to, reinforces the identification of a free-form structure.

SECTION I: Bars 1–70

Bars 1–12	Introduction of Sets 1, 2 and 3
Bars 13–42	Canonic development of three Sets (anticipation of Set 4 bars 14 and 17)
Bars 44–59	Cadenza-like passage based mainly on 2a. (1a also present)
Bars 60–70	Canonic development of Sets 1, 2a and 3

SECTION II: Bars 72–118

Bars 72–90	Introduction of Set 4
Bars 91–118	Development of Sets 1, 2 and 3 adopting triplet figure

SECTION III: Bars 120–174

Bars 120–132	Further development of all four sets (bar 3) now in unison
Bars 133–144	Further development of canonic idea (bars 13 and 60)
Bars 144–155	Further development of Set 4 (bar 72) augmentation
Bars 156–174	Further development of Sets 1, 2 and 3 (bar 91)

PITCH MATERIAL		APPEARANCES
SECTION I:	Set 1, 4–17 [0,3,4,7]	13
	Set 1a, 3–11 [0,3,7]	13
	Set 2, 4–4 [0,1,2,5]	7
	Set 2a, 3–4 [0,1,5]	31
	Set 3, 4–19 [0,1,4,8]	16
	Set 4, 4–5 [0,1,2,6]	2
SECTION II:	Set 4, 4–5 [0,1,2,6]	5
	Set 4a, 3–5 [0,1,6]	4

compositional style.

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The majority of the pitch material in the first section is derived from three main sets. Set 1 is the pitch-class set 4–17 prime form [0,3,4,7]. This set appears mainly in the form of grace note material and outlines the intervals of the major and minor third, the perfect fifth and the minor second. These intervals are central to the entire work as they represent Bodley's link with tonality and perhaps signify the fact that he was not yet ready to abandon his tonal roots. Set 1 is first anticipated in system 8 of the *Prelude* where it appears as *tremulo* material.

The Eb–G "resolution" at the end of the *Prelude* may also be derived from this set, and similarly the C–G outlined by the harmonics linking the *Prelude* and *Toccata* can be directly related to Set 1.

In the *Toccata*, Set 1 first enters in bar 2 where the right hand plays a dyad, a descending interval-class 5 (perfect fifth) decorated by interval-class 4 grace notes (major third) against which the left hand sustains the harmonics initiated in the last system of the *Prelude*. The next appearance of Set 1 is in bars 4/5 where Bodley symmetrically outlines ic5 ascending on this occasion rather than descending, once again adorned by ic4 grace notes and followed closely by the descending version also

in bar 5. Bodley introduces Set 1 sequentially on these three occasions at the interval of the major second: C–D–E:

EXAMPLE 2.2
Seóirse Bodley, *Prelude, Toccata and Epilogue*, Toccata (bars 1–7)

In bars 9 and 10 Bodley rearranges the pitches of Set 1 with the result that the main interval outlined on each occasion alternates between each of the ics suggested by the set, i.e. major and minor third, perfect fifth and minor second.

Set 1 enters again in bars 65–66 where ic5 dominates, reinforced by the fact that Bodley employs a circle of fifths for these three appearances: D–A–E–B. Symmetry also appears to be an interest as two descending ic5s frame an ascending ic5.

All of the above represent Set 1 in its original form [0,3,4,7] however several other subsets derived from this set appear quite frequently, the most prominent being pitch-class set 3–11 prime form [0,3,7].[5]

Set 1a first appears in bar 4 of the *Toccata* where it outlines the minor triad B–D–F# followed by the major triad C–E–G both in the right hand part. Bodley continues the use of this set in bars 18–20 where five minor triads are employed. The use of these diatonic triads further reinforces Bodley's link with tonality. Set 1a enters again in bars 45–47 against which an ic4 *tremulo* appears in the left hand. The final appearance of Set 1a in the first section occurs in bar 59 where Bodley uses a major triad in the right hand and a minor triad in the left hand. Another subset of Set 1 is [0,2,4,7] 4–22: the distinguishing feature being that ic3 is replaced by ic2. This set 1b appears on only one occasion in the first section (bar 26), however it continues to feature in the remaining two sections.

The second main set in the first section of the *Toccata* is Set 2, 4–4 [0,1,2,5]. Whereas Set 1 produces decorative material such as grace note and *tremulo* figures, Bodley begins to employ Set 2 in a more melodic context first in the form of an ascending arpeggio figure in bar 3:

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[5] Pitch-class set 3–11 refers to both the major and minor triad; the difference being that the non-inversional prime form of a minor triad is [0,3,7] Z3–11 whereas the non-inversional prime form of a major triad is [0,4,7] Z1 3–11.

EXAMPLE 2.3
Seóirse Bodley, *Prelude, Toccata and Epilogue*, Toccata (bar 3)

Set 2 enters again at bar 43, on this occasion descending rather than ascending. In bars 52–54 and 56 Bodley changes the shape of Set 2 and presents it in the form of grace note material, similar to Set 1, with a trichord preceded or followed by a leap of a major seventh.

However it is subset 2a, 3–4 [0,1,5] that is most prominent throughout the entire composition, the absence of ic2 distinguishing it from Set 2. Set 2a first appears in the final system of the *Prelude* providing a link into the *Toccata*. On this occasion, Set 2a is in the form of grace note material entering three times in the right hand and twice in the left hand. Bodley alternates between using an ic4 as the main beat or as the decoration. Set 1 is evident in the pitches F#–A#–A–C and A–C#–C–E in the right hand part; however it is the major seventh leap that identifies the material as Set 2a. Bodley presents Set 2a in many different guises throughout the *Toccata*, the first of which is an arpeggio-like figure (similar to Set 2) encountered in the right hand part in bar 5 and again in bar 27:

EXAMPLE 2.4
Seóirse Bodley, *Prelude, Toccata and Epilogue*, Toccata (bar 5)
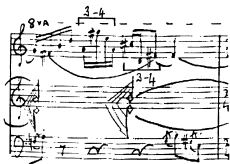
Set 2a features prominently throughout the fragmented section from bar 28–43, firstly

as single isolated notes and then in the form of *tremulo* material. The importance of

this set is further reinforced by the fact that the music reaches a climax on four

occasions between bars 42 and 52 each time climaxing on a Set 2a trichord:

EXAMPLE 2.5
Seóirse Bodley, *Prelude, Toccata and Epilogue*, Toccata (bars 42–50)

The majority of the *cadenza*-like passage (bars 49–52) is based on Set 2a trichords as is the *Moderato* section (bars 53–60). The first section ends with Set 2a in its arpeggio form (bars 66–67) followed by a final fragmented statement of the set in bars 68–70.

The final main set used by Bodley in the first section is Set 3, 4–19 [0,1,4,8]. In contrast to Sets 1 and 2, Set 3 does not appear in the *Prelude* but first enters in bar 8 of the *Toccata* with both hands moving in contrary motion:

EXAMPLE 2.6
Seóirse Bodley, *Prelude, Toccata and Epilogue*, Toccata (bar 8)

The exact notes of the left hand part (F–A–C#–E) appear again in the right hand in bar 13. Similarly the notes in the right hand part (A–C–E–G#) enter again in the right hand in bar 19 with an A♭ enharmonic equivalent.

Set 3 is evident again in bars 22–24 remaining in the form of an ascending or descending arpeggio figure with a tied first note. In the canonic section from bar 60 Set 3 is used quite frequently, beginning on the note C the descending figure is followed in bar 62 a minor third higher. In bar 64, Set 3 begins once again on the note C, in this instance followed by the left hand entering canonically one beat later a major seventh lower. This is the final appearance of Set 3 in the first section.

Most of the pitch material in the first section is derived from Sets 1, 2 and 3. Several other sets are evident, however on closer examination it becomes obvious that these sets are related to the three main sets, most frequently with one ic altered or omitted, for example Set 3, 4–19 [0,1,4,8] gives rise to several other sets including: 4–20 [0,1,5,8], 3–12 [0,4,8], 4–18 [0,1,4,7] etc.

The second section begins at bar 72 with the introduction of Set 4, 4–5 [0,1,2,6] and its subset 4a, 3–5 [0,1,6]. The major seventh features strongly in this set, however it is the entry of the tritone that is the distinguishing element. Bodley begins the canonic development of Set 4/4a material in the left hand part, followed a bar and a half later by the right hand at ic5. The opening of this section briefly portrays Bodley's interest in the lower register of the piano, however he quickly shifts to the other extreme as Set 4 material is abandoned and Sets 1, 2 and 3 are reintroduced to explore the upper register of the piano (bar 91). The one feature that is retained from the opening bars is the triplet rhythmic figure that served to decorate the ic5 resolution in bars 80–81.

The further development of Sets 1, 2 and 3 based on the triplet rhythm continues from bar 91 to bar 118 thus marking the end of the second section. Set 2a features most prominently once again in this section, appearing on twelve occasions in different guises, however Set 1a is also quite strong with eleven appearances as opposed to Set 1 which is used only three times and Set 3 is employed twice.

The final section begins at bar 120 with Bodley recalling the Set 2 material first encountered in bar 3, now performed in both hands rather than as a single line. This unison statement is immediately interrupted a bar later by three bars of angular grace note material featuring Set 2a and Set 1, however it is the major seventh leap that is most prominent. Bodley then resumes his unison movement based on Sets 1a and 2a, only to be interrupted a bar later (bar 125) by Set 4 grace note material, the major seventh once again most significant. Bodley continues to alternate between unison and grace note figures until bar 133 where he recalls the canonic section first encountered at bar 13 and again at bar 60. Sets 3 and 2a are most prominent in this

brief section. Set 1a appears in bars 141–144 as Bodley employs ic3 and ic4 trichords. At bar 144 Bodley recalls Set 4 material from the beginning of the second section (bar 72). As before this material is developed canonically at ic5 a bar and a half later, however Bodley employs augmentation on this occasion:

EXAMPLE 2.7
Seóirse Bodley, *Prelude, Toccata and Epilogue*, Toccata (bars 142–149)

The semiquaver figure A–A♭–B♭–D in the left hand is repeated in quaver values interspersed with rests. The E–E♭–F–A is treated in a similar manner in the right hand. The *glissando* first heard in bars 89–90 is now ascending rather than descending (bars 154–155) and is a right hand *glissando* on the black notes as opposed to a left hand *glissando* on the white keys. Finally Bodley recalls the developmental material based on the triplet rhythmic figure with Sets 1, 1a, 2a and 3 featuring most prominently. The *Toccata* ends with a statement of a Set 1a trichord (D minor).

The extent to which Bodley is aware of the potential of the medium for which he is writing is evident in the work. He expects the performer to explore the piano's timbral possibilities beginning with the continuous *tremuli* of the *Prelude*. By means of these *tremuli* Bodley explores the different registers of the instrument, extreme dynamic and agogic ranges and contrasting tempi. Bodley introduces a Webernesque fragmented grace note figure in the last system of the *Prelude*, and other examples may be found in many different registers:

EXAMPLE 2.8
Seóirse Bodley, *Prelude, Toccata and Epilogue*, Prelude

Bodley's preoccupation with the timbre of the piano is also evident in his introduction of harmonics at the end of the *Prelude* accompanied by the instruction "soundlessly depress all notes between C and G inclusive, with flat of hand on white notes, fingers on black keys". These harmonics continue for several bars into the *Toccata*. He also employs the *glissando*, firstly descending on the white keys (bars 89–90) and then symmetrically ascending on the black notes (bars 154–155). Each *glissando* rapidly progresses from one dynamic extreme to the other extreme. Bodley also experiments with different textures throughout the composition, for example in the final section of

the *Toccata* (bar 120) the texture is quite dense, however this suffers constant interruptions by sparse grace note statements. Finally, he employs one pedalling effect at the end of the *Prelude* and *Epilogue* sections - to trill the sustaining pedal.

Bodley briefly experiments with aleatoricism in the *cadenza*-like passage (bars 43–53) of the first section.   Firstly, he introduces an ic4 *tremulo* in the left hand accompanied by the direction "ad lib. Variable *tremulo – accell. = cresc., dim. = rall.*" This *tremulo* continues until the end of bar 52 where Bodley gives the direction "end *tremulo dim e rall* or *cresc e accell.*" thus leaving the decision to the performer. In the same bar the marking 𝄽 is used on four occasions in the right hand, accompanied by the direction "pause length ad lib. – preferably these four pauses should be of irregular length".   In the following bar (53) Bodley provides the performer with a choice of dynamic level, suggesting an extreme *ff* or *pp*.

It is notable that in contrast to the freedom encountered in this section, Bodley does include quite specific instructions throughout the composition regarding the tempi, dynamics and character of the piece. Descriptive words such as *ritmico, lirico, feroce, brilliante, con tenerezza* etc. are encountered in addition to numerous dynamic markings and tempi changes.   The use of constantly changing time signatures is another characteristic of this work, for example between bars 120 and 131 the time signature alternates between 4/4, 3/4 and 2/4 on seven occasions.   This feature is reminiscent of Bartók as is the absence of bar lines (bar 59) and the symmetrical references throughout.

Traditional compositional features include Bodley's use of canon to develop his material (bars 13–15, 60–64, 72–80) etc., his employment of a circle of fifths (bars 65–66), the use of sequence (bars 1, 4 and 5) and his use of augmentation in the final section of the *Toccata* (bars 144–146).

The overall aural perception is one of dissonant atonality as Bodley begins to experiment with avant-garde techniques but on closer examination; however, the pitch material is often essentially tonal. Several interval-classes recur consistently throughout the composition thus revealing a relationship between each of the four main sets. In Set 1, 4–17 [0,3,4,7] the prominent intervals are the major and minor thirds and the perfect fifth. Similarly in Set 2, 4–4 [0,1,2,5] the major third and perfect fifth are prominent, however the major seventh also features. Set 3, 4–19 [0,1,4,8] is built on major and minor thirds with the major seventh outlined on each entry. Finally, the main intervals in Set 4, 4–5 [0,1,2,6] are the major third, major seventh and the tritone. The interval classes 3, 4, 5 and 1/11 form the basis for the entire composition; it is the manner in which Bodley employs these ics that gives the work its avant-garde flavour.

In the following year, Bodley wrote his *Chamber Symphony No. 1* (1964) – a substantial twenty-six minute work in four movements. This is essentially a serial work as Bodley continued to absorb the Darmstadt experience, however Malcolm Barry comments that "traces of inflections from Irish traditional music may be heard".[6] Bodley does not recognise this aspect of the work, however he is very aware of consciously trying to evade the "rhythmic straightjacket" imposed by many Irish

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[6] Malcolm Barry, "Examining the Great Divide" in *Soundpost* (October/November, 1983), p. 6.

traditional dance tunes. He comments that "eventually I found that I had landed myself right beyond the field of metrical rhythms as such into the field of the irregular rhythm".[7]

In *Configurations* (1967) for orchestra, Bodley experiments with timbre as each movement displays different textural possibilities. As a means of furthering his timbral experimentation, Bodley employs concentric orchestras, explaining that " ... by dividing the string orchestra up in half and having them run in opposite directions you can get antiphonal effects between the cellos on one side and the cellos on the other and so on: a matter of using the spatial dimensions".[8] Bodley also employs grace notes as a means of decoration in this composition. The use of these ornaments may be attributed to the Irish tradition and perhaps viewed as an anticipation of his post–1972 compositional style.

Bodley continues his manipulation of serial and aleatoric techniques in his String Quartet No. 1 (1969) – a work that is frequently considered the apogee of Bodley's middle-period of compositional style. The String Quartet falls into two movements, the first of which is quite brief lasting approximately 2½ minutes, in contrast to the second movement which is a more substantial eleven minutes. The pitch material of the entire quartet is derived from the following row:

C–D–D♭–A–B–F#–B♭–G–F–A♭–E♭

However, Bodley does exercise some flexibility in his application of this row, for example, pitches 5 and 8 may be moved to a different position in the row or omitted altogether, and pitches 6 and 7 may be reversed or omitted, thus displaying his

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[7] Charles Acton, op.cit., p.121.

aleatoric tendencies. On the other hand, Bodley is quite precise in his metronome markings for each of the five sections of the first movement.

In a typical serial manner Bodley employs his pitch material at various transpositions, inversions and retrogrades, however, both Malcolm Barry[9] and Gareth Cox[10] make the point that Bodley's own ear always determines the final outcome, regardless if this requires him to stray from the serial constraints. For instance, the tonal interval classes ic4 and ic3 are both quite prominent in the first movement.

Bodley divides his second movement into eleven sections, specifying the duration in seconds for each of these. Throughout this movement Bodley outlines certain fragments of material in connecting boxes which are performed consecutively thus reflecting the philosophy of Critical Path Analysis. He uses this method to highlight the material that he considers more important, with all other material regarded as secondary. In this manner he constructs a priority route through the movement. His interest in aleatoricism emerges once again in the second movement, where several hexachords are presented in boxes that may be played in a random sequence, while the dynamic indications must still be observed.

Gareth Cox describes this work as representing "not only the peak of his personal modernism but also [marking] a watershed in his compositional career between two styles ... However the plethora of agogic, timbral and dynamic instructions can make the work seem a little overcrowded occasionally and it sometimes appears as if

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[8] Ibid., pp. 125–126.
[9] Malcolm Barry, op. cit., p. 7.

Bodley had learnt *too* much in Darmstadt and is trying to fit too many techniques into a single work; this can detract from the rhythmic energy which he is clearly striving for and clouds some lyrical moments".[11]

Bodley's last major work before his change of style is his *Ariel's Songs* (1969) composed for the second Dublin Festival of Twentieth Century Music. They comprise a collection of three songs for soprano and piano, the text for which is taken from Shakespeare's *The Tempest*. Bodley's *Ariel's Songs* are dodecaphonically constructed from one row and its various permutations. The exact ordering of the notes is unclear due to the fact that Bodley partitions the row into four bars, comprised of two tetrachords and two dyads rather than using a linear statement. However the intervallic content is quite significant as it displays a definite predilection for ic3 with each tetrachord containing ic3 and both dyads outlining ic3. Bodley employs his row in a free manner where the order of the pitches is unimportant, repetitions of pitches occur frequently and incomplete statements of the row are quite common. The linear style of the entire composition is reminiscent of Webern with its angular and fragmented pitch statements that explore the different registers and dynamic ranges of both voice and piano:

[10] Gareth Cox, "An Irishman in Darmstadt: Seóirse Bodley's String Quartet No. 1 (1968)", *Irish Musical Studies* vii, Gareth Cox and Axel Klein (eds.), (Dublin: Four Courts Press. at press), pp. 94–108.
[11] Ibid.

EXAMPLE 2.9
Seóirse Bodley, *Ariel's Songs*, Original Row
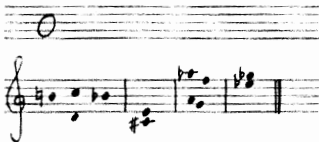
Song I opens with a complete statement of Bodley's **O** scattered throughout the different registers of the piano and accompanied by specific dynamic instructions:

EXAMPLE 2.10
Seóirse Bodley, *Ariel's Songs*, Song I (bar 1)

The remainder of the brief piano introduction in bar 1 is derived from I–9, the ic1 grace note figure taken from the first bar of I–9 with the remaining four notes C#–D–E–C constituting bar 3 of I–9. The voice enters in bar 2 with four notes from the beginning of S–7 (G–F–B–F#) accompanied by two ic3s, the first of which may be

derived from the second bar of RI, and the other from the first bar of R. Bodley then introduces the first four notes of RI–8 outlining ics 2 and 3 and followed by S–10 pitches encompassing both the piano and vocal lines. In bars 5 and 6, I–8 pitches are evident in the piano part with the omission of G and C and the F# substituted with A#. The vocal line in bar 6 is constructed from S–7 pitches (F#–G–F–B omitted). The remainder of the pitch material in bars 6 and 7, both instrumental and vocal, may be attributed to RI–5 with several pitch repetitions and no specific ordering evident.

Three bars of a piano interlude follow (bars 8–10), the first of which displays pitches from bars 2 and 3 of S–1 with the next two bars revealing a complete statement of I–3. Five bars of S–4 material constituting both the vocal and instrumental lines follow this. The repeated ic1 grace note figure employed during the vocal melisma in bar 13 can first be viewed as a reiteration of S–4 material, however the final two figures may be attributed to RI–8 in keeping with the piano material. This is followed by a complete statement of RI with a C# enharmonic equivalent. Overlapping with the final three notes of RI (C#–Bb–D) in the piano part, the vocal line enters with a complete statement of RI–5 (Db enharmonic equivalent) accompanied by various pitch repetitions in the piano (bars 13–15).

In bar 16 Bodley employs I–2 pitches followed by bars 2, 3 and 4 of I in the voice. A complete statement of I–1 is then evident in the voice against which the piano begins an incomplete statement of S–4, shifting to repetitions of I–1 material in bar 18. Bodley then introduces the opening of S–4 in bar 19 with ics 1 and 2 evident. A complete statement of the row including several pitch repetitions in the piano part follows this.

The final bars of the first song are mainly constructed from ics 1, 2 and 3 derived from the first two bars of R–7. The piano plays repetitions of several of these pitches (D# enharmonic equivalent) and also introduces some of the other pitches from R–7 in no particular order. The song concludes on the tritone D#–A.

This song is clearly based on one row and its various transformations, however Bodley demonstrates considerable freedom in his implementation of the dodecaphonic process. With regard to the intervallic content, ics 1, 2 and 3 may be detected in abundance throughout this piece.

The second song opens with a fragmented one-bar piano introduction derived from RI–3 and immediately outlines ics 1, 2 and 3. The voice completes the statement of RI–3 in the following bar with F# and C# enharmonic equivalents. In bar 3 the piano once again begins a rather jumbled statement of RI–3 followed by selected pitches from RI–5 in the vocal line. The piano then enters with four pitches from RI–5 (A–C–A♭–B♭) outlining ics 3 and 2.

The voice enters again in bar 6 with I–5 pitch material and ics 1, 2, 3 and 4 evident. The piano interrupts one bar later with an ic1 dyad in the right hand and an ic2 dyad in the left. The voice provides an incomplete statement of I–4 in bars 8 and 9, however this row is completed in bar 9 by the piano, which also incorporates several pitch repetitions in both bars 8 and 9. (extra pitch B in bar 8 is not part of I–4):

EXAMPLE 2.11
Seóirse Bodley, *Ariel's Songs*, Song II (bars 8–10)

Bodley then employs the opening tetrachord and two dyads of I–8 in bar 10

encompassing both instrumental and vocal lines. The second ic3 dyad (D–F) overlaps

with the beginning of a complete S–7 statement evident mainly in the piano part. In

bar 12 Bodley introduces the first four pitches of S–1 (Db–B–C–Eb) in the vocal line.

Bodley continues his exploration of S–1 material for the remainder of the song,

perhaps predictably concluding on an arpeggiation of an ic2 dyad in the left hand and an ic3 dyad in the right.

The voice opens *Song III* with a fairly angular but complete statement of I–4 over three bars. The grace notes of the first bar decorate the note D on each occasion outlining ics 1, 2 and 3. The piano enters briefly in bar 1 with a sparse reiteration of the first three I–4 pitches (E–D–F). A complete statement of R–1 follows, beginning on an ic2 in the voice in bar 3 but continued by the piano in bars 4 and 5. Bodley assigns a specific dynamic indication to practically every pitch in this row:

EXAMPLE 2.12

Seóirse Bodley, *Ariel's Songs*, Song III (bars 1–5)

At the end of bar 5 the voice begins another statement of I–4 which is completed over the next three bars in both parts. The piano then enters with S–3 in bar 9, the last two pitches of the row contributed by the voice in the following bar (F#–A), however these two pitches may also be attributed to RI as the voice continues an incomplete statement of this row in bars 10 and 11. Both I and RI material in the piano part accompany this. The remainder of bar 11 is comprised of RI–3 pitches in the vocal

and instrumental lines and the beginning of RI–8 in the voice, briefly interrupted by I material in the piano part but completed in bar 13. Bodley's use of RI–8 continues into bar 14 where it is later replaced by the opening of R–3, followed by the opening tetrachord of S (B–C–B♭–D). Bodley then employs RI–11 material in both instrumental and vocal lines until bar 16 where the voice enters with a complete statement of I–6, accompanied by selected pitches from R–3, most frequently outlining ics 2 and 3. The pitches in bar 17 of the piano part may be regarded as the opening tetrachord of S–10 or as repetitions of the I–6 pitches of the vocal line. Bodley employs I–7 material in both instrumental and vocal lines for the majority of bar 18, however he concludes *Song III* on four I–5 pitches.

All three songs share many characteristics, the most obvious being the Webernesque shape and textures throughout, and the extreme but specific dynamic indications. The freedom exercised by Bodley in his employment of this row is evident in the frequent pitch repetitions and incomplete statements of his rows.

In Zychowicz's book on Mahler's Fourth Symphony, Edward R. Reilly outlines several stages in the compositional process with regard to the sketches of Mahler.[12] The process begins with the preliminary sketches where different thematic or motivic possibilities are explored, and the basic pitch material is decided upon. This is followed by the preliminary draft where the structure of an entire movement, or a large section of work, is presented. The next stage in the process is the development of a draft score where more detail is introduced and some modifications of the various elements may be detected. The autograph full score then follows. Obviously, not all

of these stages will be present in a composer's compositional process, however, drawing on Bodley's sketches,[13] two definite steps are identifiable. The sketches may be divided into preliminary sketches and a draft score of Song 1 of *Ariel's Songs*. Through the use of this material it is possible to explore his compositional process in greater detail.

The first preliminary sketch presents the partitioning of the row into two tetrachords and two dyads, with all transpositions of the original, inversion, retrograde and retrograde inversion, and evidently he referred to this sheet while selecting his pitch material throughout the work:

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[12] James L. Zychowicz, *Mahler's Fourth Symphony* (New York: Oxford University Press, 2000), pp. 2–5.

