Articulating Time

Listening to Musical Forms in the Twenty-First Century

Richard Luke Powell

PhD

University of York Music September 2016

Abstract

This study sets out to explore concepts of musical time by developing two complementary strands of discussion, one practical and the other theoretical. The practical strand is concerned directly with instrumental works from the Western art music tradition. Underpinning the thesis are five analytical case studies; in each, a piece written by a living composer (George Benjamin, John Adams, Hans Abrahamsen, Kaija Saariaho and Thomas Adès) is paired with a work by a historical figure (Mozart, Schubert, Brahms, Beethoven and Sibelius). Emphasis falls upon the contemporary works, with the more familiar canonic repertoire serving as a lens through which more recent music might be viewed. United by a broad conception of form as a duration that draws listeners to engage creatively with an organising impulse, these pieces facilitate discussions of broader issues of aural structure: continuity, repetition, energy and perspective. An overriding concern will be the effect that these perceptual qualities have upon experiences of time in music, and the ways in which this might enable different kinds of meaning. Through this process, it is intended that more 'difficult' new works can be rendered more accessible, while familiar 'masterpieces' might by the same token be viewed in a new light.

This musicological endeavour will be informed by an investigation into the ways in which time is perceived. This supporting theoretical strand will synthesise philosophical and psychological conceptions of temporality, and their contributions to subjective perspectives, to provide a framework for the experiences discussed. Whilst the 'twenty-first century' aspect of the thesis title serves as a nod towards an emphasis upon contemporary composition, it also refers to the diversity facing audiences today. The juxtaposition of new and old is reflective of more recent cultures of reception: listening habits are formed less by a socially-driven system of canons, and increasingly according to individual preference. This is an attempt to analyse the temporality of musical works at a point when their compositional chronology has perhaps never seemed so irrelevant. Rather than offering overarching theories of perception or prescribing specific methods of analysis and interpretation, this study embraces the plurality of experienced musical time in the acknowledgement that articulating these phenomena might enrich an appreciation of a variety of musical styles.

3

Contents

Abst	tract	3
Con	tents	4
List	of figures	7
Ack	nowledgements	9
Autł	hor's declaration	10
1.	Introduction	12
	Trees and flags	12
	Something old, something new	
	Keeping score	20
	Mutual benefits	24
2.	Alternative Paths - George Benjamin & Mozart	
	About time	
	Narrative impulses	
	Grasping time	
	Losing time	34
	Cycles and spirals	
	Temporal dualities	40
	Disintegration	45
	Timelessness	50
3.	Directing Time	56
	Clutching at metaphors	57
	Time, space and change	61
	In search of direction	64
	Going with the flow	67
4.	Perception and Perspective – John Adams & Schubert	71
	Placing perspective	73
	Simplicity and continuity	76
	Discontinuity	
	Moving beyond spectacle	86
	Moving beyond contrast	89

Contents

5.	Perceiving Time	
	Objective and subjective time	
	Order and consciousness	
	Processing musical time	
	Affect and attention	
	Diversions and subversions	113
6.	Dynamic Continuities – Hans Abrahamsen & Brahms	
	Developing variation	119
	Multiple forms – Abrahamsen	
	Innovation within tradition – Brahms	
	Tracing boundaries – Fourth Symphony: Finale	
	Finding dynamism	134
	Ebb and flow	136
	Layers of time – Schnee: Canon 1a	140
	Horizontal perspectives – Schnee: Canon 1b	
	Temporal dimensions – Schnee: Canon 2a	146
	Shifting focus – Schnee: Canon 2b	148
	Disintegration – Schnee: Canons 3–5	151
	Dynamic continuities	
7.	Experiencing Time	

Experiencing Time	
Perceiving forms	
Continuity and narrative potential	
Questioning continuity	
Dynamic forms	

8.	Narrative Possibilities – Kaija Saariaho & Beethoven	
	Surface balance	
	Internal narratives	
	Fulcra	
	In search of stability	
	Self-destruction	
	Fresh perspectives	
	Renewed focus	

Contents

9.	Understanding Time	
	Formal impulses	
	Autonomy	
	Unity	205

211
214
216
221
225
231
234
236
242
247
249

List of figures

2.1	Mozart, Violin Sonata in E minor K. 304 (2) , structural table	41
2.2	Mozart, Violin Sonata in E minor K. 304 (2), bars 1–16 (piano)	42
2.3	Mozart Violin Sonata in E minor K. 304 (2), bars 70–81	43
2.4	Benjamin, Viola, Viola, three-part structural plan	44
2.5	Benjamin, Viola, Viola, bars 1–19 (reproduced from Benjamin 1997)	44
2.6	Benjamin, <i>Viola, Viola</i> , list of events	48
2.7	Benjamin, Viola, Viola, bars 92–97 (reproduced from Benjamin 1997)	
2.8	Mozart, Violin Sonata in E minor K. 304 (2), bars 94–102 (piano)	51
2.9	Mozart, Violin Sonata in E minor K. 304 (2), themes, bars 1–4, 94–101	52
2.10	Benjamin, Viola, Viola, bars 98–105 (reproduced from Benjamin 1997)	53
4.1	Schubert, Sonata in B-flat D. 960 (1), bars 1–23	
4.2	Schubert, Sonata in B-flat D. 960 (1), trill derivation, bars 1 and 8	83
4.3	Adams, Shaker Loops (1): harmonic reduction, bars 1–104	87
4.4	Schubert, Sonata in B-flat D. 960 (1), table displaying structural plan	90
4.5	Schubert, Sonata in B-flat D. 960, binary form diagram	93
4.6	Adams, Shaker Loops (3), solo cello melody, bars 3–26	96
4.7	Adams, Shaker Loops, table displaying gestural interpretation of form	97
4.8	Adams, Shaker Loops, excerpts showing rhythmic motif reversal	98
6.1	Abrahamsen, Schnee, canonic parings across the formal scheme	124
6.2	Abrahamsen, Schnee, detuning process across the three intermezzi	125
6.3	Abrahamsen, Schnee, 'four movement' formal scheme	126
6.4	Abrahamsen, Schnee, 'diminishing structure' formal scheme	126
6.5	Brahms, Fourth Symphony (4), structural interpretations of form	126
6.6	Brahms, Fourth Symphony (4), reduction of ostinato, bars 1–8	130
6.7	Brahms, Fourth Symphony (1), reduction of bars 393-403	132
6.8	Brahms, Fourth Symphony (3), harmonic reduction, bars 317–26	
6.9	Brahms, Fourth Symphony (4), reduction, bars 97–104	137
6.10	Brahms, Fourth Symphony (4), selected reduction of bars 129-36	138
6.11	Brahms, Fourth Symphony (4), 'two gestures' formal scheme	139
6.12	Abrahamsen, <i>Schnee</i> (1a), bars 1–6 (reproduction of Abrahamsen 2008)	141
6.13	Abrahamsen, Schnee (1b), bars 1–3 (reproduction of Abrahamsen 2008)	144
6.14	Abrahamsen, <i>Schnee</i> (2a), reduction, bars 1–4	146
6.15	Abrahamsen, <i>Schnee</i> (2a), piano excerpts, bars 22–23 and 34–35	147
6.16	Abrahamsen, <i>Schnee</i> (3b), pianos (bars 1–4)	151
6.17	Abrahamsen, <i>Schnee</i> (4a), bars 1–3 (reproduction of Abrahamsen 2008)	152
6.18	Abrahamsen, <i>Schnee</i> (5a & 5b), piano parts, bars 1–4	153

List of figures

8.1	Saariaho, Je sens un deuxième coeur, formal scheme	175
8.2	Beethoven, 'Eroica' Symphony (1), formal scheme	175
8.3	Saariaho, Je sens un deuxième coeur (2), bars 54–57	182
8.4	Saariaho, Je sens un deuxième coeur (2 & 4), closing sonority reductions	183
8.5	Saariaho, Je sens un deuxième coeur, table detailing fulcra shifts	183
8.6	Saariaho, Je sens un deuxième coeur (3), bars 1–3	184
8.7	Saariaho, Je sens un deuxième coeur (4), piano, bars 1-4	185
8.8	Saariaho, Je sens un deuxième coeur (4), piano, bars 40-42, (piano)	185
8.9	Saariaho, Je sens un deuxième coeur (1 & 5) viola and cello openings	186
8.10	Beethoven, 'Eroica' Symphony (1), strings, bars 1–14	188
8.11	Beethoven, 'Eroica' Symphony (1), E-minor theme derivation	189
8.12	Beethoven, 'Eroica' Symphony (1), harmonic reduction, bars 248–84	190
8.13	Beethoven, 'Eroica' Symphony (1), tonal leanings, bars 284–338	191
8.14	Saariaho, Je sens un deuxième coeur (1), piano, bars 26–28	197
8.15	Saariaho, Je sens un deuxième coeur (2), bars 9–17	197
8.16	Saariaho, Je sens un deuxième coeur (3), viola and cello, bars 4–7	198
8.17	Saariaho, Je sens un deuxième coeur (4), reductions of selected bars	198
8.18	Saariaho, Je sens un deuxième coeur (5), piano, bars 1–3	198
10.1	Sibelius, Symphony No. 7, reduction of bars 1-4	210
10.2	Adès, <i>Tevot</i> , reduction of bars 1–4	210
10.3	Adès, <i>Tevot</i> , harmonic reduction, bars 1–13	219
10.4	Sibelius, Symphony No. 7, table displaying tempo changes	222
10.5	Sibelius, Symphony No. 7, trombone theme, bars 60–70	224
10.6	Adès, Tevot, table detailing tempo changes	226
10.7	Adès, <i>Tevot</i> , cello, bars 65–68, and violin 1, bars 92–99	228
10.8	Adès, Tevot, trumpet melody, bars 142-44	228
10.9	Adès, <i>Tevot</i> , counterpoint motifs utilised in bars 53–91	229
10.10	Sibelius, Symphony No. 7, strings and horns, bars 106–08	232
10.11	Adès, <i>Tevot</i> , reduction of bars 302–323	237
10.12	Sibelius, Symphony No. 7, strings and horns, bars 500–10	240

Acknowledgements

I would not have been able to undertake this project without the financial backing of a Doctoral Studentship from the Arts and Humanities Research Council; I feel very fortunate to have been given so much time and space to explore, well, time and space, and I am immensely grateful to the AHRC for its support in this regard. The Department of Music at the University of York has provided an incredible listening and performing environment in which to carry out this study. Whilst I have felt very blessed to have been able to treat it as something of a second home for the past eight years, I feel luckier still that after all that time it still provides so stimulating, so challenging, and yet so warm and friendly a place to work. This is mostly thanks to a whole host of people who have inspired and affected the course of this thesis in a variety of ways. Special thanks go to Daniel March, Mark & Vanessa Hutchinson, Martin & Zoë Scheuregger, John Stringer, James Whittle, Sarah Goulding, George & Annie Wissen, Ian Hoggart, Sophie Simpson, Benjamin Gait, Thomas Simaku, Christopher Leedham, Daniel Swain, Imogen Clarke, Patrick Jones and Claire McGinn.

Thanks also go to a number of friends, mentors and family members who have at various points offered invaluable support: David & Elspeth Dutch, Justin Evans, Eva Warren, my uncle Paul, my grandfather Pat and his wife Linda, Maryjane & Tony Clifford, Cathy Denford, Andrew Vickers, Lesley Smith, Mark & Jane Lewis and all the 'red herrings'. Particular thanks go to Paul Dryhurst for his friendship, conversation and tea-drinking companionship.

I would especially like to thank Bella Clifford for her constant love and encouragement, her ability to keep me calm and grounded, and her endless patience (if it had limits, I think I would have found them during the writing of this thesis!). Far from freaking out when I announced I wanted to study music, my parents Andy and Carey have been an incredible source of generosity, advice and support throughout, and there is no adequate way to show just how grateful I am. My siblings – Katie, Beth and Ben – have continued to inspire me with the amazing lives they lead. Shadow, the golden retriever, has also been ever-consistent.

Finally, special thanks go to my supervisor Tim Howell. I feel incredibly privileged to have been able to rely on his guidance and insight throughout this project. I will always be grateful for his friendship and support.

Author's declaration

I declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for an award at this, or any other, University. All sources are acknowledged as References.

Chapter Four contains written material and figures (4.3, 4.7 and 4.8) taken from my article 'Accessible Narratives: Continuity in the Music of John Adams' (listed in the Bibliography). Copyright is held by the publisher Taylor & Francis Ltd.

Shaker Loops – Music by John Adams
© Copyright 1978 Associated Music Publishers, Inc.
Chester Music Limited trading as G Schirmer.
All Rights Reserved. International Copyright Secured.
Used by Permission of Chester Music Limited trading as G Schirmer.

Tevot – Composed by Thomas Adès © 2007 Faber Music Ltd, London, WC1B 3DA Reproduced by permission of Faber Music Ltd All Rights Reserved.

Schnee – Music by Hans Abrahamsen © Copyright 2008 Ed Wilhelm Hansen. Chester Music Limited. All Rights Reserved. International Copyright Secured. Used by Permission of Chester Music Limited.

Viola, Viola – Composed by George Benjamin © 1998 Faber Music Ltd, London, WC1B 3DA Reproduced by permission of Faber Music Ltd All Rights Reserved.

Je Sens Un Deuxième Coeur – Music by Kaija Saariaho © Copyright 2003 Chester Music Limited. All Rights Reserved. International Copyright Secured. Used by Permission of Chester Music Limited. After all, why has a novel to be planned? Cannot it grow? Why need it close, as a play closes? Cannot it open out? Instead of standing above his work and controlling it, cannot the novelist throw himself into it and be carried along to some goal he does not foresee?

E.M. Forster, Aspects of the Novel ([1927] 2005, 95)

One

Introduction

Trees and flags

'If a tree falls in a forest and no one is around to hear it, does it make a sound?' At face value, this popular philosophical question solicits a knee-jerk reaction, apparently warranting a simple yes or no response. Nevertheless, as with any conundrum, it gently demands an exploration beyond its surface. It echoes wider epistemological enquiries that have punctuated Western discourses for hundreds of years. The methodical doubts of René Descartes in the seventeenth century and the immaterialist conjectures of George Berkeley in the eighteenth, have raised questions of rationality and sense in empirical and theoretical disciplines alike (Kantonen 1934, 483-500); even quantum physics has been led back to these issues when faced with the paradoxical characteristics exhibited by sub-atomic particles.¹ In Eastern thought, the question can be traced further back, with versions of it expressed as concise Zen koans. The Gateless Gate – a koan collection published by Mumon Ekai in 1228 – contains a comparable narrative, in which two monks debate what is moving: the flag or the wind. A passing Chan master leaves them awestruck at his equally contentious suggestion that rather it is their minds that are moving. Mumon's accompanying commentary elegantly bottles the pitfalls of discussing the phenomenon: 'The wind moves, the flag moves, the mind moves; All have missed it. They only know how to open their mouths, And do not know that their words have failed' (Yamada 2004, 143).

Of course, both of these puzzles are neither solvable nor rhetorical; they cannot be addressed in any straightforward way. The least (or perhaps the most) that can be concluded as to whether the unheard falling tree produces a sound is a paradox: yes *and* no. As with Mumon's kōan, the point of the question is the *asking* itself and the reflective journey this provokes. It encourages a heightened self-

¹ Physicist Jim Baggott explains that 'ever since it was discovered that atomic and subatomic particles exhibit both localised, particle-like properties and delocalised, wave-like properties physicists have become ravelled in a debate about what we can and can't know about the 'true' nature of physical reality.' (Baggott, 2011)

awareness precisely through a consideration of absence; emphasis is placed upon the relationships between individual and environment. Above all, this consideration of the nature of perception is the catalyst for a shift in perspective: an apparently objective enquiry is soon revealed to be a subjective exploration.

This philosophical query also acts as a useful gateway to contemplation of sound itself, underlining it as something that is *experienced*. It would seem that part of the desired realisation is the acknowledgement that sound, as we understand it, constitutes much more than its essential physical properties of vibrations in the air. Of comparable importance are the ways in which these properties are – or, in this instance, are not – received by a listener. What was a fact of the matter has quickly become a source of interpretation; a leap from the physical to the metaphysical has occurred. There can be no end to the different ways in which a single sound can be heard and interpreted. There will always be at least as many hearings as there are listeners. Even if we might understand aspects of those hearings to overlap, they will nonetheless retain independence from one another. Music often seems to complicate this yet further – wonderfully so.

Conveniently, then, this study is undertaken fundamentally from one perspective: my own. Music has been a captivating presence in my life; the *act* of listening to it has proved a particular source of fascination. And I am convinced that it is such: a necessary, creative, musical act. If the 'falling tree' question can impart anything essential about music, it is that its very purpose – perhaps even its very existence – might be called into question if it does not involve a listener of some kind. Eric Clarke – whose work concerning the psychology and ecology of listening will provide a theoretical underpinning at points here – underlines the unique significance of this active and reactive mode:

Perception is the awareness of, and continuous adaptation to, the environment, and, on the basis of that general definition, the perception of musical meaning is therefore the awareness of meaning in music while listening to it. It can be distinguished from musical meaning that arises out of thinking about music, or reflecting on music, when not directly auditorily engaged with music. (2005, 5)

The ways in which people listen to pieces of music transform and evolve over time, even if the performances themselves remain 'fixed' in the form of a recording (though even here a multitude of variables inevitably remain). Time, as

shall be shown, amounts to something of a 'constant variable' here. Music can only unfold as performance (either original or reproduced) in time, and might be said to 'possess' its own time or duration. But music can only take place in the same time once; the onward nature of temporality, and the changes that accompany it, provide an ever changing context for listening. Hearings of different performances, or 'works' (a useful notion that will feature throughout but not without scrutiny at certain points), do not develop in isolation but enter into a subtle dialogue with one another. On both conscious and sub-conscious levels, performances inform one another in the minds of listeners, chipping away at established conceptions to enable new aural perspectives on the familiar. This study emphasises these perceptual networks, establishing its own ecology of musical works in order that the broader phenomenon of musical time - an underlying essential condition of music, but one that proves elusive when considered - might be explored. Conceptual sub-divisions - principally continuity, repetition, energy and perspective - provide an analytical framework, allowing more specific concerns to be related to more general temporal experiences. A more substantial introduction to the issues surrounding the examination of time will follow in Chapter Two (Alternative Paths); in the meantime, it is necessary to establish both the framework, and some of the parameters, of the thesis.

Something old, something new

Whilst there are no limits as to the types of music that could contribute to these discussions, for the purposes of this study it was necessary to establish some parameters. The only strict criteria for selecting the ten works found here were that they be instrumental compositions that fall within a broad tradition of Western art-music, and that half of them might be loosely termed 'contemporary'. While it represents just a small pocket of global music history, the range presented here is relatively large; the oldest piece was composed in 1778, the most recent in 2008: a 230-year spread. Here the works are listed in the case-study pairings in which they will appear in the course of the thesis, with the specific movements analysed referenced at the close of works where relevant:

- George Benjamin *Viola, Viola* for viola duo (1997)
 Wolfgang Amadeus Mozart Violin Sonata in E minor, K. 304 (2) (1778)
- John Adams *Shaker Loops* for string orchestra (1978/83)
 Franz Schubert Piano Sonata in B-flat, D. 960 (1) (1828)
- Hans Abrahamsen *Schnee*, Ten Canons for Nine Instruments (2008) Johannes Brahms – Symphony No. 4 in E minor, Op. 98 (4) (1885)
- Kaija Saariaho *Je sens un deuxième coeur* for viola, cello and piano (2003)
 Ludwig van Beethoven Symphony No. 3 in E-flat 'Eroica', Op. 55 (1) (1804)
- Thomas Adès *Tevot* for large orchestra (2007)
 Jean Sibelius Symphony No. 7 in C, Op. 105 (1924)

The earlier pieces in each pairing fall into one of two genres: symphonies or sonatas. These labels immediately invoke expectations within the context of Western art music (which will remain the primary frame of reference throughout). Whether the works in question conform, develop, reinvent, or react against those expectations is less significant than the overriding implication that they will *engage* with the tradition in some way. It is important to consider these formal – in some cases possibly even formalist - decisions as creative choices rather than restrictions. The development of these genres was never quite as categorical as is popularly held; as Charles Rosen observed, 'the principles of "classical" art were codified (or, if you like, classicised) when the impulse which created it was already dead' (1997, xi). What could be dismissed as tradition and convention today was far more likely to have seemed a stimulating stylistic evolution to the composers of the time. In their wide-ranging study of sonata form, James Hepokoski and Warren Darcy (2006) chart not only conventional procedures prevalent in the late Eighteenth Century but also numerous instances of individual composers diverging from these conventions, often to heightened dramatic or expressive effect. Their understanding of formal procedures as fundamentally dynamic and dialogic is also notable on account of its consideration of temporal and perceptual factors:

Rather the composer generates a sonata – which we regard as a *process*, a linear series of compositional choices – to enter into a dialogue with an intricate web of interrelated norms as an ongoing action in time. The acoustic surface of any sonata (what we literally hear) sets forth the sonic traces of this individualised, processual dialogue, one that, from the standpoint of reception, it is the task of the analyst to reinvigorate. (Hepokoski & Darcy, 2006, 10–11)

Readers might note gaps and absences among the figures included in these case studies. Numerous composers of profound influence are not represented. Although the nine men and one woman showcased here (the gender imbalance is another deeply disturbing side effect of both musical history and the formation of the canon, but not the focus of this project) might easily be thought of as being progressive or influential in their own ways, they were not selected solely on that account. Several other major 'progressives' maintain an indirect presence: Haydn casts a shadow through his bearing on symphonic and sonata forms; influential figures such as Wagner and Debussy are palpable in the compositional developments they rendered possible through their unique approaches; and numerous twentieth-century powerhouses such as Stravinsky, Cage, Stockhausen, Boulez, and Reich are made known through their influence upon re-castings and re-alignments of musical thought. Meanwhile, the Second Viennese School is here represented through the scholarship and theoretical explorations of the composer many regard as its forefather, Arnold Schoenberg; whilst his music will not feature, his aesthetic writings will find a place here. As well as these external contributions, theoretical perspectives will also be offered from the selected composers themselves.

Although they present aesthetics that are undoubtedly distinct from one another, the contemporary works utilised here might nevertheless be thought of as representative of wider tendencies in much western art music at the close of the twentieth century and the beginning of the twenty-first. This overarching trend is not concerned with surface style but rather with more profound aspects of compositional approach. Focusing largely on music written after 1980, David Metzer (2009) frames this leaning in modernist terms. Here, modernism is utilised less as a historical movement and more as a continuing mentality that 'has a strong awareness of its own precedents and builds upon them':

16

Constantly reworking established elements, modernist idioms strengthen connections with past explorations, thereby creating the surprising result of modernism solidifying the past, its own past. At the same time, the involvement with previous explorations can yield the new, not so much the shocking gesture as the different ways in which an idea has been treated. The mode of modernist inquiry is not unlike that in science, one in which an experiment cites and departs from previous research in the hope of reaching new insights. (2009, 7)

In Metzer's reading, the notion of inquiry emerges as a central facet of modernism, one that is intertwined with the expressive characteristics that he perceives in music of recent decades. In these works, he asserts, the process of analysing expressive modes itself proves to be a mode of expression (2009, 23). His examination of the expressive act is twinned with an unpacking of 'compositional states': particular conditions or circumstances that serve as ideals to be emulated (though, importantly, not simply mimicked) through musical constructions. Through exploring states of silence, fragmentation, lamentation, and sonic flux, he offers a compelling case for compositional focus – rather than material – as a common ground for discussion of recent music (2009, 8–12).

Metzer utilises this distinction as one way of separating what he terms 'late modernism' from much of the avant-garde work produced in the post-war period; typified by the largely serial styles promoted at the Darmstadt International Summer Courses during the 1950s and 60s, the latter music emerges from a stringent emphasis on 'newness', often seemingly at the expense of expressivity (2009, 18–19). Indeed, it is the modernist engagement with past modes, and the heightened subjective expression this facilitates, that provides the means by which Metzer seeks to view a diverse range of recent compositional styles – including neo-Romanticism, new complexity, and spectralism – under the same light: 'Moving back from the individual details to the larger scene, we can perceive a range of richly expressive idioms, the vibrancy of which emerges from a fascination with the immediacy and communicative force of that expressive moment' (2009, 20).

In this sense, it can be posited that the more recent work utilised in this study might all be understood as displaying broader, post-avant-garde traits. Indeed, it might be argued that they exhibit seemingly modernist tendencies

17

through their engagement with structural precedents and their shaping of musical form as a vehicle for expression. Whilst Adès' Tevot does this in a more explicit way through its stated invocation of the symphonic tradition, an emphasis on contrast, development and dynamism as means by which structure can be delineated proves central to the music of Abrahamsen, Adams, Benjamin, and Saariaho. While it is not the intention of this thesis to focus upon modernism as a principal frame of reference, it is nonetheless significant that it can be evoked as a connecting feature; Julian Johnson provides the most extensive recent example of this with his cross-historical study Out of Time (2015), emphasising modernism as a potential source of unification rather than division once it 'is understood in relation to the aesthetic mediation of social modernity, rather than defined exclusively through technical or stylistic terms to do with atonality or metrical asymmetry': 'Whereas the aesthetics of Modernism used to divide musical sheep and goats into conservative and progressive camps, recently we have found it more interesting to explore the co-existence and interaction of diverse stylistic practices which, on closer inspection, begin to show some remarkable similarities' (2015, 7).

