



# University of HUDDERSFIELD

## University of Huddersfield Repository

Vickers, Katy

Repetition and Recontextualisation: an analysis of my recent compositional work

### Original Citation

Vickers, Katy (2019) Repetition and Recontextualisation: an analysis of my recent compositional work. Masters thesis, University of Huddersfield.

This version is available at <http://eprints.hud.ac.uk/id/eprint/35157/>

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: [E.mailbox@hud.ac.uk](mailto:E.mailbox@hud.ac.uk).

<http://eprints.hud.ac.uk/>

**Repetition and Recontextualisation**

*an analysis of my recent compositional work*

**Katy Rae Vickers**

A thesis submitted to the University of Huddersfield in partial fulfilment of the requirements for the degree of  
Master of Arts by Research

**The University of Huddersfield**

September 2019

## **copyright statement**

The author of this thesis (including any appendices and/or schedules to this thesis) owns any copyright in it (the 'copyright') and she has given The University of Huddersfield the right to use such Copyright for any administrative, promotional, education, and/or teaching purposes.

Copies of this thesis, either in full or in extracts, may be made only in accordance with the regulation of the University Library. Details of these regulation may be obtained from the Librarian. This page must form part of any such copies made.

The ownership of any patents, designs, trademarks, and any and all other intellectual property rights except for the Copyright (the 'Intellectual Property Right') and any reproductions of copyright works, for example graphs and tables ('Reproductions') which may be described in this thesis, may not be owed by the author and may be owed by third parties. Such Intellectual Property Rights and Reproductions cannot and must not be made available for use without permission of the owner(s) of the relevant Intellectual Property Rights and/or Reproductions.

## **acknowledgements**

To my family and friends, I offer my greatest thanks.

Without their unwavering encouragement, guidance, support and patience, this thesis would not have been possible.

## **list of contents**

p. 2	<b>copyright statement</b>	
p. 3	<b>acknowledgements</b>	
p. 4	<b>list of contents</b>	
p. 5	<b>list of portfolio contents</b>	
p. 6	<b>list of figures</b>	
p. 8	<b>abstract</b>	
p. 9	<b>introduction</b>	
p. 11	<b>chapter one:</b>	An analysis of <i>Cicada</i> by Kevin Volans
p. 35	<b>chapter two:</b>	Addition and Subtraction
p. 47	<b>chapter three:</b>	Placement and Displacement
p. 56	<b>chapter four:</b>	Tone and Colouring
p. 67	<b>summary</b>	
p. 68	<b>bibliography</b>	

## **list of portfolio contents**

<b><i>three pianos</i></b>	for three pianos; c. 9'; 2017
<b><i>quintet for percussion</i></b>	for gong, three vibraphones, and celesta; c.7'20"; 2018
<b><i>string quartet no. II</i></b>	for string quartet; c.6'30"; 2018
<b><i>glissandi for choir</i></b>	for satb choir; c.8'; 2018

## list of figures

### *list of figures included in chapter one:*

- Figure 1: Theme A of Cicada (1996)
- Figure 2: Theme A1 of Cicada (1996)
- Figure 3: Theme A2 of Cicada (1996)
- Figure 4: Theme A3 of Cicada (1996)
- Figure 5: Theme A4 of Cicada (1996)
- Figure 6: Theme A4, the bass line of Piano I in Cicada (1996)
- Figure 7: Theme A, the bass line of Piano I in Cicada (1996)
- Figure 8: Theme A5 (A3.1) of Cicada (1996)
- Figure 9: Theme A6 of Cicada (1996)
- Figure 10: Theme A, bass line of Piano II in Cicada (1996)
- Figure 11: Theme A6, bass line of Piano II in Cicada (1996)
- Figure 12: Theme A7 of Cicada (1996)
- Figure 13: Theme A8/A7.1 of Cicada (1996)
- Figure 14: Theme A9/A7.2 of Cicada (1996)
- Figure 15: Theme A10/A.1 of Cicada (1996)
- Figure 16: Theme A11/A of Cicada (1996).
- Figure 17: Theme A12 of Cicada (1996)
- Figure 18: Theme A12a/A6.1 of Cicada (1996)
- Figure 19: Theme A12b/A6.2 of Cicada (1996)
- Figure 20: Theme A13/A4.1 of Cicada (1996)
- Figure 21: Theme A14/A3.2 of Cicada (1996)
- Figure 22: Theme A15/A.2 of Cicada (1996)
- Figure 23: Theme A16/A12.1 of Cicada (1996)
- Figure 24: Theme A17/A13.1/A4.2 of Cicada (1996)
- Figure 25: Theme A18/A.3 of Cicada (1996)
- Figure 26: Theme A19/A3.3 of Cicada (1996)

### *list of figures included in chapter two:*

- Figure 27: Theme A1 of Cicada (1996)
- Figure 28: Theme A4 of Cicada (1996)
- Figure 29: Bars 7-8 in Three Pianos (2017)
- Figure 30: Bars 9-10 in Three Pianos (2017)
- Figure 31: Bars 7-16 in Glissandi for Choir (2018)
- Figure 32: Bars 24-25 in Three Pianos (2017)
- Figure 33: Bars 26-27 in Three Pianos (2017)
- Figure 34: Theme A.2 in Quintet for Percussion (2018)
- Figure 35: Theme C in Quintet for Percussion (2018)
- Figure 36: Theme D.1 in Quintet for Percussion (2018)
- Figure 37: The Opening of Movement II. Bars 37-44 in String Quartet No II (2018)
- Figure 38: Bars 33-34 in Three Pianos (2017)
- Figure 39: Continuation of Theme D.1 in Quintet for Percussion (2018)
- Figure 40: Theme E in Quintet for Percussion (2018)

*list of figures included in chapter three:*

- Figure 41: Theme A7 of Cicada (1996)
- Figure 42: Theme A10/A.1 of Cicada (1996)
- Figure 43: Theme A4, the bass line of Piano I in Cicada (1996)
- Figure 44: Theme A, the bass line of Piano I in Cicada (1996)
- Figure 45: Bar 23 in Three Pianos (2017)
- Figure 46: Bars 43- 44 in Three Pianos (2017)
- Figure 47: Movement II, bars 61-68 in String Quartet No II (2018)
- Figure 48: Theme A.1 in Quintet for Percussion (2018)
- Figure 49: Theme B.2 in Quintet for Percussion (2018)
- Figure 50: Bars 20-21 in Three Pianos (2017)
- Figure 51: Bar 23 in Three Pianos (2017)

*list of figures included in chapter four:*

- Figure 52: Theme A15/A.2 of Cicada (1996)
- Figure 53: Theme A2 of Cicada (1996)
- Figure 54: Bars 14-15 in Three Pianos (2017)
- Figure 55: Bars 53-63 in Glissandi for Choir (2018)
- Figure 56: Bar 13 in Three Pianos (2017)
- Figure 57: Bars 14-15 in Three Pianos (2017)
- Figure 58: Theme C in Quintet for Percussion (2018)
- Figure 59: Theme B.2 in Quintet for Percussion (2018)
- Figure 60: Theme A.4 in Quintet for Percussion (2018)
- Figure 61: The Opening of Movement II. Bars 37-44 in String Quartet No II (2018)
- Figure 62: Bars 7-16 in Glissandi for Choir (2018)



## **abstract**

This thesis accompanies and complements a portfolio of four original acoustic compositions written between 2017 and 2018. Together, this thesis and the portfolio of compositions explores aspects of repetition and recontextualisation within music.

By drawing from sources by Dora A. Hanninen, Jacques Lacan, Johnathan Burrows, and Bara Kolenc, this thesis outlines several current theories regarding repetition and recontextualisation and attempts to contextualise my enquiry.

This thesis will identify, illustrate, and explain a variety of compositional techniques and devices that may be used to achieve the repetition and recontextualisation of musical material, and through which a composer may encourage a listener to re-orientate the perspective from which each element of the repeated material is heard.

To do so, this thesis presents an analysis of *Cicada* by Kevin Volans, as an initial case study, but also draws upon examples from work presented within the portfolio of original compositions. Furthermore, this thesis also draws examples from a wide variety of works across the creative arts by other artists including: Phillip Glass, Robert Lax, Alvin Lucier, Steve Reich, Morton Feldman, Richard Glover, Agnes Martin, and James Turrell.

Ultimately, this thesis proposes that the compositional techniques and devices deployed in the repetition and recontextualisation of musical material may be classified into any one or more, of the following three categories: (1) addition and subtraction, (2) placement and displacement, and (3) tone and colouring.

## introduction

*As a means of introduction, this chapter will define key terminology, and outline a limited number of current and recent theories on repetition and recontextualisation.*

The Oxford Lexico Dictionary defines repetition as follows:

“repetition (noun)

[mass noun]

1. the action of repeating something that has already been said or written: her comments are worthy of repetition [[count noun] : a repetition of his reply to the delegation.

[count noun] archaic a piece set by a teacher to be learned by heart and recited.

2. [often with negative] the recurrence of an action or event: there was to be no repetition of the interwar years [[count noun] : I didn't want a repetition of the scene in my office that morning.

[count noun] a thing repeated: the geometric repetitions of Islamic art.

[count noun] a training exercise which is repeated, especially a series of repeated raisings and lowerings of the weight in weight training: lie on your back and bench-press a light weight very quickly over ten repetitions.

(Music) the repeating of a passage or note: the tune is full of melodic repetition and sequence”

(Lexico, 2019).

These definitions of repetition are mostly specific to a context. Looking at these definitions, the phrase that unites these definitions, and is perhaps the most generalised definition of repetition, is a ‘reoccurrence’ of something.

Bara Kolenc argues that there is a relationship between repetition and surprise, and that if something is repeated, we might expect it to not surprise us. However, Kolenc also states that in psychoanalysis there is a “mode of repetition where every instance of repetition actually surprises us” (2018, p.45). Kolenc believes that repetition is not surprising in instances where the material is a true repetition, where the material is “repeated over and over again without the material shifting” (2018, p.45). Kolenc argues that repetition is surprising when the material is subjected to “shifting, shaking or changing what is repeated” (2018, p.45). When material shifts, it becomes an act of transformation. It is only when repetition is used as a transformational process, and shifts repetitive material into a new context, when repetition is surprising (Kolenc, 2018, p.45).

Kolenc also refers to the Danish philosopher, Søren Kierkegaard, who thought that repetition can “liberate and emancipate us” (Kolenc, 2018, p.45). By this, Kierkegaard meant that repetition is a path to transformation and freedom, and is not a form of capture (Kolenc, 2018, p.45).

Jacques Lacan, a psychoanalyst, used Aristotle’s physics to define repetition. Aristotle devoted his attention to what escapes accident and chance and suggests two parameters: “automaton and tyche” (Kolenc, 2018, p.45). According to Lacan, “automaton is precisely the repetition of the same, while tyche is defined as the encounter with the real”, and therefore is the encounter with the new and unexpected (Kolenc, 2018, p.45). Lacan states that Tyche cannot exist without gaps within automation (Kolenc, 2018, p.45).

Dance choreographer, Johnathan Burrows, states that “repetition is a device [that] emphasise[s] or erode[s] something by showing it more than once” (Burrows, 2010, p.8). He quotes the choreographer Meg Stuart, who states that: “To see an image and then to re-see it, to experience it more than once, to go beyond the first

impression so that it becomes something completely else to you than it was when it first flashed by" (Burrows, 2010, p. 8).

Dora a Hanninen quotes John Rahn, in that "abstraction-from-context is the only kind of abstraction there is. This is the operation that makes the notion of a thing" (Hanninen, 2003, p. 65). For the abstraction and instalment of material, Hanninen has offered the name recontextualisation. This is her equivalent of Aristotle's *tyche*. She states that "recontextualization indicates a (listener's perception of) phenomenal transformation of repetition [...] induced by a change in musical context" (Hanninen, 2003, p. 61). She continues to state that this form of repetition is an 'estranged' form of repetition, where this repetition of material does not sound like an identical repetition due to its new context (Hanninen, 2003, p. 61).

Within my creative work, I have explored a variety of compositional techniques and devices to recontextualise and transform musical material and have used repetition as a transformative process. In this thesis, I shall present my analysis of Kevin Volans *Cicada* (1996) as a case study in such compositional devices. I will identify, illustrate, and explain the compositional techniques and devices used within my own work to modify each reiteration of repeated material. I will also draw examples from a wide variety of works across the creative arts, to illustrate alternative and complimentary approaches to such techniques. Ultimately, this thesis will propose that the compositional techniques and devices deployed in the repetition and recontextualisation of musical material may be classified into any one or more, of the following three categories: (1) addition and subtraction, (2) placement and displacement, and (3) tone and colouring.