[13] The sketches were kindly provided by Bodley from his personal collection. All are recto on loose-leaf A4 manuscript.

EXAMPLE 2.13
Seóirse Bodley, *Ariel's Songs*, Preliminary Sketch I[14]

[14] In the final bar of RI, Bodley presents his pitches in the form of two sevenths or diminished octaves on each occasion except on the first line where his pitches are clustered in the form of a tetrachord. There does not appear to be any obvious reason for this deviation from the norm.

It is interesting to note that although the exact ordering of the original is not clear, Bodley did explore different possibilities during his compositional process. This is evident in the second preliminary sketch where several orderings are notated:

EXAMPLE 2.14

Seóirse Bodley, *Ariel's Songs*, Preliminary Sketch 2

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The first tetrachord at the top of Sketch 2 incorporates the same pitches as that of Sketch 1, however the dyads F–G and A♭–A (second and fourth bars) were evidently toyed with before settling on C♯–E and E♭–G♭. The ordering C–B♭–D–F–B–E–G was also considered by Bodley as was the ordering C–B♭–D–B; F–G; G♭–E♭–E–D; A♭–A followed by its transposition at ic7.

He then drafts several other possibilities including:

- C–D–B–B♭–F–G–E–E♭–C–G♭–A♭–A

- B♭–B–C–D–D♭–B♭–E–F–F♯–G♯–G–A

- B♭–B–C–D; C♯–D; A–A♭–G–F; F♯–D♯

It is clear from Sketch 2 that Bodley gave the order of the original pitches a great deal of consideration and that he experimented with various combinations of pitches and divisions of the row before finally deciding on his original row. However, Bodley's decision to divide the row into two tetrachords and two dyads rather than presenting a linear statement, perhaps provided him with a means of avoiding a definite ordering.

Draft Score 1 is Bodley's plan for the opening of Song I. The melodic line is drafted at the top of the sketch, with the pitches G–F–B–F–B–F♯ evident in the vocal line of the score (bar 2):

EXAMPLE 2.15
Seóirse Bodley, *Ariel's Songs*, Draft Score 1

There is a break mark indicated in Bodley's sketch after these pitches, however the E♭ that follows in the score (bar 4) is not evident in his original plan. The pitches A–G#–C–E–D#–D–B♭–D♭–G–F# follow in bar 6 as in Sketch 3. Bodley originally appears to mark this row as R–1, but it is probably more accurate to relate the majority of these pitches to S–7.

The following three staves on Draft Score 1 comprise his plan for the piano part at the beginning of Song I. The original subject, followed by I–9, may be traced from the sketch to bars 1 and 2 of the score. The melodic line of bar 2 then appears on the next stave of Sketch 3, followed by the piano part of bars 3–5 where RI–8, S–10 and I–8 are evident:

EXAMPLE 2.16

Seóirse Bodley, *Ariel's Songs*, Song I (bars 1–6)

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The final three staves of the sketch present the plan for bars 6 and 7 of Song I, with

the remainder of I–8 detectable in the opening pitches of the piano part, followed by

RI–5 in both the vocal and instrumental lines. (The final pitches of bar 7 are evident at the beginning of Draft Score 2). Although this sketch is quite rough on first appearance, the relationship between the plan and the score is easily identifiable. Similarly in Draft Score 2 the original plan for bars 8–12 is definitely traceable:

EXAMPLE 2.17
Seóirse Bodley, *Ariel's Songs*, Draft Score 2[15]

EXAMPLE 2.18
Seóirse Bodley, *Ariel's Songs*, Song I (bars 8–13)

The plans for bars 13–17 are then evident in Draft Score 3:

EXAMPLE 2.19

Seóirse Bodley, *Ariel's Songs*, Draft Score 3

The remainder of Song I can be quite easily identified in Draft Score 4 and 5:

EXAMPLE 2.20

Seóirse Bodley, *Ariel's Songs*, Draft Score 4

EXAMPLE 2.21
Seóirse Bodley, *Ariel's Songs*, Draft Score 5

Bodley's Preliminary Sketch 3 is probably the most informative with regard to his original intentions for the pitch material:

EXAMPLE 2.22
Seóirse Bodley, *Ariel's Songs*, Preliminary Sketch III

He divides his row into two hexachords labelled **a** and **b**, each with a pitch-class set identity of prime form 6–2. He links the three tritones B♭–E, C#–G and A–E♭ with arrows, and also isolates the two trichords B–D–C and G–F–A♭ by "amoeba-like" circles. Both of these trichords share the prime form identity of 3–2. The four trichords G♭–F–G (3–1), B♭–B–E (3–5), C–D–C# (3–1) and G–E♭–A♭ (3–4) are then outlined using curvy lines.

In the early 1970s, Bodley's compositional style underwent another significant change, while retaining the European contemporary influences Irish traditional music also became an integral part of his style. Having consciously rejected these ethnic influences during his Darmstadt or middle period, Bodley realised that it was time to re-embrace his own heritage in order to fulfil his stylistic requirements. His new style was therefore a juxtaposition of Irish traditional features with atonality. Bodley's *The Narrow Road to the Deep North* (1972) for two pianos was the first composition to

display this new synthesised technique. This work is essentially atonal, although Bodley makes frequent references to C and D major. He places an Irish-style melody in the midst of dissonance, with much ornamentation of the melodic line. Gareth Cox writes that "nothing could be a clearer statement of his future intentions than the C major beginning and end of *The Narrow Road to the Deep North* for two pianos of 1972 [see **Ex. 2.23**] and, although many of the techniques and dissonances from the String Quartet still abound, his attempts to ensure, as he himself said, 'something which is audible to the listener' speak volumes about his desire for communication".[16]

Ceathrúinti Mháire Ní Ógain (1973) for soprano and orchestra was Bodley's next endeavour. This cycle of seven songs which again display an Irish element in a vocal line against a dissonant orchestral background. The text is also in Irish. Bodley's new style appears to be more secure in *Aislingí* (1977) for solo piano. Malcolm Barry comments that "… with *Aislingí* Bodley seems to be becoming more consciously Irish: the appeal to Irish form and to Irish traditional music's ornamentation is now made manifest".[17] Similar to *Aislingí*, the adaptation of *The Narrow Road to the Deep North* (1977) for solo piano also displays an abundance of ornamentation and consistent use of the sustaining pedal, thus creating a drone effect:

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[16] Gareth Cox, *Irish Musical Studies* vii, op.cit., p. 108. Further "it is therefore hardly surprising that he was to relinquish some of the dissonant and extremely complex language of the Sixties for a more accessible (and ultimately neo-tonal) style and for what might be described as Irish music as heard through Darmstadt ears".
[17] Malcolm Barry. op. cit., p. 7.

EXAMPLE 2.23

Seóirse Bodley, *The Narrow Road to the Deep North* (bars 1–8)

Characteristically, Bodley also explores the different registers and dynamic ranges of the piano throughout this piece.

This is followed by a series of religious works, two symphonies (1980 and 1981) and a Chamber Symphony No. 2 (1982). Bodley's latest works include *Chiaroscuro* (The Taking of Christ) – a five-minute work based on the Caravaggio painting, *News from Donabate* (1999) – a substantial fifty-minute work for solo piano based on a twenty-one-note series[18] and *An Exchange of Letters* (2002) also for solo piano.[19]

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[18] This work consists of ten pieces of varying length within which recurring motifs may be heard. In the programme note at the beginning of the score, Seóirse Bodley describes the work as " ...

Bodley was not the only Irish composer to experiment with serialism. For instance, Seán Ó Riada is widely remembered for his deep association with the music and literature of Ireland, which provided a basis for much of his work from 1960 onwards however, his pre-1960s compositions are regarded as more promising by many of his contemporaries. Harry White reflects this opinion when he states that "the early works, especially *Hercules Dux Ferrariae* (1957), signal a degree of authenticity and flair which few of his later compositions would surpass",[20] he goes on to say that "*Hercules* in particular is a work of enormous promise (an observation so frequently made during Ó Riada's lifetime that the work came to plague him in later years) which signifies a commitment to the European aesthetic at once untroubled and resourcefully aware".[21] Douglas Sealy refers to the work as "the most original and forward-looking work of the 1950s in Ireland,"[22] however Michael Taylor views it as being "consistently over-rated".[23] Following a trip to Paris in 1954, where he encountered serialism for the first time, Ó Riada developed an interest in the technique and proceeded to incorporate it into his compositions, notably *Hercules Dux Ferrariae*. Seán Ó Riada was probably the first Irish composer to experiment with serialism. Whereas European composers in the 1950s were using the serial technique at a more advanced level, i.e. applying it to pitch, dynamics, rhythm, attack etc., Ó Riada adopted a more simplistic approach favouring a singular relationship to pitch. *Nomos No. 1: Hercules Dux Ferrariae* is based on the text of *Hercules Dux Ferrariae* originally used by Josquin des Pres in his Mass dedicated to his patron

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reflect[ing] a personal occurrence in [his] life". He goes on to explain that "only standard methods of playing the piano are employed. Colour is dependent on placing of notes and dynamics".
[19] Premiered in the National Concert Hall, Dublin on 25 March 2002 by soloist Andrei Roudenko.
[20] Harry White, *The Keeper's Recital* (Cork University Press, 1998), p. 127.
[21] Ibid., p. 145.
[22] Cited in Axel Klein, *Die Musik Irlands im 20 Jahrhundert* (Hildesheim: Georg Olms Verlag, 1996), p. 238.
[23] Ibid., p. 238.

Hercules, Duke of Ferrara. Ó Riada uses the same method as Josquin where he adopts the eight vowel sounds of *Hercules Dux Ferrariae* as a basis for his melodic theme. Ó Riada re-arranges the vowel sounds to give him; re–fa–mi–ut–re–ut–re – translating as follows: D–F–E–D–C–D–C–D. In addition to using an eight-note theme, Ó Riada also divides the composition into eight movements, each movement corresponding tonally to the note of the above series, for example he uses the "re" tonality for Movements I, IV, VI and VIII etc.

The serial element is evident in Ó Riada's employment of two 12–note rows:

EXAMPLE 2.24
Seán Ó Riada, *Hercules Dux Ferrariae*, Note Rows

However, Ó Riada presents his 12–note rows within a tonal context on each occasion. The first row forms the basis for the brief second movement *Lento e Rubato*. Ó Riada uses his row in a very simple manner, introducing it from bar 1 to the first beat of bar 3, followed immediately by a retrograde in bars 3–4:

EXAMPLE 2.25
Seán Ó Riada, *Hercules Dux Ferrariae*, Second Movement (bars 1–5)

Another retrograde of the first five pitches is evident in bars 16–18 of violin 1. The use of retrograde is as far as Ó Riada aspires to with his series, Seóirse Bodley remarks that the "use of serialism in this work is extremely limited by comparison with his continental contemporaries" and that Ó Riada's "use of note-rows is in general fairly straightforward, often consisting of melodic usage only".[24] Despite the employment of this 12-note series, a "fa" tonality (second note of *Hercules* theme) is maintained throughout the movement.

The second series is introduced in Movement III *Passacaglia*. The row is evident between the second violin and the viola from bars 3–6, and is immediately repeated in bars 6–9. This repetition of the row in its original form continues for the majority of the movement. The first violin adopts fragments of the row as melodic material while the cellos repeat a melodic *ostinato* throughout the movement. The double basses

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[24] Seóirse Bodley, "O'Riada The Original Compositions" in *Integrating Tradition: The Achievement of Seán Ó Riada*, ed. Bernard Harris and Grattan Feyer (Ballina, 1981), p. 34.

sustain the note E as a ground bass thus establishing the "mi" tonality of this movement.

In Movement IV *Rondo*, Ó Riada uses both the *Hercules* theme and the two 12–note rows. The *Hercules* theme is performed *pizzicato* by the double basses from bar 1, and the two rows are combined to create the melodic material of violin 1 from bar 17. Ó Riada continues to use his 12–note rows within a tonal context for the remainder of the work. What had promised to be the beginning of a new and exciting direction for Irish music was cut short as Ó Riada abandoned this style of European influenced composition in 1960 in favour of exploring his Irish heritage.[25]

John Kinsella (b. 1932) is a self-taught Irish composer who held the position of Head of Music at R.T.É. until 1988, when he resigned to devote more time to composition. His compositional output is quite substantial, comprising eight symphonies, two violin concertos, four string quartets and numerous other works for a variety of different media. Regarding his influences Kinsella comments that "[I] am a great admirer of the writings of Schoenberg and some of his theories but am less convinced by his music even though it is obviously the work of a genius".[26] In spite of his scepticism towards the music of Schoenberg, Kinsella does experiment with serialism in both his second and third String Quartets, however, his adaptation of the technique is very free. Kinsella places more emphasis on the intervallic content of the series rather than applying the entire series in a traditional manner.

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[25] The original copy of *Hercules Dux Ferrariae* was under the name John Reidy and it was only after 1960 that the name on the published score was changed to Seán Ó Riada.
[26] Axel Klein, op. cit., p. 285. Cited in a letter from Kinsella to Axel Klein.

Kinsella's String Quartet No. 2 (1968) is based on a 12-note series divided into four trichords:

(a) B–C–D   (b) A#–C#–A (c) E–G#–G   (d) D#–F–F#

The entire series is introduced in the first three bars:

EXAMPLE 2.26
John Kinsella, String Quartet No. 2, First Movement (bars 1–3)

Following the initial presentation of the series, Kinsella begins to focus on the interval classes outlined by the original, and expands his material based on these ics. He also presents modified versions of the series at various transpositions. With reference to the second quartet, Gareth Cox observes that "… Kinsella restricts himself to using the intervallic potential of the row grafted onto a sonata-form movement".[27]

Kinsella's String Quartet No. 3 (1977) was written almost a decade later, however, his free serial treatment of the pitch material is reminiscent of the second quartet. "the basic series is treated with considerable freedom and certain groups of intervals are

allowed to predominate from time to time".[28] There are two main features in this quartet, the first of which is the opening four-note series: (a) A#–B–D#–F# and the second is the pair of tritones (b) Ab–D and (c) G–C#. Both the series and the tritones are introduced in the first two bars with G# and Db enharmonic equivalents:

EXAMPLE 2.27
John Kinsella, String Quartet No. 3, First Movement (bars 1–3)

Kinsella then proceeds to present his pitch material at various transpositions.

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[27] Gareth Cox, "Webern Reception in Ireland" *Sprachen und Kultur* xv, (Tokyo, 1998), p. 32.
[28] John Kinsella, Programme note for Third String Quartet, Contemporary Music Centre, Dublin.

EXAMPLE 2.28
John Kinsella, String Quartet No. 3, First Movement (bars 10–12)

The closing bars of the quartet are constructed from repeated statements of the

opening four-note series:

EXAMPLE 2.29

John Kinsella, String Quartet No. 3, Final Movement (bars 430–453)

The main focus of this chapter has been on Bodley's absorption of serial techniques dating from his time in Darmstadt. Although he was clearly influenced by such

features as extreme dynamic indications and large leaps in the parts, he reserved a personal freedom for himself in the technical composition and employment of his rows: For example in *Ariel's Songs*, as has been seen, the exact ordering of the row remains ambiguous because of its partitioning into tetrachords and dyads and his free repetition of pitches and incomplete statements of the row are evidence of his rejection of Total Serialism. As has been noted, his ear ultimately determined the use of the material. However, he is certainly one of the most significant Irish composers to incorporate serialism (often in combination with free tonal and aleatoric techniques) in his works, albeit to a less strict extent than many of his fellow-students and teachers at the *Internationale Ferienkurse*.[29] His *Ariel's Songs* are clear evidence of this immersion in the serial world at the time; it was a technique he was to return to considerably later in his compositional career.

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[29] A fruitful avenue of further research could consider the serial aspects of some of Gerard Victory's compositions from the 1960s.

Chapter 3

Octatonic Pitch Structure in Post-War Irish Composition

This chapter examines the use of the octatonic scale and its subsets as a source of pitch material for several Irish composers. Raymond Deane and Fergus Johnston are considered briefly in the first part of the chapter, however the main focus is on the work of Philip Martin, particularly the first movement of his Piano Concerto No. 1 (1986) which is explored in detail.

The term "octatonic" may be applied to any scale or mode that is constructed from eight different pitches within an octave, however, since the use of the term by Berger,[1] the octatonic scale is widely recognised as a *collection* of alternating tones and semitones with a pitch-class set identity of 8–28. This symmetrical scale is frequently referred to as the diminished scale as it is formed by a combination of two non-enharmonic diminished seventh chords.[2] Only two forms of the octatonic scale exist, the first beginning on a minor second and the other on a major second – referred to by van den Toorn as models A and B.[3] Three transpositions are also possible and are generally referred to as Collections I, II and III.[4]

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[1] Arthur Berger, "Problems of Pitch Organisation in Stravinsky", (PNM, ii 1963–'64) pp. 11–42.
[2] The octatonic scale is referred to as the "Persian" scale by Polish composer Ludomir Rogowski, *The New Grove Dictionary of Music and Musicians* xix, ed. Stanley Sadie, (London and New York: Macmillan, 2nd edn. 2001), p. 523–524 and Dutch composer Willem Pijper refers to his use of octatonicism as "pluritonality", *The New Grove Dictionary of Music and Musicians* xxi, ed. Stanley Sadie, (London and New York: Macmillan, 2nd edn. 2001), p. 740–743.
[3] Peter C. van den Toorn, *The Music of Igor Stravinsky*, (New Haven and London: Yale University Press, 1983).
[4] Jay Reise refers to the collections as O1, O2 and O3, however, Wai-Ling Cheong makes the point that collections I, II and III correspond to O2, O3 and O1 respectively, thus creating a certain amount of confusion. Therefore he favours George Perle's labelling method: C3 (0,1), C3 (0,2) and C3 (1,2) where the exact pitch-class content of each of the octatonic collections is made clear. (C3 stands for a diminished seventh chord). Wai-Ling Cheong, "The Late Scriabin: Pitch Organisation and Form in the Works of 1910–1914", (unpublished Ph.D diss., Cambridge University, 1991), p. 18.

In 1975[5] Elliott Antokoletz discussed the octatonic scale with reference to Bartók's Fourth String Quartet and explained that "the twelve tones can be partitioned into three mutually exclusive interval 3–9 tetrachords. If we pair any two of these three tetrachords, we get an eight-note scale that is based on regular alternations of the whole-tones and semitones. (We will refer to this scale as 'octatonic'). There are altogether three possibilities of pairing the three interval 3–9 tetrachords, thus giving us the three octatonic scales:

C–D–E♭–F–F#–G#–A–B

C#–D#–E–F#–G–A–B♭–C

D–E–F–G–G#–B♭–B–C#"[6]

Richard Cohn writes, "an octatonic collection is most readily characterised, for mnemonic purposes, as any set of pitch-classes resulting from the union of two different diminished seventh chords".[7] He goes on to discuss the attraction that composers have to the octatonic and attributes this to "... a number of special internal properties ..." identified as follows: "... any octatonic collection maps into itself under four different transpositional values, and thus has only three distinct forms. Maps onto itself under three different inversions, and thus potentially articulates eight

[5] Elliot Antokoletz, "Principles of Pitch Organisation in Bartók's Fourth String Quartet", (unpublished D.Phil. diss., The City University of New York, 1975), p. 74.
[6] Antokoletz discusses the octatonic scale in greater detail in his *The Music of Béla Bartók: A Study of Tonality and Progression in Twentieth Century Music*, (Berkeley, Los Angeles and London: University of California Press, 1984), p. 76. He goes on to explain that "in pairing two interval–3 tetrachords, an octatonic set can be formed by three other pairings of equivalent symmetrical sub-collections: Z2–8 (D–G–G#–C#) and its interval–3 transposition Z11–5 (B–E–F–B♭); the French augmented sixth chord E–G#–B♭–D, and its interval–3 transposition G–B–C#–F; and two minor tetrachords D–E–F–G and G#–B♭–B–C# separated by the tritone". With regard to the labelling of the three transpositions of the octatonic scale, Antokoletz writes that "any permutation of that scale that can begin with pitch-class C will be referred to as octatonic-0, that with pitch-class C# as octatonic-1, and that with pitch-class D as octatonic-2", p. 76.
[7] Richard Cohn, "Bartók's Octatonic Strategies: A Motivic Approach", *Journal of the American Musicological Society*, xliv/2 (1991), p. 262. Cohn then makes a distinction between the terms octatonic "collection" and octatonic "scale" stating that "when ordered from bottom to top ... the term

different pitch-class axes of symmetry. Has an asymmetrical distribution of intervals, concentrating minor thirds more intensely than any other collection-type of similar size. Has a relatively limited roster of sub-set types, since each of its proper subsets recurs at multiple levels of transposition and transposed inversion".[8] He then identifies the external properties[9] that may attract composers as:

"The collection's potential to articulate multiple tonal centres. Its abundant possession of semantically rich subsets like consonant triads, seventh-chords, French sixths, and minor [0,2,3,5] tetrachords. Its ability to 'modulate' into diatonic collections and other modes common to various folk-music traditions, via elementary voice-leading routines."[10]

Cheong reinforces Cohn's findings on the versatility of the octatonic collection in stating that "the introduction of the symmetrical octatonic collection opens up new possibilities which enable the composer to recreate various structural roles formerly played by the tonal system ... It is widely accepted that the usefulness of the octatonic collection lies in its availability of triadic structures, which allows it to interact with conventional tonality".[11]

Forte has examined the octatonic scale in great detail and identifies all of the subsets of the octatonic as follows:[12]

'octatonic scale' is more commonly employed; 'collection' is used in this study out of a preference to avoid any implication of a canonical ordering of the elements". p. 262.
[8] Ibid., pp. 262–263.
[9] External in that "they depend on a relationship to other entities and concepts that bear privileged status in the musical tradition". Ibid., p. 263.
[10] Ibid., p. 263.
[11] Cheong, op. cit., p. 158.
[12] Cheong is consistent in his use of the terms octad, septad, hexad, pentad, tetrad and triad in his article "Scriabin's Octatonic Sonata", *Journal of the Royal Musical Association*, cxxi (1996), pp. 206–228, whereas Forte demonstrates a preference for the terms hexachord, tetrachord and trichord in addition to using septad and pentad to describe his subsets. I have opted for Forte's terminology in this study as it

Septad	7–31
Hexachords	6–z13, 6–z23, 6–27, 6–30, 6–z49, 6–z50
Pentads	5–10, 5–16, 5–19, 5–25, 5–28, 5–31, 5–32
Tetrachords	4–3, 4–9, 4–10, 4–12, 4–13, 4–z15, 4–17, 4–18, 4–25, 4–26, 4–27, 4–28, 4–z29
Trichords	3–2, 3–3, 3–5, 3–7, 3–8, 3–10, 3–11.[13]

Several of these subsets are of particular relevance as they are formed by adjacent pitches of the octatonic scale; these include septad 7–31 (the main subset of the octatonic), hexachords 6–z13 and 6–z23, pentad 5–10 and tetrachords 4–3 and 4–10. The remainder of the subsets are obviously derived from the octatonic scale but include non-adjacent pitches and are therefore not as easily identifiable.

The use of octatonicism may be related to several composers, the most obvious, perhaps, being Messiaen as the octatonic scale constitutes the second of his *Modes of Limited Transposition*.[14] Messiaen recognises the presence of this scale in the music of Stravinsky,[15] Rimsky-Korsakov and Scriabin,[16] however he dismisses their use of the scale as being a "timid sketch, the modal effect being more or less absorbed by

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appears to have gained greater currency, however, Cheong may be more correct in that the terms octad, septad etc. clearly imply a collection of pitches whereas the word 'chord' appears to suggest the simultaneous sounding of these pitches.

[13] Allen Forte, *The Atonal Music of Anton Webern* (New Haven and London: Yale University Press, 1998), p.12.

[14] Messiaen's adaptation of the various modes as pitch material for his compositions is described in greater detail in: Olivier Messiaen, *Technique de mon Langage Musicale*, (Paris, 1944; Eng. Trans. 1956), and Donald Street, "The Modes of Limited Transposition", *The Musical Times* cxvii (1976), pp. 819-823.

[15] The use of octatonicism in the work of Stravinsky has been examined in detail in numerous monographs and articles including; Peter van den Toorn, op. cit. and *Stravinsky and "The Rite of Spring"*: *The Beginnings of a Musical Language*, (Oxford University Press, 1987), Berger, op. cit., pp. 11–42, Richard Taruskin, "Chernomor to Kaschei: Harmonic Sorcery; or, Stravinsky's 'Angle'", *Journal of the American Musicological Society* xxxviii (1985), pp. 72–142, Richard Taruskin, "Chez Petrouchka: Harmony and Tonality chez Stravinsky", *Nineteenth Century Music*, x/3 (Spring 1987), pp. 265–286, Arnold Whittall, Review Survey: "Some Recent Writings on Stravinsky", *Music Analysis*, 8/1–2 (1989), pp. 169–176.

classified sonorities".[17] He criticises their integration of the octatonic mode into a predominately diatonic framework. Other composers recognised for their use of octatonicism include Bartók,[18] Debussy,[19] Ravel[20] and Dallapiccola.[21]

One of the Irish composers principally associated with octatonicism is Brian Boydell (1917–2000). Boydell's musical style is characterised by a consistent use of the octatonic scale and its subsets in combination with diatonicism. Boydell's first String Quartet, op. 31 (1949) is significant in that it establishes the musical language that is to remain constant throughout his compositional career.