The music selection process for this thesis was inevitably subjective. These works were ultimately chosen on account of what I perceived to be potential to catalyse an exploration of broader musical topics. Indeed, it is these topics that, whether explicitly or covertly, will act as the guiding principle of the case studies rather than any intention to provide a set of comprehensive analyses. Consequently, the range – and the limitations – of the analyses themselves will vary. Examinations of compositions by Abrahamsen and Brahms, and by Adès and Sibelius, will take into consideration the entirety of their unfolding forms. By contrast, the focus in other chapters will fall instead on particular moments of crystallisation: discussion of works by Adams and Schubert will centre upon their openings and the perceptual implications of these passages; meanwhile, two periods of alienation at the centre of pieces by Saariaho and Beethoven will serve as a springboard for an exploration of the effect of these landmarks within the context of the wider musical narratives. The introductory pairing of Benjamin and Mozart will offer considerations of both long-term and momentary ideas, exploring both broader formal process and specific passages that might be thought of as evoking a sense of timelessness.

Although the pieces are cast in pairings relative to particular temporal concepts, they each undoubtedly contribute beyond their stations, enriching broader theoretical examination as well as one another. Placed between these case studies are four shorter chapters, interludes that seek to synthesise the work of other scholars into a more cohesive navigation of surrounding conceptual and theoretical issues. The links between these interludes and the analyses will often be implied rather than stated outright; it is hoped instead that they can increasingly inform and stimulate one another, accumulating gradually towards a broader account of musical time. In conjunction with the case studies they bridge, the theoretical interludes present a developing exploration of ways in which time is understood in philosophical and scientific terms (Chapter Three: Directing Time), how its passing is perceived in psychological and cognitive terms (Chapter Five: Perceiving Time), ways in which longer durations are understood and structured (Chapter Seven: Experiencing Time), and how these impressions might feed into more musicological concerns regarding musical form (Chapter Nine: Understanding Time). Chapter Two (Alternative Paths) will provide a juxtaposition of both strands of the thesis, introducing a number of the broader theoretical questions that will feature before moving into the first case study (Benjamin and Mozart). Meanwhile, taking the shape of a brief conclusion, Chapter Eleven (Epilogue: Open endings) will consider the implications of the paradoxes surveyed for an open perspective on music and time.

There are numerous musicological movements and discourses – hermeneutics, semantics, narrativity, formalism, structuralism and poststructuralism, to name but a few – that, whether named or not, will crop up in discussion at various points. It has largely been my intention to sidestep these larger debates rather than to join them; they are sub-fields that merit their own theses, and certainly little justice could be done to the range of ideas and literature they encompass without granting them the focus they deserve. If they are invoked here, it is only at moments when the essential issues of this study overlap with principles at the heart of those discourses. The wide-ranging literature concerning the earlier musical works examined here will be treated in a similar way, drawn upon at points when it bears relevance to the topics at hand. Indeed, to this end, it is not an intent here to provide comprehensive analyses – in a conventional sense – of these pieces; rather they shall be explored with a view to focusing upon aspects of their construction that contribute to an ongoing discussion of temporality.

Keeping score

The act of analysing a score, by its very nature, will to some degree always be predisposed towards ascribing meaning to music 'in and of itself', granting it a kind of autonomy.² Inevitably, within the performance-dependent context of musical time, the boundaries of musical meaning must be set far wider, encompassing all manner of textual, perceptual, ecological and cultural factors. Indeed, as Kevin Korsyn points out, these factors must be taken to form a network of 'relational events' if the dead-end binary of the 'text/context dualism' (analyses and discussions of music that are limited to movement between conceptions of 'inside' and 'outside' the work) is to be avoided (1999, 55-56). In this sense, it would be easy to call the significance of the score into question. Discrepancies between score and sound will always serve to illustrate the shortcomings of notation as an empirical text. In his book Beyond the Score, Nicholas Cook expresses a desire to fulfill the outlook of his title whilst airing the prospect of an intriguing return, suggesting that 'it is only once you think of music as performance that you can start to make sense of scores'. Nevertheless, he is realistic regarding their limitations:

In a nutshell, musicology was set up around the idea of music as writing rather than music as performance. To think of music as writing is to see its meaning as inscribed within the score, and accordingly to see performance as a reproduction of this meaning. That turns performance into a kind of supplement to the music itself, an optional extra, rather like reading poetry aloud (because isn't the meaning already there on the printed page?). Even if that is a satisfactory way of

² The notion of musical works possessing some kind of 'autonomy' is touched upon in Chapter Nine (Understanding Time).

thinking of poetry – which critics like Stanley Fish would deny – it is not a satisfactory way of thinking of a performing art like music. (Cook 2013, 1)

Cook's invocation of Stanley Fish is apt; whilst Fish's theory of 'interpretive communities' and its accompanying theory of text readings as largely cultural constructions offers a well-considered counter-weight to more categorical thinking (1976, 483–84), it is ultimately his approach to perception and meaning that proves most fruitful. In his exploration of interpretative clashes regarding Milton, he reaches an open-ended conclusion:

In short, these are problems that apparently cannot be solved, at least not by the methods traditionally brought to bear on them. What I would like to argue is that they are not *meant* to be solved, but to be experienced (they signify), and that consequently any procedure that attempts to determine which of a number of readings is correct will necessarily fail. (1976, 465)

Ultimately, Cook's portrayal (2001) of the work as emergent in the act of performance – as an 'interaction of autonomous agents' (2001, 192) – serves as a useful model for musical meaning. Scores, though they contribute significantly to this process, will not hold a monopoly in the course of this study; the pieces of music utilised here are represented as much by the selected recording detailed in the primary resource list as they are by their notated forms. However, whilst specific aspects of these recordings will at times be referenced in the case studies, it is more often that excerpts from the score will be employed as a supplement to discussion. Rather than succumbing to the kind of binary that Korsyn warns against, it is hoped that this use of notation - as representative of important aspects of many performances - helps to allow these analyses to be adapted beyond the specific recordings they relate to here. By extension, this use of scores can offer a degree of clarity that might enable the focus of this thesis to remain upon subjective experiences of musical time rather than the more intricate facets of the relationship between text and performance. Whilst it does not fall within the remit of this thesis to provide a detailed discussion of the nature of meaning in music, various kinds of meaning will be implied or invoked at numerous points. The focus will not be the specific shape of that meaning; interest instead lies in the ways in which aspects of the construction of pieces create particular temporal

effects when performed, and the ways in which these perceptual features might help to facilitate meaningful experiences.³

Although this thesis draws upon and is influenced by a variety of sources, its theoretical underpinning can be traced to several authors whose approach to similar subjects has proved particularly useful. Several writers in particular deal with musical time in encouraging ways. First and foremost is Jonathan D. Kramer, whose The Time of Music (1988) provides one of the most wide-ranging, and comprehensive attempts to unpack the subject. In conjunction with numerous articles that address related subtopics (1973, 1978, 1981, 1982, 1985 and 2004), the book goes a long way towards establishing a practical vocabulary that enables functional discussion of musical works. Barbara Barry's Musical Time: The Sense of Order (1990) has also proved helpful in this regard; though reservations might be held regarding its subjective perceptual assumptions and its assertion of aesthetic preferences, Barry's written approach exhibits a directness and an intentional avoidance of jargon worth aspiring to. Thomas Clifton's Music as Heard: A Study in Applied Phenomenology (1983) admirably addresses first-principle dilemmas whilst refusing to be obstructed by them, utilising numerous examples of musical works in order to offer a pragmatic dissection of subjective experience. In outlining his stance according to the phenomenological tradition, he asserts his position as 'a way of uttering meaningful statements which are objective in the sense that they attempt to describe the musical object adequately, and subjective in the sense that they issue from a subject to whom an object has some meaning' (1983, viii-ix). Finally, Robert Adlington offers perceptive and incisive appraisals of attitudes towards temporality in post-tonal music, skilfully highlighting limitations in a variety of approaches (1997b and 2003). Although his writing is predominantly theory-centric, his leaning is undoubtedly towards analysis and his discussions of metaphor, gesture, and motion prove pragmatic in their consideration of aural

³ For further reading regarding musical meaning and the tensions discussed here, see Cook (1990, 2001, and 2013), Korsyn (1999), Almén (2003), Small (1998) and Clarke (2005).

effect.⁴ Additionally, in terms of the wider study of time, Freidel Weinert's *The March of Time* (2013) provides a fascinating detailed yet relatively accessible historical survey of scientific developments in temporal theory; its impact upon this thesis will be discussed in more detail in the course of Chapter Three.

More broadly, Eric Clarke's writing has proved invaluable in its embrace of interdisciplinarity. His book *Ways of Listening: An Ecological Approach to the Perception of Musical Meaning* (2005) goes some way towards constructing a bridge between psychological, musicological, and analytical understandings, with its discussions of specific musical works grounded by the ways in which their elements might be perceived. Accepting the 'truism that different people perceive notionally the same event in different ways and on different occasions' (2005, 194), Clarke sets out an ecological approach to perception, promoting a common aural ground between individuals without sacrificing subjective listening: 'We all have the potential to hear different things in the same music – but the fact we don't (or at least not all the time) is an indication of the degree to which we share a common environment, and experience common perceptual learning or adaptation' (2005, 191).

Clarke's own attitude towards musical meaning – as something that differs according to how, and in what circumstances it is perceived – is complemented by a number of hermeneutic ideas. One scholar who emerges on a number of occasions is Lawrence Kramer, whose deliberate avoidance of strict definitions for musical meaning does not prevent but rather facilitates wider discussions concerning human values (1990, 1995, 2002, 2005, 2007, 2009 and 2010). With regard to more specific aspects of musical communication, Byron Almén presents a compelling argument for notions of musical narrative that emerge in parallel to literary theories rather than directly from them (2008); his work features heavily in Chapter Seven.

⁴ It is encouraging that further studies into musical time are beginning to emerge. Although their focus falls more upon aesthetic and cultural issues contemporary to the composers and musical works they discuss, Karol Berger (2007), Julian Johnson (2015) and Benedict Taylor (2016) number among particularly engaging recent examples of scholarship that seeks to emphasise the significance of temporality in musicological endeavour.

Mutual benefits

Many of the earlier works in this thesis have amassed a rich reception history, some frequently considered 'masterpieces' by 'genius' composers. Even if aspects of those histories are referenced here, the focus remains upon the experiences of the works today. Such acclaim often seems to have the effect of steaming up the lens, so to speak: an audience's 'view' of the artwork is obscured or manipulated by the labels attached to it. The 'genius' tag sometimes even introduces an unsettling extra-autonomous element to artistic endeavour. At an extreme, Nicholas Cook draws attention to Heinrich Schenker's assertion that 'genius' composers do not speak with a voice of their own but instead are *used* by 'the superior force of truth' (Cook 1998, 32).

While many would dispute the other-worldly intervention Schenker describes, the notion of 'masterpieces' persists today in the shape of 'repertories' or 'canons', 'the imaginary museum of musical works' as Lydia Goehr termed it (1992). William Weber rightly attempts to challenge modern preconceptions about the origins of these hierarchies, highlighting the formation of European pedagogical and performance canons throughout the sixteenth and seventeenth centuries. Nevertheless, he concedes that it is the composers of the 'Classical style' that are popularly considered as the foundation stones upon which today's repertory is founded (Weber 1999, 340–41). Cook points to the ancient Greek and Roman 'standards of beauty' that inspired the label: 'This term implied that similar standards had now been set in music, against which the production of all other times and places must be measured' (Cook 1998, 31).

Certainly the Austro-Germanic works selected here are likely to be thought of in terms of this lineage. Consequently, it might be expected that some kind of statement regarding the canon is intended; rather, this thesis is designed simply to underline two positive side effects of it. The first is the resulting familiarity that an audience may well have with several of the chosen pieces. The transformative power of repeated hearings cannot be underestimated, even in the context of inherited preconceptions. Indeed, part of the role of these analyses is to engage with engrained expectations that listeners may have. The second is the way in which this bringing together of diverse works hints at a transcendence of period

and era, a certain kind of 'timelessness'. Each of the pieces selected here demonstrates this paradoxical temporality, summarised eloquently by Edward Said in his dissection of late style:

There is first of all the artist's connection to his or her own time, or historical period, society and antecedents, how the aesthetic work, for all its irreducible individuality, is nevertheless a part – or, paradoxically, not a part – of the era in which it was produced. This is not simply a matter of sociological or political synchrony but more interestingly has to do with rhetorical or formal style... There is also an antithetical relationship in the case of artists whose work challenges the aesthetic and social norms of their eras and is, so to speak, too late for the times, in the sense of superseding or transcending them. (Said 2008, 299–300)

A practical application of this notion is harnessed by E.M. Forster, who – in his *Aspects of the Novel* – attempted to 'exorcise' from academic endeavour 'that demon of chronology', rejecting a historical view of literary analysis and instead considering great writers not within their own time periods, but all working together in a large, circular room:

That is why, in the rather ramshackle course that lies ahead of us, we cannot consider fiction by periods, we must not contemplate the stream of time. Another image better suits our powers: that of all the novelists writing their novels at once. They come from different ages and ranks, they have different temperaments and aims, but they all hold pens in their hands, and are in the process of creation. (Forster [1927] 2005, 31)

While studies such as Forster's have proved formative in the development of this project, it should be added that his is not an approach I wish to emulate. Forster assumes his position to illuminate integral facets of the novel in order to advocate a broader theoretical approach akin to that of New Criticism. Indeed, whilst many of the distinctions made by 'New Critics' between meaning, intention and interpretation are worth attention, they carry no more weight than many of the other approaches invoked in the course of this thesis.

The five selected works by living composers present by comparison what might typically be recognised as more 'difficult' music. Gaining some kind of standardised, transferrable understanding proves tricky in the absence of many conventional footholds such as easily perceivable harmonic, melodic, and metric

hierarchies. It is these contemporary pieces that take centre-stage as catalysts for discussions of musical time. The canonic works, analysed in parallel, take the shape of recognisable lenses through which the new can be viewed and better understood. However, this is not an exclusively one-way process. A hoped-for side effect is that the new might in-turn reinvigorate the old: the unfamiliar rendered more accessible, the familiar cast in a new light. A useful analogy might be found in *Les Misérables* as Victor Hugo outlines a chance encounter between the humble and elderly priest Monseigneur Myriel and the newly crowned Emperor Napoleon Bonaparte: 'Seeing the old priest intently regarding him, he turned to him and asked sharply: "Who is the gentleman who is staring at me?" "Sire," replied Monseigneur Myriel, "you are looking at a plain man and I am looking at a great man. Each of us may benefit" (Hugo trans. Denny 1982, 20).

This hope – for a mutually beneficial analytical ecology regardless of surface style – is central to this thesis, and its approach to the music it utilises. Each work selected here justifies its place alongside its bedfellows on account of what it can facilitate. Music, at its most successful, seems to possess a remarkable capacity to act as a catalyst for meaning – an ability to pull into focus for listeners all manner of things to do with self, emotion, intellect, spirituality, and relationships. Lawrence Kramer's eloquent portrayal of music as a 'dialogue between an inevitably creative intelligence and an inevitably meaningful world' seems particularly apt in these terms (2007, 29).

The pieces utilised here been selected precisely so that they might be explored, examined, and interrogated in all manner of ways. Each was chosen with the conviction that it would not only stand up to testing but also emerge all the richer for it. There is no desire here in prescribing how any of this music *should* be heard. Rather, alternative listening approaches are offered, allowing each individual to broaden their own hearing of a piece.

Similarly, for reasons that will occupy the remainder of this study, no broad theory regarding musical time will be offered. Instead, I will argue that no such definitions can be reached regarding so mercurial a subject. In the faith that music ultimately seems to possess the ability to articulate things that words cannot – not least regarding our relationship with time – it will be the final case-study pairing (Adès and Sibelius) that will serve to underline the conclusion of this thesis

26

through its engagement with profound paradoxes of change and recurrence, stasis and flux. I do not wish to see this apparent open-endedness as some kind of 'sadly unavoidable' situation, as Benedict Taylor describes it (2016, 288). I am convinced that to engage with questions like those asked in the course of this thesis is to become more receptive to one's own musical experiences and, thus, to leave oneself open to new ways of listening and the new kinds of meaning that might accompany them. In this spirit, all this endeavour asks of its readers is an attitude of openness in a manner similar to that outlined by C.S. Lewis in *An Experiment in Criticism*:

No poem will give up its secret to a reader who enters it regarding the poet as a potential deceiver, and determined not to be taken in. We must risk being taken in, if we are to get anything. The best safeguard against bad literature is a full experience of good; just as a real and affectionate acquaintance with honest people gives a better protection against rogues than a habitual distrust of everyone. (Lewis 1961, 94)

Two

Alternative Paths

George Benjamin & Wolfgang Amadeus Mozart

About time

The temporally-determined quality of music does not set it wholly aside from other art-forms. Whilst it is obviously accompanied by all explicitly performancebased arts, to claim that other written and visual genres differ drastically in this respect is to underestimate the ways in which they are perceived. It could very well be argued that they too are performed, albeit in an abstract sense. They too rely upon the passage of time for their realisation, even if control over duration lies to a greater extent in the hands of a viewer or a reader. The linear construction of a novel requires time to pass for it to play out as it is read; the duration of a viewing of a painting may profoundly affect the impression it leaves. The entwining of music and time is, of course, first and foremost an consequence of the fact that sound - the basic component of music - can only be comprehended within the unfolding time it takes for that sound to emerge. However, I would propose that is precisely this connection that *can* set the most profound musical experiences aside. A surrender of temporal 'control' on the part of a listener can lead to a heightened reflective awareness of perceptual time. In other words, a musical experience can manipulate the flow of time for its listeners, providing they allow it to. Rowan Williams is apt in his inference that if music 'is the most contemplative of the arts, it is not because it takes us into the timeless but because it obliges us to rethink time' (Williams 1989, 248, quoted in Begbie 2000, 29).

It is a useful constant within the rich musical variety of this study that each chosen work is notable for its ability to draw listeners – certainly this one, at least – into this kind of engagement with their experiences of time. Indeed, beyond mere exploitation, the pieces seem to *engineer* time, structuring it in an audible manner. Thanks to their (largely) fixed expressions as notated scores, and the attempts of most performances to realise (or 'recreate') these texts, time is in some sense 'ordered' through the choreographed production of sound. The 'musical forms' in

the title of this thesis refer to this concept of audible design and its capacity to communicate, to act as a springboard for meaning beyond simply the structuring of sound itself. Arnold Whittall suggests that 'forms might be defined simply as what forms have in common, reflecting the fact that an organising impulse is at the heart of any compositional enterprise' (*Grove*, 2007). The same would often appear to also be true at the receptive end of the continuum of creation and interpretation; surely this same impulse lies at the centre of any *listening* enterprise.

Whittall clearly notes the significance of this impulse in the broader context of musical reception: 'meaning is implicated in form, yet not identical with it' (2007). It is a gap between construction and significance that philosophers like Eduard Hanslick have argued is bridged by aesthetic ideals such as beauty and purity. Aspects of Hanslick's formalist approaches are, in some ways relevant to this thesis, not least his proposal that music be defined as 'tönend bewegte Formen': sonically moving forms (trans. Cohen 1957). Indeed, the emphasis he places upon the organic, self-driven development of melodic material – the lifeforce of music, as he asserts – is worth noting. Exploring Hanslick's conceptions, Marc Leman infers that these moving structures 'have a direct impact on human physiology because they evoke corporeal resonances giving rise to signification' (2008, 17). Perceived formal dynamism will feature at points here, with particular focus placed upon its contribution towards large-scale structural procedures like growth and decay, and convergence and divergence (Chapters Six and Ten in particular).

Narrative impulses

Attitudes to the role form plays in the location of meaning vary greatly. Adam Ockelford develops an aesthetic theory of music on the grounds of palpable order, introducing the term 'zygonic' to denote patterns internal repetition and selfimitation within structures (2005, 5–6). Here, form itself might be taken to promote meaning intrinsically, pleasure derived from self-reference. By contrast, Lawrence Kramer acknowledges the significance of concise repetition and cyclical

structures within the context of popular music, but reverses Ockelford's focus when discussing Western classical music, highlighting the manner in which 'the force of departure or dissolution cannot be so neatly contained'. In particular, he refuses to let discussion of the aesthetic value of music supersede its practical and perceptual capacities:

Classical music constantly put its claims of beauty, desire, energy, clarity, and so on at risk in the currents of contingency and metamorphosis. This willingness to engage with the passage of time from something like the inside gives the music part of its special character. Classical music allows us to grasp passing time as if it were an object or even a body. Time, which as mutability dissolves the solidity of our loves and beings into abstraction and memory, becomes a source of tangible, persistent pleasure and meaning. (L. Kramer 2007, 38–39)

In placing these temporal factors at the centre of the perceptual and emotional experience of music, Kramer highlights further a refreshingly pragmatic conception of form: 'One doesn't listen *for* the forms, but *through* them. Form arises as a projection of drama; the drama is not a paraphrase tacked onto the form' (2007, 38–39). The notion of drama is apt; instrumental music might certainly be said to convey a narrative, even if it does not possess the specificity of a literary drama. In spite of his reservations, Jean-Jacques Nattiez is quick to acknowledge the 'narrative impulse' – a process which 'operates when we hear music in a more or less spontaneously narrative mode of listening': 'On the level of the strictly musical discourse, I recognise returns, expectations and resolutions, but of what, I do not know. Thus I have a wish to complete through words what the music does not say because it is not in its semiological nature to say it to me' (Nattiez, 1990, 244–45).

Adapting Whittall's impression of the act of composition, this arrival at narrative structure could be taken as part of a broader 'organising impulse'. Barney Childs agrees: 'Man traditionally searches to "make sense" out of experience, and art provides one means he can choose to do this' (1977, 195). However, such language choices might seem to undermine the creative routes this journey can encompass. To talk of 'organising' or 'ordering' may suggest something altogether more unimaginative, the implication being of the music possessing an inherent hierarchical system. Of course, formal hierarchies should not necessarily

be viewed in negative light; on the contrary, they are often crucial to gaining an understanding of a perceptual narrative. But to suggest that these systems of formal hierarchy are singular – and that interpretation is little more than a jigsaw puzzle – would be damaging. To equate it with the act of composing, listening too is a creative act.

Such varied perceptions and visualisations of an experience as fundamentally universal as the passing of musical time throw open the interpretative floodgates. Paul de Man eloquently outlines the problematic temporal implications for readings of literary form:

The idea of totality suggests closed forms that strive for ordered and consistent systems and have an almost irresistible tendency to transform themselves into objective structures. Yet, the temporal factor, so persistently forgotten, should remind us that the form is never anything but a process on the way to its completion. The completed form never exists as a concrete aspect of the work that could coincide with a sensorial or semantic dimension of the language. It is constituted in the mind of the interpreter as the work discloses itself in response to his questioning. But this dialogue between work and interpreter is endless. (1983, 31–32)

The sheer diversity of ways in which a single narrative can be read induces a paradoxical interchange between subjective and objective, boundaries between general and specific irretrievably blurred. As Joseph Campbell says of hero mythologies: 'Where we had thought to travel outwards we shall come to the centre of our own existence; where we had thought to be alone, we shall be with all the world.' (2008, 18). C.S. Lewis, in turn, associates these narrative experiences with a reciprocal relationship between the natural and the transcendental:

Literary experience heals the wound, without undermining the privilege, of individuality. There are mass emotions which heal the wound; but they destroy the privilege. In them our separate selves are pooled and we sink back into sub-individuality. But in reading great literature I become a thousand men and yet remain myself. Like the night sky in the Greek poem, I see with a myriad eyes, but it is still I who see. (1961, 140–41)

Largely freed from the constraints that language and visual elements might impose, instrumental music already lies some distance along this path of abstraction. Many pieces of music, even if they were composed with a specific subject matter, are – in being heard – allowed to assume the form of more personal expressions that might nevertheless be united with bigger, 'universal' ideas.

Grasping time

Lawrence Kramer's suggestion that classical music allows passing time to be 'grasped' in the manner of a physical entity is indicative of a wider receptive approach to musical form (2007, 39.) Beyond the obvious reference to rhythmic and metrical aspects of performance, it would appear to consider musical works as stretches of time that are in some sense preserved – or 'kept' – and reproduced (in, nonetheless, endlessly variable forms) to express wordless narratives. An oft-quoted passage in *Richard II*, finds William Shakespeare invoking this idea (5.5. 42–48):

Ha, ha! keep time: how sour sweet music is, When time is broke and no proportion kept! So is it in the music of men's lives. And here have I the daintiness of ear To cheque time broke in a disorder'd string; But for the concord of my state and time Had not an ear to hear my true time broke.

With poetic concision, this passage references many of the conceptual obstacles that face examination of musical time. Apparent dichotomies are invoked – continuity and discontinuity, linearity and non-linearity, proportion and disproportion, 'true' time and 'broken' time – but within a paradoxical simultaneity. It is these kinds of distinctions that permeate Jonathan Kramer's approach; even his opening question – 'Does music exist in time or does time exist in music?' (J. Kramer 1988, 5) – perhaps hints at the inevitable fallibilities and limitations of any singular enquiry. He seems well aware of this, and he frequently takes care to acknowledge both the inherent contradictions and ultimate redundancies of the divisions (1988, 58, for example).