## chapter one

*This chapter presents an analysis of Kevin Volans' Cicada, that identifies, illustrates, and explains the compositional techniques used by Volans in Cicada to achieve the repetition and recontextualisation of its opening material. The analysis tracks the subtle alterations made by Volans to each reiteration of the opening material of the piece, through which Volans encourages the listener to re-orientate the perspective from which they hear each element of the repeated material.*

Kevin Volans completed *Cicada* in 1994. The piece is scored for piano duo and was commissioned for Double Edge Piano Duo by the Mary Carey Foundation (Volans, 1996). The first performance of *Cicada* was given by Edmund Niemann and Nurit Tilles at the Los Angeles County Museum of Art on 25th April 1994. Kevin Volans has referred to *Cicada* as his 'first genuinely minimalist piece' (Eastburn, 2004, p. 34).

The title of Volans work *Cicada* was derived from a series of crosshatched paintings of the same name by Jasper Johns (Smith, 2011). Johns' *Cicada* series was a product of his 'linear style' that was inspired by a car decorated with 'clusters of non-intersecting parallel lines' (The Museum of Fine Arts, Houston, 2005). Volans felt that the non-intersecting parallel lines in Johns' *Cicada* reflected the way in which the two pianos parts in Volans' composition mirrored and interlocked with on another (Volans, 2004, p.39).

Titling aside, Volans gives credit to James Turrell's exhibition, *Air Mass* (1993) in Kilkenny, Ireland, as the primary source of inspiration for *Cicada*. Volans described his encounter with James Turrell's exhibition, and how it inspired *Cicada*, as follows:

A friend took me to an opening of Turrell's in Kilkenny. In the evening we sat in a large cubic light box in the grounds of the castle and over a period of an hour watched a square of the sky overhead turn from the blue-grey of Irish clouds, through Yves Klein blue to slate black. I stayed overnight in my friend's minimalist house in Killiney. The next morning, I woke to a glittering square of sunlight reflected off the sea and I decided: no composition; don't change anything except the tone (Smith, 2011).

However, as Adrian Smith explains, it is not just the tone that is changed throughout Volans' *Cicada*. The opening of 'repeated interlocking chordal patterns' is subjected to 'gradual adjustments of harmony, tone, dynamics, register, and tempo' (Smith, 2011). These gradual adjustments to the material are made throughout the piece and alter the perspective from which each element of the repeated material is heard. Essentially, the opening material of *Cicada* is continually recontextualised during the performance of the piece.

In this regard, there are further similarities that can be drawn between Volans' *Cicada*, and Turrell's *Air Mass* (1993). In the latter, as an audience experiences the work over time their perspective of it is in continual motion: there are continual adjustments to the tone and direction of light. The physical exhibition, however, re-mains the same. The changes made to the tone and direction of the light are outsourced by the weather, the placement of the sun, and the time of day. These factors working externally upon the exhibition effect the perspective from which the audience experiences the work.

Figure 1 contains the opening two bars of *Cicada*. The material within these opening bars is comprised of a phrase of syncopated three and four note chords, that is repeated ten times. Each repetition is punctuated with a bars rest. For the purpose of this analysis, this material shall be referred to as Theme A.

Figure 1: Theme A of *Cicada* (1996)

The musical score for Theme A of *Cicada* (1996) is presented for two pianos. The tempo is marked as  $\text{♩} = 138$ . The score is in 6/4 time and consists of two systems, each repeated 10 times (indicated by 'x10').

**Piano I:** The treble line (right hand) is marked *mf* (mezzo forte) and is enclosed in a red box. The bass line (left hand) is marked *p* (piano) and is enclosed in a blue box. The instruction *Ped. sempre con 1/2 Ped.* is written below the bass line.

**Piano II:** The treble line (right hand) is marked *p* (piano) and is enclosed in a blue box. The bass line (left hand) is marked *mp* (mezzo piano) and is enclosed in a red box. The instruction *Ped. sempre con 1/2 Ped.* is written below the bass line.

*Cicada*  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Theme A is played at 138 crotchet beats per minute. The treble (right hand) line of Piano I, and the bass (left hand) line of Piano II are in rhythmic unison. Conversely, the bass line of Piano I, and the treble line of Piano II are also in rhythmic unison. This is shown in Figure 1 using red boxes for the former, and blue boxes for the latter. Similarly, the pitch material is identical in both pianos. The chords used in the treble line of Piano I, and the treble line of Piano II are the same. This is also true for the bass line of each piano. The chords in each line are played in alternation. In Piano I the chords alternate from the treble to the bass line, whereas in Piano II the chords alternate from the bass line to the treble.

In Theme A, the treble line of Piano I is marked *mezzo forte*, and the bass line of Piano II is marked *mezzo piano*. Meanwhile, the bass line of Piano I, and the treble line of Piano II are both marked *piano*. Volans has used the variation of dynamic marking as a technique to prioritise the individual elements of the material and alter the perspective from which each element is heard. In general, material with a stronger (or louder) dynamic marking is given a higher priority, whilst material with a weaker (or quieter) dynamic marking is given a lower priority. In Theme A, the stronger dynamic markings prioritise the treble line of Piano I, and the bass line of Piano II. This is shown in Figure One using pink boxes.

Figure 2: Theme A1 of *Cicada* (1996)

The musical score for Theme A1 of *Cicada* (1996) is presented in two systems. The first system, starting at bar 7, features a treble clef staff with a *mf* dynamic and a bass clef staff with a *p* dynamic. The tempo is marked as quarter note = 138. The key signature has one flat. The first system concludes with a double bar line and a repeat sign, followed by a yellow box indicating a repetition of 12 times (x12). The second system, starting at bar 9, mirrors the first system's structure. Two green boxes highlight specific chords: one in the bass line of the first system (bar 8) and one in the bass line of the second system (bar 9). The score ends with a double bar line and a repeat sign, followed by another yellow box indicating a repetition of 12 times (x12).

*Cicada*  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 2 contains bars 7 and 8 of *Cicada*. The material within these bars form a modified version of Theme A and shall be referred to as Theme A1. Theme A, and Theme A1 are closely related. In Theme A1, each phrase of syncopated chords is repeated twelve times, whereas in Theme A, each phrase is repeated ten times. In addition, the bars rest that punctuates each repetition has been diminished from 5/8 in Theme A, to 3/8 in Theme A1. This is shown in Figure 2 using an amber box. Furthermore, in Theme A1 the second chord of the bass line of Piano II, and the penultimate chord of the bass line of Piano I have been altered by a single note. In each chord, the C<sup>#4</sup> used in Theme A has been replaced with a B<sup>b3</sup>. This is shown in Figure 2, using green boxes.

Figure 3: Theme A2 of *Cicada* (1996)

The image displays two piano staves for Theme A2 of *Cicada*. The score begins at measure 9, marked with a tempo of  $\text{♩} = 126$  (indicated by a purple box). The key signature has one flat (B-flat), and the time signature is 6/4. The first staff (Piano I) starts with a dynamic of *mf* and features a green box around a chord in the treble clef. The second staff (Piano II) starts with a dynamic of *p* and also features a green box around a chord in the treble clef. Both staves conclude with a 3/16 time signature and a repeat sign with a 'x4' multiplier, which is enclosed in an amber box.

*Cicada*  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 3 contains bars 9 and 10 of *Cicada*. The material within these bars form a modified version of Theme A and shall be referred to as Theme A2. The bars rest that punctuates each repetition has been diminished from 3/8 to 3/16. This is shown in Figure Three, by the amber box. The tempo has also been diminished, from 138 crotchet beats per minute, to 126 crotchet beats per minute. This is shown in Figure 3, by the purple box. Volans has made minor alteration to the pitch material. Within the treble line of Piano I, the  $B^{b11}$  chord (with omitted 3<sup>rd</sup>) has been altered to a  $B^7$  chord (with omitted 3<sup>rd</sup>). Within the treble line of Piano II, the original  $B^{b11}$  chord (with omitted 3<sup>rd</sup>) has been altered to a diminished E chord with added 11<sup>th</sup>. This is shown in Figure 3, by the green box.

Figure 4: Theme A3 of *Cicada* (1996)

*Cicada*  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 4 contains bars 13 and 14 of *Cicada*. The material within these bars form a modified version of Theme A and shall be referred to as Theme A3. The tempo within Theme A3 is the same as Theme A2, though it is worth noting that the tempo between bars 11-12 is 112 crotchet beats per minute. The return to 126 crotchet beats per minute is shown in Figure 4, by the purple box. The dynamic markings have also been altered within Theme A3. The treble line of Piano I is marked *mezzo piano*, whilst the dynamics in the remaining parts are marked *pianissimo*. This indicates that Volans is, again, using dynamics to prioritise the material. These dynamics markings are shown in Figure 4, by the pink boxes.

Volans has also made modifications to the pitch material within Theme A3. The  $D_{min}^{\#7}$  chords that appear in Theme A, have been altered to  $B^b$  major triads. This creates a more consonant harmonic pallet. The affected chords are shown in Figure 4, by the green boxes. In addition, the bars rest that punctuates each repetition has been augmented from the 3/16 used in Theme A2, to 2/4. This is shown in Figure 4, by the amber box.



Figure 5: Theme A4 of *Cicada* (1996)

The image shows a musical score for two piano parts, labeled 'Pno.' on the left. The score consists of two systems, each with a treble and bass clef staff. The first system starts at measure 15, marked with a tempo of  $\text{♩} = 138$  and a dynamic of *mp*. The second system also starts at measure 15, marked with a tempo of  $\text{♩} = 138$  and a dynamic of *pp*. The score is annotated with several colored boxes: a yellow box highlights the first measure of both systems; a purple box highlights the tempo marking in both systems; a pink box highlights the first measure of the bass line in the first system; a green box highlights two chords in the treble line of the second system; and a large orange box highlights the final two measures of both systems, which are marked with a repeat sign and 'x2'. Red arrows in the bass line of the second system indicate octave transpositions: three arrows point up and two point down.

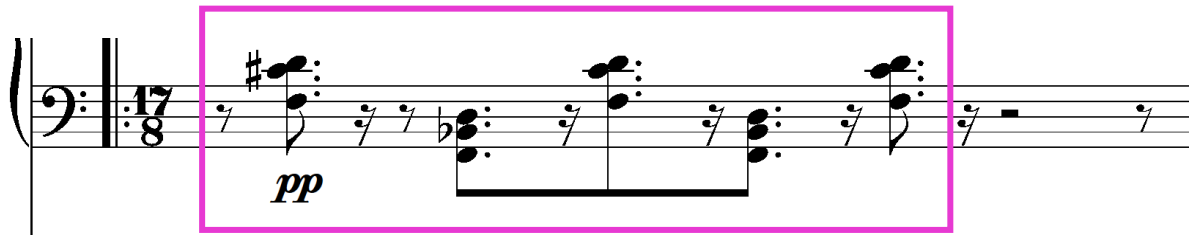
*Cicada*  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 5 contains bars 15 and 16 of *Cicada*. The material within these bars form a modified version of Theme A, Theme A4. Theme A4 is the most significantly modified version of Theme A used at this point in the piece. Volans has augmented the bar of syncopated chords from 6/4 to 17/8, in addition to augmenting the succeeding bars rest from 2/4 to 7/4. The latter is the longest period of silence within the composition so far. This is shown in Figure 5, by the yellow and amber boxes respectively. In Theme A4, the tempo has returned to the original tempo of 138 crotchet beats per minute. This is shown in Figure 5, by the purple boxes.

Further pitch alterations have been made in Theme A4. In Theme A, the pitch material was comprised of E4, B<sup>b</sup>4, E5, and F5. In Theme A4, the E4 has been shifted to A4, the F5 to G5, and E5 has been eliminated. The affected chords have been boxed in green in Figure 5. Furthermore, each chord in the bass line of Piano II has been shifted either up or down by one octave. The red arrows within Figure 5 indicate the direction in which each chord has been transposed.

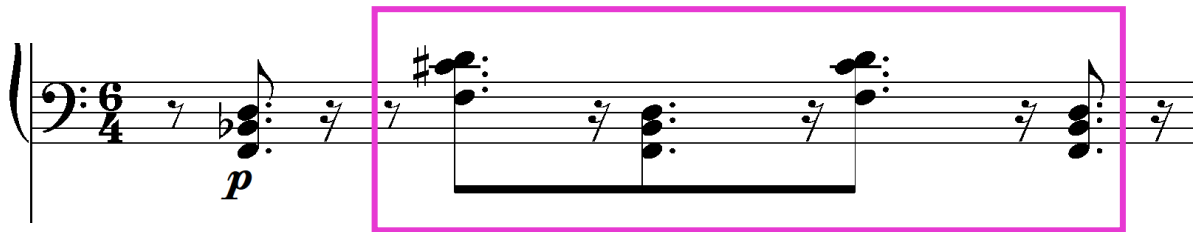
In Theme A4, Volans introduces another technique to modify this reiteration of the opening material. Figures 6 and Figure 7 outline how the material within Piano I has shifted through its pattern of triads, and begins on what would have been the second triad in Theme A. This shift is visibly outlined by the purple boxes in Figures 6 and 7.