The string quartet opens with the cello introducing octatonic subset 3–2 (C–C#–D#) in the first three bars, and the viola adding the next three pitches of the octatonic scale (also 3–2, E–F#–G) in bar 6, thus resulting in octatonic hexachord 6–z13:

[16] Scriabin's use of octatonicism is discussed in the articles: Cheong, 1996, op. cit., pp. 206–228, 1991, op. cit. George Perle, "Scriabin's Self-Analyses", *Music Analysis*, 3:2 (1984), pp. 101–121.
[17] Richard Taruskin, op. cit. (1985), p. 73.
[18] Elliott Antokoletz, op. cit., (1984) and op. cit., (1975). Other articles include: Richard Cohn, op. cit., pp. 262–300, George Perle, "Symmetrical Formations in the String Quartets of Béla Bartók", *Music Review* xvi (1955), pp. 300–312.
[19] Debussy's use of the octatonic scale is discussed in: Allen Forte, "Debussy and the Octatonic", *Music Analysis* x/1–2 (1991), pp. 125–169 and Arnold Whittall, "Tonality and the Whole-Tone Scale in the Music of Debussy", *Music Review* xxxvi/4 (1975), pp. 261–271.
[20] See T. Kabisch, "Oktatonik, Tonalität und Form in der Musik Maurice Ravels", *Musiktheorie* v (1990), pp. 117–136.
[21] See Michael Eckert, "Octatonic Elements in the Music of Luigi Dallapiccola", *Music Review* xxxxvi/1 (1985), pp. 35–48.

EXAMPLE 3.1
Brian Boydell, String Quartet No. 1, First Movement (bars 1–6)

Octatonic tetrachord 4–3 forms the second theme, evident from the end of bar 41 in the inner voices. By bar 48 both violins and viola, playing parallel 6/4 chords in a type of organum have adopted this octatonic theme.

The octatonic scale also features quite prominently in the second movement, with the complete octatonic collection 8–28 achieved in the first violin by bar 11. Octatonic hexachord 6–z13 is also present in all voices in bar 11:

EXAMPLE 3.2

Brian Boydell, String Quartet No. 1, Second Movement (bars 1–13)

The final movement opens with octatonic hexachord 6–z13 as in the first movement,

however on this occasion all voices enter in unison. The first violin once again

completes the octatonic collection 8–28 by bar 11 and it continues to feature throughout the remainder of the movement:

EXAMPLE 3.3
Brian Boydell, String Quartet No. 1, Third Movement (bars 1–12)

The Second String Quartet, op. 44 (1957) opens with octatonic tetrachord 4–3 in the viola, followed by an inversion in the cello in bars 4–5. Octatonic trichord 3–2 is evident in both violins in bar 11, followed by octatonic tetrachord 4–10 in the second violin in bars 15–16, and the opening tetrachord 4–3 entering once again in bars 16–18 in the first violin:

EXAMPLE 3.4
Brian Boydell, String Quartet No. 2, First Movement (bars 1–19)

The complete octatonic collection 8–28 appears in ascending scalic form on several occasions in the second movement from bar 179.

The trills of the two violins and cello at the beginning of Boydell's Third String Quartet, op. 65 (1969) form octatonic pentad 5–10 (including the semiquaver beats).

This pentad appears on several other occasions throughout the first section. The viola in bar 5 then introduces a four-note figure constructed from octatonic tetrachord 4–z15. This is a significant figure in that it is the motif from which the majority of the material in the quartet arises:

EXAMPLE 3.5
Brian Boydell, String Quartet No. 3, First Movement (bars 1–6)

Octatonic septad 7–31 is evident in the first violin in bars 30–31 and again in bars 56–57. Boydell makes frequent use of trichord 3–2 throughout the quartet, for example bars 33–39. Octatonic hexachord 6–27 appears in the second violin in bar 55, and hexachord 6–z23 in the cello in bars 66–70. The pentad 5–10 from the opening of the quartet is also evident in the second violin, viola and cello in bar 71 and in the second violin once again in bar 73.

It is evident from the above how completely Boydell has absorbed the octatonic concept into his own language. The interaction between octatonicism and diatonicism is explored in greater detail by Gareth Cox in his paper on the musical language of

Brian Boydell.[22]   Other significant octatonic works include his Violin Concerto (1953/54), *Megalithic Ritual Dances* (1956) and *Adagio and Scherzo for String Quartet*, op. 89 (1991).

Irish composer Raymond Deane (b. 1953) not only combined octatonicism with diatonicism but also incorporated chromaticism,[23] pentatonicism and the whole-tone scale in his work for thirteen strings entitled *Dekatriad* (1995).[24]   Regarding his compositional style Deane comments that " ... I don't use serial techniques. I am a very *ad hoc* person when it comes to techniques.   I use whatever technique is appropriate to the material I'm working with.   Some of my pieces ... are definitely derived from serial thinking in some sort of way, but I don't use things like tone-rows. It tends to be more harmonic. Or I'll use small cells that I can give vertically and horizontally and in inversions and so on; the way dodecaphonic composers use them ... I use just about any material that comes to hand".[25]

[22] Gareth Cox, "The Musical Language of Brian Boydell: Octatonic and Diatonic Interaction", *The Life and Music of Brian Boydell*, ed. Gareth Cox, Axel Klein et al, (Irish Academic Press, Dublin, 2001). See also Cox, "Octatonicism in the String Quartets of Brian Boydell", *Irish Musical Studies* iv, Patrick Devine and Harry White (eds.), (Dublin: Four Courts Press, 1996), pp. 263–270.
[23] Ian Wilson (b. 1964) combines octatonicism with diatonicism and chromaticism. With regard to his Second String Quartet entitled *The Capsizing Man and Other Stories* (1994), which contains "savage descending octatonic scales", Robin Elliott writes that "Wilson's musical language is a rich mixture of tonal and non-tonal idioms, diatonic, chromatic and octatonic pitch collections, static and active gestures, tragic and comic moods", "Passion, Painting, Poetry, Pessimism: Extra-Musical Themes in The String Quartets of Ian Wilson", *Irish Musical Studies* vii, Gareth Cox and Axel Klein (eds) (Dublin: Four Courts Press, at press), p. 167. On Wilson's *Rich Harbour: Concerto for Organ and Orchestra*, Michael Russ writes, "while there are extensive passages of octatonic writing, Wilson's use of the octatonic scale is very free. He does not capitalise on the octatonic routines made possible by the symmetrical partitioning of the scale ... and non-diatonic pitch-classes are mixed freely with the octatonic", "Some Observations on Form-Building Processes in Twentieth Century Music: Shaping Time in Ian Wilson's *Rich Harbour: Concerto for Organ and Orchestra*, ibid., p. 115.
[24] Dedicated to Iordanis Arzogiou and all at "I Kourti".
[25] Cited in Michael Dungan, "A Very *ad hoc* Person", *New Music News* (May 1999), p. 10.

In *Dekatriad* the use of octatonicism is evident mainly in sonorities and rarely in linear passages, for example at bar 24 octatonic tetrachord 4–10 appears vertically between the first violins while the violas and celli introduce octatonic pentad 5–28:

EXAMPLE 3.6
Raymond Deane, *Dekatriad*, First Movement (bar 24)

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Octatonic tetrachord 4–10 is also evident in the first violins in bars 28 and 30 with octatonic pentad 5–28 appearing again in bar 29 in the viola and cello parts, moving to 4–27 in the same bar. The first and second violins present clear statements of two octatonic tetrachords 4–25 in bar 31:

EXAMPLE 3.7
Raymond Deane, *Dekatriad*, First Movement (bars 28–31)

The lower strings present octatonic pentad 5–28 on several occasions over the following bars during which octatonic sonorities also appear in the upper strings. A chain of octatonic tetrachords 4–26 from bar 50 in the first violin conclude the movement before settling on A♭:

EXAMPLE 3.8

Raymond Deane, *Dekatriad*, First Movement (bars 50–60)

The octatonic instances are more isolated in the second movement; however, octatonic septad 7–31 (only one short of the complete octatonic collection) may be detected in the form of Stravinskian-like repeated sonorities in the lower strings in bars 88–89:

EXAMPLE 3.9
Raymond Deane, *Dekatriad*, Second Movement (bars 88–89)

Although octatonic tetrachord 4–3 can be traced occasionally it does not appear to be deliberate, however Deane presents octatonic tetrachords 4–18 and 4–13 vertically between all voices (excluding the double bass) in bars 107 and 108 with octatonic tetrachord 4–25 evident in the following bar in the lower strings and octatonic pentad 5–19 in the lower strings in bars 116–118:

EXAMPLE 3.10
Raymond Deane, *Dekatriad*, Second Movement (bars 114–119)

At bar 123, the first violins present octatonic tetrachord 4–12 against octatonic tetrachord 4–18 in the second violins, while the violas present octatonic tetrachord 4–3 horizontally:

EXAMPLE 3.11
Raymond Deane, *Dekatriad*, Second Movement (bars 123–124)

The orchestra sits on octatonic tetrachord 4–26 in bar 131 and the work ends on a sustained G major chord between all voices. Deane writes in the preface to the score that "the final G major chord stands apart from what went before – not a summation as in 'proper' tonal music, but a dismissal".[26]

Irish composer Fergus Johnston (b. 1959) also experimented with octatonicism in his eight variations for string orchestra entitled *Je Goûte le jeu...* (1997).[27] In contrast to the works of Boydell and Deane, octatonicism is central to this work in that the theme providing the basis for the set of variations is constructed from the complete octatonic collection 8–28. The first four pitches are named by the composer in the foreword to the score which reads; "Inspired by and dedicated to Eb–A–C–B"[28] whereas the remaining four pitches of the collection are inversions of these: Eb–A–C–B–Ab–F–F#–D

Johnston's obvious interest in symmetry surfaces immediately in the opening bars of the work where the first four pitches are introduced one by one beginning with the upper strings down to lower strings, and the inversions are presented in the same manner but from lower strings to upper. The complete octatonic collection then appears homophonically between all voices in bar 9:

EXAMPLE 3.12

Fergus Johnston, *Le Goûte le Jeu*... Variation 1(bars 1–9)

The next appearance of the complete octatonic collection is in bar 18 where Johnston marks the end of *Variation 1* with a sustained *ff* chord between all parts.

Symmetry is once again evident from bar 19 where *Variation 2* opens with a melodic solo outlining the complete octatonic collection, alternating between violins 1–3, 4–6 and 7–9. This is followed by the lower strings adopting the solo material in inversion, beginning with the double bass and followed by the celli and violas:

EXAMPLE 3.13

Fergus Johnston, *Le Goûte le jeu…* Variation 2 (bars 19–30)

The development of material based on 8–28 continues for the remainder of *Variation 2* with mirror inversion becoming a feature between bars 33 and 37.

Variation 3 begins at bar 38 with a brief melodic fragment in violins 1–3 outlining octatonic pentad 5–19, however in the following bars this fragment is extended to produce the complete octatonic collection 8–28. At bar 42, violins 4–6 present 8–28 in a similar manner followed by violins 7–9 in the next bar, the violas in bar 44, celli in bar 46 and the double bass in bar 48. All voices build towards a climax using descending octatonic material, however they culminate in non-octatonic homophonic chords in bars 50–51:

EXAMPLE 3.14
Fergus Johnston, *Le Goûte le jeu*...Variation 3 (bars 38–51)

At bar 52, Johnston begins the same process once again, however, in keeping with the symmetrical nature of the piece; he now opens with the octatonic pentad 5–19 in the celli and uses ascending octatonic material rather than descending. On this occasion the homophonic chords (bars 64–65) outline octatonic tetrachord 4–12:

EXAMPLE 3.15

Fergus Johnston, *Le Goûte le jeu...* Variation 3 (bars 52–65)

From bar 66, Johnston presents complete octatonic 8–28 in each voice in the form of a brief melodic fragment. He starts with violins 1–3 and descends by voice to the double bass in bar 70 where, symmetrically he begins to ascend through the voices once again. *Variation 3* concludes on unison C *tremolos* played *ff* in bars 77–79:

EXAMPLE 3.16

Fergus Johnston, *Le Goûte le jeu...* Variation 3 (bars 68–79)

Variation 4 begins at bar 80 with a melodic solo outlining octatonic collection 8–28 in

the cello parts, accompanied by repeated semiquavers in the violins and violas based

on octatonic tetrachord 4–13. This continues until bar 91 where there is a descending

glissando in all voices excluding the double bass, followed by a continuation of the

repeated semiquaver idea in the violins and violas (bar 92), on this occasion outlining

octatonic tetrachord 4–12:

EXAMPLE 3.17

Fergus Johnston, *Le Goûte le jeu...* Variation 4 (bars 76–94)

At bar 96, violins 1–3 adopt the melodic solo based on 8–28 while the remainder of the violins, violas and celli accompany with repeated semiquavers, once again outlining octatonic tetrachord 4–13. Johnston continues to present his octatonic material in a similar manner for the remainder of *Variation 4*.

Variation 5, beginning at bar 121, displays certain aleatoric characteristics where Johnston divides his material into blocks figured A–P, to be performed in "multiple tempi". Octatonicism, however, is still evident as the pitches presented by violins 1–3 outline octatonic hexachord 6–z50, followed by octatonic tetrachord 4–18 in violins

4–6. The violas outline octatonic trichord 3–5, while the pitch material in the cello and double bass parts is constructed from octatonic hexachord 6–z50:

EXAMPLE 3.18
Fergus Johnston, *Le Goûte le jeu*... Variation 5 (bars 1–2)

Variation 6 is also constructed from blocks of material figured A–N. Octatonic tetrachord 4–12 features quite prominently throughout this variation as it provides the basis for blocks A, B, C, D, G and H.

The complete octatonic collection 8–28 appears in violins 1–6 in bar 139 in unison

form, and again in bar 141 in violins 1–3. Violins 1–6 present 8–28 in descending

form in bar 142 while violins 7–9 achieve octatonic septad 7–31. Each group begins a

descending octatonic scale at a different point, against which the lower strings adopt

octatonic tetrachord 4–12:

EXAMPLE 3.19

Fergus Johnston, *Le Goûte le jeu...* Variation 6 (bars 137–143)

Johnston concludes this variation on a descending octatonic scale in violins 7–9 against an ascending octatonic scale in the violas. Aleatoricism is central to *Variations 7* and *8*, however Johnston concludes the work on a *pp* homophonic chord outlining the complete octatonic collection 8–28 for the final time.

Perhaps the main Irish composer who can be associated with the use of octatonicism in his music is Philip Martin (b. 1947). In addition to being a prolific Irish composer of contemporary music, Martin is also a renowned concert pianist. He began his studies in Dublin under Mabel Swainson, but later moved to London having been awarded a scholarship to study both piano and composition at the Royal Academy of Music. Martin studied under a variety of teachers including Franz Reizenstein, Lennox Berkeley and Richard Rodney Bennett. In 1977, Martin made his performance debut at the Royal Festival Hall and the Royal Albert Hall, London. Since then he has performed with numerous orchestras throughout the world. Martin was awarded the UK–US Bicentennial Arts Fellowship in 1981, enabling him to spend a year in America concentrating on both composition and performance; in this year he completed several vocal works.

To date Martin has composed over 150 songs based on various texts, the inspiration for which probably arises from his wife, the soprano Penelope Price Jones. Martin's compositional output includes two Piano Concertos dated 1986 and 1991, a Harp Concerto (1993), Piano Trio (1993) and numerous works for solo piano and various chamber ensembles. Martin now resides in England, however he is very active on the Irish contemporary music scene both as a composer and performer.

Martin's *The Rainbow Comes and Goes* for solo piano was commissioned by the GPA Dublin International Piano Competition in 1988. This work is in four short movements, each of which contains some octatonic material.

Although the first movement of *The Rainbow Comes and Goes* contains several octatonic references, the majority of the material is quite tonal. The first eight bars of the piece are based around the pitches of A major, first appearing in dyad form in the left hand (bars 1–4) outlining intervals including major seconds, perfect fourths, fifths and minor sixths. The melodic idea introduced in the right hand in bar 5 is constructed from the pitch material of bar 3, now in augmented note values and the left hand material of bars 1–4 is repeated against this in bars 5–8. The tonal nature of this movement is reinforced by the dominant references in bars 4 and 8 (E major). At bar 10, Martin begins to introduce some octatonic material, with pentad 5–25 in the right hand against septad 7–31 (the main subset of the octatonic) in the left hand. Septad 7–31 appears again in bars 12–13, however on this occasion it is against hexachord 6–23, with both subsets "resolving" on a 3–11 trichord (F major) at the end of bar 13. Martin uses the same octatonic subsets in bars 15 and 16, once again concluding on a 3–11 trichord – G minor (first implied in bar 2):

EXAMPLE 3.20

Philip Martin, *The Rainbow Comes and Goes*, First Movement (bars 10–16)

The complete octatonic scale 8–28 is evident in bars 18–19 in both hands. Martin presents the octatonic material in the left hand in the form of descending major seconds. The next octatonic reference is in bar 22, where the cadenza passage is constructed from hexachord 6–z49 containing four forms of trichord 3–11. The movement concludes with several sustained chords, beginning with octatonic tetrachord 4–13 in bar 23, 4–27 in bar 25 and finally, 4–12 in bar 27.

The second movement of Martin's piece is based mainly on the cell 5–25. The only octatonic references may be detected in bars 1 and 2 where the final chord in each is octatonic tetrachord 4–27, and in bar 9 where octatonic pentad 5–28 is present. The 3–11 trichord also appears, however this is quite tonal and is not exclusive to the octatonic scale.

Martin's use of octatonic material is integral to the third movement. The opening three bars consist of descending five-note cells, three of which are octatonic (5–25 in bars 1 and 2, 5–16 in bar 3). The first note in each cell forms the following scale: C#–D–D#–E–F#–G–A–B♭–B which is more chromatic than octatonic, however, the cadenza passage in the following bar is completely octatonic. Martin employs several octatonic subsets including tetrachords 4–18, 4–17, 4–10, pentads 5–16 and 5–25 and numerous 3–11 trichords. The pedal notes accompanying the cadenza passage outline the diminished chord E–G–B♭.

This is followed by a rhythmic chordal passage, constructed entirely from octatonic material. Martin employs tetrachords 4–z15 and 4–z29 on several occasions during this passage. Forte describes these subsets as the "most flexible of all tetrachords" adding that 4–z15 "was made for atonal music".[29] Hexachord 6–z50, containing four forms of trichord 3–11 (two major and two minor triads) is also present, as is tetrachord 4–17 which also features both major and minor triads. Other subsets evident in this passage include 4–18, 4–27, 4–26, 4–12, 4–13, 5–25, 5–32 and numerous trichords:

[29] Allen Forte, 1998, op. cit., pp. 15–16.

EXAMPLE 3.21

Philip Martin, *The Rainbow Comes and Goes*, Third Movement (bars 3–5)

Martin continues his use of octatonic material in bars 9 and 10 where pentad 5–25

appears in the left hand, followed by a 6–z49 hexachord between both hands. The

conclusion to this movement is quite chromatic with the lower notes outlining the following scale: G–A♭–B–C–C#–D–E♭–E–F–F#

However, octatonic subsets 4–25, 4–13 and 3–11 may also be detected.

Practically all of the pitch material in Martin's fourth movement is octatonic and may be attributed exclusively to Collection III as defined by Van den Toorn in his writings on Stravinsky.[30] Collection III consists of the following pitches: C#–D–E–F–G–G#–A#–B and is characterised by the fact that it begins on the interval of the minor second. The opening two bars in the right hand, however, are chromatic with the exception of the major second D–E. B♭–B–C–C#–D–E–F–F#

The octatonic tetrachord 4–26 (0,3,5,8) appears against this chromaticism only to be replaced by a 4–14 tetrachord at the end of each bar. From bar 3 Martin also begins to introduce octatonic material in the right hand, beginning with hexachord 6–z49 which contains four forms of trichord 3–11 (two major and two minor triads). This is followed by octatonic pentad 5–16 while the left hand maintains its 4–26 tetrachord, "resolving" upwards to a 3–11 trichord (E major) at the end of the bar:

[30] Peter van den Toorn, 1983, op. cit.

EXAMPLE 3.22
Philip Martin, *The Rainbow Comes and Goes*, Fourth Movement (bars 1–4)

Bar 4 is completely octatonic with Martin introducing hexachord 6–z13, followed by septad 7–31 in the right hand, accompanied by trichords 3–7 and 3–11 in the left hand. Both trichords have strong tonal implications, with 3–7 also a subset of the pentatonic and 3–11 outlining a major triad in this instance. With regard to 7–31, Forte describes this subset as "the primary surrogate of 8–28, since its subsets are the same as those of 8–28 with respect to set-class type (not number)".[31] 6–z13 is also closely related to 8–28 due to the fact that adjacent notes of the octatonic scale form it.

Septad 7–31 and the complete form of the octatonic scale 8–28 feature prominently in the following five bars, with one appearance of hexachord 6–27 in bar 7. The accompanying chords in bars 5 and 7 are also octatonic, with tetrachord 4–26 (0,3,5,8) in bar 4 and 4–27 (0,2,5,8) in bar 7, both of which are closely related:

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[31] Allen Forte. 1998. op. cit., p. 11.

EXAMPLE 3.23

Philip Martin, *The Rainbow Comes and Goes*, Fourth Movement (bars 5–11)

From bar 10, Martin recalls the opening three bars of the movement an octave lower, with only the final chord in bar 12 altered as he substitutes tetrachord 4–17 for trichord 3–11. This is not a significant alteration as subset 4–17 (0,3,4,7) also presents both major and minor triads.

Martin makes use of the complete octatonic scale in each bar from 13–21. Against these complete statements, various octatonic chords are introduced in the left hand, beginning with tetrachord 4–25 (0,2,6,8) in bars 13–15. This tetrachord shares a

relationship with the even whole-tone scale (0,2,4,6,8,10). Octatonic pentad 5–31 is also present in the left hand of bar 15.

Martin introduces pedal notes in bars 16–20, and in keeping with the octatonic nature of this movement, the pedal notes outline the diminished seventh chord E–G–B♭–C♯. Octatonic pentads 5–10, 5–25 and tetrachord 4–13 are also evident in the left hand from bars 16–21:

EXAMPLE 3.24
Philip Martin, *The Rainbow Comes and Goes*, Fourth Movement (bars 16–22)

In bars 20–21 tetrachord 4–13 is presented homophonically rather than in arpeggio form as in the previous bars. The following two bars are constructed from 3–11 trichords. The complete octatonic collection 8–28 and its main subset 7–31 appear once again in the left hand of bars 24–25, followed by a brief linking section, built almost entirely on major and minor seconds in bars 26–27. Bars 1–9 are then recapitulated exactly as before in bars 28–36, followed by the left hand of bars 10–12 or 1–3 being recalled in bars 37–42. Martin employs collection 8–28 once again in the right hand of bars 41–42.

The movement concludes with several reiterations of octatonic tetrachord 4–29 in bars 43 and 44 (in descending arpeggio form) followed by a dramatic ascending *glissando* in the right hand, against the pitch C# in the left hand spanning six octaves and finally climaxing on a non-octatonic *sff* cluster C–C#–D–E–F (pitch-class set 5–3):

EXAMPLE 3.25

Philip Martin, *The Rainbow Comes and Goes*, Fourth Movement (bars 43–46)

Calstone, 10 June 1987

Philip Martin © 1987

Another of Martin's works dealing with octatonicism is his Piano Concerto No. 1 (1986). Martin was the soloist at the premiere in the National Concert Hall, Dublin, in 1987 with the R.T.É. Symphony Orchestra conducted by Albert Rosen.

The opening of the first movement is quite dramatic with the upper strings and piano playing *glissandi* up to *sff* unison pitch E, and the lower strings and majority of the wind section also playing sustained *sf* chords. In the following bar the forceful chords are briefly reduced to *p* as the flute and oboe also enter on the pitch E. A quick *crescendo* to *f* follows in preparation for the return of the original *sf* chord. The piano and xylophone continue with the *sf* and *sff* chords in the following bars, first playing only the pitch E, with F added in the next bar and G added in bar 9, thus forming

octatonic subset 3–2. The piano continues its strong chordal movement with several octatonic references evident. Octatonic tetrachord 4–10 may be detected in bar 10, as can trichord 3–2. Octatonic trichord 3–3 is evident in bar 11, with trichord 3–10 and tetrachord 4–13 in the following bar. Despite the presence of these octatonic subsets, the piano part is primarily chromatic at this point.

At figure **A** (bar 14) the piano begins a repetitive semiquaver pattern arising from octatonic trichord 3–2 (B–C#–D). This figure continues until bar 26 and also features quite prominently at a later stage.

At bar 17 Martin begins a *Chorale* section, with the oboe, clarinet and bassoon parts playing homophonically. The majority of the material in this section is octatonic with the first chord outlined being octatonic tetrachord 4–27. This is a dominant seventh chord in tonal music and is referred to by Forte as the "half-diminished chord".[33] In bar 19, octatonic septad 7–31 is evident for the first time, as is the semiquaver/dotted quaver rhythm that recurs frequently throughout the movement. The sustained notes resolving from 7–31 outline octatonic tetrachord 4–26 (bars 19–21) followed by closely related 4–27 in bars 21–22. Octatonic hexachord 6–27 (the only non-symmetrical octatonic hexachord) is then evident, followed by hexachord 6–30 which is the other extreme in that it is referred to as "the ultra-octatonic hexachord" due to its highly symmetrical nature.[34]

Subset 6–30 resolves to octatonic tetrachord 4–18 in bars 24 and 25, and in the following bar it resolves to trichord 3–2:

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[33] Ibid., p.16.
[34] Ibid., p.13.

At this point the piano abandons its repetitive semiquaver pattern in favour of accented *f* chords, the first of which arises from octatonic trichord 3–5 outlining both the tritone and perfect fourth. Octatonic tetrachord 4–z15 follows, with hexachord 6–

z50 (containing two major and two minor triads) evident in bar 28. Octatonic septad 7–31 appears once again in bar 29 in the piano part, with hexachord 6–30 formed by the strings in bars 28 and 29.