In discussing formal coherence, Theodor Adorno voices what he perceives as a transformation of 'crude unmediated space, time, and causality' within the context of artworks from a distant contributor into 'something other': 'Thus, for example, there is no mistaking time as such in music, yet it is so remote from empirical time that, when listening is concentrated, temporal events external to the musical continuum remain external to it and indeed scarcely touch it'. Adorno seems to make a striking temporal distinction here, asserting that empirical time infringes upon this musical time 'only by dint of its heterogeneity, not because they flow together' (Adorno trans. Hullot-Kentor 1997, 137). Certainly, in assuming a particular aesthetic perspective, many musicologists and analysts might often be seen as implicitly advocating a particular view of musical time. In this way, Nicholas Cook identifies a temporal distinction as lying at the foundations of the opposition between what he terms structuralist and rhetorical conceptions:

The structuralist model is of an ideal object that is not inherently temporal but, in performance, is presented through time. Time is the medium through which the music passes, rather in the manner of its steady progression across the screen when you are playing a recording in Sonic Visualiser.... By contrast, the rhetorical model is one in which time is a dimension of the musical material, so that (as I put it) the music is not *in* time, as with the structuralist model but rather *of* time. This means that music is understood to be inherently temporal ... and equally that it shapes temporal experience, rather in the manner of a magnetic field. (2013, 126)

Time is often conceived as comprising oppositional characteristics. Jonathan Kramer describes them as 'absolute' on the one hand and 'musical' on the other, acknowledging the possibility of the former as an reality external to experience but promoting the powers of the latter to 'create, alter, distort, or even destroy time itself' (1988, 5).⁵ Nevertheless, he calls upon the writing of Thomas Clifton to help dissect notions of objective time for the purposes of his enquiries:

Time is a *relationship* between people and the events they perceive. It is an ordering principle of experience. Thus I am focusing on the time that exists primarily *within us*. Yet even what I call 'absolute' time (a term Clifton rejects) is little more than a social convention agreed to for practical reasons. (J. Kramer 1988, 5)

⁵ Further discussion of the dualities that Jonathan Kramer's can be found in Chapter Seven (Experiencing Time).

Though Clifton may reject an autocratic reading of time, he is nevertheless happy to work with a binary interpretation, noting a difference between 'the time a piece takes' as opposed to 'the time a piece presents or evokes' (Clifton 1983, 81). Kramer's apparent evasion of concrete conclusions regarding a concept of 'absolute time' proves a concern for Jeremy Begbie, who highlights a number of inconsistencies: despite his discussions of music in its relation *to* absolute time, Kramer holds that it is 'primarily subjective', yet he confuses things further by concluding that 'time does not exist outside of experience' and that absolute time is 'objective time, the time that is shared by most people in a given society and by physical process'. Begbie points to Immanuel Kant's conception of temporality as the form that governs cognition and determines the organising of sense data as a helpfully clear-cut expression of this subjectivism (Begbie 2000, 32–33).

Losing time

In his book *Shaping Time*, David Epstein's summation of 'dual modes' of time outlines something perhaps more akin to a power struggle in the mind of a perceiver:

One is essentially clocklike, a measurement mode that mechanically delineates equal periods. The other mode relies upon experience for its demarcation – experience that is particular and unique. Time, seen in the context of such experience, is anything but mechanical or external; quite the opposite, it is integral to the experience itself. As a consequence, it is often measured, or delineated, in terms of that experience. (1995, 7)

This apparent mistrust of clock time – and the wider desire to avoid any surrender to a notion of objective temporality – is nothing new. In his eleventh book of *Confessions*, written in the final years of the Fourth Century, St Augustine's pondering of the Biblical creation narrative leads to a detailed consideration of the experience of time. He questions how we comprehend the passing of time, exploring duration, whether it is determined by motion, and the ever-changing regularity of how it is sensed (trans. Chadwick 1991, 221–245). Perhaps most significantly, he analyses his own consideration of time, concluding that time

cannot be appraised from 'outside'; a questioning of time is itself subject to the passing of time. Dissecting past and future, he observes how difficult it is to determine exactly what constitutes the 'present' and how to quantify it, providing an eloquent summary of its paradoxical nature (trans. Chadwick 1991, 241):

And yet the times we measure are not those which do not yet exist, nor those which already have no existence, nor those which extend over no interval of time, nor those which reach no conclusions. So the times we measure are not future nor past nor present nor those in process of passing away. Yet we measure periods of time. (1991, 241)

More recent attempts to emphasise the subjective over the objective might well be considered within the fallout of what Michael Rofe describes as 'one of the most significant paradigm shifts in modern physics': the departure from the classical mechanics premise of time as definitively measurable regardless of subject movement (referred to as Newtonian time, in Rofe's reading) following the subsequently verified assertions of Albert Einstein's General and Special theories of relativity that space and time are inextricably entwined not only with one another but also with what occurs within them. The direct implication for theories of time were that it could no longer be considered an absolute: numerous studies show it to alter within the context of extremes in motion and proportion (Rofe 2014, 346–7).

With even an objective conception of time thrown into doubt, it becomes easy to view much art and scholarship concerned with time as a reaction – positive or negative – to the futility of attempts to quantify temporal experience. T.S. Eliot's *Four Quartets* provides a particularly iconic case in point, the exposition to its first poem, *Burnt Norton*, bearing striking resemblances to St Augustine's musings (Eliot 1944, 13):

Time present and time past Are both perhaps present in time future And time future contained in time past. If all time is eternally present All time is unredeemable. What might have been is an abstraction Remaining a perpetual possibility

35

Only in a world of speculation. What might have been and what has been Point to one end, which is always present.

When dealing with such mercurial subject matter, it is unsurprising that the process of music analysis has conventionally shied away from the Einsteinian conception of time. As Rofe observes, 'the object of analysis is more often the score, rather than the listener's perception of that score, and the units used to describe patterns in music are most often the (Newtonianly stable) bar, tactus or second' (2014, 347).

It would certainly seem that, within Western art music, the score has been upheld – or clung onto – as representative of a handful of constants in the sea of variables that surround the performance of a work, a practical blueprint for what might in some sense be seen as an attempted 'repeat' of a temporal experience. This desire to simulate wider temporal repetition would seem to be reflected in a more acute manner when taking into account aspects of composed repetition: the controlled recurrence – or quasi-recurrence – of features within a piece. The effect of this contained recycling process upon our perception of time becomes seemingly all the more complex the more it is scrutinised. Repetition or consistency of even the vaguest kind has a bearing on perceived continuity, forming a central component of musical syntax. Even discontinuous elements, when implemented in an extreme or extended manner, are tantamount to continuities of their own.⁶

Cycles and spirals

Nevertheless, the presence of repetition within a piece does not act as an indicator of whether that music might be thought of as linear or non-linear in terms of the temporality perceived. The distinction Jonathan Kramer establishes between these two extremes, although linked less convincingly with his conception of the two

⁶ Further discussion of tensions between continuous and discontinuous elements, and their implication for broader conceptions of form, can be found in Chapter Five (Perceiving Time).
hemispheres of the brain, offers a fascinating workable continuum.⁷ Martin Clayton certainly interprets it this way, concurring that 'music can exploit either or both of these complexes, and that any piece of music exhibits both linear and non-linear features' (2000, 24). Kramer asserts that these qualities are not mutually exclusive: 'Most music exhibits some kind of mix of temporalities, at times nebulous, at times contradictory, at times changing, at times elusive' (1988, 58). These linear and non-linear features, he would seem to be suggesting, are separated out within his discussions for the purpose of clarity, facets of a complex, plural process isolated and dissected in turn.

Approaching the subject of musical time largely through the lens of Indian classical music, Clayton suggests that this systematic treatment of the topic may well be endemic to particular strands of musicology:

If there is a difference between metre in Indian and Western music it may lie not so much in one being cyclical and the other not, but in the fact that Indian theorists have not been troubled by the apparent paradox of musical time as both linear and recurrent, whereas Western theorists have been inclined to play down the sense of recurrence, let alone cyclicity, in favour of a more singular conception of linear development. (2000, 19)

Capturing multiplicity of this kind in within the context of specific musical analyses proves difficult. Tim Howell attempts just this (2001), mapping Kramer's distinction onto the music of Sibelius to illustrate the ways in which the timescale the composer employs initiates contention between motion and stasis, between progression and stagnation. Howell infers two closely-derived categories of musical time: the onward motion of 'linearity', and the repetition-based stasis of 'circularity'. (2001, 40–1.)

Articulating musical time in these terms, while proving functional, displays an inevitable reliance upon successful metaphorical expression. Nevertheless, the necessity of this support network has been increasingly acknowledged. Robert Adlington, points to the work of linguists like George Lakoff and Mark Johnson (1980) as having been instrumental in this shift in perspective: 'Contrary to the

⁷ Martin Clayton refers to, but does not elaborate fully upon, doubts expressed by Ian Cross in a private correspondence regarding Kramer's linking of linear and non-linear time to the left and right hemispheres of the brain respectively (Clayton 2001, 24).

traditional understanding of metaphor as an essentially poetic or figurative linguistic device, these theorists have stressed the centrality of metaphor to cognition and experience. Metaphor, in other words, rather than being subjective and indeterminately connected to its object, is often necessary and unavoidable' (Adlington 2003, 301). The subject of metaphor with particular relation to time, space and motion, will emerge as a topic of discussion in the course of this thesis, in particular in Chapter Three (Directing Time).

The 'circularity' description Howell employs - 'cyclicity' in Clayton's reading - appeals more directly to perceptual experience than any kind of temporal actuality. As Clayton clarifies within his consideration of metrical implications, 'no music is cyclical in any empirically verifiable sense. The cycle is a spatial-temporal metaphor used in order to clarify, mediate, and communicate subjective musical experience' (2000, 18–19). Nevertheless, in spite of this process of abstraction, the imagery that different theoretical approaches produce can bear striking similarities. Clayton cites two theoretical attempts to address dissatisfaction with cyclicity as a model for metrical perception. The first is Victor Zuckerkandl who, in acknowledging the impossibility of any true 'going back' in time, conjures a more linear image: 'Since [...] every new beat does bring us to a new point in time, the process can be better understood and visualised as a wave which also best corresponds to our sensation of metre.' Subhadra Chaudhary in her dissection of Indian tāla, meanwhile, does not dismiss the visual significance of cyclicity altogether, but is quick to emphasise - like Zuckerkandl - the manner in which it differs from circularity: 'Although both have round shapes the circle is formed by returning to starting point whereas the cycle is formed by moving forward gradually in a spiral.' (Clayton, 2000: 20–21).

While Clayton also draws parallels here with Jeffery Pressing who, within his own metrical study, resorts – like Chaudhary – to a graphical illustration of a helix, it is the theoretical notion of a spiral that is reflected in Howell's summary of temporal synthesis in the music of Sibelius. Uniting his Kramer-derived conceptions of contrasting linear and circular time within one perceptual phenomenon, Howell aptly refers to 'spiralling': 'where events appear to be repetitive and circular but where that very repetition drives the music onward and gives it a sense of momentum.' (2000, 90).

38

Though specifics and semantics may vary, each of these examples showcases a conscious decision to surmise the perceived time of particular kinds of music in terms of gestural metaphors, each an attempt to convey through straightforward means a process of multi-layered complexity. They reach, it would seem, the same conclusion as Edward T. Cone: 'If music is a language at all, it is a language of gesture: of direct actions.... Instrumental utterance, lacking intrinsic verbal content, goes so far as to constitute what might be called a medium of pure symbolic gesture.' (1974, 164). Here, a theoretical connection between practical sound perception and abstract interpretation is forged. Eric Clarke underlines the role that implications of movement play in this journey: 'The sense of motion or self-motion draws a listener into an engagement with the musical materials in a particularly dynamic manner ... and in doing so constitutes a vital part of musical meaning.' (2005, 89).

Zuckerkandl, Chaudhary, Howell and Pressing each reconcile features of stasis within the context of a dynamic structure: an attempt to emphasise a relationship of duality and co-existence rather than one of dichotomy and opposition. Each example also reinforces Jonathan Kramer's views on the potential simultaneity of temporal modes. As with Kramer's own work, for the sake of clarity, a detailed exploration of apparently plural musical time will entail an unpacking process, individual components examined in turn (1988, 58). By adopting a more systematic approach to relatively immediate and obvious aspects of aural construction, increasingly profound underlying temporal processes might be considered, building a bridge between physical actuality (sound) and expressive abstraction (meaningful interpretation). In a similar manner, this thesis will set out to suggest ways in which temporal interpretations of musical works can be linked back to fundamental, universal experiences of time, in both the short- and the long-term: issues of beginning and ending, of growth and decay, of convergence and divergence, of climax and subsidence, of expectation and denial.

Temporal dualities

This approach can be illustrated through an initial case-study pairing of two pieces: the second movement of Wolfgang Amadeus Mozart's (1756-1791) Sonata for keyboard and violin in E minor, K. 304 (1778), and George Benjamin's (b. 1960) piece for viola duo Viola, Viola composed in 1997. In spite of their stylistic and formal disparity, both works nevertheless hint at broader, related conceptions of time and its significance. They also exhibit on-going dialogues between linear and non-linear modes of time, as a dualistic coexistence is revealed in the contrasting ways in which their temporal journeys can be heard. This brief analysis will begin with an emphasis upon non-linear characteristics; more static, structural divisions will be outlined showing the ways in which the durations of these pieces can be segmented according to a formal plan. These overviews will gradually give way to more explicitly linear conceptions, taking into account more dynamic musical processes that could be heard in order that the validity of the more clear-cut architectural readings might be queried. Finally, further questions will be raised regarding specific passages in each piece that present a 'time' that is not so easily defined. Here, considerations of the the form at large will give way to examination of two specific parallel passages in both works; these analytical perspectives long-term and short-term - will be utilised to varying extents in the case studies that follow during the course of the thesis.

Mozart's sonata was written early in the summer of 1778 while the composer was staying in Paris. Comprising just two movements rather than the typical three, it represents one of his experiments with formal compression; a number of other sonatas composed on the same trip follow a comparable format (Bromberger, 2007). Whilst the opening *Allegro* assumes a conventional first-movement role, the *Tempo di Menuetto*, as its non-committal title might suggest, represents something of a hybrid. Although it assimilates aspects of minuet and trio traditions through its dance-like metre and its bookending structure, its also seems to sit at odds with these influences via its subdued, slow-movement character. Maintaining the E-minor tonic in its outer sections, this is sombre, highly expressive music, exhibiting a wistful, perhaps even despondent melancholy rare in Mozart's output.

Formal segment Tonality		Bar numbers (total)	Duration	
A1	E minor	1-32	0'46	
B E minor / G maj		32-69	0'59	
A2 E minor		70-93	0'35	
C	E major	94–127 divided into two repeated	1'58	
		sections (68 bars in total)		
A3 E minor		128–148	0'20	
Coda	E minor	149–171	0'37	

Fig. 2.1: Mozart, Violin Sonata in E minor K. 304, second movement, table showing
circular structure

Architecturally speaking, the *Tempo di Menuetto* displays a circularity of form: two related outer sections in E-minor enclose a contrasting E-major 'trio' episode, with the musical material distributed accordingly (see Figure 2.1).⁸ The effect is one of self-contained stasis. From the long-term revisitations of the 'minuet' material, to the short-term antecedent-consequent relationships found within the melodic and harmonic material, the movement hints at an overriding sense of circularity. A distance is travelled but levels of repetition ensure that the destination bears a easily perceivable resemblance to the point of departure.

Nevertheless, aspects of this overview betray something more complex than mere recurrence; a 'pure' cycle is avoided through a lack of direct repetition. In this sense, Mozart evades the structural norms of a minuet with the wider opening section (A1–B–A2 in Figure 2.1). Instead of two directly repeated passages, he opts for a through-composed developing dialogue between the two instruments. The roles of the violin and piano are not limited by an unchanging hierarchy of soloist and accompanist, nor are they presented as constant equals; rather, a give-andtake relationship is set in motion with each offering different perspectives on the thematic material. The return to the A-material after C also differs from the conventional model in which an unaltered restatement of the opening 'minuet' might be expected (often literally, with scores utilising a *da capo* instruction). Instead, only a brief glimpse of the initial material is permitted; the movement is instead curtailed by a looping coda, a consequent-oriented passage that might appear disproportionately long relative to the short reprise (A3) it supersedes.

⁸ Durations taken from recording listed in primary resource list (Rachel Podger, violin; Gary Cooper. Channel Classics: 24607).



Fig. 2.2: Violin Sonata in E minor K. 304, second movement, bars 1-16 (piano)

While cyclical qualities are still maintained, the effect upon the overall form of the movement is one of dynamism: the small-scale onward developments of thematic material are underpinned by what might be thought of as a ternary form in which its episodes diminish in duration, if A1-B-A2 is taken as a larger opening section.

Considering the developmental processes in the course of this form adds a further dimension to the linear interpretation. Although the melodic material of the A-sections is constructed in a contained, antecedent-consequent manner, at no point does it appear in exactly the same form twice (see Figure 2.2 for the first appearance of the theme). The themes are passed between instruments, varied, transposed, shortened, extended, and juxtaposed with different countermelodies and accompaniments. Even at the outset of A3 (from bar 128), the return of the primary theme is found in the piano part an octave lower than its original form. When the violin re-joins (from bar 135) it assumes this lower octave, the piano rising to the higher octave to present the melody in unison with its counterpart, notably the first instance of a full melodic unison held through to the culmination of the subject.

This melody of fundamentally circular design is rendered dynamic with its components subjected to spiralling developments, variations and changes. Never repeated entirely in its original form, the effect of these thematic changes might be heard as one of gradual fragmentation, of an entity that slowly loses track of its own shape. In this sense, the melody appears unable to fully access its own history,



Fig. 2.3: Violin Sonata in E minor K. 304, second movement, bars 70-81

even for a very brief period of time as might usually be expected within a conventional Classical form through the employment of a recapitulation. Most notable in this respect are moments at which multiple expressions of the melody are displaced, the instruments diverting from one another (see Figure 2.3). These failed returns are temporally significant, their palpable melodic disintegration suggesting some kind of irreversible linear process that is taking place within a broader cyclical structure.

Cast in one nine-minute stretch of music, George Benjamin's *Viola, Viola* does not explicitly subscribe to any kind of conventional structural template in the same manner as Mozart. Nevertheless, a three-part form is audibly delineated through two moments of silence that act as structural markers (the duration of bar 47 and within bar 153), facilitating both upward gear-shifts in both tempo and tension. Indeed, each section proves audibly distinct in character. However, as with Mozart's sonata movement, such evident changes fail to dispel a broader feeling of stasis. Although each section exhibits novel features, the parallel characters of the outer segments contribute to what could be interpreted as a ternary form of sorts

Formal segment	Bar numbers	Recorded duration
1) Vivace ♪. = 60-66	1-46	1'25
(Silent formal division)	47	0'05
2) Pochiss. Più mosso ∫ . = 66-69	48-157	6'28
(Silent formal division)	First quarter of 158	0'03
3) Poco più mosso \$. = 76-80	Second quarter of 158–175	2'00

Fig. 2.4: Benjamin, Viola, Viola, three-part structural plan



Fig. 2.5: Viola, Viola, bars 1-19 (reproduced from Benjamin 1997)

(see Figure 2.4): two stretches of unstable, jittery volatility flanking a prolonged outburst of strident, ferocious violence (albeit one with a central lull).⁹

The parallels with rhetorical aspects of Classical structure do not end there. As Philip Rupprecht observes in his harmony-centric dissection of the work, its opening (see Figure 2.5) comprises the successive 'collisions' of 'four events' which he highlights in the score: a 'tuning A\\equiv (sustained between the two violas in bars 1–12); *fortissimo* C-major 'triads' (appearing in bars 3, 8 and 9); *ponticello* 'scurrying' (established as a continuous sequence between the two instruments in bars 10–13); and a harrowing 'drone' comprising a low E\\eta with C\\eta harmonics (sustained between the two instruments in bars 14–19) (Rupprecht 2005, 31). Holding true to this expository manner of presentation, it is these events that serve

⁹ Durations taken from recording listed in primary resource list (Tabea Zimmerman and Antoine Tamestit, violas. Nimbus: NI5713.).

to generate much of the piece. The motives audibly pervade the form, and are subject to numerous changes and developments. Indeed, the opening of the second episode (from bar 48) almost seems to emulate that of a sonata-form development section, the opening 'tuning A\\' drone recommencing proceedings but now transposed to a D\\ and juxtaposed with harmonics first on E\\ and then on C\\. Despite the many changes that occur, the continuity of the piece is underlined by the recurrence of Rupprecht's four motivic features within the closing section of the work: sharp chordal punctuations (from bar 158), scurrying passages (from bar 163, brief glimpses of drone-like sustained harmonics (from bar 166).

When adopting a perspective that focuses on recurring content in this way, it would certainly seem that *Viola, Viola* – through an apparent recycling process – ends up back where it started. Of course, as prominent as the features described might appear for a listener, this perceived circularity is the product of a selective interpretation. As with Mozart's sonata movement, there are two contrasting impressions at work here: one architectural and block-like, the other characterised by onward change. Moving beyond a structural overview to take into account the more detailed – and in many cases more subtle – changes that take place within the piece reveals these linear characteristics, allowing such a categorical view of the work to be challenged.

Disintegration

In his exploration of harmony and texture in *Viola, Viola*, Rupprecht highlights its composer's aesthetic to generate interest in musical content, but ultimately to emphasise movement rather than stasis. He refers astutely to Benjamin's own comments regarding a crux in the music of both Olivier Messiaen and Elliott Carter. Carter's 'dry' sonic environment does not preclude an 'extraordinary power of continuity and of complex developments'; meanwhile, Messiaen's music 'remains generally static in its mosaic-like ritual' in spite of the extraordinary 'individuality' of the chords it comprises. The implication seems to be that Benjamin's ideal lies somewhere between the 'being' of Messiaen and the 'happening' of Carter (Rupprecht 2005, 32).

For Rupprecht, this strived-for equilibrium is reflected in the tonal language of *Viola, Viola*, with its middle-register instrumentation acting as the perfect vehicle for a work that is not restricted by the textural hierarchies of conventional bass-centric harmonic structures. Power often stems instead from the core of the texture with seemingly gravitational consequences for the surrounding material, control now exerted via what he describes as a 'mirror-symmetric inversion about a central pitch axis' (2005, 28–30). In aural terms, the consequence might be an audible pull towards a point *within* the harmonic texture of a given passage rather than a guiding, or often overriding, tonal rooting below it – a kind of audible epicentre.

An example that Rupprecht uses to argue this is the first instance of the 'scurrying' motif in the second viola part (bars 10-12, see Figure 2.5), and the manner in which the second half of each bar revolves around D¹ as a central pitch sandwiched by semitones, perfect fifths and minor sixths above and below (2005, 32). The motif is also, notably, constructed from a sequence of tritone dyads that, as Rupprecht observes, prove significant for the long-term playing out of the work. Rather than leaning towards consonance, Benjamin's tritones prove generative through an ongoing dissonance: 'Its "will to resolve" is not exactly abandoned, but largely evaded: tritones still sound 'dissonant', but they progress to other tritones. [...] Parallel motion by tritone dominates the voice leading' (2005, 32-33). This unconventional variety of tonal motion facilitates a broader dynamism across the piece, with tritone shapes present in different forms at the climactic culminations of both the first (chords binding four tritone dyads, bars 33–46) and second formal segments (a broader recurring 'pedal' of C¹/₄ and F[#] spanning bars 138–57) (2005, 29–34). The formal changes of Viola, Viola are in this way demarcated by recurring expressions of a 'vertical' harmonic relationship; a broadly static - or perhaps 'non-linear' – feature pervades a linear construction.

However, perhaps there is a more aurally distinguishable expression of this duality. The four 'events' that Rupprecht outlines at the outset might be underlined less on account of their harmonic and timbral characters, and more in terms of the perceived temporal continuum they establish. Indeed, their collision-style effect might be a consequence of their extreme contrast. Viewing these motifs as symbolic of a polarity between linear and non-linear features allows the content of

46

the work to be quantified in a more accessible manner in terms of both sound and score. The 'events' fall along a spectrum between sustained, horizontal (continuous time, typified by the opening 'tuning A\\equiv'), or momentary, vertical (discontinuous time: typified by the sudden, *fortissimo* 'triads') gestures.¹⁰ The 'scurrying' and 'drone' motifs exist as hybrids that lean towards the vertical and horizontal extremes respectively, with their prolonged patterns punctuated by rearticulations. Following the musical narrative according to a polarity – and often a duality – between these notions of time and space reveals a dynamic musical journey; this onward motion is enhanced by the slight increase in tempo marked for each of the three episodes. Figure 2.6 offers an account of the aural events in the course of the work with emphasis placed upon the contrast between horizontal and vertical gestures.

To combine this continuous drama with the structural overview explored earlier, it is possible to view Viola, Viola as a gradual process made accessible through its triptych form. As seen, the expository segment of the work (bars 1–46) starkly juxtaposes horizontal and vertical gestures that gradually begin to merge; bars 36-46 illustrate this blending as short, angular chords seem to become more and more sustained through interactions with 'scurrying' figures. The development-style centre seems to present an alternate perspective on the preceding 'exposition', with the music at first robbed of vertical punctuations, only horizontal material retained. Even when interruptive staccato outbursts re-emerge from bar 56, they do so in rapidly succeeding pairs, contributing to the audibly goal-directed build in tension that the passage conveys. These paired punctuations operate conjunction with the scurrying figures as the first climax is reached; vertical and horizontal expressions are united within a teleological design. With the scurrying passages now outlining repeated sequences of increasing length and ever-ascending pitch, the paired outbursts eventually revert to a singular form. They signal a breakout into the peak of the climax as a low D¹ drone seeps out from the scurrying, coupled at first with a C# and then with a G# two octaves above, the tritone character of the augmented eleventh sustaining tension at a supposedly cathartic structural juncture (see Figure 2.7).