Figure 6: Theme A4, the bass line of Piano I in *Cicada* (1996)



*Cicada*  
Music by Kevin Volans.  
© 1996 Chester Music.  
All Rights Reserved. International Copyright Secured.  
Used by Permission of Hal Leonard Europe Limited.

Figure 7: Theme A, the bass line of Piano I in *Cicada* (1996)



*Cicada*  
Music by Kevin Volans.  
© 1996 Chester Music.  
All Rights Reserved. International Copyright Secured.  
Used by Permission of Hal Leonard Europe Limited.

Figure 8: Theme A5 (A3.1) of *Cicada* (1996)

17 ♩=126

Pno. *ppp*

*pp*

*pp*

*ppp*

♩=126

Pno. *pp*

*ppp*

x7

x7

*Cicada*  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 8 contains bars 17 and 18 of *Cicada*. The material within these bars is a modified version of Theme A3 and shall be referred to as Theme A5 (A3.1). Theme A3 and A5 are closely related. The only differences between A5 and A3, are the difference in dynamic markings, and the time signature in the bars rest. In Theme A5, the bass line of Piano I is in rhythmic unison with the treble line of Piano II. This is shown in Figure 8, by the red box. By marking this material with a stronger dynamic marking, Volans has prioritised this material over the treble line of Piano I, and the bass line of Piano II. In Theme A5 the bars rest that punctuates each repetition has been diminished by a quaver, from 2/4 to 3/8. Also, whilst Theme A3 was not repeated, Theme A5 is re-peated seven times. These alterations are all displayed in Figure 8.

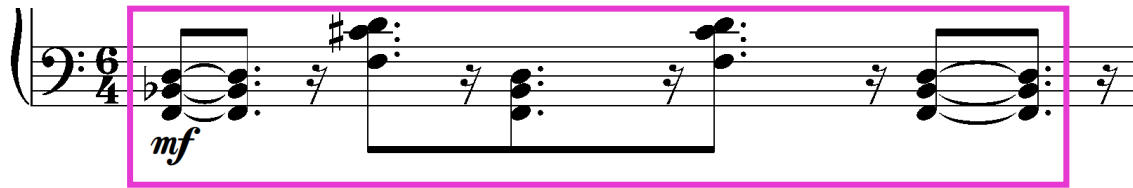
Figure 9: Theme A6 of *Cicada* (1996)

The musical score for Theme A6 of *Cicada* (1996) is presented in two systems of piano accompaniment. The tempo is marked as 112. The first system (Piano I) features a treble clef and a bass clef. Red arrows in the treble line of Piano I indicate chords that have been transposed up by one octave. Green boxes highlight the final chords of both Piano I and Piano II in bar 19, showing their unification of pitch material. A pink box highlights the bass line of Piano II in bar 19, which has been altered to start on the second triad of the original Theme A material. The dynamics are marked as *pp*.

*Cicada*  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

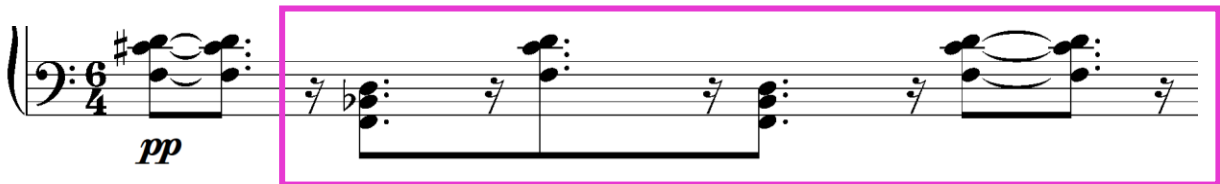
Figure 9 contains bars 19 and 20 of *Cicada*. The material within these bars is a modified version of Theme A and shall be referred to as Theme A6. In Theme A6, several chords in the treble line of Piano I have been transposed up by one octave. The affected chords have been marked with red arrows in Figure 9. These modifications continue, as pitches material has been altered in the treble line of Piano I, and the treble line of Piano II. Towards the end of bar 19, both Piano I and II are playing the same triads, which contain the following pitches: B<sup>b</sup>4, G5, and A5. This unification of pitch material is displayed by the green boxes in Figure 9. The bass line of Piano II has also been altered in bar 19, as it shifts through the pattern of triads. As a result, the bass line begins on what would be the second triad in the original Theme A. To illustrate this, Figure 10 displays the original pattern of triads in Theme A. Figure 11 displays the Theme A6 material, which begins on the second triad of the original Theme A material.

Figure 10: Theme A, bass line of Piano II in *Cicada* (1996)



*Cicada*  
Music by Kevin Volans.  
© 1996 Chester Music.  
All Rights Reserved. International Copyright Secured.  
Used by Permission of Hal Leonard Europe Limited.

Figure 11: Theme A6, bass line of Piano II in *Cicada* (1996)



*Cicada*  
Music by Kevin Volans.  
© 1996 Chester Music.  
All Rights Reserved. International Copyright Secured.  
Used by Permission of Hal Leonard Europe Limited.

Figure 12: Theme A7 of *Cicada* (1996)

The image shows a musical score for Theme A7 of *Cicada* (1996), consisting of two piano parts. The score is in 6/4 time and begins at measure 21. The first piano part (top) is in G minor, and the second piano part (bottom) is in E minor. Both parts feature a series of triads in the first two measures, with red arrows indicating octave transpositions: up in the first measure and down in the second. The music concludes in measure 22 with a 7/8 bar rest, which is highlighted by a yellow rectangular box. The dynamic marking *pp* is present at the beginning of both piano parts.

*Cicada*  
Music by Kevin Volans.  
© 1996 Chester Music.  
All Rights Reserved. International Copyright Secured.  
Used by Permission of Hal Leonard Europe Limited.

Figure 12 contains bars 21 and 22 of *Cicada*. The material within these bars is a modified version of Theme A6 and shall be referred to as Theme A7. Within Theme A7, Volans has transposed a number of triads up or down an octave. The direction of these transpositions has been indicated with red arrows in Figure 12. The bar rest in Theme A7 has been augmented substantially from the 1/8 bar rest found in Theme A6, to 7/8. This is displayed in the amber box in Figure 12. It is also worth noting that neither Theme A6 or Theme A7 are repeated.

Figure 13: Theme A8/A7.1 of *Cicada* (1996)

The image shows a musical score for two piano parts (Pno.) for bars 23 and 24 of the piece *Cicada*. The score is in 6/4 time. The first part (top) has a red arrow pointing to a triad in bar 23 that is transposed down an octave. The second part (bottom) has a yellow box around the end of bar 24, which is marked 'x4', indicating a diminished time signature of 3/8. Both parts end with a double bar line and repeat dots.

*Cicada*  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 13 contains bars 23 and 24 of *Cicada*. The material within these bars is a modified version of Theme A7 and shall be referred to as Theme A8/A7.1. Theme A8/A7.1 is slightly different from Theme A7, as the first triad in the treble line of Piano I has been transposed down an octave. This transposition is indicated by the red arrow in Figure 13. Another modification in Theme A8/A7.1 is the diminished time signature in the bar rest (bar 24). The time signature in Theme A7 was 7/8, as displayed in Figure 12. In Theme A8/A7.1, this is diminished to 3/8, which is illustrated in the amber box in Figure 13. Another notable difference is that Theme A8/A7.1 is repeated four times, whilst Theme A6 and Theme A7 are not.

Figure 14: Theme A9/A7.2 of *Cicada* (1996)

The image displays a musical score for two piano parts (Pno.) across two systems. The first system covers bars 25 and 26. The second system covers bars 27 and 28. The music is in 6/4 time. A red arrow points to the first chord in the treble line of the first piano part in bar 25. An amber box highlights the final measure of bar 26, where the time signature changes to 9/8. The score includes various musical notations such as chords, stems, and beams.

*Cicada*  
Music by Kevin Volans.  
© 1996 Chester Music.  
All Rights Reserved. International Copyright Secured.  
Used by Permission of Hal Leonard Europe Limited.

Figure 14 contains bars 25 and 26 of *Cicada*. The material within these bars is the second time that Theme A7 has been modified and shall be referred to as Theme A9/A7.2. Theme A9 is almost a true copy of Theme A8/A7.1. The first chord of the treble line on Piano I has been transposed up by one octave. This is indicated by the red arrow in Figure 14. The time signature within the bars rest (bar 26) has been augmented significantly from 3/8 in Theme A8/A7.1, to 9/8 in Theme A9/A7.2. This is indicated by the amber box in Figure 14. It is also worth noting that unlike Theme A8, and like Theme A6 and Theme A7, Theme A9 is not repeated.



Figure 15: Theme A10/A.1 of *Cicada* (1996)

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 15 contains bars 30-32 of *Cicada*. The material within these bars is related to Theme A and shall be referred to as Theme A10/A.1. Bar 31 of Theme A10 is an exact repetition of bar 1 of Theme A. Bar 30 is an addition to the phrase which allows for the first chord of the Theme A material to be augmented. This is shown in Figure 15 by the blue boxes.

In Theme A10/A.1, the tempo has returned to the original tempo in Theme A, 138 crotchet beats per minute. This is indicated in the purple box in Figure 15. The dynamic markings are not an exact repetition of the dynamics in Theme A. However, as in Theme A, the treble line of Piano I and bass line of Piano II are sonically prioritised in Theme A10/A.1. This sonic prioritisation through dynamic marking is boxed pink in Figure 15.

Figure 16: Theme A11/A of Cicada (1996).

45  $\text{♩} = 138$  x10

Pno. I *mp*

*pp*

Pno. II  $\text{♩} = 138$  x10

*pp*

*p*

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 16 contains bars 45 and 46 of *Cicada*. The material within these bars is an exact repetition of Theme A and shall be referred to as Theme A11/A. In this instance, Theme A has been recontextualised.

Figure 17 contains bars 47- 49 of *Cicada*. The material within these bars is a modified version of Theme A and shall be referred to as Theme A12. As A12 is constructed of two A phrases, I will be separating A12 into two halves: Theme A12a and Theme A12b.

Figure 17: Theme A12 of Cicada (1996)

A12a:

A12b:

47  $\text{♩} = 112$  x3

Pno. I *pp*

*pp*

Pno. II  $\text{♩} = 112$  x3

*pp*

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 18: Theme A12a/A6.1 of Cicada (1996)

The image shows a musical score for two pianos, Pno. I and Pno. II, in 6/4 time. The score begins at bar 47. The tempo is marked as quarter note = 112, which is boxed in purple. The dynamic marking is *pp*, which is boxed in pink. A specific note in the Pno. I staff is highlighted with a green box. The score consists of two systems, each with a treble and bass clef staff. The Pno. I system has a tempo marking of quarter note = 112 and a dynamic marking of *pp*. The Pno. II system also has a tempo marking of quarter note = 112 and a dynamic marking of *pp*.

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 18 contains bars 47- 48 of *Cicada*. The material within these bars is a modified version of Theme A6 and shall be referred to as Theme A12a/A6.1. The most notable difference between Theme A6 and Theme A12a is the augmentation of the B<sup>b</sup>5 in Theme A12a. This is augmented from a one and a quarter beats in Theme A6, to a dotted semibreve tied to a quaver. This extreme augmentation of the B<sup>b</sup>5 adds the new element of suspension beyond Volans use of the sustain pedal. This is boxed green in Figure 18. The tempo and dynamic markings in Theme A12a are a repetition of the tempo marking and the dynamic markings in Theme A6. The repetition of tempo has been boxed purple, and the repetition of dynamic markings are boxed pink in Figure 18.

Figure 19: Theme A12b/A6.2 of Cicada (1996)

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 19 contains bars 49- 50 of *Cicada*. The material within these bars is a second version of Theme A6 and shall be referred to as Theme A12a/A6.2. The B<sup>b</sup>5 in the treble line of Piano I, which was augmented in Theme A12a/A6.1, has been diminished in Theme A12b/A6.2 back to its original value in Theme A6. This is indicated in the green box in Figure 19. However, within the third chord of the treble line of Piano I, the B<sup>b</sup>5 that was a dotted quaver in Theme A6 has been augmented into a double dotted minim. This is boxed in red in Figure 19. Within the bass line of Piano I, some chords have been transposed up by one octave, whilst others have been transposed down by one octave. The direction in which these chords have been transposed is indicated by the red arrows in Figure 19.