At figure **B** (bar 30) Martin introduces the complete octatonic set 8–28 for the first time, employing Collection III:

EXAMPLE 3.27

Philip Martin, Piano Concerto No. 1, First Movement (bars 28–30)

This octatonic material is repeated by the piano in the following bars, against which

the lower strings adopt the repetitive semiquaver pattern previously employed by the

piano, and the wind section plays a series of sustained chords. Homophonically, octatonic subsets 4–18, 3–11 and 5–16 may be detected, however, horizontally the clarinet presents the complete octatonic scale 8–28, once again derived from Collection III (bars 32–36). The sustained *ff* chord in all parts from bar 36–41 outlines octatonic pentad 5–16, against which the piano begins ascending octatonic movement from bar 38, using both 8–28 and septad 7–31.

At figure **C** (bar 42) the flute, oboe, trumpet and strings all enter in unison presenting octatonic pentad 5–16, against this octatonic septad 7–31 appears in the unison clarinet and horns. The piano continues its strong chordal movement revealing several octatonic sets including 8–28 and 4–17 in bar 43, and 7–31 and 4–17 in bar 45. Complete octatonic collection 8–28 is evident once again from bar 45–53 in the piano particularly, but also in the trumpet, horn, viola and cello parts. Octatonic hexachord 6–z23 is also present at this point in the clarinet, as is octatonic tetrachord 4–3 in the violins:

EXAMPLE 3.28
Philip Martin, Piano Concerto No. 1, First Movement (bars 45–50)

At figure **D** (bar 54) the xylophone, tubular bell and piano all enter with sustained *sf*
pitch E at various registers, joined by the timpani in bar 57. The sustained pitches
form octatonic trichord 3–2 by bar 58, as Martin adds the pitches F# and G. These
strong chords serve to prepare for the piano cadenza that follows.

Octatonic pentad 5–16 is outlined by the left hand of the piano part, in the form of another repetitive semiquaver pattern from bar 59–79. Martin then uses octatonic septad 7–31 and the complete octatonic scale 8–28 in the right hand of the piano from bar 62–74. The oboe and clarinet enter briefly in bars 65–68 with octatonic pentad 5–10.

There are numerous octatonic references throughout the cadenza with 8–28 appearing on several occasions (bars 77–82):

EXAMPLE 3.29
Philip Martin, Piano Concerto No. 1, First Movement (bars 75–82)

Octatonic pentads 5–25, 5–28, 5–31 and 5–32 are also quite prominent, as are octatonic tetrachords 4–26 and 4–27. There are two appearances of octatonic hexachord 6–z49 in bars 92 and 93, and one appearance of octatonic septad 7–31 in bar 94.

The complete octatonic scale 8–28 and its primary subset 7–31 come to the fore once again from bar 98–108. Throughout this passage 8–28 appears in both ascending and descending scalic form, whereas 7–31 is mainly in chordal form:

EXAMPLE 3.30
Philip Martin, Piano Concerto No. 1, First Movement (bars 98–99)

At figure **F** (bar 109) Martin introduces another repetitive rhythmic idea in the brass section, with the double bass playing a syncopated *pizzicato* pattern derived from the complete octatonic set 8–28. The same material is repeated in the following bar with the addition of the clarinet line doubling the trumpets.

In bar 111, the oboes, clarinets and horns combine to produce octatonic hexachord 6–z50, against the *pizzicato* lines of the divided cellos outlining octatonic septad 7–31

and octatonic pentad 5–10. The octatonic development continues in the following bars with the oboe material constructed from octatonic septad 7–31 (bars 112–113) and the horns using octatonic hexachord 6–z50, tetrachord 4–27 and trichord 3–8. Octatonic hexachords 6–27, 6–z23 and 6–z13 are evident in the cello part:

EXAMPLE 3.31
Philip Martin, Piano Concerto No. 1, First Movement (bars 112–114)

In bar 114, the cellos play an ascending scalic pattern outlining octatonic pentad 5–10, against a rhythmic idea in the oboes based on octatonic tetrachord 4–3. In the following bar, Martin employs octatonic tetrachord 4–10 in the oboes and pentad 5–19 in the clarinets and trumpets.

At figure **G** (bar 116), the repetitive rhythmic pattern previously evident at figure **F** is re-introduced in the brass section, once again outlining octatonic set **8–28**. The complete octatonic collection 8–28 continues to feature in the following three bars in the brass section, while the piano re-enters with its original semiquaver pattern derived from octatonic pentad 5–16. At bar 120, the piano also employs the complete 8–28 set against octatonic septad 7–31 in the violins and cellos. Martin continues to use both 7–31 and 8–28 in the piano, violins and cellos until bar 124, against which the vibraphone sounds three octatonic chords – tetrachord 4–12 on two occasions and tetrachord 4–z29 once (bar 122).

From figure **I** (bar 135) the strings, clarinets and trumpets all enter in unison and by bar 138 have achieved octatonic septad 7–31. The piano plays a series of chords against this, based on octatonic tetrachord 4–18, septad 7–31, pentad 5–32 and trichords 3–5 and 3–11. A series of octatonic chords are then evident homophonically, including tetrachord 4–26, trichord 3–11 and hexachord 6–z49 (bar 141).

Octatonic set 8–28 features strongly in the next two sections, beginning in the piano part from figure **J** (bar 141). 8–28 may be detected in each bar until 152 where octatonic septad 7–31 is evident, however 8–28 re-emerges in the piano in bar 155. Other octatonic subsets present in these bars include pentad 5–10 (bars 141–144), tetrachord 4–25 (bar 145), tetrachord 4–3 (bar 146), hexachord 6–27 (bars 151–152) and hexachord 6–z49 (bar 154):

EXAMPLE 3.32
Philip Martin, Piano Concerto No. 1, First Movement (bars 143–155)

At figure **L** (bar 158) a series of octatonic trichords emerge in the muted brass section, including 3–8, 3–11 and 3–5. In the following bar the piano resumes its repetitive semiquaver figure, constructed from octatonic subset 3–2, until bar 169.

From bar 160, Martin introduces a sustained melodic line in the woodwind section. Homophonically these parts indicate octatonic tetrachords 4–27 and 4–18 (bars 160–163), octatonic septad 7–31 (bars 161 and 163) and octatonic hexachord 6–30 in bar 164. The strings then adopt the sustained chords from bar 165, with several octatonic subsets emerging, including pentads 5–16, 5–31 and 5–32, tetrachords 4–17 and 4–12, and trichords 3–3 and 3–10. The remainder of the orchestra becomes involved in bar 168, with several sustained chords over the following bars. In bar 168, octatonic pentad 5–31 and trichord 3–8 are evident, however it is octatonic tetrachord 4–18 that is sustained from figure **M** (bar 169) until bar 173.

The complete octatonic collection 8–28 returns in the piano in bars 174–176 followed by its primary subset 7–31 between all parts in bar 177. The piano begins another repetitive pattern in the left hand from figure **N** (bar 178). This pattern is a syncopated, staccato idea outlining the interval of a minor third (C#–E). From bars 180–183, Martin employs 8–28 once again in the brass section, with septad 7–31 evident in bar 184:

EXAMPLE 3.33

Philip Martin, Piano Concerto No. 1, First Movement (bars 180–186)

The piano continues its minor third pattern in the left hand, with the right hand chords combining to produce octatonic set 8–28 in bars 187–188. The lower strings also adopt the minor third pattern from bar 190; however, the pattern has been altered

slightly at this point. In combination with the brass section in bars 190–191, the lower strings and piano achieve octatonic hexachord 6–z49.

In bar 192, Martin employs 8–28 between all voices once again, and this set continues to feature, mainly in ascending scalic form, in the following bars:

EXAMPLE 3.34

Philip Martin, Piano Concerto No. 1, First Movement (bars 193–195)

Octatonic tetrachord 4–17 is produced homophonically between all voices at figure **P** (bar 196), followed by a series of non-octatonic chords over the next bars.

At figure **Q** (bar 208), the octatonic material begins to emerge once again, with tetrachord 4–17 evident between all parts in bars 208–209. The complete octatonic set 8–28 then comes to the fore in the following two bars.

Octatonic tetrachord 4–27 and pentad 5–16 are evident in the piano in bars 212–213, against a 3–11 trichord in the wind and string lines. The final reference to the octatonic scale in the first movement is in the woodwind parts in bar 217, where tetrachord 4–17 may be found. The movement ends as forcefully as it began: on *sff* unison As in all voices.

This chapter has shown how four Irish composers included octatonic material in their works to varying degrees. However it is clearly not viable to draw useful deductions as to the employment of *specific* octatonic collections across all their works or to pinpoint any relationships between these collections, apart from within certain discrete sections as outlined above. Perhaps a cautious generalisation which might be made (and which must be treated with conjecture) is that Boydell often presents his octatonic statements horizontally, whereas Deane tends to employ octatonic subsets vertically, a fact that emerged clearly in the comparison between the material in Boydell's First String Quartet and Deane's *Dekatriad*. Johnston on the other hand in his *Le Goûte le jeu...* sets out his octatonic material quite clearly in complete statements at the beginning as "thematic" material for variation and concludes persuasively with an 8–28 statement. But whereas these three composers look to the

octatonic for pitch material (often in combination with various other collections), it is apparent that Philip Martin must now be considered the most prominent Irish octatonic composer, as many of his works are based almost entirely on the octatonic collection and its subsets as evidenced by the above analysis of his First Piano Concerto and the proliferation of the complete octatonic set and larger subsets in the fourth movement of his piano piece, *The Rainbow Comes and Goes*. One thing is certain however, Irish composers were clearly attracted (as were so many European composers) to the inherent versatility of the octatonic collection in its interaction with so many other tonal and post-tonal collections.

Chapter 4

Aleatoric Pitch Selection and Quotation Techniques: Gerald Barry and Frank
Corcoran

This chapter firstly explores the influence of quotation techniques on Barry's pitch
selection and then considers the aleatoric techniques used to determine pitch material
in his works and those of Fergus Johnston, Eric Sweeney and in particular in Frank
Corcoran's Piano Trio of 1978.

Gerald Barry is a composer whose style may be described in many ways, the most apt
being unpredictable. He has proved problematic for those who strive to categorise
various artists, mainly due to the fact that he has not conformed to the mainstream
avant-garde of twentieth-century music. On the contrary he has actively rejected
many of the conventions traditionally associated with classical music and deliberately
strives to shock the audience. The composer makes no apology for his unconventional
practices and actually thrives on the unsettling feeling he creates in his listeners. He
comments that "I frequently don't like going in the same direction as everyone else,
and I just like people to be forced and jolted out of their expectations", and also that
he has " a sort of innate desire in [him] which causes [him] to go against things".[1]

Barry's very individual style incorporates theatrical elements, the use of quotation –
drawing from various sources including Bach chorales, Handel operas, Irish
traditional folk tunes and eighteenth century literature and art – and experimentation

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[1] Jocelyn Clarke, "Pleasantly Alienating and Strangely Seductive", *New Music News* (February, 1995),
p. 11. Clarke reinforces these comments in stating that Barry's output is "uniquely consistent in its
willingness to explore possibilities and subvert expectations and, above all, provoke the most extreme
and divergent opinions from both critics and public alike", p. 9.

with aleatoricism. His musical ideas are often applied in an unconventional manner requiring an almost mechanistic virtuosity, with the role of the performer extended to involve histrionics in addition to demanding a very high level of technical skill. Ivan Hewett attempts to sum-up Barry's music in saying that "Barry's pieces are in many ways unknowable; they resist the listener's attempt to 'make sense' of them, and they resist analysis as well. But in another sense they're 'knowable' as few composers are. Each piece by Barry is like a signature in music. It's utterly personal and instantly recognisable".[2]

Barry was born in Co. Clare in 1952 and even as a child was very persistent in his quest for musical knowledge and training. He completed a B.Mus. in University College Dublin in 1973, followed by an MA in 1975. He then began to broaden his horizons studying organ and composition in Amsterdam under Piet Kee and Peter Schat respectively. He spent a considerable period in Cologne (1975–1981) studying composition under Karlheinz Stockhausen (b. 1928) and Mauricio Kagel (b. 1931), interrupted in 1977–1978 with a journey to Vienna to study under Friedrich Cerha. In 1982 Barry returned to Ireland where he was employed as lecturer in composition at University College Cork until 1986 when he was appointed to Aosdána thus providing him some financial security required to pursue an independent compositional career.

Of all of Barry's mentors, Kagel stands out as being most influential, however Barry does acknowledge Stockhausen as being a "great architect in music"[3] and as a result of his time spent studying under Stockhausen he "acquired the ability to build

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[2] Ivan Hewett, "Bob's Your Uncle", *The Musical Times* (April, 1995), p. 201.
[3] Barra O'Seaghdha, "Breathing Space", *Graph* (August, 1998), p. 18. However, he also acknowledges the fact that Stockhausen had no interest in any of his students, but Barry accepted this as he considered Stockhausen "a very interesting person".

structures which wouldn't sag".[4] Kagel's work offered more appeal to Barry even though initially he had no real interest in music theatre, but in order to work under Kagel he "had to manufacture one quickly".[5] The field of music theatre is where Kagel excelled, however this is an area which has been avoided and rejected by many as being irrelevant mainly due to the fact that there are so few opportunities for commissions, or if the works are commissioned they rarely receive more than one performance. Ligeti reflected the opinions of many composers in the late 1960s and early 1970s stating that "I cannot, will not compose a traditional 'opera'; for me the operatic genre is irrelevant today – it belongs to a historical period utterly different from the present compositional situation".[6] However, Kagel was unperturbed and created numerous theatrical pieces where the performer adopts the role of actor as well as instrumentalist, thus placing the actions of the performer on equal par with the sounds they produce.

Match (1964) presents a musical contest between two cellists dressed as table-tennis players, refereed by a percussionist.[7] By comparing the concert performance with a sports event the composer attempts to expose the competitiveness of the classical music tradition. Kagel maintains this humorous element even a quarter of a century later in *March* (1989) for saxophone and harp where he employs a male and female actor who begin the piece completely naked, the act of dressing constituting the performance. Kagel's satirical and even comical approach was welcomed by many, including Barry, as refreshing, but on the other hand was rejected by others. Kagel demonstrates a particular interest in the use of different speech patterns including

[4] Michael Dervan, "Bowers of Bliss…", *An Droichead* (Summer, 1986), pp. 4–6.
[5] Ibid.
[6] Cited in Paul Griffiths, *Modern Music and After* (London: Oxford University Press, 1995), p. 171.
[7] The idea came to Kagel in a dream and a film version also exists.

whispering and shouting, evident in *Palimsestos* (1950) and to a greater extent in *Anagrama* (1955–1958) written for four singers, speaking chorus and eleven players. This composition is based on a Latin text that is utilised in an unconventional manner. The singers and speakers treat the text phonetically rather than placing emphasis on the meaning of the words, while employing a wide variety of vocal techniques. By allocating the letters of the alphabet to specific pitches, Kagel also manages to extract the instrumental material from the text. Throughout the piece the composer explores the extremities which the vocalists and instrumentalists are capable of obtaining.[8]

Kagel's *Pas de Cinq* (1965) is an example of the other extreme where no vocal or instrumental techniques are employed at all. The entire composition comprises of five performers with walking sticks pacing within the boundaries of a pentagon, tapping their sticks at precisely notated intervals. The performance is created by the interaction between the rhythms and the theatrics. Edward Dudley Hughes makes the point that Kagel "challenges the convenient assumptions of smooth developments by introducing bumps and blips into the continuum",[9] however he also notes that this is achieved in a very strict manner with the utmost concern for technical detail. The precise notation of the distance between taps of the sticks in *Pas de Cinq* clearly illustrates this fact.

Kagel also displayed an interest in electronic music, evident in his *Musica para la Torre* (1952). Here the composer distorts various instrumental material through a loudspeaker placed on top of a tubular steel tower. In *Unter Strom* (1969) Kagel

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[8] Vocal effects are also explored in his later composition *Quodlibet* (1988) where the female vocalist is required to speak in a "man's voice", and in other places the composer provides only a general contour rather than actual pitches to be sung.
[9] Edward Dudley Hughes, "The Uncut Version", *The Musical Times* (April, 1994), p. 205.

introduces three performers using an electric fan, a guitar, three amplified sirens and a rubber ball in an electric coffee grinder. Performance on this strange collection of objects is presented in a very formal setting thus preventing the unusual ensemble from being dismissed as a joke.[10]

Another aspect of Kagel's style that influenced Barry is his experimentation with quotation, for example in *Ludwig van* (1969) where the composer extracts Beethoven themes and then reduces and distorts them.[11] Similarly in *Pan* (1985) for piccolo and string quartet, Kagel constructs a main theme based on Papageno's tune in *The Magic Flute* with the added twist of alternating between raising and lowering the fourth note of the scale.

In the last decade Kagel has returned to the more conventional forms of composition and has largely abandoned his extreme radicalism, however he has left an indelible mark on contemporary music particularly noticeable in the work of Gerald Barry. As a result of his time spent studying under Kagel, Barry's compositional output boasts a considerable number of theatrical pieces. The earliest works he recognises include his Piano Concerto and *Things That Gain by Being Painted* both dating from 1977. In Piano Concerto Barry places a hidden pianist within the orchestra, who serves to produce the actual sounds that the soloist mimes. The soloist goes through all of the theatrical motions involved in the performance of a virtuoso part while the orchestral pianist performs the majority of the material. He uses a similar technique in *Things That Gain by Being Painted* for soprano, speaker, cello and piano. This work is based

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[10] This formula of using strange combinations of instruments or non-instruments is also evident in *Staatstheater* (1971) which is a ballet for non-dancers, the musical content consisting of various sounds produced by a selection of household utensils.
[11] A film version also exists.

on passages extracted from the *Pillow Book of Sei Shonagon* who was a tenth century Japanese woman who was "impossibly snobbish".[12] Barry employs the image of a Bunraku puppet (a silhouette behind a partition) to portray Shonagon, who at one point recites the lines of the soprano from behind the screen while the soprano pretends to deliver them.

Other theatrical works include the ballet *Unkrautgarten* (1980)[13], *Décolletage* (1979) for soprano and tape, and the radio play *La Traviata* (1981)[14] which is a parody on Verdi's popular work. However, Barry's best known theatrical works are his two operas *The Intelligence Park* (1981–'87) and *The Triumph of Beauty and Deceit* (1992) the latter of which is described as "an ironic version of Handel's last oratorio *The Triumph of Time and Truth*".[15] Kagel's influence is clearly evident in Barry's settings of the texts for both operas. His work is frequently littered with accents or melismas on weak syllables, and certain words are also broken up unnaturally resulting in the actual meaning of the text being distorted, reminiscent of Kagel's *Anagrama*. One of the reasons for this may be the fact that Barry composed the music independently of the text and then practically forced the libretto to fit his music. Critic David Murray comments that the music of *The Intelligence Park* is "… at least juxtaposed with … [the libretto]".[16] The delivery of the libretto is also quite unconventional with the vocal line of one singer sometimes taken over suddenly by another character. This is Barry's way of dealing with a musical line that strays out of a particular vocalist's range; he simply passes the remainder of the line onto a vocalist who is capable of achieving the required pitch. Barry states that "the way I've set the

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[12] Vincent Deane. "The Music of Gerald Barry", *Soundpost* (June/July, 1981), p. 2.
[13] Written for the Theatre of the City of Bremen, and choreographed by Reinhild Hoffmann.
[14] Entered by Radio Éireann for the Prix Italia.
[15] Jocelyn Clarke, op. cit., p. 10.

words isn't very conventional. If, for instance, I want a character to sing beyond his range I just transfer the part to another singer. I use the singers as mechanical tools".[17]

Barry often requests that the libretto be performed very quickly even if this mean sacrificing the comprehensibility of the words, thus leading to much criticism. On *The Intelligence Park*, critic Paul Driver reports that "one of the main problems … was the inaudibility of 90% of the words, although even on the page the libretto is baffling".[18] The composer comments that "the speeds in my music are absolutely crucial. They are for me as important as the actual music and notes"[19] and also that "I think its important not to understand every word that's being sung. If you want that, then you're better off at a play".[20]

Barry is considered to be one of the leading figures in contemporary music today, however he is quite content to reside in the relative isolation of Ireland. His unique compositional style may be attributed to this situation, mainly due to the fact that Barry has managed to avoid much of the pressure to pursue the techniques of the mainstream avant-garde. In his own words Barry has "kept [himself] pure", however he is concerned "that life is so easy-going that [he] might loose the cutting edge".[21] Having spent a number of years studying abroad, he still finds an attraction to Irish folk music, in particular the driving rhythms behind the music. As with many Irish composers Barry does not quote directly from any of these folk tunes, alternatively he

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[16] *The Financial Times*, July 9, 1990.
[17] *The Times*, July 4, 1990.
[18] *The Irish Times*, July 13, 1990.
[19] Jocelyn Clarke, op. cit., p. 10.
[20] *The Irish Times*, July 13, 1990.
[21] Barra O'Seaghdha, op. cit., p. 17.

distorts the source tune to such an extent that it is no longer recognisable. In his piece for two pianos "Ø" (1979) Barry takes the Irish folk tune "Bonny Kate" and fills in pitches at either side of the original notes:

EXAMPLE 4.1
"Bonny Kate" (Black notes indicate original folk tune, white notes indicate pitches added)

Barry adds a tone above and below each note and in this manner the tune becomes totally absorbed.

Barry frequently adopts another feature characteristic of Irish traditional music, namely heterophonic textures. Examples of unison playing and singing may be seen throughout his compositions, however this technique may also be attributed to the music of Handel where the lines are frequently doubled. Barry recognises the difficulty in performing unison textures, as the singers must be perfectly in tune and the instrumentalists must all employ exact intonation. This idea is fully explored in "Ø", however it is quite an extreme example as both pianos play in unison throughout the entire composition.

Barry's *Chorale 1* (1984), also scored for two pianos, is another instance where the composer employs a unison texture. Both pianos play in unison for the majority of the chorale excluding a brief *pp* section marked *Wienerisch* where the pianos begin a question and answer idea:

EXAMPLE 4.2
Gerald Barry, Chorale No. 1 (page 3)

In both of his operas Barry eschews traditional conventions when writing for this medium. Instead he places the vocal line on equal par with the instrumental line, frequently doubling the solo voice with the instrumental ensemble, sometimes resulting in the singer being drowned out. Barry comments that the reason he has the singers and instrumentalists perform in unison is that he "was nervous that the singers mightn't be in tune, and [he] was determined that they would have to be".[22] The composer acknowledges that his music is often very difficult and he views unison singing and playing as a safe option.

In the mid-1960s and early 1970s a certain group of composers began to reject the serialism and aleatoricism advocated by the Darmstadt school of thought. Their reaction came in the form of the re-introduction of techniques and musical forms central to earlier periods of music. This idea was taken a step further with the integration of excerpts from existing compositions into their newly composed work. The style of these reactionaries was therefore a synthesis of aspects from the past and present, thus representing an opportunity to study time – a subject that has pre-occupied many twentieth century composers over the years. Whereas the minimalists were interested in suspending time, these composers were concerned with the effect created by the juxtaposition of the old and new, the past and present.

Many different reasons have been suggested as to why composers began to use quotation at that particular time. Perhaps following the abundance of complex serial and aleatoric compositions, to which many would find it difficult to relate, this group of composers wanted to provide their audience with some familiar material in

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[22] Ibid., p. 17. Barry further justifies the doubling of his parts in stating that Handel, one of his favourite composers, frequently doubles in his scores.

combination with the new, thus providing a type a buffer against the complexity and resulting in their music becoming more accessible. Michael Hall suggests that the reason for the use of quotation differed from composer to composer and also differed with each work. He provides us with the example of *Eight Songs for a Mad King* (1969) by Peter Maxwell Davies where arias from Handel's *Messiah* are quoted to portray the sorrow of King George III. In contrast Stockhausen's *Kurzwellen mit Beethoven* (1970) which consists of a tape containing continuous excerpts from Beethoven's music with extracts from his letters incorporated into the recording, aims at hearing "with fresh ears musical material that is familiar, "old", performed; and to penetrate and transform it with a contemporary musical consciousness".[23]

Shostakovich's Fifteenth Symphony (1971) is probably one of the most well-known compositions to make use of quotation. Excerpts from Glinka, Wagner and Rossini may be detected, however the most obvious quotation is in the first movement where he misquotes the opening bars of Rossini's *William Tell Overture*. There are no quotations used in the second movement, but the remaining movements incorporate quotations from Wagner and Glinka. Arnold Whittall refers to the Wagner quotations as "more doom-laden motives".[24] Shostakovich appears to have made use of quotation in this satirical manner in order to portray a particular emotion i.e. the bitterness that he was experiencing in anticipation of his impending death.

The composer who developed the quotation technique perhaps more extensively than any other was Bernd Alois Zimmermann (1918–1970). Zimmermann was older than many of the other active composers at the time and therefore did not possess the urge

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[23] Ibid., p. 220.
[24] Arnold Whittall. *Music Since the First World War* (London: Oxford University Press, 1995), p. 87.

to strive constantly for the new, instead he found it easier to re-embrace ideas from the past. Zimmermann, for instance, continued to write for opera into the early 1960s regardless of the fact that the genre was being rejected as insignificant by the majority of his contemporaries.