¹⁰ In this instance, it should be clarified that this concept of 'vertical time' differs from Jonathan Kramer's use of that phrase (1988, 375); here the emphasis is on the momentary nature of the chords rather than on broader linear relationships of cause and effect.

Bars	Events	Implications		
1-46	1) Vivace ∫. = 60-66	Contrasting motifs are introduced, with particular emphasis on a contrast between 'horizontal' (drones) and 'vertical' (brief chords) gestures, and slurred ('scurrying', in Rupprecht's description) figurations that seem to offer a compromise between the two. The different ideas merge and combine, propelled towards a climax that is abruptly cut short.		
47	Silent bar	A sudden absence of sound and audible rhythmic flow creates a build in tension and also allows a clear structural division.		
48-55	2) Pochiss. Più mosso ∫. = 66-69	The piece appears to restart with a different sonority. However, this time only the 'horizontal' material is utilised. The sustained quiet dynamic serves to further heighten tension.		
56-94	Ascent to first climax	'Vertical' material is gradually reintroduced, but disruptive chords now occur largely in immediately succeeding pairs, creating a more dynamic character.		
95-98	First climax	Frantic ascending figurations lead to a climax with <i>fortissimo</i> chords punctuating sustained drones.		
99-102	'Timeless' lull	A strange parallel passage seeps gradually into the midst of the climax, with the drones gradually robbed of tone and volume. For a short period of time they are transformed into harmonics, rendering them transparent and almost chorale-like.		
102-14	First climax resumes	Prompted by a return to the held fortissimo notes by the first viola, it is as if the climax attempts to resume in spite of the interruption; but the sojourn has taken its toll, semi-stalling the passage as if it were now taking place in slow-motion, movement in pitch and gesture now notably hindered.		
114-22	Lull	Motion is gradually slowed further as passages appear fragmented, momentum lagging. Harmonics return in a chorale-like formation briefly once more, whilst <i>pizzicato</i> is notably introduced for the first time, seemingly derived as inverted punctuations of the of the horizontal scurrying passages they are in dialogue; the scurrying passages ascend, whilst the <i>pizzicato</i> figures descend.		
122-38	Second ascent to climax	Motion is returned through the triplet figures as the ascend again, dynamics building. From b. 132 momentu is truly regained with loud dynamics and barrellin figures.		
138–57	Second Climax	The second climax takes the shape of a horizontal wall of sound, a desperate attempt to sustain as much sonority as possible, demonstrated at an extreme in the case of trilling between double-stopped chords.		
158	Silence dotted crotchet	The second climax cuts itself brutally short with a fortissimo chord. The short silence that follows serves to create a structural break akin to the earlier break between 'exposition' and 'development'.		
158-75	3) Poco più mosso ∫. = 76-80	The predominantly <i>pizzicato</i> conclusion ensures that – although related material is utilised – focus has shifted from 'horizontal' gestures to 'vertical' ones. Rather than ascending, the pitch material now largely descends. Passages are brief and fragmented. Although dynamics are mostly quiet, even fortissimo outbursts (including the closing chords) appear muted by comparison with the ferocity of the development section.		

Fig. 2.6: Viola	, Viola, list of even	its with emphasis o	n horizontal and	l vertical gestures
-----------------	-----------------------	---------------------	------------------	---------------------



Fig. 2.7: Viola, Viola, first climax, bars 92-97 (reproduced from Benjamin 1997)

Within the lull that precedes the similarly tritone-capped second climax (bars 138–157), the first instances of *pizzicato* in the piece occur: three descending arpeggiated phrases of increasing length (bars 119–125), an apparent counter to the ascending phrases that have dominated the central section. Although this occurs within the context of a predominantly horizontal passage, it prefigures the final, *pizzicato*-dominated segment of the piece (bars 158–75). Here, the music is seemingly robbed of much of its previous horizontal material, with most bowed material now dispensed with. The music is, for the first time, riddled with what to an audience might well interpret as silent pauses. The plucked techniques represent – by their acoustic nature – a kind of verticality, an inability to sustain. Nevertheless, although the execution may differ, the material of this third segment is far from novel: the descending fragments that pervade the episode seem to offer an inverted perspective upon the ascending material that catalysed the earlier climaxes; beyond simply assuming a post-climactic status, the material seems deliberately anti-climactic. While abrupt vertical chords dominate, attempts to reignite horizontal events are often stunted or limited to the textural background via *pianissimo* markings. When the scurrying material returns, the emphasis falls instead upon the *pizzicato* phrases that punctuate it (for example, see bar 167). Meanwhile, several nods to the bygone drones are made through striking plucked

accents in the second viola, that are followed by the rapidly-fading afterglow of bowed false harmonics in the first viola (for example, see the start of bar 170).

These features contribute to a gradual shift in focus from the horizontal to the vertical, from development to disintegration, from a linear, goal-directed form, to a non-linear, comparatively goalless one. After the sustained, horizontal material has facilitated the climaxes of the central 'development', a crystallisation occurs at the start of the closing segment; the sudden predominance of plucking rather bowed techniques creates a change in perspective, with emphasis now falling on vertical attack rather than horizontal prolongation. These acoustic properties imbue an overall sensation of decay, of material expiring over time. The notion of growth and decay is also underlined in metaphorical terms through the repeated use of ascending gestures to imbue a sense of growth through the central section, a tactic that is inverted through the descending figures of the final portion. As Rupprecht observes, this downward trend is reflected in the long-term tonal scheme of the segment - the 'acoustic chorale', in his description - with a descending series of tritone dyads (2005, 35-37); a frustrated conclusion is provided by the emphatically repeated final chord, its central pitch axis of B_{\flat} juxtaposed with surrounding $E \flat s$, with the addition of $C \natural$, $C \ddagger$, $D \natural$ and $A \natural$ (see bar 175).

Timelessness

So far this case-study has been articulated according to dualities of linearity and circularity. These temporalities have been mapped, through gestural and metaphorical means, onto wider experiences of time. Benjamin and Mozart have implicitly explored the idea of disintegration or decay through their treatment of material across forms; nevertheless, by rendering fundamental aspects of these processes audible through gradual changes and metaphorical gestures, both offer blueprints for meaningful interpretations that utilise these ideas. Reconsidering Mozart's *Tempo di Menuetto* in terms of the gradual disintegration of its basic thematic material, Mozart realigns his content within the powerful coda, as if intent on evoking a kind of control over the conclusion – or perhaps the



Fig. 2.8: Violin Sonata in E minor K. 304, second movement, 'C' theme, bars 94–102 (piano)

destruction – of the piece. The reaction to decay in *Viola, Viola* is less assertive, as its final passages struggle in vain to regain the sustained, accumulating qualities it possessed at its outset. Its culmination takes the shape of a resignation: no tonal or motivic resolution found, little in the way of catharsis achieved.

Of course, many aspects of musical experience cannot be accounted for in terms of a contrast between linearity and non-linearity. Articulating events that might be perceived to occur *beyond* this duality is inevitably going to prove much more difficult. With emphasis now shifting from long-term structure to the shortterm effect of particular musical gestures, focus now falls upon two parallel passages at the hearts of these works; both point to a time altogether apart from the continuous notions discussed, adding another dimension to the manner in which this music can be comprehended. The passage in question in Mozart's Tempo di Menuetto is more structurally clear-cut, comprising the entirety of the central section 'C' (bars 94–127). The peculiar nature of the episode is compounded by the unprecedented switch to the tonic major, with the piano simply slipping suddenly and unambiguously into the new mode at bar 94. What ensues feels, in one sense, a world away from the melancholy of the opening 'minuet'. The rhythmic motion within these patterns appears less frantic, with the initial subject consisting primarily of successive crotchets. The melody, too, is much simpler: a pulsating figure that falls gradually in steps but rises predominantly in leaps of fifths or sixths (see Figure 2.8). The harmonic motion presented is explicit and stable, with a triadic accompaniment illuminating clearly a tonal path that favours conventional shifts - usually utilising a circle of fifths rather than the chromatic slips that riddle the 'minuet'.

However, the section still bears relation to its surroundings. The melodic emphasis on a contrast between stepwise and leaping intervals is still reminiscent of the primary 'minuet' subject. Moreover, a case could even be made for the rising



Fig. 2.9: Violin Sonata in E minor K. 304, second movement, 'A' (bars 1–4) and 'B' (bars 94–101) section subjects with pitch gesture relationship indicated

and falling gestures of the 'C' section theme representing a 'slow-motion' interpretation of the 'A' subject (see Figure 2.9). In addition to this, a broader sense of metre and construction is retained with the phrase structure of the 'minuet' replicated here: even-numbered measure divisions emphasise a continuing symmetry of antecedent-consequent relationships. The only exception to this is a moment of repose, four in-tempo beats of silence within the second repeated section before the final phrase is played (bars 118–19). In 'C', the same notions of cyclicity established in the earlier music are still present - arguably more so on account of the use of literal repeat marks. But the 'slow-motion' melodic structure, the rhythmic and tonal stability and the use of pauses contribute to a sensation of detachment. It is as if the passage presents an alternate musical path, running in parallel to the outer 'minuets', in which the same set of materials is taken in a very different direction. The relevance of the episode to its surroundings is demonstrated above all in the effortless manner in which a sotto voce return to the 'minuet' is initiated, a simple ascending chromatic scale of quavers in the righthand of the piano (bar 127b) allowing an almost unnoticed slip back to E-minor as if the music had simply regained consciousness within its original space.

The passage in question in *Viola, Viola* is much smaller, comprising just a few bars (bars 99–102). Here, at the first point of climax in the central formal segment, the *fortissimo* peak suddenly drops away to reveal a sparse, fragile texture of harmonics moving disparately, almost in the style of a fragmented chorale (see Figure 2.10). With the striking climactic gestures having now faded, the effect is not so much a free-fall as a loss of tonal and rhythmic gravity. Both the



Figure 2.10: Viola, Viola, bars 98–105 (reproduced from Benjamin 1997)

D\u03e4 pedal and the C\u03c4 and G\u03c4 juxtapositions that had characterised the final ascent to the climax vanish; the harmonics that remain avoid these notes, sounding G\u03e4, F\u03c4, E\u03c4, A\u03c4, and C\u03c4. Only at the close of bar 101, with the emergence of an A\u03c4, is the previously overriding tritone relationship enharmonically referred to once more. This prompt seems to trigger a resurgence of the climactic material, but one that only achieves partial success. The rhythmic motion that had accumulated gradually from the start of the section has now been lost and efforts to reignite it prove stilted. Chordal outbursts are long and drawn out and with the 'scurrying' figures confined to predominantly chromatic movements within a restricted pitch-space.

For all its interruptive qualities, the harmonics are far from unrelated to the development of the piece, seemingly derived from the horizontal gestures (the 'tuning A⁺' and the 'drone') at the outset. Yet here they emerge, unbound and undirected, robbing the first major peak of the work of both momentum and impact. As with Mozart's sonata movement, an alternative musical reality is presented, material hitherto utilised as part of a dynamic, goal-directed form now briefly revealed in a static, detached fashion. The glimpse of this apparently parallel piece proves unsettling for the singular narrative of *Viola, Viola*, stalling the climax and initiating, in the long-term, a 19-bar lull that is only ended by the start of an ascent towards a second peak.

These central passages in the *Tempo di Menuetto* and in *Viola, Viola* prove paradoxical. Both give the effect that they inhabit a time that lies *beyond* that of their pieces, somehow eluding the tensions of linearity and cyclicity that dominate. Nevertheless, these episodes remain as much a part of the 'practical' time of their pieces as everything else in them: they represent an equally quantifiable duration within the context of a performance, and occupy an unremarkable amount of space within the singular direction of the notated score. It would not be accurate to say that they appear wholly 'non-linear'. Whilst they evade the linearity of the immediate, foreground musical narrative, they still possess their own linear temporal flow – they are not static.

Here, it is appropriate to return to Jonathan Kramer, who makes a particularly useful distinction within his discussion of what he terms 'vertical time', a 'present extended well beyond normal temporal horizons' that nevertheless does not 'destroy the temporal continuum' (1988, 375–97). He distinguishes between time that is 'slowed' or 'stopped' (an acute, often restless, awareness of time passing) and time that is 'frozen' in an 'eternal present': timelessness. Kramer concurs with Clifton that static music does not lead merely to a perceived absence of time. Rather, as he outlines, 'the avoidance of motion leads to a special kind of time':

The term 'timelessness' does not, despite its etymology, imply that time has ceased to exist, but rather that ordinary time has become frozen in an eternal now... The extended present can exist. When it does, only one kind of time is supended while another kind, that we may call (paradoxically) the *time of timelessness*, replaces it (Kramer 1988, 377–78).

Perhaps it is this idea that comes closest to articulating what might be experienced at these crux points in *Tempo di Menuetto* and in *Viola, Viola*. Whilst Kramer's concern is the broader effect of 'non-teleological' music, here Mozart and Benjamin induce these sensations within the context of teleological pieces. Rather than simply bringing the primary (hitherto, only) temporal narrative to a point of standstill, both composers break off from it entirely for a brief period, its time continued instead within the context of a secondary narrative. As problematic as articulating it may prove, an experience of timelessness is offered within the context of a dynamic artwork. It is a concept that will recur in the analyses that follow. Indeed, the first port of call in the next case-study (Chapter Four: Perception and Perspective) will be a description that would seem particularly pertinent to this case-study, that of 'released time flowing'. However, first it is necessary to expand further upon the theoretical framework for this discussion of temporality.

Three

Directing Time

Attempting to define experiences of time in language might be seen as either a persistently fruitless task or one of limitless reward. Even a shared experience might be described in very different ways by different individuals; their already unique perspectives might well diverge further from one another when they are expressed through words. By the same token, our own experiences of time might often be subject to change; we might repeat fundamentally the same event at a later date only to find that the temporal sensation it produces is markedly different. Just as readers may distinguish their own understanding of the 'time' of the case-study pieces from the way they are described in this thesis, I might also return to them and find that the way I perceive aspects of the performances has changed. Hopes for clear articulation of temporal experiences are further clouded by the fact that they are described 'after the event'; writers are separated from the duration they wish to account for by a further elapsed duration. In this way, impressions of time rely upon memory - itself subject to temporal distortions - for their articulation. Meanwhile, any attempt to articulate an experience of time as it happens (or immediately following it) is likely to profoundly affect the experience itself through the heightened analytical awareness it would require. Of course, these various levels of ambiguity only serve to make our relationship with time seem all the more fascinating.

This chapter will begin by outlining ways in which time is commonly addressed, examining in particular the role of metaphor in this process and proposals from a number of scholars – principally Dedre Gentner (2001) – as to the ways in which metaphorical concepts might emerge. Focussing upon the aspects of these descriptions that emphasise space, motion and change, the discussion will continue by reviewing of some of the theoretical relationships that underpin this network of linguistic ideas, with the work of Ian Hinckfuss (1975), Robert Adlington (1997a, 1997b and 2003) and J.M.E. McTaggart (1993) featuring prominently. This will lead into a closing exploration of the movement – or flow – of time; numerous claims will be surveyed regarding questions of temporal direction, linearity, and asymmetry, and the perspectives that we, as subjects, might have upon these phenomena; here emphasis will fall upon the work of Friedel Weinert (2013), Eric Clarke (2005) and P.J. Zwart (1976). Much of the discourse presented here, particularly early on, is deliberately detached from the musical focus of this thesis. It is intended that this synthesis of approaches towards time from a number of disciplines might help begin to construct a broad theoretical framework within which the ensuing case studies might sit.

Clutching at metaphors

The intention of achieving true precision in addressing time is often misplaced. Whilst relativist approaches may have revolutionised strategies for dealing with time, its contribution to any attempt to *define* it has been surprisingly limited. As P.J. Zwart asserts, it is often only in circumstances involving extremes of speed and distance that an Einsteinian approach comes into its own:

In fact the new relativistic time is nothing but the old common time with a relativistic correction added to it where and when necessary. This is shown clearly by the fact that Einstein's famous analysis was not an analysis of the *concept* of time, but only an analysis of the *process* of measuring time. In physics time is not defined at all, or at the most only as that quantity which is measured by clocks. (Zwart 1976, 9–10)

Here, the interest of conventional physics lies predominantly in quantities of time. Zwart argues that the substance of these durations is a matter beyond its remit: 'In fact it even *cannot* give a definition of time all by itself, for such a definition would have to be preceded by a philosophical analysis in which among other things the uses and meaning(s) of the common sense concept of time would be examined' (1976, 10).

Friedel Weinert – in his helpfully open-minded survey of the development of different strands of temporal theory – offers a more inclusive perspective; he concedes that, whilst Einstein's theory of Special relativity is best considered an 'extension of classical mechanics', it nevertheless 'had a revolutionary effect on the classical notion of time in the same way in which the General theory had effect on

the notion of space' (2013, 64). Consequently, Weinert's broader outlook proves less compartmentalised by field, with temporal measurement considered a 'ubiquitous phenomenon, which touches on all the central issues involved in the discussions of the nature of time' (2013, 86). Of course, reframing everything in interdisciplinary terms does not make describing time any easier. Ian Hinckfuss aptly observes that the task of referring to space and time is one that we seem intent on assigning ourselves; he suggests that many problems arise from limitations in language, raising the idea that they are in fact 'pseudo-problems to be resolved by using a reformed language more appropriate in describing this world' (Hinckfuss 1975, 1).

Most everyday language choices regarding time rely upon metaphor. Time is said to 'ebb and flow', it 'flies', it 'expands', occasionally it even 'stops'. Although such descriptions may seem to fall short of any kind of quantifiable precision, they act as far more than functional stopgaps. Instead, they attend to issues of perception, outlining important aspects of subjective experience. Indeed, numerous scholars in recent decades have argued that these parallels are embedded far deeper within cognitive processes, revealing metaphor to be, first and foremost, a matter of concept. George Lakoff and Mark Johnson's *Metaphors We Live By* (1980) has proven particularly influential in this regard. Reconsiderations of what constitutes metaphor have prompted Lakoff to suggest subsequently that broader alterations to the lexicon of the subject: whilst linguistic devices might be referred to more specifically as 'metaphorical expressions', the term 'metaphor' in fact constitutes 'cross-domain mapping in the conceptual system':

The generalisations governing poetic metaphorical expressions are not in language, but in thought. [...] In short, the locus of metaphor is not in language at all, but in the way we conceptualise one mental domain in terms of another. The general theory of metaphor is given by characterising such cross-domain mappings. And in the process, everyday abstract concepts like time, states, change, causation, and purpose also turn out to be metaphorical. The result is that metaphor ... is absolutely central to ordinary natural language semantics, and that the study of literary metaphor is an extension of the study of everyday metaphor. (Lakoff 1993, 203)

58

Janna Saslaw argues that the roots of this mapping process may even be biological, asserting that it stems from recurring patterns of 'kinesthetic' experience grounded primarily in the human body (Saslaw 1996, 217–18).

This pervasive character of metaphor is reflected in philosophical discourses regarding the nature of time. Here, metaphors can take various shapes, with time acting as both a resource (to 'have plenty', or to 'run out', of time) and a container (to act 'within' a period of time) (Gentner, Imai and Boroditsky 2002, 560). However, most common temporal metaphors rely upon an image of movement of some kind, or a relative lack of it. Motion is the theme, whether the agency in these descriptions is ascribed to time ('time passes') or to people ('to pass time'). Dedre Gentner identifies these descriptions - the 'time-moving' and 'ego-moving' metaphors - as the two distinct time-space metaphoric systems, noting 'an orderly and systematic correspondence between the domains of time and space in language' (Gentner 2001, 203). These linguistic links have been explored extensively by scholars including David Bennett (1975), Elizabeth Traugott (1978), and Manfred Bierwisch (1996). Paticularly intriguing is Herbert Clarke's exploration of space-time metaphors in English language acquisition (1973), in which he argues that children learn how to apply relevant terms to their prior knowledge and experiences, with spatial expressions later extended to describe temporal phenomena:

The main evidence for this thesis is the strong correspondence between the properties of the spatial terms and the properties of man's innate perceptual apparatus, and between English spatial and temporal expressions. The correspondence is so strong, I would argue, that it simply could not be coincidental and it therefore needs explanation. Time, for example, is not just expressed with an occasional spatial simile, but rather it is based on a thoroughly systematic spatial metaphor, suggesting a complete cognitive system that space and time expressions have in common. (Clarke 1973, 62)

Casasanto, Fotakopoulou and Boroditsky (2010) argue in favour of this mapping from familiar to less familiar concepts through their experimental results. They find that space and time are asymmetrically related in the minds of children, with their subjects able to 'ignore irrelevant temporal information when making judgments about space', but incapable of maintaining such separation when it is time that is being judged; it is a pattern that seems to be mirrored in the cognitive processing of adults (2010, 403).

Gentner refuses to take for granted that these mapping procedures are the sole provider of spatio-temporal metaphor. Her line of enquiry into the linguistic linking of space and time also takes into account the influence of long-developed idioms, entertaining the possibility that many phrases may be inherited rather than intuited. To evaluate this, she suggests three other cognitive roles that linguistic space-time mappings might play. Least plausible, she finds, is the possibility that the use of parallel metaphors for space and time is derived from comparable direct similarities in phrase structures - what she terms 'local lexical relations' - rather than any systematic mapping relevant to the actual concepts that lie behind these phrases. This idea is echoed in the second, altogether more likely suggestion of 'cognitive archeology': that people may defer to a link between space and time that exists in the history of language without any continuing need to connect the two within the context of temporal reasoning. A third alternative Gentner presents is 'structural parallelism', in which conceptual systems of space and time have been constructed entirely separately from one another, but similarities between the two independent cognitive structures allow for comparisons to be drawn through language (2001, 205–06).

Gentner's evaluation of these further possibilities makes her ultimate preference for system-mapping – in which our conceptions of time are drawn from our more readily articulated notions of space – all the more convincing (2001, 220): 'An initial alignment between common relational structures invites the mapping of further inferences from the more systematic domain to the less systematic domain. Thus, candidate inferences are projected from the highly structured domain of space to the more ephemeral domain of time.' She also points to the ways in which these mapping systems are represented in functional and expressive aspects of ordinary life, citing graphs, clocks, timelines, drawings and – appropriately – musical notation (2001, 205).

Time, space and change

As Gentner's work demonstrates, the cognitive web of parallels and associations that link space and time is complex and not easily deciphered. Even if the linguistic products of this link can be broken down into two primary types of motion-based metaphor (ego-moving and time-moving), comprehending fully the psychological processes that leads to them proves impossible. The theoretical interdependence of space and time has been compounded in the course of the twentieth century through numerous theories – predominantly stemming from Einstein and Minkowski – that have necessitated the combination of the two: space and time are frequently treated as spacetime, 'a unitary entity that decomposes into different spatial and temporal intervals for different reference frames' (Dainton 2010, 314). John Earman (1970) offers a particularly astute navigation of some of the philosophical questions that arise when examining the intertwining of space and time, outlining the logical implications of considering space-time as a unit.

Distinctions can be made between the ways we treat space and time. Hinckfuss observes that often the language we use to address each can quickly become incompatible. That time can be said to 'flow' whilst space cannot is just one of a number of notions that allows separations to be made. Indeed, it is motionbased conceptions of time that create the biggest rifts, with the temporal placing of 'now' or 'present' differing in a number of senses from the spatial placing 'here'; the potential associations that the 'present' can bear with movement distinguishes it altogether from a supposedly unchanging, categorical location (Hinckfuss 1975, 63–83). Anthony Quinton, meanwhile, draws attention to an apparently unique quality of time through a series of logical conjectures involving dreams and potential multi-temporal myths, concluding that we can conceive of things in distinct spaces but not in distinct times, our experiences being confined to a single temporal series. Furthermore, he asserts that it is possible to conceive of an experience that is non-spatial, but impossible to conceive of a non-temporal experience (1993, 203–20).

Of course, as with these examples, many exceptions to the linking of space and time occur within theoretical realms. Hinckfuss issues repeated reminders that finding time and space to possess exclusive properties does not necessarily

61

equate to a fundamental difference between the two; rather it only indicates a difference in semantics (1975, 82). For reasons of function, it is perhaps best to accept a fundamental relationship between space and time, not least with regard to music. Whilst it is metaphorical conceptions of motion that serve to separate time from space, it is *physical* motion that unites them. The three – time, space and motion – are commonly taken for granted as forming a web of interdependence: the perception of one typically requires the perception of all three. Music itself comprises forms of motion: the movements of performers upon instruments, the kinetic nature of travelling sound particles, the biological and neurological impulses that allow sound to be received and comprehended. David Epstein deploys such fundamental ideas fully and without apology, describing motion not just as 'the quintessential property of time' but also 'the essence of life itself': 'Motion is basically understood by using time as its index. [...] The reverse of that correlation is equally true: time is only experienced, and thus understood, through motion' (1995, 8).