Figure 20: Theme A13/A4.1 of Cicada (1996)

The image shows a musical score for two piano parts, Pno. I and Pno. II, starting at bar 58. The time signature is 15/8, indicated by a yellow box. The tempo marking is quarter note = 138. The Pno. I part has a mezzo-piano (*mp*) dynamic, and the Pno. II part has a piano (*p*) dynamic, with the latter boxed in pink. The score is annotated with several colored boxes: a blue box highlights the diminished beats (one and three-quarter crotchets), and a green box highlights the 'x3' repeat sign at the end of the phrase. A red box encompasses the entire musical material from bar 58 to the end of the phrase.

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 20 contains bars 58 of *Cicada*. The material within these bars is a modified version of Theme A4 and shall be referred to as Theme A13/A4.1. Notable alterations between Theme A13/A4.1 and Theme A4 (as seen in Figure 5) are the time signature. Theme A4 is in 17/8, whilst the time signature in Theme A13/A4.1 is diminished to 15/8. This is indicated in the yellow box in Figure 20.

As a result of the diminished time signature, the beats rest in A13/A4.1 is diminished to one and three-quarter crotchet beats. This is shown in the blue box in Figure 20. Theme A4 is made of two bars, and its second bar consists of a 7/4 bar rest, whereas A13/A4.1 has no bar rest. This further diminishes the duration of silence at the end of the phrase. In addition, Theme A4 is repeated twice, whilst Theme A13/A4.1 is repeated three times. This is boxed green in Figure 20.

The dynamic marking in the bass line of Piano II in Theme A13/A4.1 is *piano*, rather than the *pianissimo* dynamic marking given in Theme A4. This is boxed pink in Figure 20. The material in bar 58 is an exact repetition of Theme A4, and the tempo marking in Theme A13/A4.1 is the same as in Theme A4.

Figure 21: Theme A14/A3.2 of Cicada (1996)

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 21 contains bars 64- 65 of *Cicada*. The material within these bars is a modified version of Theme A3 and shall be referred to as Theme A14/A3.2. The material in bar 64 is a true copy of the material in Theme A3 and Theme A5/A3.1, hence why this has been labelled A3.2. This is boxed red in Figure 21. There are not many differences between Theme A3 (Figure 4) and Theme A14/A3.2. However, Theme A14/A3.2 is repeated ten times, whilst Theme A3 is not repeated. The repeat marking is boxed green in Figure 21.

The time signature in the second bar of Theme A14/A3.2 (bar 65) has been diminished from 2/4 in Theme A3, to 3/8 in Theme A14/A3.2. This is displayed in the yellow box in Figure 21. The tempo markings in Theme A14/A3.2 are the same in Theme A3. This is boxed purple in Figure 21. The use of dynamics in Theme A14/A3.2 are also the same as the dynamic markings in Theme A3. These are boxed pink in Figure 21.

Figure 22: Theme A15/A.2 of Cicada (1996)

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 22 contains bars 95- 96 of *Cicada*. The material within these bars is a modified version of Theme A and shall be referred to as Theme A15/A.2. The differences between Theme A15 and Theme A are as follows: the use of dynamics, the diminished time signature in the bar rest at the end of the phrase, a slower tempo marking, and the augmentation of note values in the bassline of Piano II.

The dynamic markings in Theme A15/A.2 are quieter than the dynamic markings used in Theme A. Theme A prioritises the material within the treble line of Piano I and the bass line of Piano II by using a stronger dynamic marking. Theme A15 only prioritises the material in the bass line of Piano II through stronger dynamic markings. This is shown in the pink boxes in Figure 22.

In bar 96 of Theme A15/A.2, the time signature has been diminished from 5/8 in Theme A, to 3/16. This is indicated by the yellow box in Figure 22. The tempo in Theme A was 138 crotchet beats per minute. The tempo in Theme A15/A.2 is reduced to 126 crotchet beats per minute. The slower tempo marking is boxed purple in Figure 22. The triad in the bass line in Piano II has been rhythmically augmented from the quaver tied to a dotted quaver in the Theme A, to two crotchet beats in Theme A15/A.2. This is boxed blue in Figure 22.

Figure 23: Theme A16/A12.1 of Cicada (1996)

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 23 contains bars 115- 118 of *Cicada*. The material within these bars is a modified version of Theme A12 and shall be referred to as Theme A16/A12.1. Theme A16/A12.1 is an exact repeat of A12, apart from one alteration. Theme A16/A12.1 is repeated eleven times, whilst A12 is repeated three times. This alteration is highlighted green in Figure 23.

Figure 24: Theme A17/A13.1/A4.2 of Cicada (1996)

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.



Figure 24 contains bars 121 of *Cicada*. The material within these bars is a modified version of Theme A4 and shall be referred to as Theme A17/A13.1/A4.2. The material within Theme A17/A13.1/A4.2 is an exact repetition of Theme A13, which was originally repeated from Theme A4. This is boxed red in Figure 24. The time signature in Theme A17/A13.1/A4.2 has been diminished from 17/8 in Theme A4 to 13/8. This alteration is boxed yellow in Figure 24. The time signature of each version of A4 has been diminished by one crotchet beat. The diminution of the time signature has diminished the beats rest at the end of the phrase. This has been boxed blue in Figure 24.

The dynamics within A17/A13.1/A4.2 are all marked as *pianissimo*. This suggests that Volans did not want to prioritise any of the material within A17/A13.1/A4.2. This equal use of dynamic markings is not the case within Theme A4, and Theme A13. This equal use of dynamics is boxed pink in Figure 24.

Throughout each version of Theme A4, the tempo has remained consistent. The tempo within Theme A17/A13.1/A4.2 is boxed purple in Figure 24. It is also worth noting that Theme A17/A13.1/A4.2 has no bar rest after the first bar of material, unlike most of the Theme A material. Furthermore, Theme A4 and Theme A13 are both repeated, while Theme A17/A13.1/A4.2 is not.

**Figure 25: Theme A18/A.3 of Cicada (1996)**

The musical score for Figure 25 shows two piano parts, Pno. I and Pno. II, in 6/4 time. The tempo is marked as quarter note = 132. The score includes dynamic markings such as *mf*, *p*, and *mf*. A blue box highlights the transposed treble lines for both pianos. A yellow box highlights the repeated section marked 'x10'. A pink box highlights the *mf* dynamic marking in the bass line of Piano II.

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 25 contains bars 169-170 of *Cicada*. The material within these bars is a modified version of Theme A and shall be referred to as Theme A18/A.3. The use of dynamics within Theme A18/A.3 are almost the same as Theme A, apart from the bass line of Piano II in Theme A18 is marked mezzo forte instead of mezzo piano. This has been boxed pink in Figure 25.

The treble line of Piano I, and the treble line of Piano II have been transposed up by a third. This transposed material has been boxed in blue in Figure 25. The bass line of Piano I and II have had the C#4, originally found in

Theme A, transposed down by an augmented fourth to G3. The affected pitches are indicated by the green arrows in Figure 25.

The tempo in Theme A is 138 crochet beats per minute, whilst the tempo in Theme A18/A.3 is 132 crochet beats per minute. This is boxed purple in Figure 25. The time signature in the bar rest of Theme A18/A.3 (bar 170) is 5/8. This is an exact repeat of the time signature used in Theme A. Theme A18/A.3 is repeated ten times, which is the same number of repetitions as Theme A. These repetitions, and the repeat of the time signature, is boxed amber in Figure 25.

**Figure 26: Theme A19/A3.3 of Cicada (1996)**

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 26 contains bars 177-179 of *Cicada*. The material within these bars is a modified version of Theme A3 and shall be referred to as Theme A19/A3.3. Most of the material in A19/A3.3 is a true repetition of A3. The true repetitions of Theme A3 material within A19/A3.3 are boxed red in Figure 26. The main alterations are within the treble line of Piano II. The root note of the chord in the treble line of Piano II within Theme A3, was an E4. In Theme A19/A3.3, this E4 has been transposed up by a perfect fourth, to A4. This transposition is indicated by the green arrow in Figure 26. This A4 in the treble line of Piano II has also been augmented, so it sustains throughout the entire phrase. This augmentation has been bracketed in red in Figure 26.

The use of dynamics within Theme A19/A3.3 is like the use of dynamics within Theme A5/A3.1. The only difference is the *mezzo piano* within the treble line of Piano II in A19/A3.3, which has been altered from the *pianissimo* originally used in Theme A5/A3.1. This alteration is boxed pink in Figure 26.

The time signature of the bars rest in Theme A19/A3.3 (bar 178) is 3/8. This is the same time signature used in bar 18, in Theme A5/A3.1. This repetition of time signature is boxed orange in Figure 26. The tempo for all versions

of Theme A3 is 126 crotchet beats per minute. This is also the case for Theme A19/A3.3. This is boxed purple in Figure 26. Theme A19/A3.3 has an additional bar at the end of the phrase (bar 179), to allow the augmented A4 pitch to resonate. This additional bar has been boxed blue in Figure 26.

## chapter two

This chapter will propose how the compositional techniques and devices deployed in the repetition and recontextualisation of musical material may be classified as additive and/or subtractive processes, otherwise 'addition and subtraction'. The chapter is presented in three parts. The first part presents examples of compositional techniques and devices used by Kevin Volans in *Cicada* that may be classified as additive and subtractive processes. The second part considers similar examples explored in my own creative work, whilst the third part will present complimentary examples from the work of other artists.

### Part One:

I define additive methods as a category of techniques that add new material and/or augment pre-existing material.

I define subtractive methods as a category of techniques that remove and/or diminish pre-existing material.

Figure 27: Theme A1 of *Cicada* (1996)

The image displays two systems of piano music for Theme A1 of *Cicada* (1996). Each system consists of a grand staff with a treble and bass clef. The tempo is marked as quarter note = 138. The first system starts with a mezzo-forte (*mf*) dynamic in the treble and piano (*p*) in the bass. The second system starts with piano (*p*) in the treble and mezzo-forte (*mf*) in the bass. Both systems feature a sequence of chords in the bass line, with a specific chord in bar 8 highlighted by a green box. This chord is a triad consisting of a bass note, a middle note, and a higher note, with a flat symbol above the middle note. A yellow box highlights the final measure of each system, which contains a rest for the treble and a whole note chord for the bass, with a 'x12' multiplier above it. The time signature is 6/4, and the key signature has one flat.

Cicada  
Music by Kevin Volans.  
© 1996 Chester Music.  
All Rights Reserved. International Copyright Secured.  
Used by Permission of Hal Leonard Europe Limited.

Kevin Volans uses an additive practice within bar 8 of *Cicada*, as he increases the number of times the material is repeated. In Theme A1, each phrase of syncopated chords is repeated twelve times, whereas in Theme A, each phrase is repeated ten times. Volans also uses a subtractive practice and diminishes the time signature within the bar rest of the phrase (bar 8). In Theme A, this time signature was 5/8, in Theme A1, the time signature is 3/8. This is displayed by the amber box in Figure 27.

Figure 28: Theme A4 of Cicada (1996)

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Volans also uses additive practices through augmenting material. Volans has augmented the bar of syncopated chords from 6/4 to 17/8, in addition to augmenting the succeeding bars rest from 2/4 to 7/4. The latter is the longest period of silence within the composition so far. This is shown in Figure 28, by the yellow and amber boxes respectively.

**Part Two:**

**(Augmentation and Diminution)**

I define augmentation as the extension of pre-existing material, time signatures, and note values; and diminution as the deduction of pre-existing material, time signatures, and note values.

**Figure 29: Bars 7-8 in Three Pianos (2017)**

The image shows a musical score for three pianos (Pno I, Pno II, Pno III) in 3/4 time. A yellow box highlights the first measure of bar 7, where the time signature changes from 2/4 to 3/4. Pno II and Pno III have 'pp' markings in red boxes. Pno I has a fermata over the first measure of bar 7.

Figure 29 contains bars 7-8 of Three Pianos. As displayed in the yellow box within Figure 29, the time signature is augmented from the original 2/4, to 3/4 in bar 7. Again, this augmentation of the time signature is a technique that I have observed in Kevin Volans Cicada (1994). The extra beat within each bar augments the phrase and delays the rearticulation of the D<sup>b</sup>3 within the right hand of Piano III.

Figure 30: Bars 9-10 in Three Pianos (2017).

The time signature in bar 10 returns to the original time signature, 2/4. This is boxed yellow in Figure 30. The return of the 2/4 time signature in bar 10 in combination with the return of the original tempo marking in bar 9 sonically transforms the material back to familiar material to the listener, as it is a near repetition of the original material heard in bars 1-4.