One of Zimmermann's first compositions to present the old and new within one framework is his opera *Die Soldaten* (1958-1960). This work contains many elements typical of the traditional operatic genre, but also incorporates various electronic sounds on tape. Berg's *Wozzeck* proved an influence on this opera evident in the use of a specific musical form for each scene, e.g. toccata and chaconne. The direct quotations are extracted from Bach's *St. Matthew Passion* and may be found in the second act. Zimmermann constructs a multi-layered structure in this act as the drama heightens. These layers include two Bach chorales; *Wenn ich einmal soll scheiden* played by lower brass, and *Komm, Gott Schöpfer, heiliger Geist* played by the trumpets. Other layers consist of the *Dies Irae* in the organ part and two stage ensembles performing marches in different tempi. Zimmermann's quotations in this instance are employed for dramatic effect.[25]

Zimmermann takes the quotation technique a step further in his orchestral piece *Musique pour les soupres du roi Ubu* (1966) which he constructs entirely from quotations from each of the different eras in music history. Paul Griffiths describes it as "an unruly banquet of musical memories".[26] He continues to develop the use of quotation in his *Requiem for a Young Poet* (1967-1969) where he introduces

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[25] Other compositions which feature a juxtaposition of the old and new include Zimmermann's *Monologue* for two pianos (1960-1964) where quotations from Bach and Messiaen may be detected, and his piano trio *Presence* (1961) where he uses quotations from Bach and Prokofiev.

quotations from verbal texts in combination with musical quotations. His spoken quotations are extracted from various speeches made by different political leaders including Hitler, Stalin and Churchill, and also from the work of three young poets who committed suicide – Vladimir Mayakovsky, Sergei Yesenin and Konrad Bayer. Zimmermann's idea was to present two different perspectives on the history of Europe between 1920 and 1970, the first represented by the political leaders and the second by the reflections of the young poets. The musical quotations are taken from diverse sources including Beethoven, Wagner, Messiaen and the Beatles.[27]

Zimmermann defends his use of quotation by explaining that "one cannot avoid observing that we live in harmony with a huge diversity of culture from the most varied periods; that we exist simultaneously on many different levels of time and experience, most of which are neither connected with one another, nor do they appear to derive from one another. And yet, let's be quite honest we feel at home in this network of countless tangled threads".[28] His preoccupation with time, is perhaps further reinforced in his frequent use of quotation from the work of Messiaen.

An interesting point about Zimmermann's use of quotation is the fact that he viewed the material that he quoted as equally important and authentic as his own newly composed material. He felt that both sources of material were necessary to achieve the required effect in his work. Peter Maxwell Davies, on the other hand, did not recognise quotation as an integral part of his work, but rather as a means of contributing to a particular atmosphere of emotion. Zimmermann eventually lost the

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[26] Paul Griffiths, op. cit., p. 163.
[27] Zimmermann scored this work on a very large scale for soloists, speakers, three choirs, jazz band and symphony orchestra. The jazz band representing the 'new' being incorporated into a fairly traditional ensemble.

desire to manipulate music from the past or present and, as with the young poets, ended his own life.

Luciano Berio (b. 1925) continued the development of the quotation technique after Zimmermann. In his *Sinfonia* (1968) for eight voices and orchestra, Berio not only uses verbal and musical quotations but also bases the third movement on the *Scherzo* from Mahler's Second Symphony. Berio compares the *Scherzo* to "a skeleton that often re-emerges fully fleshed out, then disappears, then comes back again....it's never alone: it's accompanied throughout by the 'history of music' that it itself recalls for me".[29] The "history of music" referred to by Berio represents his incorporation of quotations from Bach, Beethoven, Debussy, Ravel, Schoenberg, Stockhausen etc. however, despite the broad range of quotations, Mahler's *Scherzo* remains central to the entire movement. Berio explains that the quotations "appear, disappear, pursue their own courses, return to the Mahler, cross paths, transform themselves into the Mahler or hide behind it".[30]

The verbal quotations, as with the musical quotations, are extracted from a wide range of sources. Berio constructs these quotations from a series of historical and political events including the assassination of Martin Luther King and the student demonstrations in Paris, both of which occurred in the year that *Sinfonia* was composed. The quotations take the form of extracts from speeches and slogans used

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[28] Ibid., p. 163.
[29] Michael Hall, op. cit., p. 229.
[30] Ibid., p. 229.

in Paris during the riots. The entire second movement is an elegy for Martin Luther King, the material of which returns in the final movement.[31]

Gerald Barry's recycling or quotation of material, both from his own and other composers' work is central to his compositional process. He recognises a certain responsibility to the composers from whom he is borrowing and states that "if you borrow material, the only obligation on you is to match the original, either by shedding light on it in some unexpected way or by showing it in a new light. You have an absolute duty to produce something which is as vivid in its own way as the original".[32] A sense of unity is achieved between his various compositions through the recycling of material. The same material may appear in several different compositions in a different guise on each occasion. Anthony Bye comments that "like Handel, Barry feels quite free to use his musical material in a number of wildly different contexts".[33]

Barry's opera *The Intelligence Park* (1983–1987) in particular has provided material, both musical and non-musical, for numerous works including his *Four Chorales* (1984) for two pianos. Each chorale is preceded by a different quotation from the libretto of the opera, for example, before the first chorale Barry quotes from the Prelude to Act 1, here entitled *Father's Beget*.[34] In keeping with the aggressive nature of the libretto, the piece begins with strong *fff* chords in the first piano, later reinforced by the unison entry of the second piano.

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[31] Berio also uses quotations from Levi-Strauss' *Le cru et le cruic* (The raw and the cooked) – a study on the beginnings of myth, and Samuel Beckett's novel *The Unnamable*.
[32] Jocelyn Clarke, op. cit., p.11.
[33] Anthony Bye, op. cit., p. 499.
[34] "Father's beget, and so must make begetting the stiff and piercing axle of the world. A curse on fathers and on fathering! Amen! A trumpet blast against the monstrous regiment of fathers!".

Barry not only quotes from the libretto but also adopts some of the original pitches from the opera. These pitches are evident in the inner voice of the piano parts bracketed by two other pitches thus forming homophonic sonorities without bar-lines to punctuate the musical line:

EXAMPLE 4.3
Gerald Barry, Chorale No. 1 (page 1)

In direct contrast, the final chorale is preceded by the phrase; "Cries from certain haunted cottages", and once again capturing the eerie atmosphere of the quotation this brief chorale employs a very limited dynamic range *pp–ppp* and a slow ♩ = 40 tempo.

Further examples of Barry's use of quotation include the title of his piano piece *Swinging Tripes and Trillibubkins* (1986) which is taken from the libretto of the opera, as is the title of his instrumental work *Bob* (1989) which is an anacronym for the "*Bowre of Blisse*".[35] The instrumental work *Of Queen's Gardens* (1986) employs a similar instrumental ensemble as the opera.

Several of Barry's other compositions provide the pitch material for various sections of his second opera *The Triumph of Beauty and Deceit* (1992). The aria for *Deceit* is constructed from the pitches of *Carol* (1986), and similarly, *Pleasure's Credo* is derived from the piano work *Triorchic Blues* (1991). However, the pitch material of the second opera also provides the basis for later works including *Flamboys* (1992) which is based on the material used to characterise *Time*. Barry's graphically titled work for two pianos "Ø" (1979) includes a group of pitches derived from the Irish traditional folk tune "Bonny Kate". These pitches may also be detected in *What the Frog Said* (1984) for soprano, bass and instrumental ensemble, the piano piece *Sur les Pointes* (1981), and the ballet *Unkrautgarten* (1980). Practically all of the material in *Unkrautgarten* is derived from the ensemble piece " _____ "[36] and "Ø" (both dating from 1979) the most prominent being "Ø" as it provides the material for four of the ten sections constituting the ballet. The piano piece *Au Milieu* (1981)[37] is also based on " _____ ".

All of the above are examples of quotation from the composers own work, however Barry does not limit himself to using only his own material, he also frequently quotes from other composers' work. Barry quotes from Tchaikovsky's First Piano Concerto

[35] Original quotation from Spenser's *The Faerie Queene*.
[36] First performed on 24 February 1980.

in his own Piano Concerto (1977), and *Chevaux de Frise* (1988)[38] is based on the Elizabethan song "Like as the Sun" by Patrick Mando.

Barry, in collaboration with the librettist Vincent Deane, originally intended that his opera *The Intelligence Park* would be constructed entirely of material quoted from other compositions and works. Deane appears to have achieved this to the satisfaction of the composer as Barry comments that "the libretto is a kaleidoscope of borrowings which he has welded into something of his own".[39] With regard to the music, Barry quotes from various sources including works by Thomas Arne, John Dowland, Buxtehude and Georg Friedrich Handel, however as with his use of Irish folk music, the original extracts are totally absorbed and become practically unrecognisable.

The method the composer applies when transforming the source material is quite similar in each case. In "Ø", as discussed above, Barry integrates the Irish folk tune "Bonny Kate" by inserting pitches a tone above and below the original notes. Similarly in Act 1 of the opera Barry incorporates material based on *Water Parted* by Thomas Arne, and in this case he places two pitches in between each of Arne's notes. Later in the opera Barry employs certain pitches derived from Bach chorales, more accurately he extracts the passing notes from the chorale harmonies and in this manner the source once again becomes totally obscured.

Barry also recycles material within the opera, for instance, the rantings of the magistrate Cramer in Act I are then given to his daughter in her scene of madness in

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[37] First performed March 1981 by Herbert Henck.
[38] First performed in August 1988 at the BBC Promenade concerts, Royal Albert Hall, Ulster Orchestra.
[39] Adrian Jack, "Unspeakable Practices", *Music Ireland* (July/August 1990), p. 8.

Act III. The composer comments that he "thought it was simply too good to waste".[40]
Similarly, the interlude based on Buxtehude's lament, which originally appears before
Serafino's first aria, is also in evidence after the eclipse in Act III, and again to
accompany Serafino off-stage. Finally, the sequence of chords used to accompany
Paradies' emotional collapse at the end of Act II also appears after Cramer's physical
collapse in Act III. Adrian Jack observes that "there are no motifs associated with
characters or ideas, but entire musical passages are sometimes recycled as appropriate
to the dramatic situation".[41]

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Another feature of Barry's style is his interest in aleatoricism. Aleatoric music may
be defined as "music in which the composer deliberately makes room for chance
occurrences or choices by performers"[42] or "music where the traditional control by the
composer over various aspects of the piece is relaxed".[43]   However, the term
"aleatoricism" in music is now generally accepted as a specific reference to a
twentieth-century technique. In addition to referring to the role of the performer, it
may also refer to the compositional process where random procedures are used to
create the composition in the first place. The term "aleatoric" gives rise to several
other terms including "chance" and "indeterminacy". It is debatable whether there is
a distinction between these terms, however John Cage (b. 1912) attempted to define
both terms in his lecture of 1958 entitled *Indeterminacy*. He uses "chance" to refer to

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[40] Ibid., p. 9.
[41] Ibid., p. 9.
[42] Paul Griffiths, *The Thames and Hudson Dictionary of Twentieth Century Music* (London: Thames and Hudson, 1986, repr. 1996), p. 17.
[43] Joel Lester, *Analytic Approaches to Twentieth Century Music* (London: Norton, 1989), pp. 295–296.

a random procedure in the compositional process, and "indeterminacy" to refer to the flexibility of a piece to be performed in many different ways on each occasion.[44]

Cage began to experiment with unconventional sound in his *Imaginary Landscapes* (dating from 1939–1952) where he employed objects such as turntables rotating at different speeds, buzzers, microphones etc. This resulted in perhaps what may be considered a natural progression to aleatoricism. *Imaginary Landscapes No. 4* (1951) is scored for twelve radios, with the content determined by the programming at the time and location of the performance. In the following year Cage wrote his *Living Room Music* for percussion and speech, where the performer is allowed to choose the objects on which the percussion part should be performed. Gradually Cage began to surrender more and more control over both the composition and performance of his work. He believed that the composer should "give up the desire to control sound, clear his mind of music, and set about discovering means to let the sounds be themselves rather than vehicles for man-made theories or expressions of human sentiments".[45]

Music of Changes (1951) represents the culmination of the above ideas. This piece is written for a specific instrument – the piano – however, all aspects of musical structure, i.e. pitch, dynamics, tempo etc. are determined using charts based on the ancient Chinese book of prophecy *I Ching*. Similarly, in *Music for Piano* (1952–'56) the pitches are chosen by following the imperfections on a piece of paper. Cage pushes his philosophies to the extreme in his *4' 33"* (1952) where the three-movement work for any number of performers consists of the performers remaining silent for the

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[44] This is discussed in greater detail in James Pritchett, *The Music of John Cage* (Cambridge: Cambridge University Press, 1996), pp. 107–109.

specified duration, the soundscape constituting the performance, which would undoubtedly differ on each occasion. Paul Griffiths remarks that *"4' 33"* is music reduced to nothing, and nothing raised to music. It cannot be heard, and is heard anywhere by anyone at any time. It is the extinction of thought, and has provoked more thought than any other music of the second half of the twentieth century".[46] Morgan observes the fact that this work brought Cage to a crossroads with regard to composition. He comments that "either he could give up composing entirely, on the grounds that if all sounds can be viewed as music, musical 'composition' is hardly necessary – or he could devise methods for preserving the activity of composition (and performance) as redefined by this conception of radical intentionlessness".[47] However, Cage took another step forward and began to experiment with graphic notation where various graphic indications are interpreted freely by the performers, evident in his *Concert for Piano and Orchestra* (1958). While the score of this work is visually intriguing, the musical indications are quite vague thus allowing the performers a considerable amount of freedom.

The music and philosophies of Cage exercised a particular appeal for many of his American counterparts including Feldman and Brown, however his influence also spread to Europe attracting composers such as Stockhausen and Boulez.

Stockhausen's first aleatoric work was his *Klavierstück XI* (1956). This piece is constructed from nineteen separate sections that may be performed in any order, with a choice of six tempi, six dynamic levels, and six modes of attack. The piece reaches a conclusion when any section has been performed three times. *Zyklus* (1959) for solo

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[45] Robert P. Morgan, *Twentieth Century Music* (New York: Norton, 1991), p. 362.
[46] Paul Griffiths, op. cit., p. 28.

percussionist is another aleatoric work. In this instance the score may be read forward or upside down, in addition to the performer having the freedom to begin at any point in the score. In later works Stockhausen requires the performers to improvise based on some general instructions and material attributed to himself and others, including Beethoven. The most extreme of these improvisatory works is perhaps *Aus den sieben Tagen* (1968) where the performers improvise freely on verbal texts. Stockhausen describes this as "music that as much as possible comes purely from intuition, which in the case of a group of intuitively playing musicians, due to their mutual 'feedback', is qualitatively more than the sum of their individual 'ideas'".[48] In the '70s Stockhausen reverted back to more traditional compositional structures, evident in *Mantra* (1970) which is notated precisely.

Boulez is another European composer to adopt aleatoric aspects, first evident in his Piano Sonata No. 3 (1957). Within this piece the performer may choose several different routes to follow based on separate units, each of which can only appear on one occasion throughout the performance. *Structures II* (1956–1961) for two pianos contains an extra movement which may or may not be inserted into the work, depending on the preference of the performer. This movement, however, does not effect the overall structure of the work; it is simply a brief interruption. Other composers to experiment with aleatoricism include Berio, Henze, Pousseur and Lutoslawski, however it was not until later that the concept was to reach Ireland.

Barry's graphically titled ensemble piece "_____" (1979) displays certain aleatoric tendencies, the most obvious being the fact that the work may be performed by any

[47] Robert P. Morgan, op. cit., p. 363.
[48] Ibid., p. 374.

combination of instruments. The method of pitch selection used by the composer is also aleatoric in that the pitch material is derived from an article discussing the viol music of John Jenkins. Barry extracted his pitches from a letter-coded chart representing the locations of different manuscripts, and in this manner also selected the duration of the pitches.

The pitch material of the piano piece *Au Milieu* (1980) is also derived from Jenkins manuscript sources, not surprisingly as this piece is based on "_____". On this occasion, Barry constructs a long sequence of scales from his chosen pitches and harmonises them in various ways, including a sudden juxtaposition with a Viennese waltz. Ivan Hewett comments that "music produced by system should be pure, but Barry's music is full of impurities. Just why is it that the ribbons of scales endlessly spewed out in *Au Milieu* should suddenly, without warning, be contaminated by a C# major harmony, which appears once only? What system could produce such a weird anomaly?"[49] Another work to display Barry's use of aleatoric pitch selection is his opera *The Intelligence Park* where he draws on the shipping forecast of BBC Radio 4 in combination with Bach chorale harmonies to construct the pitches for *Paradies* aria *Blooming Youthful*. Bracefield and Volans explain the process used by Barry; "all Barry did was to write out the words of the forecast, use 'musical' letters such as A or E or numbers (1 = unison, 7 = diminished seventh) to trigger an appropriate chord from his page of Bach derivations and fill in chords to the left or right of the triggered chord on this page to accompany 'unmusical' letters".[50]

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[49] Ivan Hewett, op. cit., p. 201. Hewett goes on to discuss the instrumental work *Bob* (1989) where the distance between the canonic entries of the two clarinets is first nine bars, then six bars, and later fifteen bars. He comments that "it's bad enough to have canons running riot at inordinate length ... but then to discover that there's chaos within them ... is really too much".

[50] Hilary Bracefield and Kevin Volans, "A Constant State of Surprise: Gerald Barry and *The Intelligence Park*", *Contact* xxxi (1987), p. 16. The process is discussed in further detail in this article.

Fergus Johnston (1959) is another Irish composer to experiment with aleatoricism. His work for strings *Je Goûte le jeu...* (1997) is made up of a set of eight variations, of which 5–8 are "unpulsed". In variation 5, Johnston divides his material into blocks lettered A–P where the pitch indications are quite vague and "multiple tempi" are indicated:

EXAMPLE 4.4
Fergus Johnston, *Le Goûte le jeu...* Variation 5

In the preface to the score Johnston gives the following instructions for Variation 6:

"synchronous playing should be avoided, and the repeated bars should be used as 'collection points', before moving on. Moving on from each point of repeat can be lead by a previously designated player (or a number of previously designated players: there's no reason why any one player should be a dictator!) or can be spontaneously achieved by any player deciding its time to move on, in which case the rule is that the

other players must follow once the departure has been made".[51] Once again, in this variation, Johnston divides his material into blocks or "events" lettered A–N, and allows the performers considerable freedom in their interpretation of his material.

The following instructions apply to Variation 7: "each event is represented by a letter, and each event should be allowed to occur in its own space; the player of the next event decides on how much space the previous event has by choosing when to play. Where events overlap, e.g. an entry in another part during a glissando, players should co-ordinate carefully according to their cues". The rests marked in the score represent an event occurring in another part:

[51] Unpublished score, Contemporary Music Centre, Dublin.

EXAMPLE 4.5
Fergus Johnston, *Le Goûte le jeu...* Variation 7

As with the previous variations, Variation 8 is also divided into events, however, this variation is quite brief with all parts remaining *ppp* throughout.

EXAMPLE 4.6
Fergus Johnston, *Le Goûte le jeu...* Variation 8

"*Le goûte le jeu...*"

Eric Sweeney (b. 1948) is primarily regarded as a minimalist composer, however his compositional style frequently incorporates aleatoric aspects. He began to experiment with aleatoricism before entering his minimalist stage, evident in the serial work *Circles* (1985). This composition is written for string orchestra and a trio of violins, however the ensemble may be substituted for a group of wind instruments. Sweeney frequently avoids employing specific instrumental effects and does not seek a precise instrumental timbre, thus allowing for flexibility in the choice of instrumentation for many of his works.

The second movement of *Circles* is canonic and the individual players, or groups of players, make their entrances on cue from the conductor. Sweeney restricts the role of the conductor to cueing in instrumentalists, maintaining a steady pulse throughout the composition, and deciding when particular ideas have been explored thoroughly before indicating a move onto the next pattern. The traditional interpretational role of the conductor is abandoned. In the second movement, Sweeney allows the instrumentalists the freedom to play at whatever octave is convenient and does not specify the number of repetitions of each pattern. He also designates certain "marking time" bars while waiting for the other instrumentalists to catch up before progressing onwards. This catch-up idea is evident in many of his compositions.

Sweeney's *Dance Music* (1989) series also displays his aleatoric preferences. *Dance Music III*[52] is scored for a mixture of strings, woodwind and brass, however it may also be performed by a multiple keyboard ensemble. There are seven lines of music that may be divided between a varying number of instruments. The players have the freedom to move from one line to another at will, or by pre-arrangement. Extra instruments may also be added, with the option of performing the main themes in canon, either in the same metre or by employing additive or subtractive rhythms. The number of repetitions of each bar of the canon is not specified, and the additional players also have the freedom to move from one part to another at will.

Music for a Festival (1992) is another aleatoric composition, consisting of a series of musical "blocks" that may be performed in various sequences, thus allowing the performer considerable creative freedom. This element of freedom is also exercised

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[52] This work was originally intended for Sweeney's degree students as an exercise in the development of improvisational skills, and was to be played by whatever instruments were available at the time.

in the solo voice and synthesiser version of *The Lament of Deirdre* (1989) where the pauses in the vocal line may be filled in by improvisational passages in the keyboard part, based on previous motifs.[53]

Sweeney recognises the fact that there are certain risks associated with surrendering elements of control to the performers, in that the performer may not exercise any degree of sensitivity towards the chosen style of the composer, or give an accurate performance of the material. However, he regards the risks as being "historically justified" and comments that "too often composer and performer have regarded each other with suspicion and failed to see that in their mutual dependence lies the balance of creative musical endeavour".[54]

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[53] In the version for unaccompanied choir, Sweeney points out that "these choices, for practical reasons, are re-assigned to the composer and so the pauses in the vocal line are allotted precise time values". Eric Sweeney, "A Folio of Original Composition" (unpublished DPhil diss.: University of Ulster, 1993), p. 15.

[54] Ibid., p. 10.

Certain aleatoric elements are also evident in the work of Irish composer Frank Corcoran. Born in Tipperary in 1944, he began his musical education in Dublin under A. J. Potter (1918–1980) and later progressed on to Maynooth, Rome and Berlin where he studied under the German composer Boris Blacher (1903–1975). He was a music inspector with the Department of Education from 1971–1979, following which he was awarded a composition fellowship from the Berlin Künstlerprogramm. He was guest professor in West Berlin in 1981, professor of music in Stuttgart in 1982 and since 1983 has held the position of professor of composition and theory at the Staatliche Hochschule für Musik und Darstellende Kunst in Hamburg.

Corcoran has spent the majority of his compositional career in Germany and still resides in Hamburg, however his Irish heritage has not been spurned. He was a founder member of both the Association of Irish Composers and the Dublin Festival of Twentieth Century Music, and was also a committee member of the Music Association of Ireland. With the aid of "Irish Composer Trust" he established his own "Self Help 101" label in 1978, under which he released an LP of his music entitled *Collection One*. He is also a member of Aosdána since 1983. He boasts a substantial repertoire including four symphonies, two string quartets, three wind quintets, two chamber symphonies, one opera and numerous other works including those for tape. [55]

With regard to his influences and philosophies Corcoran comments that "Few giants of our isles helped me, rather Schoenberg, Berg Webern, Lutoslawski, Ligeti. I came

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[55] Further information on Corcoran may be found in: Axel Klein, *Die Musik Irlands im 20. Jahrhundert* (Hildesheim: Georg Olms Verlag, 1996), pp. 378–380, Annette Kreutziger-Herr, "Frank Corcoran", *Komponisten der Gegenwart*. Walter-Wolfgang Sparrer and Hans-Werner Heister (eds.), (Munich, edition text + kritik, 1992), pp. 1–12, John Page, "A post-war 'Irish' Symphony: Frank Corcoran's Symphony No. 2", *Irish Musical Studies* vii, Gareth Cox and Axel Klein (eds.), (at press), pp. 134–149

late to art-music; childhood soundscapes live on … I am a passionate believer in 'Irish' dream-landscape, two languages, polyphony of history, not ideology or programme. No Irish composer has yet dealt adequately with our past. The way forward – newest forms and techniques (for me especially macro-counterpoint) – is the way back to deepest human experiences".[56] He expresses his reservations and possible solutions to working with traditional Irish music in saying that "the problem with working with Irish traditional material is how to avoid sounding like film music … you would have to take a completely different approach. First of all in the studio you could do very interesting things handling traditional music electronically. Even tuning – the whole quartertonal and microtonal business – that could be explored … you could have a Steve Reich type minimal approach to Irish music".[57] This is the path taken by Sweeney.[58]

Piano Trio (1978)[59] is aleatoric in the sense that every performance will be different due to the fact that Corcoran has structured each of the atonal lines independently of the others, displaying different time signatures, tempo markings and also different numbers of bars. He uses waiting points at the end of several of the sections where an indication is given for the player/players to wait until the other instrumentalist has caught-up before progressing onto the next section.

and Gareth Cox, "Frank Corcoran", *The New Grove Dictionary of Music and Musicians* vi, ed. Stanley Sadie (London and New York: Macmillan, 2nd edn. 2001), p. 449.
[56] Contemporary Music Centre, Dublin, composer profile leaflet on Frank Corcoran. Further John Page observes that "his intense fascination with the past evokes a pre-historical Irish psyche, the manifestation of which is vital for his music". John Page, op. cit., p. 139.
[57] Bernard Harris "From a Conversation with Frank Corcoran", *Soundpost* No. 18 (February/March 1984)
[58] See chapter three of this thesis.
[59] Commissioned by the Dublin Festival of Twentieth Century Music in 1978.

This work is also recognised as the first composition displaying Corcoran's "macro-counterpoint" ideas.[60] His macro-contrapuntal treatment refers to layers of sound as opposed to the traditional contrapuntal technique of working with individual pitches. Each of Corcoran's "layers" operates independently of the others, therefore, when subjected to macro-contrapuntal treatment, the effect is extremely complex and, due to the atonality of each independent layer, the aural implications are quite dissonant.