Robert Adlington (1997a, 1997b and 2003) calls Epstein's thesis into question, expressing concerns regarding the logical contradictions that might plague such assumptions. Both scholars have distinct motives; it is very much in Epstein's interest to accept such views of time and motion given the thrust of his work, which largely revolves around proportional relations in metre and speed across tonal pieces largely composed in the eighteenth and nineteenth centuries. Adlington's interest, meanwhile, lies primarily in addressing the ways in which such frameworks of motion-based description do not adequately serve the best interests of many types of music, in particular post-tonal works, many of which are often written off as 'static'. Crucially, though, his concerns stretch further, encompassing the potentially damaging impact that 'hardened' concepts of time might have upon people's lives. For the purposes of his argument, and in order to evaluate aspects of these effects of imposed temporal parameters, Adlington treats time as 'a social construction for dealing with change' (2003, 298–300).

Change – as a fundamental expression of motion – has lain at the centre of discourse regarding temporality for thousands of years; for Aristotle, time and change possess what Weinert surmises as a reciprocal relationship: 'Without change, there can be no recognition of time; and without time, there can be no

62

measurement of change' (2013, 8-10). Indeed, Aristotle's quantification of change through conceptions of 'before' and 'after' bears great relevance to McTaggart's starting point in his influential 'The Unreality of Time' (McTaggart 1993). His argument for this 'unreality' rests on a distinction between two ways of viewing time: one is untensed (the 'B series'), relying on fixed points in an abstracted time that lie earlier or later than one another. The other is tensed (the 'A series'), utilising subject positioning to organise events according to past, present and future within the context of a 'moving now'.¹¹ Change, McTaggart asserts, relies upon the A series; characteristics of an event can only change by virtue of their context within the on-going shift from future, to present, to past. Whilst the B series remains abstracted, it nonetheless relies upon the tensed temporality of the A series, given that earlier-later relationships require temporal passage. Thus, the B series cannot exist without the A-series. As one event cannot simultaneously possess the characteristics of past, present and future, the reality of the A series leads to an unavoidable contradiction – both series must be rejected. On the face of it, McTaggart's conclusion might prove somewhat startling:

Nothing is really present, past, or future. Nothing is really earlier or later than anything else or temporally simultaneous with it. Nothing really changes. And nothing is really in time. Whenever we perceive anything in time – which is the only way in which, in our present experience, we do perceive things – we are perceiving it more or less as it really is not. (1993, 34)

Whilst McTaggart's 'proof' of the unreality of time has loomed large in temporal philosophy ever since, its challenges underpinning much subsequent discussion, it has only served to open the debate yet wider rather than to narrow it. More broadly, it has sat McTaggart alongside many others who choose to view time as fundamentally idealised, that is to say a product of the human mind; McTaggart in fact sits within a tradition that includes Kant and Augustine before him, as Weinert observes (2013, 97–98).

¹¹ To put it another way, the 'A-series' is a series of positions (containers for events) running from the past, through the present, and into the future – it is largely reflective of a 'time passing' perspective; the 'B-series', meanwhile, assumes a 'passing time' approach, organising positions by virtue of when they occur relative to other positions. A suggested C-series offers an extra-temporal interpretation of perceived order, though crucially not of change or time.

Weinert's description of McTaggart's 'proof' as 'verbal summersaults' proves fitting (2013, 98), not least when taking into account subsequent writers who have helpfully reframed his argument within a context of seeking to address and qualify time. D.H. Mellor's 'The Unreality of Tense' (1993) does just this, evaluating the ways in which change and variation might be articulated whilst allowing his focus to remain as much on tensed and untensed descriptors. Arthur Prior, meanwhile, skilfully draws attention to the concepts we attach to notions of change, event and process, and how these ideas can often be misattributed in discussion (Prior, 1993). Also intriguing is Sydney Shoemaker's compelling argument for the hypothetical but nonetheless intriguing possibility of intervals in time that could be perceived without the supposedly essential marker of change (Shoemaker, 1993).

In search of direction

Paul Horwich (1987) takes McTaggart's work to particularly intriguing ends. Sidestepping a preoccupation with perceiving change itself, his focus lies in the three states of the A-series: past, present and future. Whilst Epstein holds change to be the quintessential property of time, Horwich suggests that it might be more specifically defined as 'the difference between the past and the future', on account of the two temporal directions being 'fundamentally unalike'. It is in this respect of temporal 'movement' being possible in one direction but not the other - that time is judged to be asymmetrical. To an even greater degree than McTaggart, Horwich rejects a 'moving now' view of time, but in doing so establishes an especially insightful accounts of the way in which such a conception is formed and the roles it plays in the ways time is thought to play out. He attributes the sense of time passing or flowing to causes phenomenological (the psychological construction of a continuum between recollection and anticipation) and linguistic (descriptions of the placing of events along that continuum). Referring to the work of Adolf Grünbaum (1973), he proposes that the noun 'now' acquires the status of 'a single entity whose varying locations are instants of time'. His exploration of the asymmetries of time gives rise to a number of ways of approaching the long-held

notion of time possessing a 'direction', including the 'tree model of reality', in which history represents a fixed path and the future a proliferation of potential branches; and fatalism, in which a causal approach to time sees the fixed nature of historical events contributing to a future path that is also fixed by consequence (Horwich 1987, 15–36).

This view of temporality as a 'cause-effect relationship of events' has contributed to the on-going consideration of the topology of time, reinforcing the suggestion that time might be thought of as moving in a linear fashion (Weinert 2013, 26–30). A directional view of time continues to prove of both use and interests to scholars across a number of fields in spite of theories that contradict it. Zwart comprehensively concludes that the direction of time is 'non-existant', content to think of it as simply 'a succession of events and of states': 'The opinion that time, being a flow, must have a direction is just as incorrect as would be the opinion that a stream of words must have a direction' (1976, 103–05).

This remark of Zwart's is particularly telling. In the same sense that many linguistic constructions can appear to us as possessing some kind of 'direction', perhaps a similar process is frequently undertaken with time. Time itself may not possess a linear character, but subjective experience seems to project such a quality onto it with surprising regularity. Regardless of the reality of physical time, spatio-temporal metaphors of motion continue to provide a widely understood and highly transferrable framework for discussion. Though the more specific mechanics of theories may vary, there is consistent imagery to be noted across many major theories of time. The contrast between ego-moving and time-moving metaphors that Gentner presents (2001, 203–05) is simply a reframing of what she summarises as a 'front/back' interpretation of the timeline:

In the ego-moving system, the future is normally conceived of as in *front* and the past as *behind*. In the time-moving system, the reverse is true: time moves from the future to the past, so that past (earlier) events are in *front* and future (later) events are *behind*.

Such an approach bears much in common with Smart's 'river of time' analogy (1949) – to be discussed in more depth in Chapter Four – but is perhaps more broadly reflective of a wider trend of contrasts that dates back as far as pre-Socratic philosophy. Weinert draws a distinction between what he terms

'Parmenidean Stasis' and 'Heraclitean Flux', derived from their eponymous thinkers (2013, 89–90). The poet Parmenides of Elea advocated an idealist outlook of unchanging 'being', in which change and thus time are merely products of the human mind. Heraclitus of Ephesus, meanwhile, denied an unchanging 'being', expressing instead a preference for a fundamental world of changing appearances; his employment of river imagery – 'we cannot step into the same water yet the river is the same' – seems to have proved particularly formative for metaphorical approaches to temporal thought. In the course of his survey of the way in which strands of temporal theory have developed in light of scientific discoveries, Weinert highlights the pervasive nature of this kind of distinction. Most temporal theory is ultimately allied to either a Parmenidean, idealist (frequently tied with realist notions of time as an independent, consistent property of the universe) or a Heraclitean, relational perspective on time. Respectively, change is either illusory or fundamental, time is either static or dynamic, and the world is either atemporal or temporal.

Weinert's achievement in The March of Time is the intricate manner in which he outlines both sides of this fundamental divide, demonstrating eloquently the principal theories that underpin the contrasts between perspectives of flux and stasis, and between temporal symmetry and asymmetry. He ultimately states a preference for a Heraclitean view of time, principally on the basis of the apparent anisotropic (that is to say, asymmetrical or dynamic) nature of time as explained through the quantum mechanism of decoherence.¹² It is an argument that I find particularly convincing and, although it is not a primary aim of this study to support broader claims regarding the nature of time itself, Weinert's balanced approach to the field has proved particularly informative and might be said to provide something of a theoretical underpinning for much of what follows here. Of greater relevance is his implicit acknowledgement that contrasting understandings of temporality (relational, idealist and realist) can all feature not only as elements a philosophical examination of time, but also as facets of subjective experience. Musical phenomena, as will be shown, can serve to underline this pluralist, perhaps even paradoxical, characteristic of time.

¹² A detailed examination of quantum decoherence can be found in Weinert 2013, 211–59.

Going with the flow

Maintaining some kind of lexicon of metaphor is particularly useful when addressing a topic as potentially confusing as music, where these waters become increasingly muddied. Whilst it might first appear to take on a kind of mediating role in temporal perception processes, further investigation may reveal that it has a disrupting presence. Articulating experiences of motion becomes particularly tricky: does the music move through time, or does time move through the music? Similarly, as listeners, do we move through the music, or does the music pass us by? It is, as Adlington notes (2003, 299), possible to experience either. Eric Clarke's consideration of such questions leads him to invoke the idea of 'subjectpositioning', a term primarily employed in cultural and film studies (2005, 91-125). Subject-position, Clarke explains, 'describes the way in which the construction of a film causes a viewer/listener to adopt a particular attitude to what she or he is witnessing' (2005, 92). He readily concedes that subjectpositioning will often involve an 'utterly individual' perspective on the part of each listener, incorporating the perceiver's 'skills, needs, preoccupations, and personal history'. Nevertheless, he outlines the ways in which the notion of subject-position might not just inform but also *direct* analyses of both vocal and instrumental works, on account of its profound ecological implications. He asserts that an important component of subject-positioning is 'built into the material properties of the object of perception, and is therefore a shaping force (at least potentially) on every perceiver' (2005, 125).

One of the most detailed and compelling frameworks for metaphors of musical motion is provided by Mark Johnson and Steve Larson (2003). They propose three principal concepts: the 'moving music' metaphor, in which musical events move from the future towards the listener, are experienced, and pass into the past; the 'musical landscape' metaphor, in which the piece takes the shape of an imagined geography and can be experienced from either the perspective of an active participant (or traveller) or a distant observer; and the 'musical force' metaphor, in which pieces act as causal forces upon listeners. Beyond providing comprehensive explorations of lexicons for each framework, Johnson and Larson

are above all realistic about the variety of musical motions that are available throughout history and across cultures:

The absence of any core literal concept of musical 'events' should direct our attention to the ways we imaginatively conceive of the flow of our musical experience by means of multiple metaphors that provide the relevant logics of our various conceptions of musical motion and space. There is no more a single univocal notion of musical motion than there is of causation, and yet we have gotten along reasonably well by knowing when a specific metaphor for causation is appropriate within a specific context of inquiry. (2003, 80)

Ultimately, specific aspects of musical and temporal motion prove secondary to the ways in which metaphors for such motion can facilitate discussion of pieces of music in relation to our experience of them. Significantly, Clarke points to the deeper implications of meaning that arise (2005, 89): 'The sense of motion or self-motion draws a listener into an engagement with the musical materials in a particularly dynamic manner (he or she seems to act among the materials), and in doing so constitutes a vital part of musical meaning.'

Beyond purely motion-based descriptions, Robert Adlington offers a convincing account of the ways in which some music can inspire a plethora of altogether distinct metaphors (1997b, 79–120, and 2003). Seeking primarily to advocate a variety of ways in which post-tonal works might be addressed in more accurate, and indeed more imaginative terms than 'static', he equates the view of music as moving with cultural concepts of time (2003, 317–318):

[...] change possesses no intrinsic properties that give it a special affinity with onward motion over any of the other physical metaphors by means of which we might grasp it. Another way of expressing this would be as follows: music, partly by virtue of its susceptibility to metaphorical conceptualisation, implicitly points to the limitations of our customary dealings with change.

In this sense, musical experiences might be regarded as querying cultural conceptions of temporality. Indeed, in the course of the chapters that follow, pieces of music can be seen calling into question aspects of time generally taken for granted. Temporal asymmetry is engaged with through the notion of musical repetition, raising the possibility of simultaneously linear and circular experiences;

68

this recurrence of musical ideas encourages alternate perspectives on the irreversibility of time. It is useful here to recall Thomas Clifton, with his assertion that 'continuity is involved in the openness of time: in the idea that past events are not forever sealed off from a present which constantly re-searches it, and that future events do not reside in some unknowable "other", ignoring, and ignored by, the present situation' (1983, 97). Indeed, this notion of a past that can be revisited - in both musical and cognitive terms - will underpin the case-study pairing of works by Adams and Schubert that follows, with their opening passages examined in terms of the perceptual implications for their unfolding form (Chapter Four: Perception and Perspective). The singularity of perceived time will also be called into question, with musical forms emerging that offer impressions of multiplicity (see Chapters Six and Ten in particular). Jonathan Kramer holds a particular interest in what he labels 'multiply-directed linear time', referring to music which possesses a 'sense of motion, but the direction of that motion is anything but unequivocal'; although an underlying linearity can be recognised, for Kramer a displacement of various formal goals can provide a multiple temporal continuum (1988, 46).

A major part of addressing the temporality of music through language is accepting inevitable inconsistencies. Indeed, it can be easy to discount the very effect that language comprehension itself can have upon the way we might express an understanding of music. One recent set of cross-cultural psychological studies carried out by Athanasopoulos, Tan and Moran (2016) has suggested a link between linguistic ability and perceived temporal directionality. When participants in the UK, Japan and Papua New Guinea were asked to provide graphic representations of rhythmic patterns, literate participants were more noticeably disposed to linear interpretations of musical performances, displaying a 'tendency to depict information along a timeline, in a manner generally consistent with the directionality of their script'; non-literate participants, meanwhile, appeared to display no clear reliance upon directionality (2016, 1139). Such studies are further indicators as to the cultural complexity of the factors that contribute towards not only how we experience music but also how we might then attempt to articulate that experience.

In light of these variables, establishing a consistent framework for the discussion of musical time proves especially difficult. However, to bring this discussion to a temporary close, it is helpful to return to Zwart in his evaluation of three prominent outlooks on the nature of time: the realist view, that time is a physical property of the universe, on-going in spite of occurrence; the idealist view, that the passage of time is a construction of the human mind; and the relational view, that the passage of time is dependent upon and effected by changes, processes and events in the universe (Zwart 1976, 15–33, also discussed in Weinert 2013, 14). His conclusion highlights adeptly why musical interests might lie in the notions that the relational perspective on time might offer, hinting once again at the peculiar notion of timelessness:

Common sense does not have a clear and distinct conception of time; its conception is confused and contains all sorts of different and contrary elements alongside each other. That the common sense view is mainly realist, for instance, is evidenced by the fact that in this view time would flow on even if there were no world, that in the void a before and an after could still be distinguished. But there is also a strong relational element in this view, for, to common sense, time is intimately connected with change. The word 'time' makes us think in the first place of events and processes, and not of stationary states. In this respect it is highly significant that one is wont to say of some out-of-the-way village where nothing changes that it is as if time were standing still there. This is clear evidence for a relational view on time, for on the realist view the concept of time standing still is completely meaningless. (Zwart 1976, 33)

Such a flexible attitude – and one so considerate towards temporal experience – seems to be skilfully reflected in the conclusions of Johnson and Larson, who go to lengths to emphasise that 'what is true of musical motion is equally true of our incompatible conceptions of time and, generally, our inconsistent conceptions of a vast range of abstract concepts':

Our claim is that each of these different, and often inconsistent, metaphorical structurings of a concept gives us the different logics that we need to understand the richness and complexity of our experience. However strong our desire for a monolithic consistent ontology might be, the evidence does not support such a unified and simple view of human experience. (2003, 80)

Four

Perception and Perspective

John Adams & Franz Schubert

In a 1928 essay, Theodor Adorno highlighted poetically – if perhaps histrionically – the problems posed by Franz Schubert's relationship to his outwardly radical contemporary Ludwig van Beethoven. He notes a difference in the expressive musical characters perceived, asserting that 'although Schubert's music may not always have the power of active will that rises from the inmost nature of Beethoven, its endemic shafts and fissures lead to the same chthonic depth where that will had its source':

Yet the stars that burn for Schubert's music are the same as those towards whose unattainable light Beethoven's clenched fist reached out. So when it comes to Schubert's music we speak of 'landscape'. Nothing could betray the substance of his music more – since he cannot be understood in terms of Beethoven's spontaneously integrated personality – than trying to construct him as a personality with the idea – a virtual centre – of puzzling out dissociated elements. (Adorno trans. Dunsby and Perrey 2005, 7)

Although subsequent commentary has not been so heavily dogged by the misplaced expectations that Adorno sought to address, the crux of this comparison has lingered. Beethoven, for some, has come to represent an overt – if not an ideal – representative of musical progress. Schubert, by implication, sidestepped the revolution.

In reality, of course, things could never be quite so black and white; just because Schubert did not subscribe to the kind of innovation that Beethoven espoused, it could never leave his art stagnant in its wake. Exploring the 'depths' to which Adorno alluded, more recent scholarship has in fact pointed to a radical compositional approach. Publications such as the 2003 multi-author volume *Schubert the Progressive* attest to a widespread eagerness to renew the contexts in which his work is considered (Newbould 2003). Susanne Kogler's contribution seeks to posit a notably 'modern' perspective, placing his music in the context of contemporary composition, utilising both the outlooks and the music of Dieter

Perception and Perspective

Schnebel (principally his *Lieder ohne Worte* written between 1980 and 1986) and Wolfgang Rihm (his *Wölfli-Liederbuch* of 1980–81) in conjunction with Adorno's essay. Her means is an underlining of Schubert's skill in engineering perceptual time and an exploration of the ways in which this foreshadows the expressivity found in the 'emotionalised' New Music established in the 1970s. Emphasised in particular is the effect of 'timelessness' (Kogler 2003, 89–100).

The ability of Schubert's music to seemingly 'escape' the regular passage of time emerges frequently in responses to his music, especially his instrumental work. A 2012 survey in *The Guardian* newspaper, for example, canvassed musicians and listeners, asking each participant to select and discuss their favourite Schubert piece. Not only did pianist Stephen Hough and actor Simon Russell Beale both select examples from Schubert's final trilogy of piano sonatas but both made reference to his treatment of musical time, concurring with Kogler in highlighting it as indicative of his 'progressiveness'. Hough outlined paradoxical sensations in the *Andantino* of the A-major sonata D. 959, describing it as 'prophetic yet timeless', while Russell Beale discussed the 'experimental' *Andante sostenuto* of the Bb-major sonata D. 960 in terms of the composer's ability to 'make time stand still':

It is as if he has distilled the process of music-making. He takes a harmonic progression, explores it, changes a single note, explores it again; he breaks down a simple melody until only the bones are left and the music is suspended. The result is a play of pure sound, without external reference, that gives us a glimpse of eternity. (Service 2012)

Rather than a commonplace conflation of progress and complexity, the focus here is simplicity. This reductive approach can lead to surprising extremes, with absence seemingly taking on an increasingly active role. Kogler is quick to ground this notion within the realms of human perception, observing a 'dialectic' between sound and silence (2003, 89–92).

This pragmatism also proves useful with regard to Schnebel's similarly melodramatic portrayal of the power of musical repetition. From his musings, Kogler delineates two basic 'structural elements that determine the timeappearance of the sound': 'immediate time' (points of time) and 'time passing by' (flowing time). A third temporal category is outlined with special reference to
Schubert's work: '[...] time is flowing totally naturally, which makes us almost forget its transitoriness. It appears so much as unfolding of itself that the compositional will seems to dissolve in its vegetative character. [...] Thus, released time starts flowing'. Kogler elaborates on these 'enclaves of spatial and temporal distance': 'According to Schnebel, these passages refer to a change of perspective ... and therefore stand out strikingly against their sound environment. They constitute extra-territorial moments beyond time' (2003, 90–91).

Placing perspective

Both Schnebel and Kogler draw on valid experience when recalling Schubert's music in these terms; as shown above, they are far from alone in referring to a profound 'timeless' quality. Their attempts to define and quantify these experiences help to address contradictory aspects of temporal experience. To conclude that any musical passage occurs *beyond* time – even in poetic or perceptual terms – is, of course, to turn a deliberately blind eye to music's fundamental grounding in the linear reality of time; as Kogler herself acknowledges, 'music materialises as a stream of sound' (2003, 89).

Nevertheless, as discussed earlier, the temporary musical *effect* of 'timelessness' is widely recognised. Indeed, part of the attraction of such moments or episodes lies in the fact that, for all their apparent evasive qualities, the music never leaves the passage of time, even perceptually. Even a sense of timelessness could only ever be understood within the context of time passing; to assert otherwise would be a leap of pure subjective interpretation. This seemingly illusory feature can be adapted to assume broad formal significance, contributing static or detached experiences within the context of a linear actuality. Jonathan Kramer is quick to assert the linear context of musical timelessness within his wider discussion of what he terms 'vertical time', claiming that such music 'can provoke intense and unusual responses, but it does not destroy the temporal continuum'. In spite of the unwavering continuation of time, the variety of experiences available within the depths of the 'extended present', as Kramer puts

it, is surprising; as well as the distinct 'lack of time' that 'timelessness offers', perceptual time might also be 'frozen', 'slowed' or 'stopped' (1988, 575–81).

Is it possible to explore these perceptual complexities without losing sight of the directness and, as with this case, the simplicity of the musical constructions that arouse them? These experiences are a widely accessible aspect of Schubert's work; surely they embrace more fundamental aspects of listening? If so, maybe these perceptual processes need not be thought of in such intricate terms. Perhaps Kogler's initial definitions – of time as either immediate or passing – have more to offer. Surely a third temporal category of 'released time flowing' – for all its professed uniqueness – is in fact some kind of simultaneous experience of both pointed and flowing time in combination. Indeed, are immediate and passing temporal states usually experienced entirely independent of one another? If the passage of time is taken as a constant, then surely the difference between pointed and flowing time is wholly one of *perspective*, shifts in the attention of listeners.

Articulating temporal positions is a challenging task. In the Fourth Century, Augustine grappled with the notion of a present 'so made that it passes into the past': 'So indeed we cannot say that time truly exists except in the sense that it tends towards non-existence' (trans. Chadwick 1991, 231). Keen to examine concepts usually taken for granted, he continues by dismantling the notions of past and future, dismissing them – like much functional language – as inaccurate description:

Perhaps it would be exact to say: there are three times, a present of things past, a present of things present, a present of things to come. [...] The present considering the past is the memory, the present considering the present is immediate awareness, the present considering the future is expectation. (1991, 235)

Echoing Augustine's emphasis upon the subjective, Kramer reframes these ideas in aesthetic terms: 'The present is not simply the place where perception happens, not simply the place from which linear and nonlinear perception are projected respectively into the future and past. It is also the meeting ground of memory and anticipation, both of which colour perception.' (1988, 367)

These discussions of temporal perspective may lead to further questions of subject positioning and dynamism – put simply, does time pass by or is time passed? Reimagining the concepts that underpin McTaggart's 'The Unreality of

Time' (1993, introduced previously in Chapter Three) in a notably more accessible manner, J.J.C. Smart introduces issues of syntax and metaphor to the discourse in his essay 'The River of Time' (1949). His opening remarks seem highly applicable to aesthetic experience:

We say that we are advancing through time, from the past into the future, much as a ship advances through the sea into unknown waters. Sometimes, again, we think of ourselves as stationary watching time go by, just as we may stand on a bridge and watch leaves and sticks float down the stream underneath us. Events, we sometimes think, are like such leaves and sticks; they approach from the future, are momentarily in the present, and then recede further and further into the past. Thus instead of speaking of our advance through time we often speak of the flow of time. (1949, 483)

Indeed, these impressions lie at the forefront of Edward A. Lippman's discussion of canonic works in his article 'Progressive Temporality in Music' (1984). Crucially, his notion of progression dwells not upon broader taste but refers directly to the sensations of listening: 'The feeling that music is progressing or moving forward in time is doubtless one of the most fundamental characteristics of musical experience; yet it manifests such a remarkable range of variation in its prominence and its quality that at times it seems to be absent altogether' (1984, 121). He cites examples and their effects: the tonally-induced irrelevance of time orderings in Webern, the static character of passages in Debussy and Wagner, and the ability of many contemporary works freed from pitch constraints to seemingly *regress* in time.

Reflecting upon these considerations of time proves fascinating but can lead to an analytical headache. Obviously in practice, there is no danger of a piece of music hindering the passage of time on a practical level, yet impressions of stoppage and regression abound. Here the subjective-objective divide that music scholars face becomes all too blurred; when human perception is one of the primary mediums of music, how can a perceived timelessness be ignored? How can a balance be found between pragmatic discussion of the music that does not stray from both the actuality of its performance and the continuity of its expressive form, and the highly accessible and engaging individual experiences that so often lead to linguistic tail-chasing? Earlier, it was asked whether it might be possible to

explore perceptual complexity without losing sight of musical simplicity. Perhaps it might be of use to turn this question upon its head. Through consideration of a piano sonata movement by Schubert (1797–1828) and a more recent work by the American composer John Adams (b. 1947) this chapter will look to turn this question around, asking instead whether analysing musical simplicity might facilitate a discussion of the complex perceptual phenomena that surround it. Rather than examining the form at large, analytical focus here will fall principally upon the openings of both works, and some of the temporal expectations and evaluations that might emerge. Whilst emphasis will remain upon these parallel moments of crystallisation, some of the aural implications for the long-term form of these pieces will also be discussed.