Figure 31: Bars 7-16 in Glissandi for Choir (2018)

Figure 31 contains bars 7-16 of Glissandi for Choir (2018). Within bars 7-16, the four bar phrases are diminished into three semibreves tied to dotted minim phrases, or three semibreve phrases. The three semibreve phrases are boxed blue in Figure 31, and the three semibreves tied to dotted minim phrases are boxed red in Figure 31.

**(Addition of New Material)**

I define addition as the introduction of new material with the purpose to create new relationships between existing repetitive material.

**Figure 32: Bars 24-25 in Three Pianos (2017)**

Figure 32 contains bars 24-25 of Three Pianos. New material has been added to Piano I in bar 24. The left-hand of Piano I has a new semiquaver sextuplet pattern, with the pitches ( $E^{\flat 3}$  and  $G^{\flat 3}$ ) alternating between a minor 3<sup>rd</sup>, interrupted by semiquaver sextuplet rests. This alternation between notes, and interruptions of rests creates a jarring effect. The  $E^{\flat 3}$  and  $G^{\flat 3}$  also conflict with the harmonies within Piano II and Piano III, creating a new sense of dissonance.



Figure 33: Bars 26-27 in Three Pianos (2017)

The image shows a musical score for three pianos, labeled Pno I, Pno II, and Pno III. The score covers bars 26 and 27. Pno I is written in treble and bass clefs, with a melodic line in the treble and a sextuplet pattern in the bass. Pno II is written in two bass clefs, with a similar sextuplet pattern in both hands. Pno III is written in treble and bass clefs. A pink box highlights the right-hand part of Pno III in bar 26, which contains a new pattern of semiquavers alternating between F<sup>b</sup>3 and G3, interrupted by semiquaver rests. The score includes various musical notations such as notes, rests, and dynamic markings like 'mf'.

Figure 33 contains bars 26-27 of Three Pianos. Bars 26-27 is almost a repetition of bars 24-25. The only alteration is the right-hand of Piano III. A new pattern of semiquavers, alternating between F<sup>b</sup>3 and G3, interrupted by semiquaver rests, is added to conflict with the semiquaver sextuplet pattern in the left-hand of Piano I.

**Figure 34: Theme A.2 in Quintet for Percussion (2018)**

17

Gong

Vib I.

Vib II.

Vib III.

Cel.

G- G-11 G-6/11 G- G-6/9 Edim<sup>11</sup> Edim<sup>b8/11</sup>

The chord progression in Theme A.2 has been altered from the chord progression in Theme A. This alteration has occurred by the additions of the harmonics in Vibraphone I, and the additional chords in the Celesta. This is labelled in red in Figure 34. The bar rest in bar 23 is also a new addition. This allows for silence after the resonance created within bars 1-22. This is boxed in yellow in Figure 34.

**Figure 35: Theme C in Quintet for Percussion (2018)**

57

Gong

Vib I.

Vib II.

Vib III.

Cel.

$\text{♩} = 100$

*pp*

$\text{♩} = 100$

*pp*

*pp*

*pp*

Figure 35 contains bars 57-64 of Quintet for Percussion. This material within bars 57-64 is a new theme, Theme C. Theme C introduces a new tempo marking, 100 crotchet beats per minute. This is boxed purple in Figure 58. The time signature has also been augmented from 2/4, to 3/4. This is boxed yellow in Figure 35. These alterations in tempo and time signature introduce a new sense of pacing.

**Figure 36: Theme D.1 in Quintet for Percussion (2018)**

The musical score for Figure 36 shows Theme D.1 in Quintet for Percussion (2018). It features five staves: Gong, Vib. I, Vib. II, Vib. III, and Cel. (Cymbal). The Gong part is highlighted with a red box. The Vib. I part has a blue arrow pointing to a chord voicing at the top and an orange arrow pointing to a chord voicing at the bottom. The Vib. II, Vib. III, and Cel. parts are highlighted with a green box. The score starts at bar 107 and consists of 8 bars.

The Vibraphone I is a new addition, and is a nod to the canonic material within the variations of theme A. The Vibraphone I has two individual chord voicings, one at the top (indicated by the blue arrow in Figure 36), and one at the bottom (indicated by the orange arrow in Figure 36). These voices enter individually and are the forefront of the chordal material from the rest of the ensemble.

**Figure 37: The Opening of Movement II. Bars 37-44 in String Quartet No II (2018)**

The musical score for Figure 37 shows the opening of Movement II. Bars 37-44 in String Quartet No II (2018). It features four staves: Vln. I, Vln. II, Vla. (Viola), and Vc. (Violoncello). The Vln. I part has a blue box around the first four bars and a pink box around the first bar. The Vln. II part has a green box around the last four bars and a pink box around the first bar. The score starts at bar 37 and consists of 8 bars.

Figure 37 contains bars 37-44 of String Quartet No II. Within this section, the pacing is much slower. The time signature in movement I was in 4/4, and this section is in 2/2. Although there are technically the same number of beats per bar, the pacing has changed from counting four crotchet beats, to two minims per bar.

Violin I enters with Theme 1 in movement II of String Quartet No. II (2018). Theme 1 is boxed blue in Figure 37, and the pitch names are labelled red under Violin I in Figure 37. Violin II enters later, in bar 41. Theme 2 is boxed green in Figure 37, and the pitch names are labelled red under Violin II in Figure 37.

***(Subtraction of Existing Material)***

I define subtraction as the removal of pre-existing material with the purpose to create new relationships between existing material.

**Figure 38: Bars 33-34 in Three Pianos (2017)**

Figure 38 contains bars 33-34 of Three Pianos. Within bar 33, the jarring effects of the semiquaver pattern in the right-hand of Piano III and the semiquaver sextuplet pattern in left-hand of Piano I start to dismantle as I removed the material within the right-hand of Piano III. This removal of material removes the conflicting relationship between the left-hand of Piano II and the right-hand of Piano III in bar 33, and any inherent relationships created by this conflict. This is boxed in green in Figure 41. The broken chord would have been rearticulated in bar 33. I decided not to rearticulate the broken chord, as I wanted to remove the sustained qualities that the broken chord offered. This is boxed yellow in Figure 38.

Figure 39: Continuation of Theme D.1 in Quintet for Percussion (2018)

The musical score for Figure 39 consists of five staves: Gong, Vib. I, Vib. II, Vib. III, and Cel. The Gong staff is marked with a 9/4 time signature, while the other staves are marked with a 2/4 time signature. A red box highlights the Gong staff in bar 113, where the time signature changes from 9/4 to 4/4. The other staves show various musical notations, including notes, rests, and dynamic markings.

A notable difference is the removal of the gong in bar 113. This is boxed in red in Figure 39. This exploits the thin, metallic timbre without the bass harmonics from the Gong.

Figure 40: Theme E in Quintet for Percussion (2018)

The musical score for Figure 40 consists of five staves: Gong, Vib. I, Vib. II, Vib. III, and Cel. The Gong staff is marked with a 9/4 time signature, while the other staves are marked with a 2/4 time signature. A yellow box highlights the Vib. I staff, a green box highlights the Vib. II staff, a blue box highlights the Cel. staff, and a pink box highlights the Gong staff in bar 115. The score includes various musical notations, including notes, rests, and dynamic markings such as *pp*.

The Celesta has been removed from Theme E, as the Celesta has little resonant qualities without the use of the pedal, and the articulation from the hammer is too pronounced. Timbrally, the reason I have not used the pedal for the Celesta is so the it does not overpower the rest of the ensemble. The removal of the Celesta is boxed blue in Figure 40.

**Part Three:**

**Example. 1 (Philip Glass)**

The early works of Philip Glass display “the calculative logic of minimalist modularism”, which is evident in *Two Pages* (Botha, 2015, p. 762) (Glass, 1968). The structure of *Two Pages* derives from the addition and subtraction of modules of material. Keith Potter outline Phillip Glasses modularism, and how additive processes are imperative the use of modularism:

“Each work is constructed from a Basic Unit ... The scores simply notate the expansions and contractions of the Basic Unit that forms the structure of each work. They do this, though, by grouping sub-units and their expansions or contractions into figures of varying lengths ... *Two Pages* represents Glass's first use of rigorous additive process in a composed-out score. (Four 287–8)” (Botha, 2015, p. 763).

Botha continues by stating that the structure of *Two Pages* is based on the addition and subtraction of modules. Despite this, there is a complexity, which is “nothing other than the process of calculation apprehended from the midst of its occurrence as process” (Botha, 2015, p. 763).

**Example. 2 (Robert Lax)**

Robert Lax, similarly to Glass, uses a module-like structure based around the addition and removal of words within his poem, *word* (1986), The poem is below (Lax,1986, p.9):

“word  
word  
word

a word  
a word  
a word

one word  
two words  
one word  
two words

a word  
a word  
a word”

The first stanza ‘word/ word/ word’ introduces the first module within Lax’s poem (Botha, 2015, p. 765). The second stanza adds the “indefinite article, a”. This expands the first module, ‘word/word/word’ (Botha, 2015, p. 766). The third stanza, ‘one word/ two words/ one word/ two words’ increases in complexity, as an additive and subtractive structure creates the alternative nature within the stanza. The fourth stanza retrogrades back to the second stanza, repeating the familiar material ‘a word’. (Botha, 2015, p. 766).

**Example. 3 (Alvin Lucier)**

Alvin Lucier's *I am sitting in a room* (Broening, 2015, p. 89), is formed through deceptively simple means. The piece opens with Lucier recounting:

"I am sitting in a room, different from the one you are in now. I am recording the sound of my speaking voice and I am going to play it back into the room again and again until the resonant frequencies of the room reinforce themselves so that any semblance of my speech, with perhaps the exception of rhythm, is destroyed. Whilst you will hear, then, are the natural resonant frequencies of the room articulated by speech. I regard this activity not so much as a demonstration of a physical fact, but more as a way to smooth out any irregularities my speech might have" (Broening, 2015, p. 89).

The piece unfolds following the description above. As Lucier continues to recount his statement, the "iterations of the spoken text slowly transform from intelligible [as the] "irregularities" of Lucier's speech [...] are indeed smoothed out over the course of the piece as the resonant frequencies of the room interact with those frequencies present in the recording of his voice" (Broening, 2015, p. 89). As each recording is played back into the room, the common frequencies of the speech and the recording are amplified, whilst other frequencies are weakened. These frequencies, and the transformation of the text becoming intelligible is what transform the repetitive material (Broening, 2015, pp. 89-90).

Like Glass's *Two Pages* (1968) and Lax's *word* (1986), Lucier's *I am sitting in a room* (1990) is structured through a process of addition and repetition. Particularly in this case, repetition acts as a transformative process, as the imperfections within Lucier's recounts are recorded, as well as the consistent frequencies resonating back into the room.

## chapter three

This chapter will propose how the compositional techniques and devices deployed in the repetition and recontextualisation of musical material may be classified as placement and/or displacement processes, otherwise 'placement and displacement'. The chapter is presented in three parts. The first part presents examples of compositional techniques and devices used by Kevin Volans in *Cicada* that may be classified as placement and displacement processes. The second part considers similar examples explored in my own creative work, whilst the third part will present complimentary examples from the work of other artists.

### Part One:

I define placement as a method of transforming repetitive material through placing pre-existing material in a different alignment. This can include: the placement of entries, the placement of silences, and the placement of the material within the ensemble, i.e. the placement of the material in and between instrumental forces.

I define displacement as a method of transforming pre-existing repetitive material through changing an aspect of the material whilst keeping its identity. This could include: transposition, intervallic displacement, and change of rhythmic relationships between parts.

### (Transposition)

Figure 41: Theme A7 of *Cicada* (1996)

The image shows a musical score for Theme A7 of *Cicada* (1996). It consists of four staves, two for the upper piano (Pno.) and two for the lower piano (Pno.). The music is in 6/4 time and begins at measure 21. The upper piano part starts with a piano (*pp*) dynamic. The lower piano part also starts with a piano (*pp*) dynamic. The score features complex rhythmic patterns with many rests and slurs. A yellow rectangular box highlights the final measure of the piece, which is a whole rest in all four staves, indicating the end of the theme.

Cicada  
Music by Kevin Volans.  
© 1996 Chester Music.  
All Rights Reserved. International Copyright Secured.  
Used by Permission of Hal Leonard Europe Limited.



Figure 12 contains bars 21 and 22 of *Cicada*. The material within these bars is a modified version of Theme A6 and is referred to as Theme A7. Within Theme A7, Volans has transposed certain triads up or down an octave. The direction of these transpositions has been indicated with red arrows in Figure 41.