The composition opens with the left hand of the piano playing at a very low register, however, this layer continues unaccompanied for just three bars until the right hand enters in bar 4. Both layers are present for the remainder of the introductory section. The cello enters at figure **A**, thus contributing an additional layer to the macro-contrapuntal texture. The piano has 37 bars of material whereas the cello has 33, however, Corcoran does indicate that both instruments should wait at the end of the section for the other to catch-up, if necessary, before progressing onto the next section.

The fourth and final layer is added at figure **B** with the entry of the violin. Even-though the cello does rest for the first three bars; the full texture is achieved in the following bars. Once again the number of bars differs for each layer, however it is the cello that appears to have more material than the other layers, with 43 bars as opposed to 39 in the piano and 30 in the violin. It is notable that due to the different tempi markings for the performers, the cello may not necessarily finish after the other instruments on each occasion.

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[60] John Page, op. cit., p. 139, Annette Kreutziger-Herr, op. cit., p. 2, Axel Klein, op.cit., p. 379.

Corcoran gradually added each layer from the beginning of the composition until he achieved maximum density in section **B**; however, he begins the reduction of the layers once again from figure **C**. This is a brief section where the right hand of the piano does not feature at all, and the left hand enters for one bar only. The remainder of the section is a duo between the violin and cello, with 21 bars of material for the violin and 11 bars for the cello, therefore it is possible that the violin may be solo for the end of the section depending on the particular performance.

Section **D** is also a duo between the violin and cello with no piano entry at all. The violin has significantly more material than the cello, with 34 bars as opposed to 17, and therefore it is quite likely that the violin will be solo for the end of the section. Corcoran indicates that the cello should wait for the violin before progressing onto section **E**.

The texture is reduced even further in the following section after the opening bars where the piano makes an appearance for one bar and the violin for two bars. The remainder of the section is a cello solo as Corcoran reverts back to a single layer once again.

Section **F** is extremely brief (six bars) but follows the same format as the previous section, with the piano entering for only one bar and the violin also entering for one bar (as opposed to two in section **E**), and the cello continuing solo for the remaining bars.

The layers change again at figure **G**, with the cello appearing for two bars before a *tacet* marking is evident. The piano has two bars of monodic material before resting for a further three bars and then entering into a duo with the violin, however, the violin also reaches a *tacet* marking after 27 bars and the piano continues solo for the remainder of the section. The piano material is quite fragmented from bars 30–46 with scarcely any pitches sounding against each other:

EXAMPLE 4.7
Frank Corcoran, *Piano Trio*, Section G Piano (bars 37–46)

Section **H** is also a duo between the violin and piano, however, the texture remains quite sparse as each layer is interspersed with rests and the violin plays *pizzicato*.

Corcoran reintroduces all layers once again at figure **J**, however, as with the previous section, the material is really quite fragmented. The violin finishes after eight bars of

material, followed by the cello at 14 bars and finally the left hand of the piano concludes with a fragmented statement of the opening pitches:

EXAMPLE 4.8
Frank Corcoran, *Piano Trio*, Section J Piano (bars 6–17)

The following is a summary of the macro-contrapuntal textures:

Introduction:	Piano (LH)	(bars 1–20)
	Piano (RH)	(bar 4–20)
Section A:	Piano (Both hands)	(bars 1–37)
	Cello	(bars 1–33)
Section B:	Piano (Both hands)	(bars 1–39)
	Cello	(bars 1–43)
	Violin	(bars 1–30)

Section C:	Piano (LH)	(bar 1 only)
	Cello	(bars 1–11)
	Violin	(bars 1–21)
Section D:	Cello	(bars 1–17)
	Violin	(bars 1–34)
Section E:	Piano	(bar 1 only)
	Violin	(bars 1–2 only)
	Cello	(bars 1–24)
Section F:	Piano	(bar 1 only)
	Violin	(bar 1 only)
	Cello	(bars 1–6)
Section G:	Piano	(bars 1–46)
	Violin	(bars 1–27)
	Cello	(bars 1–2 only)
Section H:	Piano	(bars 1–15)
	Violin	(bars 1–16)
Section J:	Piano (mainly LH)	(bars 1–17)
	Cello	(bars 1–14)
	Violin	(bars 1–8)

Pitch centricity is a feature of this composition as is the use of prominent interval classes.[61] The most prevalent interval is the tritone, ic6. This dyad is not only evident horizontally in the individual lines, but is also outlined in the central pitches of the various sections. The central pitches in the introductory section are A and A♭, with the pitch A evident in bars 1–4 followed by A♭ in bar 5, only to return to A again in bars 6–11. A♭ and its enharmonic equivalent G# features in bars 12–13 and 15–19, but A returns once again for the final bar of the section.

Ic6 is not outlined in the pitch centricity of this section, however, it is quite prominent when examining the interval-classes, and in fact ic6 is evident in 14 bars out of the 20

that constitute the introduction. In the opening bars ic6 dyads (a) A–E♭, (b) D–G#

and (c) A♭–D are established as the central pitch material:

EXAMPLE 4.9
Frank Corcoran, *Piano Trio*, **Introduction** Piano (bars 1–9)

ic6 is then ubiquitous in bars 10 through 20 and the other most prominent intervals are
ic1 and 2:

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[61] Annette Kreutziger-Herr refers to pitch centricity as "tonalen Zentren", op. cit., p. 5.

EXAMPLE 4.10
Frank Corcoran, *Piano Trio*, Section A Piano (bars 10–19)

The cello enters at figure **A** and, as in the introduction, the pitch A clearly emerges as a central pitch. Ab also features quite frequently, however, it is the alternation of centricity between A and Eb that is most significant as it outlines ic6 – the prominent interval-class in this section – and also A–Eb is the main tritone appearing throughout the composition. The pitch A is evident in bars 1–5 (from letter **A**) followed by Eb in bar 6. A appears again in bars 7–8 to be replaced by Eb again in bars 10–11. Ab is most prominent in bars 12–13 with Eb entering in bar 14. This alternation of pitch centricity between A and Eb, and also between Ab and Eb, continues for the remainder of the section:

EXAMPLE 4.11

Frank Corcoran, *Piano Trio*, Section **A** Cello (bars 1–12)

The cello material is based almost entirely on ic6 with A–E♭ most prevalent, however, tritones G#–D (bar 3), B–F (bar 17) and B♭–E (bar 32) also appear. Once again ic1 and 2 are also quite prominent.

The central pitches in the piano part are also A–E♭ throughout section A. The pitch A appears in bars 2–3, 5, and 7–15 followed by E♭ in bar 16 and returning to A in bars 17–22. E♭ is central again in bars 23–24, replaced by A in bars 25, 26 and 28. E♭ is central in bars 29–30 followed by A again in bars 30–33. E♭ returns in the next bar, but the section ends with the pitch A present in the final two bars.

The tritone features most prominently once again in the interval structure of the piano material and it is perhaps self-evident that A–E♭ dominates. Ic6 C–G♭ appears in bars 1–2 with D–G# and E♭–A obvious in bar 8. Ic6 (a) E♭–A may be detected in bars 10–15 with (b) A♭–D and (c) C–F# emerging in bars 17–18. (a) A–E♭ then appears in bars 18, 20, 22, 26, 31, 32 and 36 followed by tritones A#–E and F–B in bars 33, 35 and 37. As in the previous section ic1 and 2 are also quite prominent, however ic3 also recurs frequently throughout the section:

EXAMPLE 4.12

Frank Corcoran, *Piano Trio*, Section A Piano (bars 15–24)

Corcoran introduces the final layer at figure **B** with the entrance of the violin. In keeping with the other layers, the pitches A and E♭ occur in practically every bar of the section, however A♭ is also prominent. The pitch A is present in bars 2–4 followed by E♭ in bars 5–6 and A returning in bars 7–8. A♭ makes a brief appearance in bar 9 with A central again in the following bar. Both E♭ and A♭ are present in bar 12, followed by an alternation of pitch centricity between A and A♭ in bars 13–25. There is a shift of centricity from bar 26 to the end of the section where an alternation begins between B♭ and E – also outlining ic6.

With regard to the interval structure of the violin material, it is notable that the tritones are not as abundant as in the previous sections. Ic6 F–B is present in bars 1–3 followed by A♭–D in bar 8 and B–F in bar 15. The main tritone A–E♭ is evident in bar 18 with E–B♭ in bars 22 and 27. Ic6 B–F emerges again in bar 28, but the final bar of the section contains B♭–E – the interval outlined in the pitch centricity.

As with the violin, the pitch centricity of the piano part also alternates between A–E♭ and A♭, outlining both ic6 and ic5. The pitch A is evident in bars 1–5 followed by A♭ in bar 6 and shifting back to A in bars 7–11. A♭ emerges again in bar 12, with E♭ obvious in bars 13–14 and also in bars 15–16 however, A♭ is also present in the latter bars. Pitch A returns in bar 17, replaced by A♭ in the following bar and E♭ in bars 19, 22, 23 and 24 (A is also present in bar 24). A♭ is evident again in bar 25 however it is the pitch A that is central for the remainder of the section.

The right hand of the piano opens with ic6 (a) F–B – the same tritone evident in bars 1–3 of the violin. This is followed by ic6 (b) B♭–E in bars 3–4 with the same tritone detectable in bar 4 of the cello part:

EXAMPLE 4.13

Frank Corcoran, *Piano Trio*, Section **B** Piano (bars 1–5)

Ic6 A♭–D and B♭–E are evident in bar 8 with F–B, E–B♭ and A–E♭ in the following bar. In bars 14–15, A♭–D and F#–C are present with the enharmonic equivalent C–G♭ in bar 16. Several tritones emerge in the following bars including E–B♭ (bar 17), F#–C and F–B (bar 18) and B♭–E again in bar 23. The opening pitches of the composition are recapitulated in bars 32–33 and 36, with tritones (a) A–E♭ and (b) D–G# evident:

EXAMPLE 4.14
Frank Corcoran, *Piano Trio*, Section B Piano (bars 27–36)

In contrast to the piano and violin, the cello begins section **B** with a shift in pitch

centricity to Bb–E. This shift was only achieved by the violin in the final bars of the

section, and the piano did not shift at all. Both pitches are evident in bar 4, however E

dominates in bar 5 followed by Bb once again in bars 6–7. It is notable that the pitch

B is also quite prominent in bars 10–11, shifting back to Bb in bars 11–13. In bars

14–15, E is central again with B♭ and E both present in bar 17. The pitch B is evident in bars 18–20 with B♭ also present in bar 20. The pitch centricity continues to alternate mainly between B♭ and E for the remainder of the section.

In keeping with the interval outlined in the pitch centricity, Corcoran begins the cello line with ic6 B♭–E in bar 4. As with the violin, the cello does not have an abundance of tritones in this section, in fact the only tritones evident are B♭–E (bar 4) and B–F in bars 7, 18 and 19. Ic1 and 2 dominate the cello line, however there are a considerable number of ic5, and ic3 also present.

A duo between the violin and cello begins at figure **C**, while the piano enters for just the first bar with practically the same pitch material as the opening bar of the composition. On this occasion an F♮ is substituted for the original E♭ and therefore, only one ic6 is outlined (D–G#) rather than two (A–E♭). The cello material does not contain any tritones at all in this section and the pitch centricity shifts between B♭ and F. B♭ is the central pitch in bars 1–5 followed by F in bars 6–7 and returning to B♭ in bars 8–10. The most prominent intervals are ic1 and 2:

EXAMPLE 4.15

Frank Corcoran, *Piano Trio*, Section C Cello (bars 3–10)

In the violin part, both F and F# appear on numerous occasions throughout this section beginning in bars 1–2 and then in bars 6–10 and 12–14. F♮ may be found without F# in bars 3, 5, 15–16 and 18 while F# is evident in bars 11 and 17. The pitches B and B♭ also feature strongly in this section, with one or the other evident in bars 2–7, 9–10, 15–16 and 18–19. In the final two bars, the pitches E♭ and E♮ emerge most prominently.

Naturally enough, having examined the pitch centricity, ic1 and 2 also emerge quite strongly in the interval structure of the violin line however ic6 remains a prominent feature. Only two tritones are outlined: F–B and B♭–E, but they both appear on numerous occasions. In bar 2, ic6 B♭–E is evident, followed by F–B in bars 3, 6 and 7 and B♭–E also in bar 6. Both tritones appear in bar 11 and finally, F–B is evident in bar 18.

Section **D** is also a duo between the violin and cello however, the violin has considerably more material than the cello and therefore plays solo for the second half of the section. As in the previous section, the pitch centricity of the violin part features both F and F# prominently, with B and B♭ to a lesser extent. The pitch F is evident in bars 1–2 followed by B in bars 3–4 and F# also in bar 4 and in bar 5. F♮ returns in bars 5–11 with F# evident in bars 11–13 and F♮ again in the following bar. B♭ appears in bar 15, however both F and F# may be detected in bar 16 and F continues to feature until bar 19. B♭ is also present in bars 17–24 and bar 26 with F# evident in bar 24–26. The pitch F then appears in bar 28 followed by B in bars 29, 32 and 34. Similar to the cello in the previous section, ic6 is not prevalent in the interval structure; in fact only one tritone B♭–E may be detected on five occasions in bars 17, 18, 22, 23 and 24. The prominent intervals are once again ic1 and 2.

In the cello part, no pitches recur to such an extent that they could be considered central. Unlike the previous sections, Corcoran does not appear to focus on one or more central pitches in this line. The pitch A is evident in bar 1 followed by A♭ in bars 2–3, then D is central in bar 4 with C# emerging in bars 5–6. A appears again in bar 7 with D returning in bars 8–9. The pitch B♭ is prominent in bars 10–15 followed by A♭ in bars 16–17. Only two tritones may be detected in the cello line: (a) E–B♭ in bar 14 and (b) D–A♭ in bar 16, however ic5 is evident in bars 6–7, 7–8 and 15, and ic1 and 2 are also quite prominent:

EXAMPLE 4.16
Frank Corcoran, *Piano Trio*, Section **D** Cello (bars 2–17)

Section **E** is a cello solo as the piano enters for just the first bar and the violin for bars 1 and 2. The piano outlines the main tritone Eb–A during its brief entry and also uses pitches F# and Ab while the violin alternates between the two pitches B and C.

In contrast to the previous section, the pitch centricity of the cello line returns to A–Eb – the tritone outlined most frequently throughout the composition. Pitch A is evident in the first bar followed by Db in bars 2–3 and Bb in bar 4. Pitch F is prominent in bars 5–6, however A returns in bars 6–10 and begins its alternation with Eb which is central in bar 11 but was also present in bars 9–10. This alternation continues for the remainder of the section:

EXAMPLE 4.17
Frank Corcoran, *Piano Trio*, Section E Cello (bars 2–24)

Ic1 and 2 are once again quite prominent in the interval structure of the cello line,

however two tritones are also evident. The ic6 (G#–D) may be detected in bars 8, 10

and 13 with E♭–A also evident in bar 10 and in bar 17.

Section **F** is very brief, with the piano and violin both entering for only the first bar

and the cello playing six bars of material. The piano has the same pitch material as in

the previous section: F#–E♭–A–A♭, once again containing the main tritone (E♭–A). The

violin part is also constructed from three of the above pitches: B♭–A–F#,

however ic6 is not present. The central pitches in the cello line are A–E♭ (bars 1–3),

shifting to F in bars 4–6. Ic6 and ic1 and 2 are the only intervals outlined during this brief section:

EXAMPLE 4.18
Frank Corcoran, *Piano Trio*, Section F Cello (bars 1–6)

At figure **G** the cello plays an F# tremolo for two bars and the remainder of the section is a duo between the violin and piano.

The opening bars of the violin appear quite tonal as they outline the diminished triad A–C–Eb – the main tritone A–Eb present once again. The pitch Db emerges in bars 5–6 followed by A again in bars 7–10 and 12–13. In bars 11, 14 and 15, F is prominent, with A returning in bars 15–16 and 18–19 and F evident once again in bars 20–21. The pitch A is present in bar 23 followed by Eb in bars 24 and 26, with A and Eb evident in the final bar.

The interval structure of the violin demonstrates a prominence of ic3, however ic6 may also be detected on several occasions beginning in bar 1 where the main tritone A–E♭ is outlined. Ic6 F–B is then evident in bar 7 followed by (a) A–E♭ again in bars 9–10 and 19. In bars 22–23, (b) D–A♭ is present and the section concludes on A–E♭ in bar 27:

EXAMPLE 4.19
Frank Corcoran, *Piano Trio*, Section **G** Violin (bars 9–27)

This section may be viewed as a recapitulation in the piano part. The first two bars of material both contain ic6: E–B♭ (bar 1) and D–G# (bar 2) and the pitch A is also present in both bars. The piano then has a three-bar rest suddenly followed by three 4-27 sonorities – dominant seventh chords (see **Ex. 4.20** bars 6–8) in root position, first inversion then second inversion: B♭–D–F–A♭. These tonal "chords" appear to come out of nowhere, however the atonal aural implications are not compromised as the violin sounds a "bluesy" D♭ against them:

EXAMPLE 4.20
Frank Corcoran, *Piano Trio*, Section **G** Piano (bars 5–10)

The recapitulation of the opening material begins in the following bar and continues until bar 30. The opening pitches are then restated in bar 31: A–F#–E♭ (LH) and A♭–D (RH) both hands containing a tritone.

The remainder of the section is fragmented with each line interspersed with rests. The pitch centricity continues to alternate between A–E–E♭–A♭, outlining both ic6 and ic5. Several tritones are also evident in the interval structure including D–A♭ in bars 31–32, B♭–E in bar 35, B–F in bars 37–38 and E♭–A in bars 41–42 and 43, however ic1 and 2 are most prominent.

Section **H** continues in the same fragmented manner as the second half of the previous section. The violin is re-introduced with material based on just three pitches: B♭–A–G# for the entire 16 bars, therefore the principal intervals outlined are once again ic1 and 2. The pitch F# is quite prominent in the piano part and may be detected in bars 1, 3, 4, 6, 7, 9 and 11, while A may also be found in bars 1–3, 10, 12 and 14–15. There are only two tritones evident in the piano part: (a) E♭–A (bar 10) and (b) B–F

(bar 11), however no one interval is prominent as Corcoran makes use of numerous

intervallic possibilities:

EXAMPLE 4.21
Frank Corcoran, *Piano Trio*, Section **H** Piano (bars 1–15)

All three instruments are present for section **J**, but the violin plays just five bars of material and rests for the remaining three bars that constitute the violin line. The only pitches used by the violin are A and E (with one appearance of B♭ in bar 1), while the pitch material of the cello comprises E–B♭ and F, and the main ic6 A–E♭ ubiquitous in the piano part, resulting in a superimposition of perfect fifths in the violin, perfect fourths in the cello and the tritone motif in the piano. The composition concludes with a restatement of the opening pitches in fragmented form in bars 13–16: A–E♭ and finally G#–D (see **Ex. 4.14**).

It is evident through this analysis that the intervallic content of the individual lines is essentially built around central pitches spanned by the tritone (particularly A–E♭), however, due to the nature of the macro-counterpoint technique, the harmonic implications are unclear. Corcoran has relinquished control over the harmonic effect

due to the fact that different pitches sound against each other during every performance. With this in mind, it is debatable whether Corcoran's term "macro-counterpoint" aptly describes what appears to be quite a straight-forward technique of juxtaposing independent lines against each other. Traditionally, counterpoint focused on the intervallic compatibility of one line to another, defined by Tinctoris as "restrained and thought-out polyphonic composition created by setting one sound against another".[62] However, later theorists began to make a distinction between polyphony and counterpoint, associating polyphony with style and counterpoint with technique. As Dahlhaus observes, polyphony was seen as an end and counterpoint as a means.[63] The importance of the vertical relationship between contrapuntal lines gradually diminished through the centuries to such an extent that counterpoint in the twentieth-century is described as "nothing more than multiple melody".[64] Further, Harry White notes that "canonic texture is a meaningless phrase unless it applies to tonal counterpoint" and suggests that "when deprived of a tonal context this intrinsic property of craftsmanship disappears [and that] some other term is therefore necessary to describe literal imitation in non-tonal music".[65] This definition of twentieth-century counterpoint can apply to Corcoran's adaptation of the technique as the only apparent relationship between his layers is the use of central pitches.

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[62] "Counterpoint", *The New Grove Dictionary of Music and Musicians* vi, Stanley Sadie (ed.), (London and New York: Macmillan 2nd edn, 2001). p. 557.
[63] Ibid., p. 561.
[64] Ibid., p. 568.
[65] Harry White, "The Holy Commandments of Tonality", *Journal of Musicology* (1991), p. 256.

Other compositions where Corcoran uses the macro-counterpoint technique include Symphony No. 2 (1981),[66] *Music for the Book of Kells* (1990), Wind Quintet No.2 (1979) and *Symphonies of Symphonies of Wind Instruments* (1981).

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[66] Annette Kreutziger-Herr writes "Corcoran erweitert hier seine Vorstellungen von Makrokontrapunkt und überträgt sie auf das grosse Orchester: Zwei Zwillingssätze, wobei der metrisch ungeordneten Struktur des 1. Satzes *Soli* die strenge Metrik des 11. Satzes *Tutti* gegenübergestellt wird. Die Motivik, die sich häufig entspricht, wird auf diese Weise unterschiedlich gebrochen und beleuchtet – so, als würde man das musikalische Material durch ein Prisma schicken. In den *Soli* folgt jedes Instrument einer eigenen motivischen Idee-jedes der zwölf Violoncelli hat eine eigene Dynamik, Artikulation, Spieltechnik. Im *Tutti* hingegen alternieren eine auf Vierteltakte bezogene strenge Metrik und konsequenter Makrokontrapunkt; die Kontrastwirkung wird durch unterschiedliche Tempi unterstrichen. In den vereinheitlichenden Teilen, die auf einen gemeinsamen Grundschlag bezogen sind, teilt Corcoran die Instrumentengruppen stets auf, so dass Lebhaftigkeit und Individualität der Stimmen trotz strenger Metrik gegeben sind", op. cit., pp. 8–9.

Chapter 5

Irish Traditional Music as a Source of Pitch Selection: Eric Sweeney's Minimalist Period

This chapter considers Eric Sweeney's minimalist period during which he turned to Irish traditional music as the exclusive source for his pitch selection. The chapter begins by contextualising Sweeney's initial compositional development as a serialist composer in a brief study of his orchestral piece *Circles* (1985), and then traces his employment of Irish traditional music, firstly in general in *Duo* of 1991, and then in close detail throughout all four movements of his String Quartet of 1996.

Eric Sweeney was born in Dublin in 1948. He began his musical studies in Ireland and later travelled to England, Belgium and Italy for further study. He has lectured at both the Dublin Institute of Technology College of Music and Trinity College, Dublin, and now is Head of the Music Department at Waterford Institute of Technology. Sweeney was a member of the Arts Council from 1989 to 1993 and is currently a member of *Aosdána*. He was awarded a DPhil in composition from the University of Ulster in 1994.

Sweeney's compositional career began in the early 1970s, at a time when several different pathways presented themselves for aspiring composers. Firstly, the twelve-tone music of the Second Viennese School which offered a quasi-mathematical approach to compositional material and often resulted in compositions of extreme complexity. It was this technique that had been pursued by post-war composers such as Olivier Messiaen and later Pierre Boulez and Karlheinz Stockhausen, when

following the example of Webern, they adapted the technique by extending the parameters to include rhythm, dynamics, duration, attack etc.

A second and very different route revealed itself in the aleatoricism of John Cage. In one sense this was the total opposite to serialism, in that serial technique could be very complex and restrictive, and this aleatoricism or "chance music" offered total freedom. Given that one of the basic principles of aleatoricism lies in the acceptance of all sounds as valid sources of music, all standardised conventions are abandoned and any restricting forms are rejected. This technique proved quite popular and enjoyed a strong following, paradoxically often by the very same composers who embraced serialism.

The situation was relatively straightforward for those composers who were content to adopt one (or both) of the above techniques, however it was more difficult for those who did not feel that their compositional voices lay in either of these directions. Composers responded in different ways to this dilemma, but many did begin their compositional careers writing in a serial style. The reaction of the English composer Michael Nyman is quite extreme stating that " I tried to write one serial piece, but I gave up. And I didn't write a single note from 1964 to 1976, because I couldn't come to terms with writing serial music."[1] Philip Glass describes Boulez' *Domaine Musicale* series as "a wasteland, dominated by these maniacs, these creeps, who were trying to make everyone write this crazy creepy music."[2] Eric Sweeney recalls his feelings at the time: "When I was growing up in the 60s, ... I wanted to be a composer, and yet all music people seemed to be writing was serial and post-serial, and very

[1] K. Robert Schwartz, *Minimalists* (London: Phaidon, 1996), p.196.
[2] Edward Strickland, *Minimalism: Origins* (Indiana University Press, 1993), p. 205.

complex mathematical, ... and I didn't really take to that sort of music. But I thought, well, that's what modern music is, I'll have a go at writing it ... I didn't really believe in it, but I thought, that's what composers do".[3]

So, as with many composers, Sweeney also began his career writing in a serial style, recognising that serialism was regarded then as an integral part of a composer's vocabulary and therefore could not be ignored. It is interesting to note that, even though Sweeney professes to have written in a serial style out of necessity rather than because of any particular belief in the concept behind the technique, he continued to compose within this framework for twenty years, producing a modest output of serial compositions before ever progressing onto his later minimalist phase.