Simplicity and continuity

A relatively recent compositional trend that has become synonymous with ideas of musical simplicity is that of minimalism, pioneered during the 1960s and 70s in the United States by figures including La Monte Young, Terry Riley, Steve Reich, and Philip Glass. Although each carved out a strikingly individual voice for himself, there are overarching qualities of note. For the most part, their music is uncompromisingly direct, self-driven, almost industrial in its seemingly ceaseless onward development. As for its construction, Keith Potter writes aptly of an 'intentionally simplified rhythmic, melodic and harmonic vocabulary' (Potter, *Grove*). K. Robert Schwarz delineates the wider structural implications of this:

Like so much non-Western music, minimalist pieces do not drive towards climaxes, do not build up patterns of tension and release, and do not provide emotional catharses. They demand a new kind of listening, one lacking in 'traditional concepts of recollection and anticipation', as Glass has put it. In minimalism, you will not find the contrasts – loud and soft, fast and slow, bombastic or lyrical – that are the substance of Western classical music. (1996, 8–9)

Although he has often been affiliated with the style, John Adams is not a minimalist composer, emphatically so if Schwarz's checklist is anything to go by; Adams seemingly falls short in almost every category. He has, perhaps a little more accurately, been described as a 'post-minimalist' or a 'second generation minimalist' (Service 2011, and Clark 2015). But while facets of the minimalist aesthetic emerge as prominent audible influences in his music, there can be no doubt that they are absorbed as a feature within a much broader compositional palate that almost equally encompasses post-Romantic and early-twentieth century styles (Cahill, *Grove*). Utilising this inclination to draw upon a wide range of sources – a distinctly modernist tendency, at least in the post-avant-garde terms discussed in the introduction – Adams exhibits an economic handling of musical content, producing highly engaging and communicative musical structures. Though his music is, in many senses, minimal, its effect is decidedly not.

Although he defies a strict minimalist aesthetic in many ways, Adams falls into a large group of twentieth-century composers whose music – on account of its apparent simplicity of construction – has often been failed or, worse, side-lined by more traditional analytical approaches that do not account for its perceptual intricacies. It is precisely this imbalance in scholarship that Daniel March seeks to address in his thesis *Beyond Simplicity* (1997). From the outset, he expresses his concern that a negative association between minimalism and simplicity leads writers to dismiss the music as being 'of insufficient compositional interest to be taken seriously':

Such discussions usually focus on the limited amount of basic material... and equate simplicity of means with simplicity of effect. Even those pieces which involve a greater variety and density of material [...] are to some extent implicated in this process, in that their use of repetition... is viewed as demonstrating a lack of 'musical sophistication', which is again equated with absence of musical effect. (1997, 11)

Exhibiting a complexity of effect in spite a simplicity of means, Adams's piece *Shaker Loops* for string ensemble provides an apt representation of the dichotomy March outlines. First emerging in 1978 and revised five years later, the work represents not only a career breakthrough for Adams but also a stylistic watershed; although it comprehensively displays the first utterances of a mature and now recognisably distinctive musical language, it also stands as one of the clearest remnants of the composer's minimalist lineage. Its direct and novel powers of communication are illustrated clearly in this excerpt from David Nice's

review of a 2013 performance given by the London Symphony Orchestra conducted by Adams himself: 'Will it ever stop electrifying us with the shock of the new, that series of roof-rocking, steam-train accelerating chords? Audiences in the Seventies and Eighties must have immediately realised they were in the presence of a masterpiece; we still felt it last night.' (Nice 2013)

Aspects of this distinctive impression, it might be argued, are formed from the very opening of the work, a gesture of bold economy: two notes (a perfect fourth, G_{\natural} and C_{\natural} an octave above middle C) recycled rapidly in rhythmic uniformity. Few gestures could seem more minimal. From the fifth bar onwards, a B_{\natural} flickers intermittently between the interval, and for a further 18 bars this is all that occurs.

In some senses, such employment of material is far from unusual. On the contrary, it might appear to subscribe to a conventional pattern in Western art music, assuming the role of a musical foundation or accompaniment, a consistent undercurrent of sound that provides a rhythmic and tonal framework into which a feature of greater interest – usually some kind of melodic theme – can then step. At this point in the work, on a first hearing, it is likely that many typical Western listeners will still be expecting the musical 'main event'. Thomas Clifton (1983) helpfully frames these anticipations in terms of different notions of 'beginning'. The example he chooses – the opening of Beethoven's Ninth Symphony – proves particularly relevant to this case study; like Adams, Beethoven commences his work with just one motoric, recycled interval – a perfect fifth. Clifton asserts that he hears Beethoven's symphony as possessing two beginnings: this opening undercurrent, and the climactic unveiling of the primary subject 17 bars later, reached through a brief process of established stability, ensuing disruption, and aggregate cumulation:

My experience of a second beginning entails a situation which is neither a repeat, a recapitulation, a new beginning, nor another beginning, but which refers to a complex activity of both observing and participating in an event which (1) belongs to the same time event as the first beginning; (2) shows itself in the appearance of the first beginning; but (3) presents an idea essentially different from that presented by the first beginning. (1983, 83–88)

Perhaps it is this expectation of a 'second beginning' that an audience familiar with canonic staples such as Beethoven's Ninth Symphony would subconsciously subscribe to at the outset of *Shaker Loops*. Its initial gestures would certainly indicate such an unfolding. Of course the denial of this expectation is only affirmed gradually, a nagging possibility transformed into a persistent reality. Audiences are forced to reappraise their reception of the piece *as* they continue to receive it, realigning their expectations and mentally reviewing – perhaps even replaying – the opening passages in order to follow an on-going narrative thread.

Once these anticipations are redirected, it is possible to move beyond the surface simplicity of these initial gestures, allowing their relevance to the projected musical narrative to emerge. Indeed, these connections that are crucial to a present-tense aural continuity, an integral aspect of the highly communicative nature of *Shaker Loops*. Clifton's observations are apt:

A mere succession of sensory experiences cannot be experienced as having continuity if events succeed each other without influencing each other. Continuity is not an additive process; tonal atoms, by themselves, cannot coagulate to form a melody. Rather, it is continuity which enables us to recognise melody, and to atomise it by analysis. (1983, 96)

As the work progresses, the repeated cellular patterns – 'loops' – that spring from the texture prove generative through their interaction with one another. The architectural shape that emerges from these accumulations and interactions establishes an unbroken narrative stretch. Adams's own preface to the score indicates that these issues of formal unity and communication featured heavily in his compositional approach:

Although being in its own way an example of 'continuous music', *Shaker Loops* differs from most other works of its kind because it sees so much change within a relatively short amount of time. Also it avoids the formal and temporal purity of much 'minimal' music by not adhering to a single unbending tempo throughout. This less severe approach allows a freer movement from one level of energy to another, making a more dramatic experience of the form. (Adams 1989, 3)

It was such considerations that prompted Adams to revisit the original 1978 'modular' version, in which the introduction and duration of each 'loop' was left to the discretion of the conductor. Dissatisfied with the 'overall shape' and 'harmonic movement' of performances that he himself did not direct, Adams produced a through-composed version, 'locking in the harmonic and formal design in a time scale that made the most sense' (Adams 2008, 107). The in-vogue brand of regulated aleatoricism that permeated the initial incarnation – the string quartet *Wavemaker* – had by now been replaced entirely with a more conventional, composer-controlled structural consistency.

The cellular properties of the 'loops' themselves contribute to this continuity; beyond simply reappearing in quasi-leitmotivic fashion, the sequences undergo transformations through their interactions with surrounding materials, inciting changes in pace and direction. This often occurs discreetly, with developments assuming textural roles: the resultant unity is largely subconscious.

Discontinuity

In musical terms, there is no doubt that the opening of *Shaker Loops* exhibits an extreme level of continuity. A thread of sound unwinds, without pause, break, or fracture; indeed, for a large part of the opening movement this thread is only reinforced. However, a radical simplicity of construction allows the passage to evade conventional expectations; paradoxically, a form of *discontinuity* is precipitated. Rather than arising directly – and abruptly – from musical gestures, the discontinuance is a gradual realisation for first-time listeners as the economical nature of the material is confirmed; a process of re-contextualisation is necessitated. The discontinuity takes place 'in the audience' rather than 'in the music'.

Jonathan Kramer underlines the significance of musically experienced discontinuity, asserting that an evasion of expectations can prove particularly profound; for him, the unexpected 'is more striking, more meaningful, than the expected because it contains more information':

The musical experiences that are the most memorable are the magical moments when expectation is subverted, when complacency is destroyed, and when a new world opens.... Tonal discontinuities, when pushed to extremes, create new experiences of time – time that is not linear and not one-dimensional. (1978, 177)



Figure 4.1: Schubert, Sonata in B^b, D. 960, first movement (bars 1–23)

Whereas Adams finds ways to challenge audiences with an unprecedented continuity, Schubert confronts listeners with an unexpected *dis*continuity in his B⁺ sonata, one that can be pinpointed to the unprecedented bass trill in the eighth bar. The very opening of the work seems to be imbued with a remarkable power to hold its listeners with a seemingly minimal amount of effort (see Figure 4.1). A

largely stepwise, rhythmically steady theme – spaciously harmonised – at the higher end of the middle register is supported by a tonic-dominant interplay in the bass. A motoric presence is imbued from interceding quaver oscillations. The passage betrays very little intent of harmonic motion away from the established tonal centre of B^{\flat} within the first seven bars. The focal interactions occur between tonic and dominant; even a sojourn into the subdominant in the fifth bar is underpinned by continued tonic emphasis in the bass. With the exception of an ascending leap to E^{\flat} in the fifth bar (the first point at which the thematic motion extends beyond a step of a tone or semitone), the melody too is held comfortably within the range of a perfect fourth.

Disregarding the aural question-mark provided by the closing imperfect cadence (second half of bar seven), the phrase evokes a strong sense of the conventional antecedent-consequent patterns that might indicate a contained, small-scale form. In fact, the sonata that ensues from these opening gestures is one of gigantic proportions, usually lasting over 40 minutes in performances, with the *Molto moderato* first movement itself comprising approximately half of that span. Such an expansive and supposedly complex structure appears to sit at odds with the tonal and motivic simplicity of the opening seven bars. Comparison might be drawn with the opening Allegro con brio of Beethoven's Third Symphony (itself often approaching 20 minutes in duration), which will be discussed in Chapter Eight (Narrative Possibilities) in terms of the thematic drop to C[#] in its seventh bar. The effect is of a brief tonal upheaval, a magnetic disruption that is immediately corrected but nonetheless precipitates the wider tonal introspection and interrogation that will serve to project forward an unusually vast musical architecture. This brief melodic departure from, and return to C[#] is the audible germ of the narrative conflict that ensues.

No such disruption occurs within the thematic content of the first seven bars of Schubert's sonata; by this point in a first-time hearing, it is difficult to conceive of any of the presented material necessitating a 20-minute movement. Indeed, the disruption is yet to come. Unlike in *Shaker Loops*, the discontinuity at play in Schubert's sonata *does* take place within the parameters of the notated music. Nevertheless, it still evokes a sense of *otherness*. Indeed after such a tonally straight-laced opening, the G \flat -A \flat bass trill in bar eight presents a jarringly



Figure 4.2: Sonata in B^b, D. 960, first movement, selected bars (1 and 8) with brackets highlighting bass ornament derivation

chromatic enigma. Whilst he takes note of its mysterious character, Charles Rosen views the gesture as highly generative, suggesting that the 'entire work seems to arise' from it (1988, 249). Charles Fisk acknowledges this catalytic function but still underlines the status of the trill as a 'foreign element': 'a harbringer of something outside or beyond what is implied by the theme itself, something fascinating in both its allure and its danger.' He suggests that the harmonic modulations that it facilitates in the course of the movement – and, by extension, the remainder of the sonata – seem to in turn suggest 'a state of *Entfremdtheit* ('alienation')' (Fisk 2001, 241–42).

An analysis abstracted from aural experience can in fact reveal a motivic connection that runs through the apparently disparate initial elements; when transposed, the stepwise ascent of the melody in the first bar can be seen to reappear as the flourish that sets up the trill (see Figure 4.2). However, this connection does not surface as a crucial component of the passage as it is *heard*; the trill appears instead as an unrelated entity in the unfolding musical narrative, not only hinting at new tonal realms but doing so in a thus-far unexplored pitch register. Indeed, by the same token, the differences between the two gestures do not audibly amount to an opposition in the same sense as Robert Hatten's theory of 'markedness' (1994, 34–38, discussed further in Chapters Seven and Eight). The melody and the trill sit in stark contrast to one another but do not necessarily appear *opposed*. Rather, the effect of the interruption might be of a glimpse of a distinctive musical narrative running in parallel – two alternative planes of music momentarily overlapping; indeed, the trill sounds like it belongs to an entirely

different, far darker piece of music in the wake of such placidity. The occurrence creates a stylistic and aesthetic clash: contained clarity meets open-ended ambiguity; a straightforward sequence of antecedence and consequence is curtailed by an ominous question mark.

What proves perhaps more radical is the way music continues to unfold in the wake of this disruption. As far as an audience might be concerned, the sonata simply restarts itself: for nearly four bars, an identical reprise takes place, with the melody altered and extended for a further five bars beyond that. Whereas *Shaker Loops* might be seen as inciting a memory-based reassessment of its opening, Schubert seems to insist upon restarting the sonata from scratch, the trill apparently presenting a hurdle that cannot be overcome in a conventionally through-composed manner. The perceptual effect is one of temporal disruption, direct linearity sacrificed for a second, artificial attempt at continuity. By granting listeners the inside track on this process, of course, the effect is of a jarring discontinuity. For all its understatement and *pianissimo* dynamic, such a blatant cut-and-rewind decision seems particularly brazen.

In sonata theory terms, this disjointed introduction would appear to constitute what Hepokoski and Darcy (2006) might term a 'deformation', an instance of a composer creating a particular expressive effect through the manipulation or flouting of a structural norm (614-21); in this instance, it is the anticipation of melodic, tonal, and metric continuity that is aroused and offset. What is particularly notable is the unexpected poignancy with which this discontinuity is implemented; what might at other times prove little more than an eccentric disruption here proves unsettlingly evocative, with the passage seemingly possessing significant narrative potential. David Damschroder, in his principally harmonic commentary, is even prompted here to speculate as to whether the opening of the movement might set in motion a reading that draws parallels with its composer's conflicted sexuality (2010, 257 & 304-05); he even goes so far as to extend this metaphor to the tonal playing-out of the movement, describing the pursuit of a 'gradual conversion from deviant $D \not -F \not -A \not$ to diatonic $D_{4}-F_{4}-A_{4}$ (258–259). As conjectural as suggestions like this might seem, the potential impact of such analogies is nonetheless derived from the solely musical deformations - both localised discontinuities and long-term tonal leanings - that permeate the movement. Writing more broadly, Hepokoski and Darcy (2006) reinforce these connections:

The expressive or narrative point lies in the tension between the limits of a competent listener's field of generic expectations and what is made to occur – or not occur – in actual sound at that moment. Within any individual exemplar (such as a single musical composition) operating under the shaping influence of a community-shared genre-system, any exceptional occurrence along these lines calls attention to itself as a strong expressive effect (2006, 614).

Even at this early stage in Schubert's sonata the musical time - or 'times' - it presents has reached a surprising level of complexity. Kramer, in his breakdown of what he terms temporal modes, acknowledges the challenges in unpacking their application within musical works, admitting that 'the categories are not always comparable, and distinguishing between them is often far from a clear-cut procedure' (1988, 58). Although he utilises particular experiences of discontinuous musical time as descriptive markers between extremes of linear and vertical time, he identifies limitations in their near-consistent impurities: 'Most music exhibits some kind of mix of temporalities, at times nebulous, at times contradictory, at times changing, at times elusive' (1988, 58). Nevertheless, bearing the blurred nature of these experiences in mind, they resonate strongly with the opening of this sonata. Two modes prove particularly apt: 'moment time', in which musical continuity is contained within sections rather than developing by implication; and 'multiply-directed time', in which implications are not realized in subsequent sections but rather elsewhere, at other points in the musical form. Schubert's opening would appear to showcase characteristics of these concepts: two seemingly disparate types of material, both audibly self-contained, the consequences of their implications either played out at a later stage (the opening melody) or temporarily frustrated (the 'alien' trill). The wider musical result is the establishment of an engaging journey for listeners. Perceptually, the piece has barely begun, yet it has already appeared to find a way to engineer, manipulate, and revisit its own history. As Clifton notes, 'continuity is involved in the openness of time: in the idea that past events are not forever sealed off from a present which

constantly re-searches it, and that future events do not reside in some unknowable "other", ignoring, and ignored by, the present situation' (1983, 97).

Moving beyond spectacle

With their opening gestures, both pieces issue intriguing challenges to preconceived notions of musical continuity. But as fascinating as these subversions prove when they are subjected to detailed analysis, they fail to account for any deeper dramatic significance that might occur. Denials of expectations like the ones discussed cannot necessarily garner and sustain enough interest to draw listeners into engagement with musical narratives over a longer period of time. Such gestures are perhaps comparable to Aristotle's notion of 'spectacle' within his wider prescriptions for dramatic narrative; whilst some degree of spectacle constitutes an necessary component of successful drama, he is quick to rank it the least significant of the qualities, deeming it 'attractive' but 'very inartistic and is least germane to the art of poetry' (trans. Heath 1996, 13). When implemented for a prolonged duration, such gestures make for 'difficult' listening; incessant discontinuity amounts to a continuity of its own - one potentially remembered more for its monotony than its meaning. Focus for the remainder of this case study pairing will now shift to the longer-term structural implications that emerge from the openings of each work.

Shaker Loops comprises an uninterrupted half-hour of music, its four parts directly interconnected as one extended, unbroken strand. Once its initial simplicity has encouraged an audience beyond a superficial reception to a more actively-involved state of listening, it must satisfy these realigned expectations by providing a sufficient basis for musical drama. An emotionally communicative dramatic structure was part of Adams's original intentions for the piece. The title takes its cue – in part – from the dances of the 'Shakers'; the term is a colloquialism for the United Society of Believers in Christ's Second Appearing, of which there was a colony near Canterbury, New Hampshire, where he grew up. Through this reference, Adams draws upon facets of a spiritual experience, deliberately summoning up 'the vision of these otherwise pious and industrious souls caught



Figure 4.3: Adams, *Shaker Loops*, Part I: reduction of harmonic accumulation (bars 1–104)

up in the ecstatic frenzy of a dance that culminated in an epiphany of physical and spiritual transcendence' (Adams, 2014). Although the music itself does not call upon specific imagery in an explicitly programmatic sense, its four subdivisions are granted notably motion-based titles: 'Shaking and Trembling', 'Hymning Slews', 'Loops and Verses', and 'A Final Shaking'. Whether the audience aurally 'observes' these motions or enters into a kind of perceptual participation is difficult to ascertain. Ultimately, the emotional thrust of the work is unlikely to leave listeners in a state of detachment; on the contrary, they are drawn to its very centre.

The end result of this compositional approach is the encouragement of a kind of self-reflective listening, raising broader questions of motion, space, subjectivity and temporality. The surface simplicity of the musical material presented at the outset of *Shaker Loops* prompts a heightened introspection, the lack of event beyond the established repetition stirring a discontentment with an attitude of passive reception. Spurred beyond a face-value hearing, meaning must instead be sought in the basic construction of the sound. With no distinctive melodic shape upon which to focus, attention is diverted to the notes themselves and how they relate to one another. It is an approach that is frequently taken for granted within the context of conventional tonal music. When a hierarchy of harmonic relationships is established, its progressive function is usually assumed by listeners. Until this hierarchy is musically challenged or subverted, it is rarely questioned. Many pieces influenced by the minimalist style reaffirm this system in a particularly black-and-white manner.

While *Shaker Loops* undoubtedly tends towards tonality, its approach is not so clear-cut. Seemingly, at the outset, no permanent tonic key is established. Indeed, it could easily be argued that the entire first movement comprises an extended series of tonal centres – emerging, overlapping, conflicting, fading. It is in this manner of continued allusion without allegiance that the drama – and, by extension, the broader narrative – of the piece is set in motion. Rather than

implementing an harmonic 'gravity', the composer initiates an audible dialogue between different gravitational fields (see Figure 4.3). In a conventional context, the implication of the opening perfect fourth is a tonal centre of C⁴. The interceding B⁴ that follows throws this initial assumption into imbalance, a centre of C⁴ still likely but the possibility of G⁴ as a 'tonic' of sorts now emerging (a likely proposition for the score-reader given the one-sharp key signature). The subsequent introduction of E⁴ (*Shaker Loops*: 'Part I', bar 26) – spatially the lowest note – transforms all preconceptions, casting the accumulating chord within the light of E minor (again in-keeping with the key signature); the D⁴ that flickers at the top of the chord in constant interaction with its adjacent C⁴ immediately serves to add a sense of transience to the current E minor, a change in course apparently imminent by virtue of the seventh.

While the addition of A^{\ddagger} (appearing with increasing prominence from bar 40) and F^{\ddagger} (a largely consistent presence from bar 51) serves to perpetuate an Eminor emphasis, the gradual extension of the cello lines down to C^{\ddagger} (from bar 75) reasserts the power of the sonority with which the piece began. The result is an over-saturation of tonal possibilities and the arrival at a breaking point. At such junctures, Adams invokes what might perceived as changes in gestural trajectory. The potential for palpable shifts in tonal gravity is vastly reduced by the sheer number of notes collected within such a limited pitch range. As changes in pitch gradually become near-imperceptible, the oscillations cease and the ensemble settles upon one chord (C^{\ddagger}, D^{\ddagger}, F^{\ddagger}, B^{\ddagger}) before changing direction entirely through a shift to F major.

While an audience may remain largely unaware of the mechanics of the tonal process, attention will nonetheless be drawn to the interaction between these competing gravities. Expectations are constantly aroused, averted, and denied at different stages of the accumulation. Propulsive motion is reinforced by the constant transformations of the material – as new loops are introduced, fresh tonal perspectives are offered on existing sonorities. The effect upon a perception of the larger formal architecture is an enhanced clarity of gesture at odds with any preconceived stasis. There is a present-tense awareness of an adaptive, goal-orientated structure: the music feels like it is 'going somewhere' even if its audience cannot predict where, or indeed when it will arrive.

Moving beyond contrast

A plot is not (as some think) unified because it is concerned with a single person. An indeterminately large number of things happen to any one person, not all of which constitute a unity; likewise a single individual performs many actions, and they do not make up a single action. (Aristotle, trans. Heath 1996, 15)

Aristotle's summation of the variety of events that a unified plot can encompass is apt with regard to Schubert's sonata. The first page of its score – when realised in performance – does not offer an immediate impression of unity. Rather the jarring contrasts of the musical material it presents incites a puzzling aside: how might the composer unite these disparate elements within the context of a cohesive whole? The answer, it emerges, is not quite so straightforward, yet it is arguably *simple*, nonetheless: rather than any immediate attempt to reconcile or resolve the differences, Schubert is content to let these two 'characters' – self-contained clarity and other open-ended ambiguity – coexist alongside one another. Indeed, it is through changing aural perspectives upon these materials and their roles that the long-term drama of the movement arises (see Figure 4.4 for a summary of the formal scheme).¹³

Following the first appearance of the trill in bar 8, the extended restatement of the opening theme culminates in a perfect cadence at bar 18. The returning trill, however, is now placed upon the tonic itself (bar 19), its chromatic oscillation with C_{\flat} inciting a descent towards its original G_{\flat} context at the upbeat to bar 20. This diversion sets up an entirely new context for the restatement of the principal theme: although the theme recommences on the tonic (as with the opening of the movement), it now finds itself relegated to the status of mediant within the newly-forged path of G_{\flat} major (see Figure 4.1).

As Fisk readily acknowledges, such emphasis upon the flattened submediant in a major-key work is not out of the ordinary, even within the classical style. What he quite rightly emphasises though, is the 'portentous' nature of its significance in this opening passage (2001, 241). While these events themselves constitute nothing unusual, the way they are *paced* does. The

¹³ Durations taken from recording listed in primary resource list (Mitsuko Uchida, piano. Decca: 475 6282).

Formal division	Bars	Tonal region (bars)	Duration
First Exposition (+ first-time bars)	1–116 + 9 bars	B♭ major (1–19) G♭ major (20–34) B♭ major (35–47) F♯ minor (48–73) F major (74–117i)	0'00–5'44
Second Exposition (+ second-time bar)	1–116 + 1 bar	B♭ major (1–19) G♭ major (20–34) B♭ major (35–47) F♯ minor (48–73) F major (74–117ii)	5'44-11'04
Development	118-215	C♯ minor (118–148) D♭ major (149–156) E major (157–161) C major (162–165) Transition (166–170) D minor (/ B♭ major) (172–202) F major (V of tonic) (203–215)	11'04–15'15
Recapitulation	216-357	B♭ major (216–234) G♭ major (235–238) F♯ minor (239–253) B♭ major (254–266) B minor (267–288) B♭ major (289–357)	15'15–21'54

Fig. 4.4: Sonata in B^b, D. 960, table displaying structural plan

expansive B \flat sonority with its comfortably placed melody does not sound in any way precarious; on the contrary, it almost gives the sense that, free of interference, it could continue onwards in a perpetual state. Such a dramatic uprooting within the first 20 bars of the work belies an underlying competing tonal gravity – its orbit stationed around G \flat – with profound implications for the musical narrative to follow. Beneath the tranquil surface of the opening bars, a fundamental hierarchy has been called into question.