**(Entrances)**

**Figure 42: Theme A10/A.1 of *Cicada* (1996)**

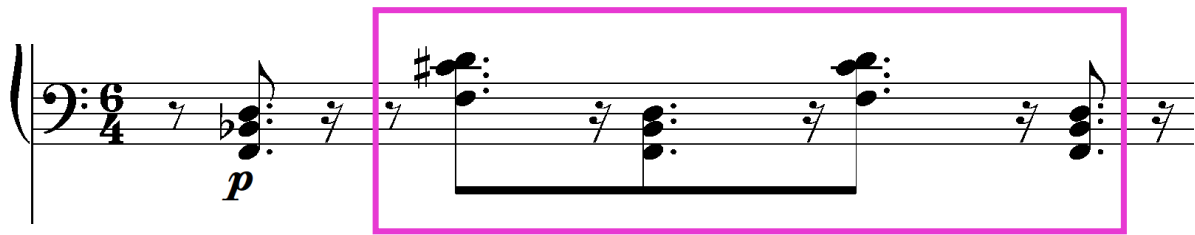
Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 42 contains bars 30-32 of *Cicada*. The entrance of the material is delayed by the addition of the 5/4 bar in bar 30. Bar 30 is an addition to the phrase which allows for the first chord of the Theme A material to be augmented. This is shown in Figure 42 by the blue boxes. This augments the silence after the previous phrase and delays the entrance of the material in bar 31.

**Figure 43: Theme A4, the bass line of Piano I in *Cicada* (1996)**

Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

Figure 44: Theme A, the bass line of Piano I in Cicada (1996)



Cicada  
 Music by Kevin Volans.  
 © 1996 Chester Music.  
 All Rights Reserved. International Copyright Secured.  
 Used by Permission of Hal Leonard Europe Limited.

In Theme A4, Volans introduces another technique to modify this reiteration of the opening material. Figure 43 and Figure 44 outline how the material within Piano I has shifted through its pattern of triads, and begins on what would have been the second triad in Theme A. This shift is visibly outlined by the purple boxes in Figures 43 and 44.

**Part Two:**

**(Transposition)**

Figure 45: Bar 23 in *Three Pianos* (2017)

Figure 45 contains bars 23 of *Three Pianos*. A modulation takes place in bar 23. Working from the left hand of Piano III upwards, the B<sup>b2</sup> in bar 22 has been transposed up by one tone, to D<sup>b3</sup>. The A<sup>b3</sup> in bar 22 of the right-hand of Piano III, has been transposed up by one semitone to B<sup>b3</sup>. The F<sup>2</sup> in bar 22 within the left-hand of Piano

II, has been transposed up by one tone to A<sup>bb</sup>2. The D<sup>b</sup>3 minim in the left-hand Piano II, found in bar 22, has been transposed up by one semitone to E<sup>bb</sup>3. The E<sup>b</sup>3 within bar 22, in the right-hand of Piano II, has been transposed up one semitone to F<sup>b</sup>3. A new broken chord within bar 23 has been written to suit the new harmonies in Piano II and III. The notes that have been transposed up by one semitone have been boxed in red, those that have been transposed up by one tone have been boxed in blue. New additional pitches have been boxed in amber.

**Figure 46: Bars 43- 44 in Three Pianos (2017)**

The image shows a musical score for three pianos (Pno I, Pno II, Pno III) across two bars (43 and 44). The score is annotated with various boxes and lines to highlight specific transpositions and new pitches. A yellow vertical line is drawn between bar 43 and bar 44. A tempo marking '♩ = 52' is located at the top right of the score. Dynamic markings include *p*, *mp*, and *mf*. The score is divided into three systems: Pno I (top), Pno II (middle), and Pno III (bottom). The key signature is one flat (B-flat major/D minor) and the time signature is 3/4. The score shows a modulation from B-flat major to E-flat major (D minor) between bars 43 and 44. The annotations include: a red box around the right-hand part of Pno I in bar 44; a blue box around the left-hand part of Pno I in bar 44; a green box around the left-hand part of Pno II in bar 43; an orange box around the right-hand part of Pno II in bar 44; and a red box around the right-hand part of Pno III in bar 44. A yellow vertical line is drawn between bar 43 and bar 44.

Within bar 44, another modulation happens. Working from the left-hand of Piano III upwards, the F2 in bars 35-43, has been transposed up by one semitone to G<sup>b</sup>2 in bar 44. The B<sup>b</sup>2 in the left-hand of Piano III, bar 43, has been transposed up by one semitone to C<sup>b</sup>3 in bar 44. The D<sup>b</sup>3 in bar 43, in the right-hand of Piano III, has been transposed by one semitone to E<sup>bb</sup>3 in bar 44. New pitches are added to a broken chord in the left-hand of Piano II. The E<sup>b</sup>3 in the semiquaver sextuplet pattern in the left-hand of Piano I, as seen in bar 43, has been transposed up by one semitone to F<sup>b</sup>3 in bar 44. The C3 in the semiquaver sextuplet pattern in the left-hand of Piano I, bar 43, has been transposed down by one semitone to C<sup>b</sup>3 in bar 44. The A<sup>b</sup>3 in the right-hand of Piano I in bar 43 has been transposed up by one semitone to B<sup>bb</sup>3 in bar 44. Material in bar 44 that has been transposed up by one semitone has been boxed in red in Figure 46. Material that has been transposed down by one semitone has been boxed blue in Figure 46. New additional pitches have been boxed orange in Figure 46.

Figure 47: Movement II, bars 61-68 in String Quartet No II (2018)

Figure 47 displays the musical score for Movement II, bars 61-68, from *String Quartet No II* (2018). The score is arranged for Violin I, Violin II, Viola, and Cello. The Cello part is transposed down a fourth from the original theme. The Viola part plays Theme 2.1 above the Cello in bars 61-64. The score includes notes and chord labels (B5, G#5, A5, E5, D5, F5, B4, A4, C5, G4, C5, B4) with various colored boxes (green, red, blue) highlighting specific sections.

Figure 47 contains bars 61-68 of *String Quartet No II*. The Cello enters for the first time in Movement II, with a version of Theme 2.1 that has been transposed down a fourth. This has been labelled Theme 2.1a and is indicated by the light green box in Figure 78. Above the Cello is the Viola, which plays Theme 2.1 above the Cello in bars 61-64. This is displayed by the darker green, dashed box in Figure 47.

**(Entrances)**

Figure 48: Theme A.1 in Quintet for Percussion (2018)

Figure 48 displays the musical score for Theme A.1 in *Quintet for Percussion* (2018). The score is arranged for Gong, Vib I, Vib II, Vib III, and Cel. The score includes notes, rests, and chord labels (Edim6, Edim6/11, A-7, A-7/b9, Edim11, A7/dim5, A-6/11/dim5, A-6/11) with various colored boxes (green, red, yellow) and arrows highlighting specific sections.

(omitted 3<sup>rd</sup>)

The entrance of each harmonic within Vibraphone I between bars 9-16 is always one bar and one beat after the entrance of the chords in Vibraphones II and III. This allows for the articulation of Vibraphone I to be the sonic focus within every entrance, as the chords within Vibraphone II and III have already started to decay. This delay is indicated by the blue arrows in Figure 48.

**Figure 49: Theme B.2 in Quintet for Percussion (2018)**

Figure 49 contains bars 44-48 of Quintet for Percussion. This material is the second version of Theme B, hence why it is called Theme B.2. Material from Theme B.1 within bars 35-37, has been moved into different instruments. Vibraphone III adopts the semibreve, chordal material from Vibraphone I in Theme B.1, bars 35-41. This is boxed in yellow in Figure 49. The chords within the celesta in theme B.1, between bars 35-42, has been moved to Vibraphone I in Theme B.2, in bars 44-47. This material has been boxed in blue in Figure 49.

The entries of the new chords in the celesta (bars 44-47), like the entries of the chords in the celesta between bars 17-22, enter one minim after the Gong and Vibraphone III, and one crotchet after Vibraphone I. This creates a canonic effect. This is detailed by the blue and green arrows in Figure 49.

**(Displacement Through Ensemble)**

Within this section, I shall be identifying how I place and displace material between parts to place repetitive material in a different physical place. This effect will be present when performed live, as the material shifted spatially.

**Figure 50: Bars 20-21 in Three Pianos (2017)**

The image shows a musical score for three pianos, labeled Pno I, Pno II, and Pno III. The score covers two measures, bars 20 and 21. A yellow vertical bar is drawn at the beginning of bar 20. In Pno I, the first measure has a tempo marking  $\text{♩} = 50$  and dynamic markings *mp* in both staves. The second measure has a dynamic marking *pp*. Pno II has triplet markings (3) in both staves. Pno III has sextuplet markings (6) in both staves. Green arrows in Pno II indicate a rhythmic swap between the left and right hands. A yellow box highlights the tempo marking  $\text{♩} = 50$  in Pno I.

The rhythms between the left-hand and the right-hand of Piano II have been swapped. The E<sup>b</sup>3 in the right-hand was in semiquaver quintuplets, which has now been swapped to the triplets which originated from the F2 triplet rhythm, found in the left-hand of Piano II found between bars 14-19. The F2 rhythm has been swapped from quaver triplets to semiquaver quintuplets, as the rhythm has been swapped with the E<sup>b</sup>3's semiquaver quintuplets as found in bars 14-19. This rhythmic swap has been indicated by the green arrows in Figure 50.

**Figure 51: Bar 23 in Three Pianos (2017)**

Rhythms between the left-hand of Piano II and the right-hand of Piano II have been swapped. The A<sup>bb</sup>2 is in quaver triplets, and the F<sup>b</sup>3 is in semiquaver quintuplets. This rhythmic swap has been indicated by the green arrows in Figure 51.

**Part Three:**

**Example. 1 (Steve Reich)**

Steve Reich’s *Violin Phase* (1979) begins with the violinist entrance. This is followed by the technician pressing play on the tape recorder “after the audible click or thunk of the tape machine’s controls, and possibly some tape hiss – is the pre-recorded tape loop of the twelve-beat pattern that provides the basic musical material of the piece” (Auner, 2017, p. 77). Once the recorded loop has repeated two to four times, the live violinist begins to merge into audibility with the tape. It is specified by Reich that the “violin should be amplified and mixed so that it matches ‘the timbre as well as the volume of the tape’” (Auner, 2017, p. 77). During the fourteen to sixteen-minute process, the live violinist “executes the phase shifting process, gradually moving first four and then eight beats ahead – and the technician, who [...] fades in two other pre-recorded tracks of the out-of-phase loops” (Auner, 2017, p. 78). Reich begins this piece in unison. The whole premise of the piece is to shift the placement of the motif by introducing interludes of tempo changes to shift the motif played by the live violin out of sync with the material recorded on the tape (Auner, 2017, p. 77-78).

**Example. 2 (Morton Feldman)**

According to Dora A. Hanninen, like much of Feldman’s late music *Crippled Symmetry* (1983) “is based on a set of repeated patterns” (Hanninen, 2003, p. 59). Feldman used the following pitch orderings: “(C<sup>b</sup>5, B<sup>b</sup>4, G<sup>b</sup>5, C5) in the flute; (E<sup>b</sup>4, D<sup>b</sup>5, C6, D5) in the vibraphone, and (D<sup>#</sup>6, F5, E4) in piano/celesta” (Hanninen, 2003, p. 59). These

patterns undergo temporal changes. These changes include “changing ratios of durations within the pattern; changing the number of beats each pattern occupies; and changing the proportions between pattern and silence” (Hanninen, 2003, p. 59-60). These temporal changes cripple the pitch ordered patterns, which adjust the vertical alignments of the pitches throughout the piece. This shifting of vertical pitch placement is what transforms the repeated material within Feldman’s *Crippled Symmetry* (1983).

**Example 3 (Richard Glover)**

*Logical Harmonies* (Glover, 2013), is constructed through an audible process of shifting. Within the performance notes in the score, Glover indicates that “letters represent major triads, which may be played in any inversion. RH is top line, LH is bottom line.” (Glover, 2019). The primary chord progression is established within line one. Both the right hand and the left-hand play in unison. The chord progression is a circle of fourths: C, F, B<sup>b</sup>, E<sup>b</sup>, A<sup>b</sup>, D<sup>b</sup>, G<sup>b</sup>, B, E, A, D, and G. In each subsequent line, the harmonic progression of the right hand is shifted, and starts a chord later than the line proceeding it. To clarify, the chord progression in the right hand of line two is: F, B<sup>b</sup>, E<sup>b</sup>, A<sup>b</sup>, D<sup>b</sup>, G<sup>b</sup>, B, E, A, D, G, and C. In each line, the chord progression in the left hand is the same. The cycle completes in the thirteenth line, by which time the two hands are in unison once again. Like Volans, Reich, and Feldman, Glover explores the repetition of the harmonic progression through displacement, which changes the relationship between the two hands throughout the piece.