One of the more interesting works composed during this period is *Circles*, written in 1985. It includes "strict serial manipulation of notes and rhythm ... used together with free aleatoric elements".[4] Sweeney tends towards aleatoricism as a reaction against other composers who "offer little scope for individual interpretation or involvement on behalf of the performer apart from a certain technical skill".[5]

Circles is in three movements and is scored for string orchestra (*ripieno*) and a trio of violins (*concertino*) which may be substituted for a group of wind instruments. The first movement falls into three different sections, the first of which introduces the circle of fifths: G–D–A–E etc. (hence the title). The middle *agitato* section (bars 28–43) employs only the *tutti* group, and in contrast to the first section is not as

[3] Cited in: John Dunne, "Necessary Absence" (unpublished essay: University of Limerick MA programme, 1995), p. 2.
[4] Eric Sweeney, A Folio of Original Composition (unpublished DPhil diss., University of Ulster, 1993). p.2
[5] Ibid., p. 9.

fragmented. However, it is very rhythmic with the constantly changing time signatures contributing to the agitated effect, (e.g. 4/4, 2/4, 7/8, 3/4, 4/4). The third section begins at bar 44 with the same notes that concluded the *agitato*. Sweeney presents a loose retrograde of the opening section and employs standard string techniques such as *glissandi*, *tremuli* and *pizzicato*.

Certain aleatoric elements emerge in the second movement, which constitutes a quasi-canon where each player or group of players enters on cue from the conductor. Each instrument may play at whatever octave is convenient and the number of repetitions of the different patterns is not specified. Sweeney also introduces repeat-mark bars which serve the purpose of marking time, i.e. waiting for the remainder of the instruments to catch-up before progressing on to the next idea.

The serial element is ever present in the first two ideas **A** and **B** using the same rhythmic series, later to be retrograded in figures **D** and **E**:

EXAMPLE 5.1
Eric Sweeney, *Circles*, Second Movement (page 9)

Figure **F**, which is a mirror inversion of **A**, appears in the basses on page 13 against

the retrograde in the cellos one bar later:

EXAMPLE 5.2

Eric Sweeney, *Circles*, Second Movement (page 13)

The final movement is an *Allegro* in 10/16:

EXAMPLE 5.3

Eric Sweeney, *Circles*, Third Movement (bars 1–2)

The serial element is once again evident in the gradual introduction of all twelve

pitches in each part.   The cellos and basses begin in bar 1 with the first four pitches:

C–F–A♭–G♭, the next pitch (D♭) may be found in bar 8, followed by E♭ in bar 15, G♮

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in bar 24, D♮, E♮ and B♭ are all introduced in bar 34, and finally A and B♮ complete the row in bar 47.

In a similar manner another twelve-note row is introduced in the violin parts beginning in bar 3 with the first five pitches: C–G–E–F#–B, followed by A in bar 4, F# in bar 6, B♭ in bar 20, A♭ in bar 27, D and E♭ in bar 38 and finally D♭ in bar 49. The viola follows the violins and introduces the same twelve pitches gradually, but beginning in the second half of bar 10, thus creating a canonic effect. The canon becomes more obvious at bar 37 where the second violin leads, followed by the viola half a bar later and the first violin one bar later against an unrelenting pattern in the cellos and basses, who employ the same rhythms as the other instruments but fall at a different point in the pattern. This polyrhythmic feature was to accompany Sweeney into his next stylistic period.

Circles remains one of Sweeney's most popular compositions dating from his pre-minimalist output, enjoying numerous performances including twelve in its first year alone.[6] However, Michael Dervan, in a performance review in *The Irish Times*, expresses the opinion that "Eric Sweeney's *Circles* of 1985 is a strangely blunt work, offering a mixture of the simplistic and the gauche which remains resolutely unconvincing".[7]

An alternative to serialism and aleatoricism presented itself in what the composer and critic Michael Nyman referred to as "minimalism". This term was borrowed from the

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[6] *Circles* was commissioned by the Dublin Baroque Players with funds provided by the Arts Council. The Dublin Baroque Players premiered it in July 1985 at the Royal Hospital Kilmainham, Dublin.
[7] Michael Dervan, Review of the Irish Concert Orchestra's performance of *Circles*, appeared in *The Irish Times*, July 21 2000.

visual arts and is interpreted by La Monte Young as "that which is created with a minimum of means".[8] Originally the term was used in a derogatory manner as the style did not adhere to the guidelines of the mainstream avant-garde, and was therefore regarded with contempt.

There is much debate as to the origins of minimalism with musicologists identifying numerous examples of compositions through the ages which contain certain aspects now central to the minimalist idiom, the most significant being the use of repetition and long sustained notes. Paul Griffiths suggests in his chapter on "Minimalism and Melody"[9] that the significant difference between the use of these devices in earlier compositions such as the introduction to Handel's *Zadok the Priest*, Wagner's *Das Rheingold* (and many others), and the minimalist compositions from the 1960s onwards is that the repetition and sustained notes in the earlier pieces are employed as a means of preparation, or to "intensify anticipation" of the music to come. This is teleological music as opposed to the later compositions where the static effect created by use of the same devices constitutes the entire work and is therefore non-teleological. A different case may be presented for compositions such as J.S. Bach's famous *C major Prelude*, Satie's *Vexations* and Ravel's *Bolero* where the repetition is an integral part of the composition; however Edward Strickland comments that "Satie is working with unvarnished repetition as a concept, not to say a spoof, while the lush and rather tawdry Romanticism of the Ravel piece is the antithesis of minimalist austerity in the vulgar theatrics of its dynamic and rhythmic directionality."[10]

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[8] K. Robert Schwartz, op. cit., p. 9.
[9] Paul Griffiths, *Modern Music and After: Directions since 1945* (New York: Oxford University Press, 1995), p. 209.
[10] Edward Strickland, op. cit., p. 124.

For our purposes these earlier works are not regarded as minimalist compositions; as Paul Hillier succinctly points out, "in all periods of change in music history, nothing is completely new, or completely different, or completely unprepared".[11]

The minimalist movement began in America in the 1960s with four main composers; La Monte Young, Terry Riley, Steve Reich and Philip Glass. Ironically each of these composers rejects the "minimalist" label and yet they are regarded as the stimuli behind the entire movement in music. They resent being grouped together, as each of their styles offers something different; however, they do share a common background, and their acceptance of Eastern philosophy as a driving influence also unites them.

Minimalism represented a return to tonality, a steady pulse and clear structures. All of the elements which had been discarded with the advent of serialism were now being re-embraced, and this alone attracted much criticism as many felt that this "new" music was, in fact, regressing rather than progressing. Repetition, another feature which was hardly novel, was central to the minimalist style, however, repetition in minimalist music is used for an entirely different purpose than that of Western music. It is used to create intentionless, non-teleological music, and therefore to eliminate the goal-orientated aspect central to Western music. The harmonies, rhythm and dynamics remain constant throughout the performance and only change very gradually over a lengthy period of time, thus adding to the timeless effect. With the characteristics mentioned above forming the basis for the minimalist style, many new and interesting developments and variations followed.

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[11] Paul Hillier, *Arvo Pärt* (New York: Oxford University Press, 1997), p. 16.

Minimalism began to reach Europe a decade later than America following a tour by Steve Reich and Philip Glass in 1971. This new style was welcomed as a revelation by composers such as Michael Nyman and Louis Andriessen (b. 1939), providing them with a new and long-awaited means of expression. Later still minimalism began to filter into the Soviet bloc reaching Arvo Pärt (b. 1935) in Estonia and Henryk Górecki (b. 1933) in Poland.

These European composers are often described as "post-minimalists", and their adaptation of the technique generally falls into two categories; "holy minimalists" and "eclectic minimalists". The former, as suggested by the perhaps pejorative label, refers to the group of composers who have combined certain minimalist characteristics with a lyricism stemming from their spiritual beliefs, the aim being to produce a highly emotional effect. In order to achieve this, large orchestral forces are employed to present simple, yet powerful melodies against fairly static, uncomplicated chords. Pärt and Górecki are the principle figures to be associated with this variety of minimalism, and perhaps the most prominent work is Górecki's Symphony No. 3 (1976). Based on the suffering of his people during World War 2, this powerful, emotionally charged work has enjoyed great commercial success.

Pärt's most significant achievement is his creation of the "tintinnabular" (bell-ringing) style, which enabled him to express his spiritual beliefs in both an archaic and contemporary manner. This style stems from Pärt's interest in Gregorian chant and the rituals of the Russian Orthodox Church, "Gregorian chant has taught me what a cosmic secret is hidden in the art of combining two or three notes, ... that's something

twelve-tone composers have not known at all".[12] Three tintinnabular works *Fratres*, *Cantus in Memory of Benjamin Britten* and *Tabula Rasa*, all composed in 1977, have also enjoyed enormous success.

The other group of "eclectic minimalists", represented by Nyman and Andriessen, are characterised by their use of extracts from other compositions in combination with their own, blended in a minimalist style. The compositions employ driving rhythms, complex harmonies and are frequently scored for unusual combinations of instruments, including electronic or rock instruments mixed with traditional orchestral instruments, medieval instruments or jazz ensembles. This form of minimalism has enjoyed particular success as sound-track material or incidental music for films, theatre, documentaries etc. By far the greatest commercial success by a minimalist composer was that of Nyman's soundtrack for the film *The Piano* (1992) with over 1.5 million copies sold world-wide, the score being adapted for concert performance in *The Piano Concerto* (1993).

The minimalist movement began in America in the 1960s, but it was not until more than twenty years later that the concept reached Ireland. Evidence of this arrival may be found mainly in the compositions of Eric Sweeney from 1989 onwards. Sweeney shares many opinions with Steve Reich and identifies him as being one of the more significant influences in his compositional career. The similarities between the composers are evident in the following areas. Firstly, both composers regard Stravinsky and Bartók as being among their earlier influences. Sweeney was attracted, in particular, to the symmetrical scale patterns, extended tonality and the

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[12] K. Robert Schwartz, op. cit., p. 211.

emphasis on rhythm. Reich also expressed an interest in Baroque music but had "no real interest in music from Haydn to Wagner"[13] and similarly Sweeney shares a relatively strong attitude towards art music as a compositional tool stating that he thought "it's had its day".[14]

As we have seen, Sweeney began his compositional career writing in a serialist style. On the other hand, Reich was less successful composing within the same vein, his first such composition being a piece for string orchestra where the tone row remained constant throughout. The work consisted of continuous, unaltered statements of the tone row with no inversion or modulation, resulting in a fairly static composition. On examining the piece, Berio (Reich's composition professor at Mills College) remarked "if you want to write tonal music, why don't you write tonal music?"[15] Reich viewed this as a turning point and began to realise his minimalist tendencies as early as 1962 when he began experimenting with tape-loops. It was not until much later in 1989 that Sweeney made this transition, marked by his orchestral work *Dance Music* (1989) and his cantata *Deirdre* (1989).

Both Reich and Sweeney believe in looking inwards towards the heritage of their own countries for inspiration. The individuality of their styles clearly stems from this. Reich makes the point that "the sounds that surrounded America from 1950–1980, – jazz and rock and roll – cannot be ignored. They can be refined, filtered, rejected, or accepted in part, but they can't be ignored, or … you're ill-informed".[16] Sweeney also defends his integration of traditional Irish music into his compositions stating that

[13] Ibid., p. 53.
[14] John Dunne, op. cit., p.11.
[15] K. Robert Schwartz, op. cit., p. 57.
[16] Ibid., p. 57.

"it's a question of historical and geographical context, … the music is there, why not use it".[17]

In spite of the similarities in attitude between the two composers, their individual interpretation of the minimalist technique separates them. They share the attraction to the typical minimalist traits, but Sweeney differs by employing traditional Irish dance tunes as a source for his compositions. This is probably the most significant aspect of his music. It is quite understandable that Sweeney would choose these Irish traditional melodies, as they share some of the ideas central to the minimalist technique, for example, the repetition of phrases and notes, the use of a steady pulse, the improvisation of the performers, the clear harmonic framework.

Sweeney's compositional process involves selecting a particular Irish tune, and in a typical minimalist manner, reducing it to the nucleus. This involves omitting any repeated notes, passing notes, auxiliary notes, or any decorative notes. Only then, when left with the bare minimum, does Sweeney begin to construct his patterns based on whatever tonalities are implied by the remaining notes. The harmonies are very clearly indicated by the use of drones, perhaps suggesting the sound of the traditional uilleann pipes. Sweeney frequently employs open fifth drones that change as the tonal emphasis shifts. Compositions such as *The Blackberry Blossom* (1991) and *Dance Music* (1989) were conceived in this manner.

Rhythm is of particular interest to Sweeney, stemming from the earlier influence of Stravinsky and Bartók, but also from the rhythmic nature of many Irish traditional

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[17] John Dunne, op. cit., p. 2.

tunes. Sweeney frequently employs polyrhythms or multi-layered textures with the emphasis falling on different beats in each layer. He obscures the various time signatures by abandoning the traditional groupings of beats. As with Bartók, the inclusion of bar-lines is often a token gesture rather than being strictly relevant. This rhythmic device is evident in a large number of his compositions, as is his use of canon. The typical minimalist use of additive and subtractive processes as a means of development is also obvious in his music.

The improvisational aspect of Irish traditional performance appeals to Sweeney, and so he takes it a significant step further, leaving choices such as the number of instruments, number of repetitions of each phrase, and order of entry, to the performers. The traditional role of the conductor is also abandoned. Sweeney sees his role as not being involved in the interpretation of the music, but rather to indicate the changes of section, cueing in the performers, and deciding when to end the performance, i.e. when it is felt that the material has been sufficiently explored.

Eric Sweeney's composition *Duo* (1991)[18] for piano and violin is an excellent example of the composer's later style. As well as demonstrating many of the qualities central to the minimalist movement it also presents Sweeney's own adaptation of the minimalist technique in which certain aspects of the Irish folk tradition emerge. Some neo-classical influences may also be identified particularly in the overall structure of the piece, which is in one movement but falls into a traditional sonata form. Sweeney outlines the form as follows:[19]

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[18] Premiere in 1992, Thérèse Timoney (vln), Eric Sweeney (pf). Recordings: *Contemporary Music from Ireland, Vol. 1* (CMC CD01), 1995. *L'Imaginaire Irlandais Suite* (Celtica Musique KM CD75), 1997. Versions for saxophone and piano etc. also exist.
[19] Eric Sweeney, op. cit., p. 85.

Introduction		bars 1–14
Exposition	(A)	bars 15–38
	(B)	bars 39–88
Codetta		bars 89–110
Development		bars 111–160
Recapitulation		bars 161–197
Coda		bars 198–219

As with many of Sweeney's minimalist compositions, a steady rhythmic pulse is vital throughout the work. In keeping with this a rhythmic *ostinato* is immediately introduced in the introductory section of *Duo* (bars 1–14), where the right hand of the piano part enters with a strict repetitive pattern consisting of constant semiquaver movement falling into irregular groupings within a regular 2/4 time signature:

EXAMPLE 5.4
Eric Sweeney, *Duo*, Introduction (bars 1–4)

Sweeney employs different rhythmic groupings as a means of varying the three-note melodic cell F#–A–B which provides the basis for the entire composition. When the

melodic material is so restricting, the composer must rely on rhythm to create interest or "to avoid monotony".[20]

A contrasting idea is then introduced between the violin and the right hand of the piano, more interest being provided as the composer begins to alternate the rhythmic groupings of the violin part between ♪ = 3+3+2 and 2+3+3, against which the piano maintains a steady 3+3+2 pattern. This rhythmic interaction continues unchanged for the duration of the entire first section and is reminiscent of the "phase-shifting" of Steve Reich as the accented beats shift in and out of synchronisation.

The entire composition is based around the three-note cell F#–A–B, and by means of establishing this, the right hand of the piano part and the violin play only these three notes during the introduction. Sweeney was attracted firstly to the intervals outlined by the cell (major second and minor third) suggesting to Sweeney a folk music source (Sweeney thesis, p. 85), and also to the different tonalities implied by the notes, ex. D major, A major, B minor and F# minor.[21]

Through the use of drones Sweeney explores these different tonalities beginning at bar 15 where the first drone appears in the left hand of the piano, indicating the beginning of the exposition and perhaps suggesting a further Irish influence. These drones are employed to provide a harmonic basis for each section and to punctuate any changes of tonality, each one outlining a perfect 5th and all related to the three-note cell F#–A–B.

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[20] Ibid., p. 86.
[21] Sweeney suggests an F# major tonality on page 83 of his thesis, this is presumably an error as F# *minor* is clearly stated in several other places, e.g. pp. 82 and 85.

Sweeney introduces three different layers at bar 39 for the B section of the exposition. Firstly, the left hand of the piano abandons the drones in favour of an arpeggio-like idea, however the material is derived from the quintal harmony of the drones, the first four notes being D–A–E–B. This figure continues to outline the 3+3+2 rhythmic grouping but does alternate with 3+2+3 throughout the section.

The next layer is that of the right hand of the piano part where Sweeney introduces one of his "refrain"[22] themes which appear in several of his other compositions. The theme appears as the top note of the triad and begins by introducing the three notes F#–E–D but later extends its compass to include the note G (bar 43). Sweeney refers to the more dense triad texture as a "harmonisation" of the melodic line with a series of root position chords. He suggests that this device "adds sonority to a melody without necessarily relating to a tonal framework".[23] The composer later changes the chordal pattern to a series of second inversion chords (bar 60) and then to first inversion chords (bar 64).

Finally, the more lyrical second subject of the violin constitutes the third layer. Once again Sweeney leans towards the quintal element with the melodic material of the violin outlining the perfect 5th of the arpeggio figure but in augmented time values. In direct contrast to the piano parts, the violin falls into regular 2/4 groupings:

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[22] Ibid., p. 92.
[23] Ibid., p. 92.

EXAMPLE 5.5

Eric Sweeney, *Duo*, Exposition (bars 39–50)

This polyrhythmic, quintal harmony idea is maintained for the remainder of the section.

A brief episode (bars 80–84) recalls the material of the introduction, re-introducing the drone in the left hand, now a perfect octave rather than a perfect fifth, and re-establishing a D major tonality. The violin and right hand of the piano return to the

unrelenting semiquaver idea but now in canon, the violin entering three semiquavers behind the piano in this rising pattern.

A linking section then follows, employing material from both the first and second sections in addition to an arpeggio idea spread between both hands of the piano (bar 95). This material outlines a perfect fifth but also refers to the perfect fourth, minor third and major second (the intervals outlined by the three-note cell).

The canonic idea appears once again in the codetta section with the violin and right hand employing a descending pentatonic scale still three semiquavers apart in the pattern, in preparation for the development section. The piano opens this section with a steady semiquaver arpeggio figure (3+3+2) divided between both hands, passing through the tonalities related to the original three-note cell and employing only perfect fourths and perfect fifths. The violin adopts a more rhythmic role based on additive and subtractive processes, characteristic of many minimalist compositions. The D major tonality is prominent, however bars 131–133 seem to suggest a cadence firmly in the dominant before returning to the material from the beginning of this section at bar 134 and thus restoring the D major tonality:

EXAMPLE 5.6

Eric Sweeney, *Duo*, Development (bars 131–134)

The time signature changes for the first time in the recapitulation section (bar 161) as Sweeney introduces a 7/16 time signature. He adopts 3+2+2 semiquaver groupings established by the right hand of the piano part. The opening of the entire piece is recalled at this point, modified to suit the new time signature and based once again only on the notes F#–A–B. Sweeney continues in the manner of a classical recapitulation section with the re-introduction of the drones (bar 173), passing through the related tonalities until bar 194 where the material from the beginning of the second section appears briefly, marked by the return of the 2/4 time signature. The "refrain" theme makes a brief return against the canonic interaction between the violin and the left hand (bars 194–197). This is followed by the driving unison semiquavers of the Coda section.

The composer constructs the Coda from three ideas previously featured in the exposition, outlining them as follows:[24]

Bars 198–202: octaves between the violin and piano based on the three-note motif.

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[24] Ibid., p. 99.

Bars 203–206: rising fifth arpeggio in the piano.

Bars 207–214: pentatonic canon between the right hand and the violin augmented version.

The rising arpeggios then bring the piece to a conclusion with octaves on the note D:

EXAMPLE 5.7

Eric Sweeney, *Duo*, Coda (bars 215–219)

Different aspects characteristic of the minimalist style may be encountered throughout *Duo*. Firstly, the piece is tonal, mostly centred around D but frequently exploring the tonalities related to the minimal three-note cell. Sweeney restricts himself by using only three notes as a basis for his composition but finds many different methods for creating interest.

A steady pulse is maintained throughout the piece and much rhythmic variety is employed, including the "phase shifting" idea where Sweeney shifts the accents of the different parts in and out of synchronisation with each other. He also employs canon, additive and subtractive phrases and polyrhythmic textures as a means of development. The typical minimalist use of repetition is ever present throughout *Duo*, as are the long sustained drones that punctuate the harmonic changes or shifts of tonality.

The Irish traditional influence is apparent in the frequent use of drones, however their use may also be attributed to the minimalist affinity for long sustained notes changing very gradually as the harmonies shift. The unrelenting triple rhythms employed by Sweeney reflect the rhythms of Irish traditional dance, and major seconds and minor thirds found in the original three-note cell are also regarded by Sweeney as typical folk music intervals. Neo-classical influences are evident mainly in the overall structure of the composition reflecting a traditional sonata form. Sweeney constantly refers back to the D major key signature and frequently makes tonic–dominant references emphasising a characteristic neo-classical return to tonality.

Sweeney's String Quartet (1996)[25] displays similar characteristics to *Duo* including sharing the same three influences. Firstly, the neo-classical features are obvious in both the overall form of the quartet and the form of the separate movements. The quartet falls into four movements that are traditionally fairly fast, dance-like, slow and fast. Both second and third movements are in traditional ternary form, and the fourth movement also divides into three sections, however this movement may be considered a recapitulation of material from the previous movements in addition to introducing some new ideas. The first movement is in five sections, each sharing common material as Sweeney develops the material of the opening sections throughout the movement. Other neo-classical features include Sweeney's frequent use of canon or imitation as a means of development throughout the entire quartet, and his dominant – tonic references in each movement.

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[25] Commissioned by R.T.É. for first performance on 31st October 1996 in the Student Centre of University College Cork. Written for the Vanbrugh Quartet.

Secondly, the Irish traditional influences are evident in Sweeney's choice of three traditional Irish tunes as a source for his first three movements. The first movement is based on "The Banks of Lough Gowna", the second on "The Three Little Drummers", and the third on "The Blackthorn Tree". The final movement recapitulates the opening of "The Three Little Drummers" from the second movement. Sweeney applies each of these source tunes in a different manner, for example in the first movement he takes brief fragments of the traditional tune and gradually introduces further pitches using an additive process. In the second movement Sweeney introduces longer extracts from the source tune, and in the third movement he quotes the traditional tune in its entirety on three occasions. The use of drones and the rhythmic nature of the quartet may also be attributed to Irish traditional music.

Finally, the minimalist influences are quite prominent on several levels. Most obvious are the restrictions that Sweeney places upon himself with regard to the pitch material, frequently restricting himself to the hexatonic or pentatonic scales of the source tunes. Sweeney also employs numerous repetitive patterns throughout the quartet, however these are generally very rhythmic to maintain interest. He makes use of additive and reductive processes to introduce and develop his material in each movement, frequently creating several layers of sound in a typical minimalist manner. Other minimalist features include Sweeney's use of pedal-notes or long sustained notes and his employment of the "phase-shifting" idea on occasion. Sweeney successfully combines each of these influences to create a well-balanced and unified structure.

The first movement of Sweeney's String Quartet is based on the Irish traditional tune "The Banks of Lough Gowna". This tune is hexatonic with the pitches A–B–C–D–E–G evident. The second half of the tune employs both G and G# pitches suggesting a raised seventh and perhaps indicating an A minor tonality. Sweeney does not adopt this raised seventh feature, however he does restrict himself to the hexatonic pitches of the source tune and, in a typical minimalist manner, introduces the traditional tune gradually using an additive process:

EXAMPLE 5.8
O'Reilly, Source Tune, First Movement

Five different sections are evident in this movement, however the same basic material may be detected in each section as Sweeney follows a definite developmental path throughout the movement. The sections are evident as follows:

First Section:	Bars 1–48
Second Section:	Bars 49–64
Third Section:	Bars 65–82
Fourth Section:	Bars 83–89
Fifth Section:	Bars 90–113

Sweeney begins his String Quartet with the viola introducing a repetitive semiquaver figure outlining two perfect fourths: D–G and E–A. These intervals are then presented harmonically as the second violin enters at the end of bar 2. An additional pitch B is introduced in bar 5 by the viola with the pitch E of the second violin completing another perfect fourth. The viola and the second violin repeat the material of bars 1–8 again in bars 9–16, however the cello enters at bar 9 thus providing an additional layer. The cello is restricted to three pitches A–D–E and employs only the rhythm of a minim and two quavers. Sweeney achieves variety by alternating the order of the three pitches and the positioning of the minim and two quavers.

At the end of bar 16 the first violin enters with the opening of the traditional tune which is presented gradually using both an additive process and canonically in the second violin. The first three notes of the source tune are introduced by the first violin in bar 16 (A–B–A), with the repeated A and G introduced in the following bar. The next note E is presented in bar 18 followed by D in bar 19 and a complete statement of the first two bars of the traditional tune in bars 19–20. The second violin imitates exactly one beat later and the cello continues the same three-note pattern as before:

EXAMPLE 5.9
Eric Sweeney, String Quartet, First Section, First Movement, (bars 16–21)

From bars 20–24 the first two bars of the source tune are presented exactly as before

with the addition of the viola to the canonic process. The additive idea is then

reversed as Sweeney first eliminates the pitch B and omits the note repetitions,

followed by the further reduction of the material to leave only the four notes of the second bar of "The Banks of Lough Gowna" remaining: E–D–E–G. The first violin and viola continue the semiquaver pattern constructed from these pitches into bar 27. Against this the second violin completes the hexatonic scale with the introduction of the note C, the material extracted from bar 4 of the source tune. Sweeney once again uses an additive process when presenting the traditional tune, beginning with four notes, extended to five, seven and then nine. The viola imitates the second violin one bar later, while the cello reintroduces the perfect fifth pattern first presented by the viola in the opening bars of the movement, however from bars 28–37 the cello outlines perfect fifths on the pitches G–D, A–E and E–B. From the end of bar 29 Sweeney continues to introduce pitches from bars 4–6 of the source tune, however he also begins to omit pitches from the beginning of the extract (bar 4 of source tune):

EXAMPLE 5.10
Eric Sweeney, String Quartet, First Section, First Movement (bars 25–33)

From bar 32-39 Sweeney repeats the additive and reductive process as he reintroduces material from bars 4–6 of the traditional tune, however the first violin now joins the imitative structure.