With necessary intervallic adjustments made, the melody is gradually spun further with an onward flow of quavers from bar 27 cascading into a developing sequence of semi-quavers from bar 29. The episode is curtailed by the introduction of triplet quavers (from bar 34), the accumulated momentum propelled forward into a *forte* restatement of the opening material, underpinned by the newly acquired triplet rhythm.

The melodic subject is, by this point, outgrowing its shape and its tonal allegiance with understated ease. Rather than assuming a concrete form, a perceived 'theme' takes the shape of a broader gestural pattern by which each passage is fashioned; a basic entity never revealed in an 'essential' form but instead continually altered. Schubert extends, elaborates, and fragments the melody with tireless variety, allowing it to permeate the form of the work. The effect is a notable temporal dichotomy: on one hand, the form bears an audible repetitive streak, a sense of stasis and circularity that allows the movement to take the shape of a meditation on one essential subject; on the other, there is a palpable sense of onward development, of the same idea appearing and altering within a variety of equally changeable audible contexts.¹⁴

The melodic freedom that this perceptual paradox engenders serves to counteract the stringency that might arise from the clearly delineated sonata form with fantasy-like exploratory qualities. The ever-developing narrative of the theme itself eventually proves to be an alienating factor for the audience as it strives further and further from its initial state through increasingly unfamiliar territory. The tonal scheme represents, for Charles Rosen, the '*tour de force*' of Schubert's treatment of the three-key exposition, the gravity towards F# minor (a minor-mode enharmonic transformation of the G \flat that first appeared at bar 20) that emerges in the extended transitory episode serving deftly to offset the typical opposition between tonic and dominant (1988, 234–249). Rosen is quick to point towards the 'wonderfully expressive ambiguities' of the harmonic progressions:

[...] the way that A major appears, only to be immediately inflected and weakened by the B_{\flat} in the bass (bars 58–59), the suggestion of B minor that is

¹⁴ This thematic approach bears relation to what both Arnold Schoenberg, and later Walter Frisch with his derived study, have identified in the music of Brahms, praising the evolution of his themes as an exemplification of what they term 'developing variation': the basic trace of a motif retained throughout an 'endless reshaping' (Schoenberg 1975, 129). This is an idea that is covered further in Chapter Six (Dynamic Continuities) of this thesis.

never carried out, and the new harmonic meaning of D minor attached briefly to the Fa in the bass but sustained so briefly. (1988, 249)

In seeking to develop an harmonic approach that bypasses conventional diatonicism in favour of voice-leading efficiency between triadic shapes, Richard Cohn (1999 & 2012) is quick to ascribe further significance to F[#] minor. Rather than comprising what he terms (with deliberate verbosity) 'an enharmonically respelled minor inflection of the triad on the flatted submediant degree', the sonority constitutes a 'polar' key, sharing no tones with the established B^b major yet offering rapid modulatory potential through semitone movement (1999, 218). Assuming this perspective on the relationship between B^b major and F[#] minor, Cohn argues, casts new light upon the unnervingly brief switch to the audibly distant C[#] minor at the outset of the development section, with this new point of tonal gravity representing the corresponding polar relationship to the conventional dominant of F major (1999, 218-19). Establishing a tonal network that revolves around a series of major thirds (and their resulting triadic overlaps) stemming from the tonic, he takes his analysis further, proposing a structural scheme in which the overlaps between triadic shapes allow a conventional tonicdominant-tonic sequence over the course of the movement, with the exception of the 'double dominant' used at the outset of the development (2012, 125–28).

For listeners, it may well be that such a variety of harmonic implications and forecasts serves only to enhance a growing feeling of disorientation. So much so that by the close of the first exposition, a remarkable shift has occurred in the characters of the materials: with the sudden, *fortissimo* reappearance in the final bar of the first-time-repeat segment, it becomes apparent that although its peripheral treatment lends it a somewhat spectral quality, the trill is now rendered familiar by comparison. Serving as a jolting reminder of the interruptions with which the work began, it seems to precipitate the exposition repeat itself. A role reversal has occurred: the tonally rooted primary subject has taken on a more restless, searching character, whilst the trill is rendered its grounding factor. With each appearance the trill makes it is further absorbed into the consciousness of listeners; although it may at first seem 'foreign', it has before long become something of a familiar landmark.



Fig. 4.5: Sonata in B^b, D. 960, diagram displaying levels of binary form through work

Indeed, this perceptual transformation might be seen as providing a compelling argument for the inclusion of the exposition repeat in performance.¹⁵ Bypassing it altogether produces a profoundly different piece of music. Not only is the balance of a potential binary-form reading of both the movement and indeed the entire sonata (see Figure 4.5) destroyed, but nine bars of music are cut altogether, never to be heard, something perhaps more forgivable if it weren't for the fact that these bars present not only an entirely new figuration, but also the only *fortissimo* rendition of the trill motif. The work is irrevocably changed, quite contrary to the composer's intentions; so extensive is Schubert's compositional preparation for the return to the opening that it seems unwise to view it as an optional formality that can be ignored.

The full extent of the shifts in function of the theme and trill is highlighted at the close of the development. The C \ddagger minor that opens the section (bar 118 onwards) quickly pivots to D \flat major paving the way for a cascade of far-flung progressions (E major, C major, A \flat minor, B minor) that land the music firmly in the bleak realm of D minor with no apparent signposts to indicate a way out. Indeed it is, as Fisk observes, the return of the trill – in a notably stationary mode – that confirms D minor as a new tonal centre (bars 186–87). As if the sonata was exercising its own musical memory, the use of the trill serves as a motivic prompt, bringing about a recollection of the opening theme but transposed – as with the G \flat -major iteration from bar 20 – to the mediant of the new tonic. Fisk observes the significance of this melodic decision, incorporating his own 'wanderer'-narrative interpretation (Fisk 2001, 252):

¹⁵ Alfred Brendel in particular explains that he makes this choice primarily in order that he might be able to comfortably perform Schubert's final three piano sonatas as a trilogy in one evening, his confident overriding of the composer leading to a disagreement and a fascinating exchange with Walter Frisch (Frisch and Brendel, 1989).

Improvising a version of this passage in which the return of the theme begins instead with the tonic reveals at once how crucially the melodic emphasis on the third degree affects its feeling. It still feels more like the song of the exiled protagonist, the lonely wanderer, than like the theme in its more choral, more angelic initial form.

Iterations of the theme fail to provide any kind of long-term harmonic momentum as the interceding bass trills confirm oscillations between D minor and B^b major. Hepokoski and Darcy frame this passage in terms of its recapitulatory allusion, describing it as 'one of the most moving series of false starts in the repertory' (Hepokoski & Darcy 2006, 262). The tonic key not only appears as a subordinate to its mediant, but as nothing short of a momentary escapist fantasy within a foreign environment; so thorough has the change of perspective been upon the opening sonorities that, by this point in the movement, they serve only to enhance a sense of disorientation. The same is also true of the dominant for a time, F major robbed of 'all its conventional power' in Rosen's words, initially leading back to D minor (Rosen 1988, 291). As he points out, it is only through the fp emphasis (bar 203) upon a dominant-seventh chord that the re-establishment of the tonic for the recapitulation is undertaken. It is at this point that the trill is recalled in its original form (bars 213-14), its miniature departure from and return to the dominant sonority via chromatic unfamiliarity having proved symbolic of the wider tonal scheme that has unfurled: a microscopic expression of a macrocosmic procedure. In the desolate passage that has preceded this return, the B_{\flat} major triad has been reintroduced in cryptic segments as a figuration plagued by disorientation and uncertainty, with each constituent note utilised as the root of a suggested tonal direction: D₄ as a minor-key continuation of the development-section wilderness; B^b paradoxically as an exotic escape to the unfamiliar; F¹ at first as a dead end and eventually as a potential path back to the tonic stability of a recapitulation. Noteworthy in this sense is Nicholas Marston's reading (2000), in which he suggests that this notion of tonal transformation might be carried yet further; highlighting the way in which a heard augmented sixth chord $(B\flat - D\flat - F\flat - G)$ in the course of the recapitulation (bar 253) is in fact spelt as a dominant seventh chord in D major (A = C = -G), he argues that the very notion of B^b major as a 'home' key is challenged: 'Consequently, whereas the

corresponding moment in the exposition brought a return to the tonic following an extended digression to the flattened submediant, here in bars 254-5 Schubert pulls off the feat of "chromaticising" the tonic, specifically by colouring it as a flat submediant itself (2000, 257–258).

Form and function

By the closing passages of the first movement of Schubert's sonata, a profound shift in aural perspective upon the musical content has been completed. While the material itself has remained largely unchanged, it is the role each motivic element plays that has been subject to a transformation. At the outset of the movement, the trill surfaced as a disruptive presence, its ambiguous chromaticism throwing a spanner in the works of the plain-stated opening subject and precipitating jarring discontinuities. By the close of the movement, it recurs as a familiar landmark, a homecoming prompt for the very subject it once unsettled. As the audience hears the trill, it is a catalyst for tonal motion, but the tonal goal in question changes. The ability of the trill to initially transport the music to a new tonal realm is now transformed into an ability to bring it home. The opening melody, meanwhile, has developed a restless character; it seems to find little catharsis in its final appearances, the movement drawn to a conclusion more on account of its continued iterations within a perpetuated tonic than through any audible resolution of note. Indeed, it is through this lack of satisfactory culmination that the subdued grief of the ensuing Andante sostenuto - set within the tonally farflung key of C[#] minor – and the aural journey of the sonata at large is facilitated. It is a shift redolent of what Janet Schmalfeldt terms 'becoming': 'the special case whereby the formal function initially suggested by a musical idea, phrase, or section invites retrospective reinterpretation within the larger formal context' (2011, 9).

Although Adams's approach to motivic material and its function might not seem so clear cut, the broader concept of melody – and more specifically of melodic 'convergence' – is of great significance, audibly so in *Shaker Loops*. While the broader, lyrical gestures that emerge at the outset of Part II ('Hymning Slews')



Figure 4.6: Shaker Loops, Part III, solo cello melody (bars 3-26)

sit seemingly at odds with the rapid initial cells and loops that have preceded it, this apparent disparity is merely a reflection of time-scale. As with the outer parts of the work, these central passages are built from reiterations of simple cellular motifs utilising intervals of seconds and thirds. However, these figures now appear stretched and prolonged; hyperactive textural jostling of the opening of the work has unwound into a drifting, slow-motion dialogue of interlocking fragments across the ensemble. The transformation of prior materials in this reflective manner belies a unity of construction that in turn serves to enhance a sense of long-term aural continuity.

This economical approach to thematic material continues into Part III ('Loops and Verses') as a solo cello emerges atop tranquil textures from the preceding calm, gradually expanding a slow oscillation between two notes into a prolonged melodic meditation (see Figure 4.6). This new focus upon one singular subject rather than the interactions between several overlapping lines – facilitated by the preceding period of relative calm – might be heard as inciting a distortion of the temporality of the work. Contrary to the shifting attention encouraged by the musical multiplicity exhibited through the rest of the work, the extended melodic outpouring from the cello provides a clear focal point, a crystallisation of the pre-existing material that engenders a sense of detachment from the temporal flow, what might be interpreted as a kind of timelessness within the context of the broader form.

This refashioning of basic material through long-term gestures of convergence can be observed at its pinnacle when the large-scale structure of *Shaker Loops* is considered. Although it is experienced as a single span of music, the narrative form of the work can be reduced to four broad gestures in

Part	Duration	Gestural content
I. 'Shaking and Trembling'	7'59	An onward rush of multiple agents, interacting and reacting to one another while joined in a motoric forward action.
II. 'Hymning Slews'	5'23	A lull gradually precipitated by the lack of goal achieved through the initial motion.
III. 'Loops and Verses'	8'10	The slow convergence of the ensemble upon a repeated rhythm (an inversion of a cell from the opening of the work) catapulted through multiple accelerations culminating in a climactic collision and a subsequent dissipation.
IV. 'A Final Shaking'	3'25	A re-visitation of the motoric motions of the first part, an entirely new perspective now gained upon the material – rather than a race to burn out, the music instead gradually sinks and fades to its conclusion.

Figure 4.7: Shaker Loops, table displaying gestural interpretation of form

accordance with the divisions Adams makes (see Figure 4.7).¹⁶ It is in these terms that the architecture - and the narrative framework - of Shaker Loops can be comprehended. Continuity is achieved through process, but far from the motoric, accumulative operations of minimalism, this takes a far more organic shape: the piece offers an exploration of the process of unification. Seeking direction - at first through outward exploration and frenzied onward motion - the music eventually reaches a point of crisis and, subsequently, of crystallisation. The self-exhausting locomotive climax of the third movement comprises a series of rhythmic contractions and expansions of two repeated notes. The initial short-long figuration of the cell is apparently derived from the B¹/₂ entries at the very opening of the work (Part I - 'Shaking and Trembling', bars 5-30). In the course of what proves to be the formal cataclysm of the work, the length of the two notes is reversed as the ensemble converges with increasing muscularity (Shaker Loops: Part III - 'Loops and Verses', bars 71-123). The incision has been inverted, the abrupt action of the shorter note now acting as a cut-off rather than as a herald; an inverted perspective upon the same basic motivic shape has been achieved (see Figure 4.8).

¹⁶ Durations taken from recording listed in primary resource list (London Chamber Orchestra, conducted by Christopher Warren-Green. Virgin Classics: 7243 5 61851 2 8).



Figure 4.8: Shaker Loops, excerpts showing rhythmic motif reversal across work

After this watershed, earlier material is revisited but with an inevitably altered perspective. The fourth and final movement bears great resemblance to the first, motoric pulsations emerging and interacting across the ensemble. But rather than inciting dramatic builds in tension, these accumulating loops lead to an ultimate sense of release and relief. Perspectives on essentially unchanged materials have been transformed over the course of the work. The musical content of both *Shaker Loops* and Schubert's sonata, it would appear, has retained its simplicity; the complexities and changes that have arisen are in fact predominantly perceptual. In terms of aural content, the experiences of both works end where they began; rather it is the interceding 'events' that have reshaped how they might be heard.

Five

Perceiving Time

Objective and subjective time

Psychologists have shown that subjective time does not generally equal clock time. In the process of experiencing and then remembering lengths of time, we alter them. It is misleading, however, to think of subjective time alterations as distortions. Subjective duration is *more* relevant to the understanding of music than is duration measured by a clock. (J. Kramer 1988, 327)

Although he underlines the variety of temporal experiences that music can highlight, Jonathan Kramer lays the groundwork for his in-depth study *The Time of Music* by making a number of interconnected distinctions regarding our perceptions of time itself (1988, 1–19). He is quick to acknowledge the correspondence between his division of linear and non-linear time – a keystone of his writing – and the long-held philosophical separation between 'becoming' ('Heraclitean Flux', as Weinert puts it) and 'being' (Weinert's 'Parmenidean Stasis').¹⁷ The ongoing, quantifiable 'ordinary' time of daily life is seemingly at odds with a more malleable, immersive musical time, one that is described as being 'repeatable, reversible, accelerating and decelerating' (J. Kramer 1988, 17). David Epstein is quick to align the first of these 'times' with a clocklike measurement mode, with the latter dependent upon 'experience for its demarcation':

The clocklike mode is easiest to comprehend, especially in an age dominated by precision timepieces. The exactitude of the clock (or metronome) is Janus-faced, however; it is gained at the expense of interest, for though clock time is reliable and predictable, it is also dull. (How long can a ticking clock, devoid of other content, hold the attention of a lively mind?) Experiential time, by contrast, is the stuff of life, endlessly interesting, rarely the same, filled with the episodes of living by which it is framed. By this same token it is unpredictable, its particular structures drawn from and formed by those very elements that make a given experience unique. In reality, we live by both modes of time. They run simultaneously, at times corresponding, at other times in conflict. (Epstein 1995, 7)

¹⁷ Weinert's distinction (2013, 89–90) is discussed in Chapter Three (Directing Time).

For Epstein, the idea of the clock proves particularly significant, even if he does appear to underestimate its expressive potential in certain contexts. The notion of a 'biological clock' even underpins his exploration of the ways in which periods of time are perceived and understood (1995, 135-55). He highlights research into the way in which continuous movements or sensations are transmitted via intermittent processes in the human nervous system (principally Gooddy 1969 & 1977), the leaning of these processes towards synchronicity (Fraser 1978), and their significance in perceiving units of time (Pöppel 1978). Whilst his resulting observations about our understanding of metre and tempo prove useful, there can be no doubt that they serve a particular agenda; his emphasis upon systematic consistency in time perception reflects the broader musical regularity (rhythm, metre and phrase structure) of the classical and romantic works that dominate his study. His interpretations of musical time are unapologetically tied up with the teleological structural and tonal principles of the pieces he deems the most successful. His reasoning for this selection process is evidenced perhaps most tellingly in his use of a counterexample, what he deems to be a 'miscalulated section' in a Scriabin's Piano Concerto: a 12-bar dominant pedal in the final-movement coda judged to be unnecessary – a 'musical falsehood' – on account of its apparent intention to re-establish the already affirmed tonic. In spite of the climactic effect Epstein himself describes the passage as possessing, he dismisses it as 'rhetorically empty':

The passion seems hollow, the sweep of the line unconvincing. The phrase feels untrue. Nor is this affective response unfounded; it is grounded in the structure itself. Scriabin's miscalculation provides a musically unneeded passage whose climactic character is unsupported. The music is thus at odds with its underlying structure, and thereby stems from no intrinsic need. (Epstein 1995, 90–93)

By contrast, Kramer's approach proves helpful in its aversion to such a categorical, and indeed intrusively self-certain presentation. Although the framework he proposes is also marked by contrasting understandings of time, their simultaneity becomes a point of recurring emphasis. The seemingly paradoxical experiences that are enabled by this interaction between perceptual extremes becomes something that can be embraced and explored rather than simply bypassed in favour of a more stable, regularised, middle-ground

interpretation. Kramer points to the impact of cultural thought upon interpretations of time, outlining the linear, absolute time of the Western world and the causal understanding it generates. Twentieth-century arts and technology serve to illustrate a gradual leaning towards less obviously sequential understandings of time: the increasing obsolescence of train travel as a metaphor for modern experience relative to the 'imperceptible motion' (and thus the apparent stasis) of flight serves as a particularly potent example. Even the advances that have ensued since Kramer committed his thoughts to print have only served to enhance his accompanying analogy regarding computing: 'A program consists of doubling back, of loops within loops, of branching off in different directions. It is thus an apt symbol for contemporary temporality.' (J. Kramer, 1988, 9–19)

More convincingly, Kramer's case is grounded in neurological thought. The long-accepted divisions in function between the two hemispheres of the brain lead him to conclude that contrasting perceptions originate in distinct but nonetheless cooperating sections of the brain. The left hemisphere acts as the 'seat of linear logic', offering analytical, compartmentalised readings based on a causal understanding; the right hemisphere, meanwhile, offers a holistic comprehension of complex webs of events, remaining open to notions of simultaneity, expression and metaphor. Musical experiences – and thus musical time, he asserts – rely upon both the objective perspective of the left hemisphere, and the subjective understandings offered by the right (1988, 9–12).

Acknowledging this psychological synthesis of perceptual extremes may help us to elucidate the variety of experiences Kramer alludes to. Instead of representing direct contrasts, perceptions of time could be located at points on what might be thought of as a continuum between absolute and relational conceptions of temporality. Certainly this rooting in cognition provides a more pragmatic framework for an exploration of musical time. For all their discernible alignments, the impossibility of a predictable theoretical reconciliation between objective and subjective time must be conceded. Instead, what broadly inclusive surveys like those by Weinert (2013) seem to underline is how much more complex and multi-faceted our understanding of temporality might be; it cannot be reduced to a simple contrast between two extremes of regularity and fluctuation.

Studies like Kramer's *The Time of Music* demonstrate a commitment to exploring what lies between and indeed beyond these two extremes, and acknowledge that they are not necessarily defined by their opposition to one another.

I would suggest that writers continue to employ (or imply) the objectivesubjective distinction - in spite of the apparent oversimplification it risks - on account of how relatable it remains. It is best regarded as an indicator of how universally standardised temporal measures cannot even guarantee perceptual consistency. Rather, it is best to accept that the co-operations and tensions that are experienced between these two contrasting temporal perspectives - and all those perceptions of time that might be thought of as inhabiting a continuum between these two extremes - are evidence not so much of a difference to be reconciled but of a coexistence that is in fact characteristic of lived experience. Certainly this inclusive approach is of most use within the contexts of studies like this one, in which canonic music more conventionally thought of as engaging with linear time is juxtaposed with newer pieces that in many instances can be seen to undermine or defy such a reading. This chapter will first provide a brief survey of psychological and cognitive research concerned with the manner in which musical time is typically processed and how these operations may be subverted. Focus will gradually shift to musical characteristics and how the design of compositions might be thought of as manipulating temporal perceptions. The closing segment will highlight two scholars - Robert Adlington and Jonathan Kramer - who have provided particularly insightful ways of comprehending more recent music that, through the absence of regularised elements, provokes less conventional perceptions of time.

Order and consciousness

The German philosopher Edmund Husserl modelled a more inclusive attitude towards temporal perception with his phenomenological theories published in the first half of the twentieth century (Husserl trans. Brough, 1991). In particular, he offers a reconciliation of sorts between absolute and relational time through what he deems to be a necessary dismissal of the notion of objective time; his intention

is not to reject the concept outright, but rather to suspend it for the purpose of his inquiries (1991, 4–8).¹⁸ Instead, it is an emphasis on intentional consciousness that underpins his investigations, providing 'the very grounding condition of our knowledge of the world', as David Clarke surmises (2011, 1–2); for Husserl, temporality comprises a stream of lived experiences unified within the consciousness of the subject.

Music holds some significance within this view of time perception, articulating both this momentary flow and its broader sequential unity in an undeniably direct manner. Clarke is justifiably forthright about this relationship, asserting that participating in musical acts 'captures in its very temporal essence the temporality that is essential to the knowing of being – i.e. consciousness' (2011, 1–2). It is a point Husserl harnesses in order to illustrate this process of succession, using the example of the perception of a melody (defined here as a sequence of tones) as a springboard for his examination of memory and continuity. Crucial to this is his concept of retention: an enduring, present-tense grasp of elapsed tones, a 'consciousness of what has just been' (Miller 1984, 120).

It is this process of conscious, invoked memory – distinct from a more isolated act of recollection – that enables temporal structure to take shape, allowing events to fall into a potentially meaningful sequence rather than a disparate array of occurrences. Husserl also outlines a corresponding notion of protention, what Clarke helpfully describes as 'the fringe of expectation where what is just about to happen colours our experience of now'. However, this supposedly symmetrical counterpart to retention proves a little more problematic; Clarke raises apt concerns regarding both the incompatibility of this concept with the apparent asymmetry of time itself and with Husserl's failure to tackle anticipation as an opposite to recollection (D. Clarke 2011, 5). It is enough for present purposes to accept Izchak Miller's description of the reciprocal relationship as it is experienced (1984, 121): 'According to Husserl, I have [...] a primal-impression, a continuous manifold of retentions which are 'modifications' of past primal-impressions and a continuous manifold of protentions which are

¹⁸ A helpfully detailed examination of this 'phenomenological reduction', its distinction from Cartesian philosophy, and its implications for the notions of object and essence, can be found in Miller 1984, 175–98.

responsible for my having ... an anticipatory awareness of a continuous manifold of future primal-impressions.'¹⁹

In the context of a performance, such a view of time perception would seem to place listeners in the crux of the momentary present, with potential musical meanings accessible through a combination of 'moving' memories of the past and shifting expectations of the future. The idea of an 'organising impulse' lying at the heart of the listening enterprise (in the spirit of Whittall's take on the act of composition, discussed at the outset of Chapter Two: Alternative Paths) appears to hold true here.²⁰ It is a conclusion echoed by Hodges and Sebald, who conclude their survey of neurological hearing mechanisms by outlining a psychological tendency: 'We may have invented music, in part, because we were surrounded by a sound world from which we could not escape. Musical sound results, at least in part, from the human need to organise and elaborate sensory input' (2011, 96-110). When it comes to sound, order and meaning are unavoidably linked; listening to music necessitates, on some level, a direct engagement with our temporal consciousness. In its broadest sense, 'musical time' might best be understood as an approach towards the organisation of sound that facilitates such meaning.

Processing musical time

Practically speaking, it is rhythm and metre that might be thought of as the most rudimentary subdivisions of musical time. However, 'rhythm' in particular has come to encompass a number of definitions. Christopher Hasty navigates the 'extraordinary range of reference' that it has acquired by separating this variety into three distinct groups: broader temporal organisation in music, the unfolding of musical form, and quantifiable patterns of rhythm and metre. Although he

¹⁹ Detailed examinations of Husserl's account of the perception of a melody and its implications for temporal phenomenology can be found in Clarke 2011: 1–24, Miller 1984: 117–44, and Smith 1979: 100–16.