## chapter four

*This chapter will propose how the compositional techniques and devices deployed in the repetition and recontextualisation of musical material may be classified as tone and/or colour processes, otherwise 'tone and colour'. The chapter is presented in three parts. The first part presents examples of compositional techniques and devices used by Kevin Volans in Cicada that may be classified as tone and colour processes. The second part considers similar examples explored in my own creative work, whilst the third part will present complimentary examples from the work of other artists.*

### **Part One:**

After attending an exhibition of *Skyscapes* by James Turrell, Volans was motivated to explore tone within his own work.

"A friend took me to an opening of Turrell's in Kilkenny. In the evening we sat in a large cubic light box in the grounds of the castle and over a period of an hour watched a square of the sky overhead turn from the blue-grey of Irish clouds, through Yves Klein blue to slate black. I stayed overnight in my friend's minimalist house in Killiney. The next morning, I woke to a glittering square of sunlight reflected off the sea and I decided: no composition; don't change anything except the tone" (Smith, 2011).

Smith says: The opening of 'repeated interlocking chordal patterns' is subjected to 'gradual adjustments of harmony, tone, dynamics, register, and tempo' (Smith, 2011).

I would argue that Volans was referring to register, harmony, dynamics and tempo as forms of tone and colour. His statement explicitly says that he decided not to change anything other than the tone. Perhaps register, harmony, dynamics and tempo are his tones.

(Dynamics)

Figure 52: Theme A15/A.2 of Cicada (1996)

The image displays a musical score for two pianos, Pno. I and Pno. II, for the piece 'Cicada' by Kevin Volans. The score is in 6/4 time and begins at measure 95. The tempo is marked as ♩=126. The key signature has one flat (B-flat). The score is divided into two systems. The first system (measures 95-96) is in 6/4 time. The second system (measures 97-98) is in 3/16 time. The score includes several dynamic markings: *pp* (pianissimo) in pink boxes in measures 95 and 96 for both Pno. I and Pno. II, and *p* (piano) in a pink box in measure 95 for Pno. II. A red box highlights a chord in the treble clef of Pno. I in measure 96. A yellow box highlights the 3/16 time signature change in measure 97 for both parts. A blue box highlights a chord in the bass clef of Pno. II in measure 97. A green box highlights the repeat sign and 'x3' marking at the end of measure 98 for both parts. The score is annotated with 'Cicada Music by Kevin Volans. © 1996 Chester Music. All Rights Reserved. International Copyright Secured. Used by Permission of Hal Leonard Europe Limited.'

Figure 52 contains bars 95- 96 of Cicada. The material within these bars is a modified version of Theme A and is referred to as Theme A15/A.2. The differences between Theme A15 and Theme A are as follows: the use of dynamics, the diminished time signature in the bar rest at the end of the phrase, a slower dynamic marking, and the augmentation of note values in the bassline of Piano II.

The dynamic markings in Theme A15/A.2 are quieter than the dynamic markings used in Theme A. Theme A prioritises the material within the treble line of Piano I and the bass line of Piano II by using stronger dynamic markings. Theme A15 only prioritises the material in the bass line of Piano II through stronger dynamic markings. This is shown in the pink boxes in Figure 52.

(Tempo)

Figure 53: Theme A2 of Cicada (1996)

The image displays two systems of piano music for Theme A2 of 'Cicada' (1996). Each system consists of a grand staff with a treble and bass clef. The first system begins with a tempo marking of ♩=126 in a purple box. The music is in 6/4 time and features a melody in the treble clef and accompaniment in the bass clef. A green box highlights a specific melodic phrase in the treble clef of the first system. The second system also features a tempo marking of ♩=126 in a purple box and a similar melodic phrase highlighted in a green box. Both systems conclude with a repeat sign and a 'x4' marking, indicating that the final measure is repeated four times. A yellow box encompasses the final measure and its four repetitions in both systems. Dynamics include *mf* and *p*.

Cicada  
Music by Kevin Volans.  
© 1996 Chester Music.  
All Rights Reserved. International Copyright Secured.  
Used by Permission of Hal Leonard Europe Limited.

Figure 53 contains bars 9 and 10 of Cicada. The material within these bars form a modified version of Theme A and is referred to as Theme A2. The tempo been diminished from 138 crotchet beats per minute, to 126 crotchet beats per minute. This is shown in Figure 53 by the purple box.

**Part Two:**

**(Dynamics)**

**Figure 54: Bars 14-15 in Three Pianos (2017)**

The image displays a musical score for three pianos (Pno I, Pno II, and Pno III) across two bars (14 and 15). The score is annotated with various markings:

- Piano I:** A purple box highlights a tempo marking of  $\text{♩} = 44$  at the start of bar 14. A red box highlights a *p* dynamic marking in the right-hand part of bar 14. A red box highlights a *p* dynamic marking in the left-hand part of bar 14. A yellow vertical line marks the beginning of bar 14.
- Piano II:** A blue box highlights the right-hand part of bar 14, which contains a sequence of eighth notes with a slur and a '5' fingering. A green box highlights the left-hand part of bar 14, which contains a sequence of eighth notes with a slur and a '3' fingering. A red box highlights a *mp* dynamic marking in the left-hand part of bar 14. A blue vertical line with arrows at both ends connects the *mp* marking to the blue box.
- Piano III:** A red box highlights a tempo marking of  $\text{♩} = 44$  at the start of bar 14. A red vertical line marks the beginning of bar 14. The left-hand part of the score for Pno III contains a sequence of eighth notes with a slur and a '6' fingering.

In bar 14 of *Three Pianos*, dynamic markings have been utilised to prioritise material. The material in the left-hand of Piano II has been marked *mezzo forte*, and the chord within Piano I has been marked *piano*. These stronger dynamic markings contrast with the *pianissimo* dynamics within the other Piano parts, which emphasises the material to the listener. The stronger dynamic markings have been boxed red in Figure 54.

Figure 55: Bars 53-63 in *Glissandi for Choir* (2018)

The musical score for Figure 55 consists of two systems of four staves each (Soprano, Alto, Tenor, Bass). The first system covers bars 53-57, and the second system covers bars 58-62. A tempo marking of  $\text{♩} = 60$  is shown at the beginning of bar 53. Dynamics are indicated by *p*, *ppp*, and *mf*. A dotted amber box encloses bars 58-62. Red arrows point to specific notes in bars 53, 54, 55, 57, 58, 59, 60, 61, and 62. Vowel sounds 'ah' and 'oo' are written below the notes.

In bar 57 of *Glissandi for Choir*, the dynamics reach *mezzo forte* in the bass line. This is the first time during the piece where the dynamics increase beyond *piano*. The *mezzo forte* dynamic markings appear in the tenor, alto, and the soprano sections beyond bar 57. This is boxed pink in Figure 55.

The use of stronger dynamics, along with the *divisi* writing allowing more independence within voices, the extensive use of clashing vowel sounds, as well as the faster tempo, creates a climatic point between bars 58-62. This is displayed in the dotted amber box in Figure 55.

**(Tempo)**

**Figure 56: Bar 13 in *Three Pianos* (2017)**

The image displays a musical score for three pianos (Pno I, Pno II, and Pno III) in 3/4 time. The score is divided into three systems. The first system, labeled 'Pno I.', shows a tempo marking of ♩=54 in a purple box at the beginning of bar 13. A red box highlights a specific musical phrase in bar 12, and a blue box highlights a phrase in bar 13. The second system, labeled 'Pno II.', shows a tempo marking of ♩=54 in a purple box at the beginning of bar 13. The third system, labeled 'Pno III.', shows a tempo marking of ♩=54 in a purple box at the beginning of bar 13. A yellow vertical line is drawn through the first system, and a yellow vertical line is drawn through the third system. The score includes various musical notations such as notes, rests, and dynamic markings like '6' and 'x5'.

In bar 13 of *Three Pianos*, the tempo marking is 54 quaver beats per minute. Within bars 11-12, the tempo was at the original 52 quaver beats per minute. By increasing the tempo marking at bar 13 to a faster tempo (and in combination with the augmented time signature) the material to be observed from a different perspective. This alteration in tempo is boxed purple in Figure 56.

Figure 57: Bars 14-15 in *Three Pianos* (2017)

The score for Figure 57 shows three piano parts. Pno I (top) has a red 'p' dynamic marking in bar 14. Pno II (middle) has a red 'mp' dynamic marking in bar 14 and a blue box around its right-hand part. Pno III (bottom) has a red tempo marking of quarter note = 44 in bar 14. A purple box at the top left of bar 14 contains the tempo marking quarter note = 44. Blue arrows point from this tempo marking to the corresponding parts in Pno II and Pno III.

The tempo is notably slower from the 54 quaver beats per minute found in bar 13. In bar 14, the tempo is reduced to 44 quaver beats per minute. This alteration is boxed purple in Figure 57. This tempo change has the audible effect of the material stretching and allows the listener to hear the nuances of the relationships between the Piano parts.

Figure 58: Theme C in *Quintet for Percussion* (2018)

The score for Figure 58 shows five percussion parts. The Gong part (top) has a pink 'pp' dynamic marking in bar 57. Vib I, Vib II, and Vib III parts have pink 'pp' dynamic markings in bar 57. The Cel. part (bottom) has a pink 'pp' dynamic marking in bar 57 and a green box around its right-hand part. A yellow box at the top left of bar 57 contains the tempo marking quarter note = 100.

Figure 58 contains bars 57-64 of *Quintet for Percussion*. This material within bars 57-64 is Theme C. Theme C introduces a new tempo marking, 100 crotchet beats per minute. This is boxed purple in Figure 58. The time signature has also been augmented from 2/4, to 3/4. This is boxed yellow in Figure 58. These alterations in tempo and time signature introduce a new sense of pacing.

**(Timbre)**

Within my creative work, I also explore timbral qualities of the instrumental forces. As I have focussed on dynamics, tempo, and timbre as my 'tones', I shall be presenting these aspects from the analysis of my own compositions to demonstrate how I have used tone.

**Figure 59: Theme B.2 in *Quintet for Percussion* (2018)**

The musical score for Figure 59 shows Theme B.2 in *Quintet for Percussion* (2018). It features five staves: Gong, Vib I., Vib II., Vib III., and Cel. (Cymbal). The Gong part begins with a 'pp motor on' instruction. Vib I. has a 'pp' instruction and 'l.v.' markings. Vib III. has 'l.v.' markings. Cel. has 'pp' markings. A blue box highlights the first three measures of Vib I. A yellow box highlights the first three measures of Vib III. A green box highlights the first three measures of Cel. A red box highlights the last two measures of the score, where the instruments are instructed to 'l.v.' (let vibrate).

In *Quintet for Percussion*, the Gong and Vibraphones are instructed to let vibrate (l.v) within the last chords of bar 46. The rest at the end of the phrase exploits the transient qualities of the ensemble and allows the listener to hear the decay of the Gong and the Vibraphones. This is boxed red in Figure 59.



Figure 60: Theme A.4 in *Quintet for Percussion* (2018)

Within theme A.4, Vibraphone I uses the motor set to a medium speed. This is boxed green in Figure 60. This use of the motor offers a different timbre to the smooth, transient quality of the Vibraphone without the motor in bars 10-13.

Figure 61: The Opening of Movement II. Bars 37-44 in *String Quartet No II* (2018)

The timbre in this movement is far more delicate, as artificial harmonics are used in conjunction with a *pianissimo* dynamic marking. The dynamic markings are boxed pink in Figure 61. Violin I also enters without support from the other instruments within the ensemble. Also, as Violin II enters in bar 41, the only support it has is the tied A5 artificial harmonic from Violin I. This additive structure, alongside the artificial harmonics and the pianissimo dynamic markings, creates an opening with a very fragile timbral quality.

Figure 62: Bars 7-16 in *Glissandi for Choir* (2018)

The image shows a musical score for four voices (Soprano, Alto, Tenor, Bass) across bars 7 to 16. The score is annotated with various elements:

- Dynamic markings:** *ppp* (pianississimo) and *p* (piano) are used throughout. Dynamic swells are highlighted with pink boxes.
- Vowel annotations:** 'oh' is written in green boxes, and 'ah' is written in yellow boxes.
- Structural boxes:** Blue boxes highlight specific musical phrases or chords in the Soprano and Bass staves.
- Staff 7:** Soprano part starts with *ppp*. A pink box highlights a swell from *p* to *ppp*. A green box highlights the 'oh' vowel.
- Staff 8:** Alto part starts with *ppp*. A pink box highlights a swell from *ppp* to *p* to *ppp*. A blue box highlights a phrase. A yellow box highlights the 'ah' vowel.
- Staff 9:** Tenor part starts with *ppp*. A pink box highlights a swell from *p* to *ppp*. A yellow box highlights the 'ah' vowel.
- Staff 10:** Bass part starts with *p*. A pink box highlights a swell from *p* to *ppp*. A yellow box highlights the 'ah' vowel. A blue box highlights a phrase. A green box highlights the 'oh' vowel.