The first violin and cello play in unison from bars 40–48 as both instruments adopt the three-note minim and quaver pattern first employed by the cello in bar 9. Against this the second violin and viola resume the imitative movement using material extracted from bars 1–2 or 5–6 of the source tune, thus marking the end of the first section.

Sweeney begins a new section at bar 49 with several layers evident once again. A *pizzicato* pedal on the note D is introduced in the cello with the notes falling at a different point in the bar on each occasion, reminiscent of the phase-shifting idea. Over this the viola plays a repetitive figure which is continued from the last bars of the previous section and may be derived from bars 2 or 6 of the source tune (E–D–E–G).

The first and second violins play another additive section in unison from bars 49–54, followed by the reduction of this material from bars 54–57. In bars 58–64 the second violin, viola and cello repeat the material previously performed from bar 49, however, against this, the first violin reintroduces material from bars 32–39 of the first section:

EXAMPLE 5.11
Eric Sweeney, String Quartet, Second Section, First Movement (bars 58–60)

The layers change again at bar 65 where the cello reverts back to the perfect fourth pattern of the opening, changing to perfect fifths as before in bar 66. The first violin introduces bars 7–8 of the source tune in augmented note values from bars 66–73. From bars 67–74 the second violin begins the additive pattern performed earlier in bars 49 and 58, however on this occasion the pattern begins in the middle of the bar rather than at the beginning as in the previous two entries. Against this the viola performs a retrograde of the second violin pattern from bars 67–70:

EXAMPLE 5.12
Eric Sweeney, String Quartet, Third Section, First Movement (bars 67–72)

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Another retrograde of the second violin pattern in bars 71–78, the opening of which is repeated again in bars 79–82, follows this. From bars 75–82 the second violin repeats the same material as in bars 67–74, against which the first violin and cello perform bars 15–16 of the source tune in augmented note values (bars 75–82).

Sweeney changes to a key signature of one flat at bar 83, however at this point there is no reference to F major. Both the first violin and cello sustain a B♭ pedal note for two bars while the viola continues its repetitive pattern from the previous section and the second violin performs a *pizzicato* repeated note D. This *pizzicato* idea is then adopted by the cello a major second lower. Material from the second section (bars 49–53) is recalled in all voices a minor second lower from bars 85–89 except in the viola where the pitches remain exact (bar 2 or 6 of source tune):

EXAMPLE 5.13

Eric Sweeney, String Quartet, Fourth Section, First Movement (bars 85–90)

The final section begins at bar 90 with the three upper voices playing a repeated-note pattern, the first and second violins mainly a perfect fifth apart whereas viola is a perfect fourth apart from the second violin. Sweeney gradually reduces this material to one repeated note in each part at bar 96. Against this the cello introduces a different repetitive figure first based on the pitches C–D–E–G, however A is also introduced from bar 93. These pitches may be extracted from bar 9 of the source tune with a G♮ replacing the G#.

The layers change once again at bar 97 as the two lower voices perform material previously introduced by the first and second violins (bar 49) a major second lower. The first and second violins continue the repetitive pattern of the previous bars a perfect fourth apart. From bars 102 to the end of this movement viola and cello form major triads, eventually concluding on the chord of F major in keeping with the key signature. Against this both violins perform long sustained notes in unison ending on an octave F.

The second movement of Sweeney's String Quartet is based on the Irish traditional tune "The Three Little Drummers" from the O'Neill Collection. The tune is essentially pentatonic favouring the pitches G–A–B–D–E, but the note F# does feature occasionally. Sweeney quotes directly from the tune on a couple of occasions, however the importance lies mainly in the restraints that the pentatonic scale imposes on him, in keeping with his minimalist preferences. Sweeney restricts himself to these five pitches throughout the first and final sections, with the exception of his direct quotations from the traditional tune when the F# enters. With regard to the intervallic content, the major second, perfect fourth and fifth feature most prominently throughout the second movement. There is a notable absence of key signature as Sweeney perhaps strives to maintain the modal nature of the Irish traditional tune, however there is a definite feeling of G as a tonal centre throughout:

EXAMPLE 5.14
O'Neill, "The Three Little Drummers", Source Tune, Second Movement

The second movement is a ternary form structure that may be divided as follows:

A SECTION: Bars 1–31

B SECTION: Bars 32–55

A' SECTION: Bars 56–83

Sweeney opens the first section with the cello playing a repetitive semiquaver figure constructed from perfect fourths and fifths. This pattern continues unaltered for the first sixteen bars and serves to establish G as a tonal centre despite the absence of key signature. The upper strings enter in bar 3 with homophonic pizzicato chords in quartal harmony. At bar 5 the second violin begins a four-bar melodic idea based on the pentatonic scale, with the last six notes quoted directly from "The Three Little Drummers":

EXAMPLE 5.15
Eric Sweeney, String Quartet, First Section, Second Movement (bars 4–8)

The first violin then adopts the melodic role at the end of bar 8, entering with two four-bar phrases that are quite similar, however the second is adjusted to conclude on what could be regarded as a perfect cadence. Against this the second violin and viola revert back to the *pizzicato* contrary motion idea a major second apart, and the cello maintains the repetitive semiquaver pattern.

From the end of bar 16 the second violin quotes the first line of "The Three Little Drummers" almost exactly, with the exception of the absence of pitches B and D from bars 2 and 6 of the traditional tune and the repeated F# and G from bars 4 and 7. Also in bar 16 the cello abandons its semiquaver pattern for four bars in favour of a fragmented, descending perfect fourth idea played *pizzicato*, however the viola takes up the repetitive semiquaver figure constructed from two perfect fourths (D–G and A–D).

From the end of bar 20 the first violin enters with several brief melodic phrases restricted to the pentatonic scale but quite rhythmic. Against this the cello resumes its semiquaver pattern outlining perfect fourths and fifths, and the inner strings once again are in contrary motion a major second apart. The first section concludes with the second violin presenting a modified version of the first line of the Irish tune against the perfect fourth and fifth pattern of the viola and *pizzicato* pitches of the cello, which suggest a shift to the dominant.

Sweeney begins the second section with all voices entering canonically using an additive process. The cello plays a three-note ascending figure outlining a perfect fourth, previously employed in bar 21 of the first section. The viola follows with a four-note figure also outlining a perfect fourth but beginning on G rather than A. The second violin then enters with an extended seven-note figure outlining both perfect fourths and fifths, and finally the first violin enters with a similar pattern featuring eight notes and a quaver rest.

From bars 34–42 Sweeney develops his melodic material in the first violin both sequentially and using an additive process. He begins by employing the three-note figure of the opening, descending rather than ascending. His first group begins on the note A, followed sequentially on the note G. In the next bar (35) Sweeney adds another group beginning on F, followed by three more groups in bar 36 on E–D–C. In bar 38 Sweeney moves a step lower again to begin his three-note group on B, followed by an ascending three-note group still outlining major seconds and perfect fourths. The additive process is evident again as Sweeney extends his descending group to four notes (also in bar 38), to five notes in bars 40–41 and finally to eight notes in bars 41–42:

EXAMPLE 5.16
Eric Sweeney, String Quartet, Second Section, Second Movement (bars 32–42)

From bars 34–42 the second violin and viola play four brief melodic phrases in unison, each phrase employing only notes of the pentatonic scale. The first and second phrases are quite similar, with the second extended to include an additional pitch G. The third phrase ends on the note D followed by the fourth phrase ending on

the note G, perhaps suggesting a dominant – tonic feeling. Against these phrases the cello provides a strong bass also in sequence and once again outlining perfect fourths and fifths. As with the second violin and viola, the cello concludes with a dominant – tonic progression (bars 41–42).

From bars 43–46 the second violin presents a modified version of the second line of "The Three Little Drummers", accompanied by the first violin and viola in contrary motion a major second apart (see bar 3), and the cello entering with a single note A at a different point in the bar on each occasion. The first violin continues with its sequential development from bar 47, beginning with an ascending semiquaver pattern that is repeated an octave higher in the following bar. The descending sequences commence in bar 49 on the note A followed by G as before (see bar 34). The following four bars are nearly exact repetitions of bars 37–41. The second violin and viola play four brief phrases in unison, accompanied by the cello moving sequentially and concluding on dominant–tonic in bars 53–55. The second section ends on an open G chord.

The final section begins in a similar manner to the first with the cello playing a repetitive semiquaver pattern remaining unaltered until bar 69. The homophonic chords of the upper strings in quartal harmony remain intact with the exception of the first note of the viola line which is now A rather than E. The four-bar melodic phrase of the second violin in bars 60–63 also remains unaltered. Sweeney begins to modify his material from the end of bar 63 as the first violin enters with four melodic phrases, the last of which may be directly related to bars 22–23 of the first section with augmented time values for the last three pitches. Against this the second violin and

viola introduce material from the second section. The second violin employs an ascending semiquaver figure based on the perfect fourth and fifth while the viola enters with the pitch B at different time intervals but a major second apart from the second violin on each entry.

Sweeney begins a canonic idea at bar 71, beginning in the first violin and followed by the second violin one beat later. There is a definite feeling of C major at this point, shifting back to G in bar 74, C major again a bar later and back to G in bar 78. From the last note in bars 72 and 76, the first violin performs an embellished version of the melodic phrase previously encountered in bars 69–70 and 22–23. This phrase also appears in the viola line in bar 78.

From bar 71, the viola and cello perform a major second apart; the ascending figure in the viola in bars 71–72 moving to the cello in bars 75–76. The final section concludes with several bars of ascending arpeggio movement based firmly around G, eventually ending on unison G in all parts.

The third movement of Sweeney's String Quartet is based on the Irish traditional tune "The Blackthorn Tree" (An Draighneán Donn). Unlike the previous traditional tunes this is in simple time and is constructed from a diatonic scale with an additional flattened seventh and raised fourth.

Scale: C–D–E–F–F#–G–A–B♭–B

Sweeney quotes the complete tune on three occasions as opposed to employing brief extracts based on the source tune:

EXAMPLE 5.17
Traditional, "The Blackthorn Tree", Source Tune, Third Movement

As with the second movement, the third movement is also in ternary form with the three sections evident as follows:

A Section: Bars 1–41

B Section: Bars 42–75

A' Section: Bars 7 –94

Sweeney begins his third movement with the second violin employing an additive semiquaver figure outlining the perfect fourth, fifth and major sixth, and based around

the note C. Beginning with four notes, extended to six and then eight, this process continues until bar 9 where the viola enters in canon one beat later with the semiquaver figure now in inversion. Against this the cello plays a perfect fifth drone reinforcing C as the tonal centre.

Sweeney introduces "The Blackthorn Tree" from the end of bar 16–32, alternating the melodic material between the first and second violins. The traditional tune is performed almost in its entirety with the omission of several note repetitions and with the rhythm modified. The first violin enters with the first four pitches of the source tune in bars 16–17, followed by the second violin in bar 18 with a descending quintuplet figure comprised of pitches from bar 2 of "The Blackthorn Tree". The final pitches of the first phrase are evident in bars 19–21.

The first violin resumes the melodic movement from bars 21–24 with the opening pitches of the second phrase in augmented note values. This is followed by the second violin entering with another quintuplet figure preceded by additional two quavers; the pitches extracted from bars 7–8 of the traditional tune. The first violin presents the opening of the third phrase in bars 25–27 with the second violin completing this phrase in bars 27–29. The final phrase of "The Blackthorn Tree" is divided between the first and second violins in bars 29–33.

Against the melodic material of the first and second violins (bars 16–32), the viola and cello continue to employ the perfect fourth, fifth and major sixth semiquaver figure of the opening in canon. This figure is then adopted by all voices for the remainder of the first section. The perfect fifth pitches of the second violin in bars

39–40 are enharmonic equivalents of the first violin pitches. Both parts end in unison on F#/Gb accompanied by a drone on the note D in the cello giving a perfect fourth conclusion to the first section.

Sweeney introduces a key signature of one sharp for the second section, however this does not imply a G major tonality. The frequent appearance of the note C# suggests D major rather than G major, further reinforced by the fact that Sweeney quotes the entire traditional tune a major second higher. Sweeney's pitch material consists of the diatonic scale of the first section transposed a major second higher with both major and minor sevenths (C and C#). **Scale: D–E–F#–G–A–B–C–C#)**

Another feature of this section is Sweeney's use of continuously alternating time signatures between 3/4 4/4 and 5/4.

This middle section is quite dissonant and atonal with frequent minor second clashes between the second violin and viola, and also between the first and second violins evident throughout the section.

From bars 42–64 Sweeney quotes "The Blackthorn Tree" in the cello part a major second higher. The note values are modified in keeping with the various time signatures, however the source tune is easily identifiable. Against this the upper strings perform a repetitive semiquaver pattern quickly introducing all pitches of Sweeney's scale. In bar 43 the pitches E–F#–G–A–B are introduced, with the remainder of the pitches evident in the following bar. The homophonic entries of the upper strings are quite fragmented with rests interspersed between entries. Sweeney

employs a typical additive and subtractive process to create interest in these repetitive

entries:

EXAMPLE 5.18
Eric Sweeney, String Quartet, Second Section, Third Movement (bars 61–64)

Vln. 1
Vln. 2
Vla.
Vc.

64

At bar 65 Sweeney introduces another repetitive figure, on this occasion outlining the perfect fifth. The upper strings enter canonically with their pitches descending in major seconds. The cello enters in bars 68–72, with an ascending perfect fifth ending on a sustained note G while the key signature changes back to no sharps of flats. The cello then outlines a descending perfect fifth (G–C) perhaps signifying the return of C as the tonal centre. In keeping with this the upper strings all conclude on a repeated C thus preparing for the beginning of **A'**.

As with the previous sections, the final section also consists of a quotation of the source tune accompanied by a repetitive semiquaver pattern. The traditional tune is now returned to its original "key" and appears between the three upper voices. The cello adopts the semiquaver pattern, beginning exactly as the second violin in bars 1–3 of the first section.

In contrast to the first section, the second violin now introduces the first four pitches of "The Blackthorn Tree" (bars 76–77) sustaining the last pitch while the first violin takes over the melodic role. The viola follows in bar 78 with a descending quintuplet figure, the pitches for which are extracted from bars 2 and 3 of the source tune. Each voice continues to sustain their last pitch as the next voice resumes the melodic movement. The second violin plays the opening of the second phrase in bars 79–80, followed by the first violin (also in bar 80) and viola in bars 81–83. The second phrase is completed and the third phrase begun by the second violin in bars 83–84. The first violin continues the third phrase in bar 85, finished by viola in bars 86–88. The final phrase is started by the second violin in bars 88–89, continued by the first violin also in bar 89 and concludes in the viola in bars 90–92. The third movement ends with an open perfect fifth on C.

The final movement of the String Quartet may not be regarded as a recapitulation in the traditional sense as Sweeney extracts selected features from the previous movements and places them in a new context, and also continues to introduce new material. This movement divides into three broad sections, the first of which serves to introduce several ideas that recur throughout the movement. In the second section Sweeney introduces some new material and also revisits material from the first section. The final section is a continued development of ideas previously heard in both sections and also includes an extract from the source tune of the second movement: "The Three Little Drummers". Although this is not a typical recapitulation, the fact that Sweeney makes references to moments from the previous movements creates a certain sense of balance thus providing a fitting conclusion to the work.

First Section:	Bars 1–46
Second Section:	Bars 47–91
Third Section:	Bars 92–125

Sweeney begins his fourth movement with a homophonic, descending idea in all voices. The first violin and viola are both restricted to the hexatonic scale: **D–E–F#–A–B–C#**, whereas the second violin and cello employ the pentatonic scale: **D–E–G#–A–B**:

EXAMPLE 5.19
Eric Sweeney, String Quartet, First Section, Fourth Movement (bars 1–6)

There is a definite feeling of the dominant during this opening nine-bar passage despite the D major key signature. This is perhaps inevitable owing to the fact that the G# rises to A on each occasion in the second violin and cello, and all voices end in unison on the note A in bar 9.

Sweeney's second idea, which is introduced by the viola in bar 10, may be attributed to the opening of the first movement of the String Quartet. This repetitive idea is comprised of two ascending perfect fourths on the pitches A–D and B–E. These are not the exact pitches as in the first movement, however they do appear at a later stage in this movement. This perfect fourth figure continues unaltered until bar 18 where two additional pitches are incorporated into the pattern; C–F. The viola then continues until bar 28 where the repetitive pattern is eventually broken.

Sweeney introduces his third idea in bar 12 where both violins enter homophonically, with the first violin restricted to the three pitches E–F#–A and the second violin restricted to B–E–D. This material is very similar to an idea previously heard in the second movement (bars 3–4):

EXAMPLE 5.20
Eric Sweeney, String Quartet, First Section, Fourth Movement (bars 10–15)

In bar 20 both instruments incorporate an additional pitch into their patterns: the first violin adding the pitch B and the second violin adding the pitch F#. This pattern continues in both voices until bar 24.

Another layer is added in bar 22 where the cello performs perfect fifths, which shift position in the bar on each occasion. These open fifths are derived from the first movement (bars 28–30):

EXAMPLE 5.21
Eric Sweeney, String Quartet, First Section, Fourth Movement (bars 22–27)

EXAMPLE 5.22
Eric Sweeney, String Quartet, First Movement (bars 28–30)

From bar 24 the first and second violins adopt another idea previously evident in the second movement (bars 71–72, 75–76), on this occasion in unison rather than the second violin entering canonically one beat later:

EXAMPLE 5.23
Eric Sweeney, String Quartet, First Section, Fourth Movement (bars 22–27)

EXAMPLE 5.24
Eric Sweeney, String Quartet, Third Section, Second Movement (bars 71–74)

The first violin is first restricted to the pitches F# and A with the pitch B added in bar 26, whereas the second violin uses the pitches E–D–B with C added in bar 26. This idea from the second movement is explored further from bar 31 where all voices become involved in the pattern. The viola and cello begin one beat later than the first and second violins, with the viola imitating the first violin and the cello imitating the second violin. This idea continues until bar 38, where material from the opening of the fourth movement is recalled. All voices appear exactly as before with the exception of the cello which reverts back to the perfect fifth dyads (bar 22). This recapitulation of the opening bars marks the end of the first section.

The second section begins at bar 47 with the viola entering with material previously encountered at the opening of the first movement. Sweeney recalls the pitches exactly as before in this ascending perfect fourth figure:

EXAMPLE 5.25
Eric Sweeney, String Quartet, Second Section, Fourth Movement (bars 46–51)

EXAMPLE 5.26
Eric Sweeney, String Quartet, First Movement (bars 1–3)

Against this the cello introduces a *pizzicato* idea similar to that of the second movement (bars 17–19), however on this occasion the cello mainly employs descending perfect fifths rather than descending perfect fourths. The second violin introduces an additive idea from bar 51, beginning with four notes: G–A–B–G, extending to six in the following bar: G–A–B–G–E–F#, and then to eight in bars 53–54: G–A–B–G–E–F#–E–D.

From bar 58 the first and second violins enter an octave apart with material which is derived from the beginning of this second section (bar 47). The lower strings play bowed *sfz* chords built on two perfect fifths: C–G–D, also an octave apart. At bar 62 the viola and cello abandon their *sfz* chords in favour of imitating the material played by the first and second violins from bars 58–66. This imitation continues until bar 71 where the viola and cello repeat their imitated passage again. Sweeney then begins to juxtapose material from the first section against this material, for example in bars 67–70 the first and second violins revert back to the ascending perfect fourth idea

previously encountered in the first section (bar 10), followed by another idea from the first section (bar 12) in bars 71–77.

The viola and cello also begin to recall material from the first section in bar 80 as Sweeney juxtaposes two ideas from the opening section. The first and second violins enter with material recalled from bar 20 against material from bar 24 in the viola and cello:

EXAMPLE 5.27
Eric Sweeney, String Quartet, Second Section, Fourth Movement (bars 79–81)

This layering of ideas continues for the remainder of the second section.

The final section begins at bar 92 with a nearly exact recapitulation of the opening nine bars of the movement, the difference being that the viola and cello parts continue a repetitive pattern from the second section for the first two bars, however both parts fall into line with the first and second violins from bar 94.

In bar 101 Sweeney recalls the beginning of the second section an octave lower than previously and now with a G major key signature. The cello enters exactly as before. Against this recapitulation Sweeney juxtaposes the opening of the Irish traditional tune "The Three Little Drummers" (the source tune for the second movement) in the first violin, imitated by the second violin an octave lower from bar 108.

From bar 112–116 the cello introduces a sustained pedal note D in preparation for the return of the D major key signature in bar 117. Against this both viola and the second violin adopt the ascending perfect fourth idea, with the second violin incorporating the repeated notes one bar later:

EXAMPLE 5.28
Eric Sweeney, String Quartet, Third Section, Fourth Movement (bars 112–114)

Sweeney reverts back to D major in bar 117, however he continues to use C♮ in this bar. He then effects a powerful unison ending with a clear A major – D major statement, the driving energy very characteristic of Sweeney's music.

It is manifest from the pieces examined, particularly in all movements of this String Quartet, how completely Sweeney has absorbed Irish traditional pitch material into a minimalist compositional language. His adoption of minimalism provided him with the means of developing his own unique compositional style free from the constraints of serialism by skilfully exploiting the characteristics common to both styles: repetition of notes and phrases, use of a steady pulse, improvisation of the performers, clear harmonic frameworks, and the use of drones or long sustained notes. By selecting an Irish melody such as the hexatonic "The Banks of Lough Gowna" or the pentatonic "The Three Little Drummers" in his String Quartet for example, by then applying reductive processes to the material through the selective omission of non-harmonic notes, and by then subjecting the resultant pitches to phase-shifting and polyrhythmic, additive and subtractive, and multi-layered textural techniques, this all within a neo-classical framework, Sweeney discovered a personal language which was completely different to his earlier style and which, it could be argued, is ultimately more convincing.

CONCLUSION

In his paper "The Divided Imagination: Music in Ireland after Ó Riada",[1] Harry White identifies two traditions of Irish contemporary music. He describes the first tradition, represented by composers such as Mícheál Ó Súilleabháin, Shaun Davey and Bill Whelan as "... unmistakably Celtic ... nevertheless, this voice is one which remains aloof from the enterprise of musical modernism, which eschews the European aesthetic except in the most popular and derivative terms, which nimbly side-steps the whole confused century of art-music which has just recently ended".[2] The second represents those who embrace European avant-garde techniques and philosophies, including the composers examined in this dissertation and many more catalogued in the Contemporary Music Centre, Dublin. Although there does indeed appear to be two such traditions, it is important to conclude that this study highlights the fact that there is not any particular "school" of post-war Irish composition, as the composers represented in each chapter display very different compositional languages by employing such a wide range of referential collections in their work. Axel Klein has discussed the necessity felt by Irish composers in the past to travel abroad in order to gain exposure to the latest compositional trends and philosophies due to the dearth of avant-garde possibilities at home[3] (and it is notable that many of the latest compositional styles were developed in mainland Europe and America often more than a decade before reaching Ireland). As a result, Irish composers encountered, directly or indirectly, a variety of influences, and consequently developed diverse compositional styles. Ó Riada famously criticised the attempt to incorporate Irish

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[1] *Irish Musical Studies* vii, Gareth Cox and Axel Klein (eds.), (Dublin: Four Courts Press, at press), pp. 11–28.

[2] Ibid., p. 16.

[3] Axel Klein, "Irish Composers and Foreign Education: A Study of Influences", *Irish Musical Studies* iv, Patrick Devine and Harry White (eds.), (Dublin: Four Courts Press, 1995), pp. 271–284.

traditional music into a European context, stating that "Irish music is not merely not European, it is quite remote from it. It is, indeed, closer to some forms of Oriental music. The first thing we must do, if we are to understand it, is to forget about European music. Its standards are not Irish standards; its style is not Irish style; its forms are not Irish forms."[4] Although a characteristic which some of the composers considered in this study do have in common is the varying extents to which they attempt to come to terms with aspects of their Irish heritage within a mainstream European rhetoric, it would be surely contrived to argue that this could in some way constitute a "school". As has been seen, the references range from the overt, e.g. Sweeney's reliance on Irish traditional folk tunes as the exclusive source for his pitch selection, to the obscure as Barry's occasional use of Irish traditional music as a source of pitch material. As White succinctly comments, "… it is not always easy to be Irish and European at the same time".[5] This study of tonal and post-tonal referential collections, primarily in the works of Bodley, Sweeney, Martin and Corcoran, makes it clear that a defining feature of much post-war Irish music is its internationally-influenced plurality, from the serial pitch selection of Bodley's Darmstadt period in the 1960s to the octatonic collections of Martin in the 1980s. Although the four main composers discussed in this thesis are in many ways representative of much of the post-war compositional development in Ireland, at the same time it should be noted that they only constitute a small percent of the large number of Irish composers active in the second half of the twentieth century. There is clearly much scope for further research.

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[4] Seán Ó Riada, *Our Musical Heritage*, Thomas Kinsella (ed.), (Portlaoise, 1982), p. 20.
[5] White, op. cit., p. 28.

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