The interweaving between the voices is established, as phrases grow from the chords played underneath them. The growth and diminishing quality of the phrases is created using dynamics. The dynamic swells are boxed pink in Figure 62.

Within bars 7-16, the use 'oh' vowel is introduced. This, in conjunction with the 'ah' vowels, creates a timbral clash. This is created by clashing the roundness of the 'oh' vowel with the edge of the 'ah' vowel. The use of the 'oh' vowels are boxed green, and the use of the 'ah' vowels are boxed amber in Figure 62.

**Part Three:**

**Example. 1 (Agnes Martin)**

Agnes Martin's colour pallets and use of form reflects the chapters and locations in her life. Whilst she was living in New York, her art was "defined by the delicate graphite grid" (MoMa, 2016). When Martin returned to painting in the 1970s, her bold geometric forms, and warm colour pallets reflected her desert landscape in Taos, New Mexico (MoMa, 2016) (Guggenheim, 2019). Works such as *Untitled Number 5* (1975) "feature pale reds and blues" instead of the geometric graphite's from her time in New York (Guggenheim, 2019).

**Example. 2 (James Turrell)**

"My work is more about your seeing than it is about my seeing, although it is a product of my seeing. I'm also interested in the sense of presence of space; that is space where you feel a presence, almost an entity — that physical feeling and power that space can give." (James Turrell, 2019).

James Turrell is an American artist that works directly with light and space. His art engages viewers with their own perceptions of the presence of light and space. Turrell, "an avid pilot", considers "the sky as his studio, material and canvas" (James Turrell, 2019). Turrell is notable for his *Skyspaces*, which are "chambers with an aperture in the ceiling open to the sky" (James Turrell, 2019). When these chambers are witnessed, particularly during dawn, they "reveal how we internally create the colors we see and thus, our perceived reality" (James Turrell, 2019).

When Volans witnessed one of these Skyspaces for himself, he was inspired to not “change anything except the tone” in his *Cicada* (Smith, 2011). These artists, alongside Volans, have inspired me to consider tone, and how to change the audible perception of repetitive material by exploring dynamics, tempo, and timbre.

## summary

By drawing from sources by Dora A. Hanninen, Jacques Lacan, Johnathan Burrows, and Bara Kolenc, this thesis has outlined several current theories regarding repetition and recontextualisation.

In presenting an analysis of *Cicada* by Kevin Volans as a case study, this thesis has identified, illustrated, and explained a variety of compositional techniques and devices that may be used to achieve the repetition and recontextualisation of reiterated musical material, through which composers may encourage their listeners to re-orientate the perspective from which each element of the reiterated material is heard.

Similarly, this thesis has outlined how I have adopted and explored this enquiry within the portfolio of four original compositions presented for examination. In short, this thesis has identified, illustrated, and explained a variety of compositional techniques and devices that I have deployed to achieve the repetition and recontextualisation of reiterated musical material within my own creative work.

Furthermore, this thesis has drawn a series of complimentary examples from a wide variety of work across the creative arts by other artists that included: Phillip Glass, Robert Lax, Alvin Lucier, Steve Reich, Morton Feldman, Richard Glover, Agnes Martin, and James Turrell.

Ultimately, this thesis has proposed that the compositional techniques and devices deployed in the repetition and recontextualisation of musical material may be classified into any one or more, of the following three categories:

### (1) addition and subtraction

This thesis has defined additive processes, or 'addition', as a category of techniques that add new material and/or augment pre-existing material. This thesis has defined subtractive process, or 'subtraction' as compositional techniques or devices that remove and/or diminish pre-existing material. This thesis has presented examples of such techniques that include: augmentation and diminution, addition of new material, and the subtraction of new material.

### (2) placement and displacement,

This thesis has defined placement process as compositional techniques that transform reiterated material through placing it in a new/different alignment. Examples of these techniques include: the placement of entries, the placement of silences, and the placement of the material within the ensemble, i.e. the placement of the material in and between instrumental forces. This thesis has defined displacement process as compositional techniques that transform reiterated material through changing an aspect of the material whilst keeping its identity. This could include: transposition, intervallic displacement, and change of rhythmic relationships between parts

### (3) tone and colouring.

This thesis has defined tone and colouring process as compositional techniques that transform material through alterations to the timbre. This could include alterations in: register, harmony, dynamics and tempo as forms of controlling tone and colour.

## bibliography

Auner, J. (2017). Reich on tape: The performance of violin phase. *Twentieth-Century Music*, 14(1), 77-92. doi:10.1017/S147857221700007X

Botha, M. (2015). Why minimalism matters: Radical quantity and the representation of immanence. *Textual Practice*, 29(4), 745-772. doi:10.1080/0950236X.2014.969300

Broening, B. (2015). Alvin Lucier's I am sitting in a room. In M. H. Simoni (Ed.) *Analytical methods of electroacoustic music*. (pp. 89-110). New York, New York: Routledge.

Bryars, G. (1977). Out of Zaleski's Gazebo. On *Hommages* [CD]. UK: LTM (4).

Bryars, G. (2009). *Out of Zaleski's Gazebo (1977-78)*. Retrieved from <http://www.gavinbryars.com/work/composition/out-zaleskis-gazebo>.

Burrows, J. (2010). *A choreographer's handbook*. Oxon: Routledge.

Butler Gallery, Kilkenny Castle, Kilkenny, Ireland, "James Turrell, Air Mass," July 15 to August 16, 1993.

Butler Gallery. (2018). *Exhibitions 2000 to 1974*. Retrieved from <http://www.butlergallery.com/exhibitions-2000-to-1974/>.

Cage, J. (2000). *The Seasons*. [Recorded by D. R. Davis]. [CD]. München, Germany: EMC Records.

Dusman, L. (2015). Chaya Czernowin: Conversations and Interludes. *Contemporary Music Review*, 34 (5-6), 464-477. doi: 10.1080/07494467.2016.1150478.

Eastburn, S., Russell, B., Clarke, J., Hwang-Long, P., Czernowin, C., Chao-Ming, T., ... Fujikura, D. (Eds.) (2004). *27th Huddersfield contemporary music festival: [18th November - 28th November 2004]*. Huddersfield: Huddersfield Contemporary Music Festival.

Einaudi, L. (2013). Corale. On *In a Time Lapse*. [CD]. UK: Decca.

Feldman, M (1999). *Crippled symmetry* [Recorded by The California EAR Unit] [CD]. USA: Bridge Records Inc.

Feldman, M. & Friedman, B.H. (2000). *Give my regards to Eighth Street: collected writings of Morton Feldman*. Cambridge, Massachusetts: Exact Change.

Feldman, M. (1981). *Patterns in A Chromatic Field for cello and piano*. London, UK: Universal Edition.

Feldman, M. (1983). *Crippled Symmetry for flute, percussion and piano (doubling celesta)*. London, UK: Universal Edition.

Feldman, M. (1991). *Rothko Chapel/Why Patterns?*. [Recorded by Skywalker Sound]. [CD]. US: New Albion.

Feldman, M. (1999). *Crippled Symmetry*. [Recorded by the California EAR Unit]. [CD]. USA: Bridge Records Inc.

Feldman, M. (2008). *The Viola in My Life*. [Recorded by Cikada Ensemble]. [CD]. Germany: ECM Records.

- Feldman, M. (2009). *Patterns in a Chromatic Field*. [Recorded by A Deforce and Y Oya]. [CD]. France: æon.
- Frey, J. (2004). Streichquartett II (1998-2000). On *string quartets* [CD]. Germany: Edition Wandelweiser Records.
- Frey, J. (2004). *String Quartets*. [Recorded by Quatuor Bozzini]. [CD]. Germany: Edition Wandelweiser Records.
- Glass, P. (1968). *Two pages*. New York, NY: Dunvagen Music Publishers.
- Glover, R (2019). *Logical Harmonies (1)*. Retrieved from <http://earreader.nl/wp-content/uploads/2016/01/logical-harmonies-1.pdf>
- Glover, R. & Harrison, B. (2013). *overcoming form: reflections on immersive listening*. Huddersfield, England: Huddersfield University Press.
- Glover, R. (2013). Logical Harmonies 1 [Recorded by Thomas, P.]. On *Richard Glover - Logical Harmonies* [CD]. Sheffield, UK: Another Timbre.
- Guggenheim. (2019). *Agnes Martin*. Retrieved from <https://www.guggenheim.org/artwork/artist/agnes-martin>
- Hanninen, D. A. (2003). A Theory of Recontextualization in Music: Analyzing Phenomenal Transformations of Repetition. *Music Theory Spectrum*, 25 (1), 59-97. doi: 10.1525/mts.2003.25.1.59.
- Harrison, B. (2013). eight voices. On *Exposure* [CD]. Huddersfield, UK: Huddersfield Contemporary Records.
- Haskins, R. (2012). *John Cage*. Retrieved from <https://www.dawsonera-com.libaccess.hud.ac.uk/readonline/9781861899439>
- Hugonin, J. (2010). *Untitled (XVIII) 2009-10. A Year in the Making*. [DVD]. Edinburgh, UK: Shadowcat Films.
- Ingold, T. (2011). *Being Alive: Essays on Movement, Knowledge and Description*. London, England: Routledge Ltd.
- Ingold, T. (2013). *Making: anthropology, archaeology, art and architecture*. London, England: Routledge Ltd.
- James Turrell. (2019). *Introduction*. Retrieved from <http://jamesturrell.com/about/introduction/>
- Joseph K. Fine Art LTD.. (2018). *Cicada*. Retrieved from <http://www.josephklevenefineartltd.com/artists/jasper-johns/jasper-johns-cicada.html>.
- Kondo, J. (1998). *Chamber Music*. [Recorded by Ensemble L'art Pour L'art]. [CD]. Switzerland: Hat Hut Records Ltd.
- Kudielka, R. (Ed.) (1999). *The Eye's Mind: Bridget Riley Collected Writings 1965-1999*. London, England: Thames & Hudson Ltd.
- Lax, R. (1986). *New poems 1962/1985*. London: Coracle.
- Lucier, A. (1990). *I am sitting in a room: For voice on tape*. New York: Lovely Music.

- McGuire, J. (1987). *Frieze For Four Pianos / Pulse Music III*. [Recorded by M. F. Bauer]. [Vinyl]. Germany: Edition Michael Frauenlob Bauer.
- MoMa. (2016). *Agnes Martin*. Retrieved from <https://www.moma.org/artists/3787>
- NOS. (2012). *Simeon ten Holt (89) overleden*. Retrieved from <https://nos.nl/artikel/444592-simeon-ten-holt-89-overleden.html>.
- Palestine, C. (1995). *Strumming Music*. [Recorded by Charlemagne Palestine]. [CD]. Italy: New Tone Records.
- Palestine, C. (1996). *Sliding Fifths, On Four Manifestations on Six Elements*. [CD]. Netherlands: Barooni.
- Rahn, J. (1993). Repetition. *Contemporary Music Review*, 7 (2), 49-57. doi: 10.1080/07494469300640031.
- Reggio, G. (Director). (2012). *Koyaanisqatsi: Life Out of Balance & Powaqatsi: Life in Transformation*. [DVD]. USA: 20<sup>th</sup> Century Fox Home Entertainment.
- Reich, S. (1979). *Violin phase*. New York, NY: Hendon Music, Inc.
- Simeon ten Holt Foundation. (2017). *Biography*. Retrieved from <http://www.simeontenholt.com/Bio/index.html>.
- Smith, A. (2011). Light, Space, Colour: The Impacts of Abstract Visual Stimuli on the Aesthetic of Kevin Volans. *Irish Studies*, 11. Four Courts Press: Forthcoming.
- Smith, L. C. (2010). *Ballad*. [Recorded by A. Smith & E. Egoyan]. [CD]. Germany: Maria De Alvear World Edition E.K.
- Smith, L.C. (2001). *Memory Forms*. [Recorded by CBC Radio Orchestra]. [CD]. Canada: Artifact Music.
- The Canadian Music Centre [opus59films]. (2017. Jul 2). *13 Preludes - The Canadian Music Centre In BC's Legacy Composer Film Series, Volume 3* [Video file]. Retrieved from <https://www.youtube.com/watch?v=LkKbYSnvku0>
- Volans, K. (1996). *Cicada*. London, UK: Chester.
- Volans, K. (2000). *Cicada*. [Recorded by J. Richards and M. Hornsveld]. [CD]. UK: Black Box Music Limited.