 $^{^{20}}$ Christopher Small also emphasises listening as an active role to play in the performance of music in his *Musicking* (1998); his theory will be explored further in the coming chapters.

identifies the third of these as the most commonly employed definition, he is quick to emphasise the implications that an exploration of such features may have for wider 'rhythms', even if these are often neglected in discussion (1981b, 183–85).

Indeed, a positive that might be gleaned from the broadening of 'rhythm' into something of an umbrella term is the way in which temporal processing in music might accordingly be connected with aspects of more general experience. Hodges and Sebald provide a convincing overview of the ways in which a human sense of rhythm might be contextualised within a universe that exists in a 'state of vibration', contrasting recurring cosmic shifts with the oscillations of atomic particles outlined in String Theory (2011, 31–36): 'Although we cannot perceive vibrations at the macro- and microscopic scales, the periodicities we can perceive create a rhythmic environment. Seasons of the year, phases of the moon, and periods of daylight and dark follow in regular, timely patterns.' In a manner inkeeping with Epstein's idea of a 'biological clock', these natural patterns are mirrored by the human body, with processes like heart and breathing rates, brain waves, hormonal outputs and sleep cycles acting as readily observable illustrations of physiological rhythms (Hodges and Sebald 2011, 33).

The fundamental nature of these traits has lead to questions of whether some basic understandings of rhythm might be considered universal. Although conceding a decidedly Western perspective, Carolyn Drake and Daisy Bertrand have set out suggestions for cross-cultural research methods that might help to identify common processing characteristics (2003, 21–31). The traits they propose demonstrate leanings towards regularity of sequence, moderation of speed, and the perceived interrelation of durations and intervals, all features that might facilitate a rhythmic understanding that is capable of extending beyond what they describe as a 'memory buffer' of processing time:

One can imagine a temporal window gliding gradually through time, with new events arriving at one end and old events disappearing at the other due to decay. Thus only events occurring within a span of a few seconds would be accessible for processing at any one time, and only events occurring within this limited time window can be situated in relation to each other by the coding of relevant relational information. (2003, 23)

The ability to move beyond this basic limitation is just one of the ways in which humans prove themselves to be notably selective in issues of time organisation; Justin London outlines a common application of this facility within a musical context, asserting that often the responsibility lies with listeners to make an 'effort to project and maintain an established meter in passages that involve things like syncopation and hemiola' (2004, 25). Both physiologically and psychologically evolved constitutions allow people to be 'more time-independent than other living things', as Hodges and Sebald put it. This ability to register and respond to specific rhythmic patterns is usually demonstrated from an early age, principally through the increasingly complex processes of language acquisition and the movements and exchanges of social interaction (Hodges and Sebald 2011, 35). Also developed, albeit more gradually, are tactics for rhythmic adjustment in a variety of contexts, with people altering their own gestures to accord with the motions of others, a shift referred to by cognitive theorists as entrainment. As London explains:

Entrainment leads us to focus our attention to the most salient temporal locations for events; attention is, by its very nature, selective. We are almost always immersed in a rich and, from an information-processing perspective, noisy environment. There is much going on that commands our attention, but only some of the activity and information in our environment – including musical environments – is relevant to us at any give time. (2004, 14)

London continues by outlining this as a two-way exchange, with humans projecting order and sequence onto the surrounding environment as time passes. A long–acknowledged phenomenon he describes as subjective metricisation – where listeners perceive or impose their own rhythmic groupings upon regular aural patterns – serves to place further emphasis on the power listeners hold to modify and manipulate musical information:

In temporal attending, it is useful (and perhaps necessary) for the perceiver to establish a self-generated ground against which the continuing temporal patterns may be discerned. This attending strategy may originate in extrapolations from a local invariant or characteristic rhythmic figure that implies a particular metric schema, but the continuation of a meter is less dependent on subsequent musical invariants than on (a) the listener's ability to generate metric patterns (an ability

that may vary with age, talent, training, and enculturation), and (b) the lack of interference from subsequent musical stimuli (interference here meaning the emergence of a pattern of alternate metric cues). (2004, 14–15)

The inclination of listeners to attempt to break up long stretches of aural information into smaller comparable chunks as a means to comprehending larger musical structures is an idea that has been much discussed. The most influential theoretical research carried out in this regard is that by Fred Lerdahl and Ray Jackendoff, whose *A Generative Theory of Tonal Music* (1983) has provided a formal examination of grouping techniques. Distinct from metre, which constitutes divisions of beats or demarcations (1983, 18), grouping is a process by which a piece is divided up into temporal units according to aspects of its musical content. These units rarely overlap, and they fall within a recursive hierarchy of dominant and subordinate regions according to their size.²¹

Direct applications of this grouping theory are limited within the context of a cross-historical study such as this given Lerdahl and Jackendoff's specific focus upon more traditional, tonal music. In this sense, the manner in which they deal with musical form remains quite conventional; subject and counter subject groups, regular phrase lengths and established tonal mapping procedures continue to dictate many broader structural readings. However, all of this analytical detail is not allowed to supersede innate musical intuition, with the authors asserting that the grouping procedures they outline are not confined to musically experienced listeners (1983, 18), with facets of even the most nuanced operations remaining accessible when presented and affirmed in the right contexts: 'Unconscious processes of amazing complexity and subtlety are by no means incompatible with a conscious impression of great ease and fluidity, and with the sense that one learns these cognitive tasks by "just picking them up" from experience with sufficient environmental stimulation' (1983, 249). A particularly convincing recent affirmation of this kind of process is presented by London who notes the ability of listeners to retain and apply patterns of attention to varying levels of recurrence. He highlights musical experience as a notably dynamic phenomenon:

²¹ A helpful redaction of Lerdahl & Jackendoff's theory of grouping can also be found in West, Howell & Cross, 1985: 34–42.

We do not encounter 'generic 4/4' or even '4/4 at a tempo of quarter-note = 120' but a pattern of timing and dynamics that is particular to the piece, the performer, and the musical style. Therefore, to give an ecologically valid account of meter, we must move beyond a theory of tempo-metrical types to a metrical representation that involves particular timing relationships and their absolute values in a hierarchically related set of metric cycles. (2004, 159)

Developing this notion, he proposes the 'Many Metres Hypothesis': 'A listener's metric competence resides in her or his knowledge of a very large number of context-specific metrical timing patterns. The number and degree of individuation among these patterns increases with age, training, and degree of musical enculturation' (2004, 152–53).

The more empirical rooting of the 'generative theory' in cognitive science seems to have stood it in good stead with regard to subsequent empirical research. Although Ian Cross (1998) expressed reservations as to whether it provided a sufficient alternative to what he termed 'folk psychologies' regarding temporal perception, research into segmentation and grouping processes carried out by Eric Clarke and Carol Krumhansl (1990) has provided outcomes that not only support Lerdahl and Jackendoff's theory but demonstrate – through a study utilising music by Mozart and Stockhausen – its potential overlap with less conventional, posttonal music.

Christopher Hasty also seeks to account for a wider variety of compositional styles in his writing concerning metre as it is experienced by listeners (1981a, 1981b, 1984, 1986 and 1997). In seeking to re-establish a broader definition of metre and reaffirm its place within a variety of compositional styles, he explores its impact in terms of attention and anticipation, formulating a theory of projection:

Projective potential is the potential for a present event's duration to be reproduced for a successor. This potential is realised if and when there is a new beginning whose durational potential is determined by the now past first event. Projective potential is not the potential that there will be a successor, but rather the potential of a past and completed durational quantity being taken as especially relevant for the becoming of a present event. (Hasty 1997, 84)
The sheer breadth of this interpretation of metre allows a widening of the kind of musical gestures it can encompass, allowing greater flexibility with regard to phrase lengths:

As the phrase is being formed, primary constituents are open to future interpretation and may bear considerable ambiguities, particularly in the initial stages. The closure of the phrase is the fulfilment of certain of these possibilities at the expense of others. At the conclusion of the phrase the structural meaning of the constituents has become relatively fixed. To the extent the structure is closed, the parts no longer project future possibilities. Of course, closure is rarely so complete as to entirely deny the future. Normally, something is left unincorporated which can engender a new phrase, or there may be residual ambiguities which are resolved by succeeding phrases. (Hasty 1984, 188)

Affect and attention

Beyond the practical and social world of clock ordered events there is the inner world [...] the musical world [...] a flux where events happen at a multiplicity of unit speeds, where the units themselves are subject to distortions, and where uncounted episodes, unit-free durations, are a large part of our experience. Our sense of time comes closest to clock time when we are experiencing a regular succession of perceptually equal units. When the units become very, very long the experience becomes that of unit-free duration. [...] When the units become very short they blur into texture. (Erickson 1963, 177)

Undertaking any kind of scientific examination of the relationship between functional clock time and musical time is no easy feat. Attempted comparison between a quantifiable absolute and a wholly subjective experience in empirical terms is bound to prove somewhat futile. Apart from anything else, finding as close to an objective and standardised means of expression as possible returns us to the problems of articulatory variety discussed in Chapter Three (Directing Time). Indeed, the approach of composer Robert Erickson quoted above serves as an apt illustration of the partially estranged temporality that music is often regarded as inhabiting, at least for its participants; here, musical time seemingly threatens to acquire a kind of perceptual 'autonomy' with regard to the clock-defined absolutes

of ordinary functional time. Musical learning and experience may even enable subjects to develop an independent 'clock', with research by Deborah Sheldon (1994) pointing to the possibility of an 'internalised steady beat' acting as the yardstick by which tempo changes are comprehended and implemented.

What can most certainly be gleaned from many studies that attempt to correlate listeners' expectations and intuitions of musical durations with clock timings is the sheer variety of factors that can contribute to the extreme variation between these two temporal modes. As Henry Orlov outlines, 'if the 'biological clock' does not always tell the right time, it is because its readings are often obstructed and distorted in some way by physiological and psychological reactions and processes of different intensity and colouring, of which pleasure and displeasure, satisfaction and dissatisfaction are the first and most usual' (1979, 375). Emotions have been shown to have a profound bearing upon the way in which time and durations in particular are registered (see Droit-Volet and Meck 2007, and Angrilli, Cherubini, Pavese and Manfredini 1997), and this extends to the perceived affect conveyed by the music itself.²²

Exploring further links between emotion, tonality and timing, Naomi Ziv and Elad Omer's study of duration estimations in tonal and atonal music (2010) considers the additional complexities of the differences between experienced and remembered time. Some participants listening to keyboard works by Bach and Schoenberg were asked in advance to judge the amount of time passing (the prospective paradigm), whilst others were only asked to provide a durational estimate after the fact (the retrospective paradigm). As well as providing further evidence of the profound role emotions play in time perception, it was found that 'the more pleasant and consonant a piece sounds, the shorter it is perceived in the prospective paradigm, and the longer it seems in the retrospective paradigm' (2010, 192). Such results raise questions of attentiveness and its effect upon impressions of time. Recent research emphasises its significance, in particular with regard to processing duration; Scott Brown's review of research concerning this relationship (2010) finds attention – on both conscious and

²² For example, a study carried out by Maria Panagiotidi and Stavroula Samartzi (2010) demonstrates that, while musical training can help to imbue a more objective sense of passing clock time, it is commonplace for all listeners to underestimate the duration of a 'happy' piece (quick in tempo, major in key) and to overestimate that of a 'sad' piece (slower, minor in key).

subconscious levels – to be a requirement for more accurate temporal judgments.²³ Emphasis on the necessity of attentive listening inevitably prompts query as to the effect of altered states of consciousness upon the processing of musical time, in particular direct manipulations of subject perception such as those induced by drugs.²⁴ While such physiological and neurological issues are not a primary concern here, it is helpful to take note of a contextualisation offered by Richard Elliott:

If consciousness studies has shown an interest in the effects of drug-induced altered states of consciousness on music, we might ask why such altered states are mostly seen to concern transformations of the immediate perception of individuals, understood from the perspective of chemical changes in their brains. It is equally the case that we never hear any piece of music the same way twice, that we always bring something new and different to it, and that these differences can arise as much from to the impact of history, culture, and politics as of mind-altering drugs. (2011, 336–37)

So much scholarly energy has been directed towards attention levels that it has been suggested that other qualities have been underplayed by comparison. When examining durations people had assigned to stimuli, David Eagleman (2010) found predictability and magnitude of neural response to be especially important factors. However, even aspects of directed predication can play into the effect of attention upon time. In his survey of studies concerned with 'prior entry' – the phenomenon of a forthcoming stimulus seeming to be perceived sooner in time if it is anticipated than if it is not – Charles Spence (2010) finds that accumulated empirical evidence sits firmly in favour of the theory. Once stimuli have commenced, however, subjects more often experience the opposite effect, with focussed attention upon events causing them to seem longer in duration. In

²³ A large body of research has been undertaken concerning the use of music as a background element in commercial contexts and its effect upon consumers. Given that music in these studies is utilised as a peripheral presence rather than a point of focus, they do not warrant detailed exploration here. However, a number of publications do explore aspects of duration experience and estimation with regard to the tempo, content and familiarity of background music: Bailey and Areni, 2006; Kellaris and Kent, 1992; Kellaris and Mantel, 1996; Caldwell and Hibbert, 1999; and Oakes, 2003.

²⁴ Two useful and especially accessible recent explorations of the effect of drug-induced altered states upon musical consciousness can be found in Music and Consciousness: Philosophical, Psychological, and Cultural Perspectives ed. Clarke & Clarke, Fachner, 2011: 263–76; and Shanon, 2011: 281–92

examining this temporal expansion, Peter Ulric Tse (2010) has questioned the traditional model of distraction as causing a proportion of temporal information units to be missed, whilst attention causes less to be missed. He suggests that listeners assume a more engaged role in this process through evidence that focus induced by an unexpected event in fact accelerates information processing:

More units are detected during the event and it therefore seems to last longer, but this occurs because there are more units detected, not because fewer are missed. The previous hypothesis assumed that attention affected sensitivity, leading to fewer missed cues in a stream of constant rate. Alternatively, it could be that sensitivity remains unchanged by attention but the rate of information processing increases. These interpretations are not mutually exclusive. Both could contribute to distortions in perceived duration and both are compatible with the notion of a counter that measures the amount of information processed in order to calculate the duration of perceived events. For either reason, an attended stimulus may appear to last longer than a less attended stimulus that lasts the same objective duration. (2010, 146)

Such notions of attention and distraction inform questions as to whether people are capable of judging multiple durations simultaneously. Although research querying the ability of subjects to time overlapping stimuli has not ruled out the potential for the employment of more than one 'clock', it has highlighted notable inclinations: that greater numbers of parallel stimuli cause increasing disruption in duration judgment (Brown and West 1990); and that people more often utilise a single time source as a reference point by which to gauge multiple durations (Rijn and Taatgen 2008). That listeners might seek to organise and simplify an array of stimuli according to an audible lowest common denominator comes as no surprise. However, this singular 'pacemaker' approach is more complex than such an account would suggest. In her study concerned with time estimation in music, Marilyn Boltz is keen to emphasise the effect of different perspectives of attention upon duration perception (Boltz 1991). Acknowledging a common hierarchy of metre, phrase length and rhythm, she asserts that the processing of these units depends crucially upon whether the material they contain aligns or avoids expectation; broader structural coherence and predictability allows the attention of listeners to move freely between large and small units, whilst unpredictable, incoherent music does not so readily facilitate such shifts. Moreover, diversions from expectation within phrase lengths – such as disruptive accent placement, or unexpected changes in melodic contour – can skew perceived unit durations. Boltz contrasts melodies that conclude on the tonic with those that do not, with the latter typically overestimated in length (1991, 425–27).

Diversions and subversions

It is particularly interesting that Boltz places emphasis upon the variety of structural levels that can be identified in pieces of music and the ways in which attentional perspective can move between these levels. With regard to the perception of time, both music and audience prove decidedly complex. Focus can be drawn towards different facets of compositions on varying planes of detail, and it is this process of shifting attention between musical characteristics that can produce changes in how temporality is processed. In the sense that particular musical traits can elicit certain kinds of reactions from listeners, it might be perceived that a great deal of power lies in the hands of composers, leaving them with the ability not only to organise musical time in a more linear-minded sense but further to manipulate time for their audiences in a rather more non-linear fashion. Robert Newell's assertion that 'whoever makes music also moulds time' proves apt in this regard (1976, 147).

Beyond patterns of rhythm, controlled uses of timbre, pitch and tonality add further dimensions to audible time. Robert Erickson rightly acknowledges the lessened significance of timbre in much music of the eighteenth and nineteenth centuries, where melodic writing is often notably faster and attention thus focussed on pitch (1975, 82–85). However, there can be little doubt that the timbral focus in the often more protracted gestures of more recent music offers a more immersive time. Just as unexpected events incite accelerated reception of temporal information units, a distinctive timbral effect might prompt a similar heightened mode of listening in which moments perceptually expand; within the context of this study, movements from Hans Abrahamsen's *Schnee* might be considered in these terms. Pitch can provide similar manipulations. Diana Deutsch (1980) provides an account of how parallel movement between two separate groupings of pitch class can blur the rhythm and order of their perceived relationships. Firmino, Bueno and Bigand (2009) extend this disruptive effect of pitch movement to tonality, using their research to demonstrate the temporal acceleration created by music that involves tonal movement to more distant, unrelated keys.

Of course, generalisation regarding the temporal potential of these musical features is of only limited use given the effect of such features is dependent on the context in which they are presented. Indeed, the interdependence between these characteristics leads Robert Cutietta (1993) to question whether the elements that form the basis of much music education (pitch, rhythm, form, dynamics and timbre) are in fact reflective of a categorisation process that does not correspond with how pieces are heard. Indeed, his response is to suggest alternative perception-based elements: three that deal with aspects of musical movement (motion, energy, flow), and two that constitute less systematic reinventions of texture and timbre (fabric and colour). It is no coincidence that these are terms far more readily suited to addressing more recent music. Those describing musical movement in particular feature heavily in this study. Without doubt, they are more aural-centric, holistically minded analytical themes that might allow an approach to musical form that does not rely quite so heavily upon long-held hierarchies. Indeed, it may well help to provide a more dynamic alternative than simply mapping a different set of hierarchies onto more progressive music, as Michel Imberty suggests in addressing the perception of atonal works (1993).

Of course, even the terms Cutietta suggests constitute necessary distillations of a far more complex and integrated aural reality, one that does not afford such separations. As Barbara Barry puts it, 'in analytic time an objective technique is applied to the work to identify objects for attention, whereas in experiential time it is the musical work as performance which requires recognition of time as organised motion and ongoing progress' (1990, 105). Barry's own approach to musical time revolves around her 'tempo/density theory' derived from a particular understanding, that 'the speed at which time passes is the speed at which information is processed' (1990, 165); in essence, the fluctuating spacing – or density – of musical events in the course of a composition determines its perceived temporality and duration. Although her applications of the theory are

mostly confined to works that echo or engage with more traditional structural values, the reasoning she offers would appear to resonate with both cognitive theory and, potentially, more recent music: 'higher density musical information fills a longer experiential time than more normative information played at the same tempo. It requires more processing 'effort' because it has a greater uncertainty (less predictability, which would reduce complexity) and so is less easily assimilated to standards as reference points of organisation' (1990, 167).

It is more recent, 'post-tonal' music that Robert Adlington specifically seeks to account for (1997b and 2003). He establishes a useful branch of questioning with regard to received temporal notions, highlighting their failure to offer convincing treatments for certain musical experiences. Indeed, highlighting its reliance upon cultural constructs, he points to a lack of internal coherence in most common conceptions: 'It would appear that no social concept of time could ever adequately contain experience. Rather, what we conventionally refer to as an individual's "temporal experience" is the result of personal idiosyncrasies assemblages of, and elaborations upon, diverging constructed concepts of time' (1997, 21-22). In unpacking these conglomerations of language and metaphor, Adlington seeks out solid theoretical ground that might befit the consideration of new music. A major obstacle he confronts is that of perceived motion in music, a broadly accepted notion that, he claims, limits the ways in which musical experiences might be described. Studies like those by Epstein and Barry, he asserts, are preoccupied with intuited motion as an essential facet of musical temporality, one often tied to more traditional goal-oriented perspectives on tonality and metrical structure (Adlington, 1997b, 82-88). In highlighting the insufficiencies of such descriptions, Adlington points to passages in more formally conventional pieces - Schoenberg's Piano Concerto and Poulenc's Sextet - that might be experienced as temporally 'static' as a *consequence* of their metrical conformity rather than simply in spite of it (1997b, 90).

Taking this idea of stasis further with more recent examples by Cage and Reich, Adlington draws upon Jonathan Kramer's description of 'vertical time' to advocate a different mode of understanding for much new music; rather than claiming post-tonal composition to represent any kind of 'withdrawal' from standard temporality (Adlington 1997b, 22), he instead proposes a 'non-spatial'

115

interpretation of time that sidesteps more common frameworks of linear progress: 'Attention is instead absorbed by the contents of working memory – sifting and sorting in an effort to locate dregs of structure, pattern, or order' (1997b, 103–11). The implications of this interpretation for comprehension of musical forms over longer periods of time will be discussed further in the course of the next theoretical interlude, chapter seven.

Adlington's scepticism proves particularly useful in identifying the shortcomings of temporal conceptions that are often taken for granted. His interrogative manner towards these perceptual modes paves the way for accounts of previously neglected or unexplained musical experiences. However, his approach in fact proves most convincing in the course of his closing examination of Ligeti's Violin Concerto in which some of the more radical attitudes towards time he has proposed are integrated with more familiar, linear-minded ideas (1997b, 196–215). Focusing upon different aspects of the first movement of the concerto, Adlington conveys best the effect of non-spatialised time when contrasting it with expectations of linearity. These expectations are affirmed and subsequently denied through the composer's careful deployment of isorhythms and 'glimpses' of organised pulse that briefly arouse longer-term anticipations – 'evoke the listener's temporality', as he puts it – before frustrating them once more through their renewed absence (1997b, 207). The audible terms in which these distinct ideas about time intermingle proves especially compelling:

At the outset of the section, Ligeti's grouped rhythm connotes a 'structure' by appearing, initially, to *measure*. Yet this compliance with spatio-linearity is invoked, only to be gradually and remorselessly withdrawn as the section proceeds. The music very evidently continues, but we are explicitly deprived the usual linear means of conceptualizing it. Brought face to face with the inadequacy of these means, a listener is challenged instead to formulate alternative ways of understanding their continuing experience of change. (1997b, 203–4)

This thesis seeks to emphasise that kind of interplay between temporal modes as a point of analytical interchange between old and new styles of music; although compositional means may differ, the end result is a perceptual variety that serves to underline the expressive potential of the pieces. To this end, it is the work of Jonathan Kramer that exerts the greatest influence. His embrace of the

often seemingly paradoxical variety of musical 'times' available to listeners offers an inclusive outlook that might benefit an analytical approach. In particular, he is careful to try to distinguish between different 'times' that might often be considered as one, highlighting nuances that might help to explain very particular perceptual phenomena. As discussed earlier in this chapter, his broader contrast between linear and non-linear time is subject to numerous further qualifications and extensions. Linearity, for example, might take on a plural character, with the music aurally travelling towards more than one 'goal' ('multiply-directed linear time') thanks to elements of formal disruption that offset perceived singularity (J. Kramer 1988, 46–49). Even more singular expressions of linearity can be subject to re-orderings and discontinuities that create effects of multiplicity, not least in relation to beginnings and endings of various kinds. Kramer utilises the first movement of Beethoven's String Quartet in F, Op. 135, to demonstrate the ways in which the deployment of particular musical gestures and statements - a particularly emphatic 'final' cadence in the 10th bar, for example - can give the impression of displaced directions, beginnings and endings ('gestural time') and thus raise the idea of a 'multiple temporal continuum' (1988, 150–61).

Kramer also explores a variety of ways in which direction can be absent from musical time. Making reference to works by Bach, Chopin and Schumann, he observes that pieces can paradoxically convey a sense of motion *without* also conveying direction thanks to compositional elements that remain constant throughout: linearity and motion do not always equate to direction in perceptual terms. Two further non-linear musical structures also offer subversions of teleological form. The first – 'moment form' – constitutes a subversion of typical continuities through the employment of discontinuous musical events, disrupting standard notions of linearity in favour of a succession of self-contained occurrences (J. Kramer 1978 and 1988, 201–20). The second is the antihierarchical 'vertical time', in which a dispensation of phrase structuring can create a play upon aspects of perceived stasis and infinity that in turn enables an immersive temporal form:

The result is a single present stretched out into an enormous duration, a potentially infinite 'now' that nonetheless feels like an instant ... A vertically conceived piece, then, does not exhibit large-scale closure. It does not begin but

117

merely starts. It does not build to a climax, does not purposefully set up internal expectations, does not seek to fulfill any expectations that might arise accidentally, does not build or release tension, and does not end but simply ceases. (1988, 54–55)

It is another kind of temporal paradox that will form the starting point of the case study that now follows. Compositions by Hans Abrahamsen and Johannes Brahms will be examined on account of the ways in which they are able to convey sensations of motion and stasis simultaneously; whereas focus has previously fallen on particular passages, emphasis here will instead fall upon some of the implications that this perceptual synthesis might have for the long-term structural unfolding of both works. As progressive as this seemingly contradictory coexistence of dynamic and static temporal modes might appear, it might also be considered to arise from a thematic approach to material developed primarily in the nineteenth century, the principle of 'developing variation'.

Six

Dynamic Continuities

Hans Abrahamsen & Johannes Brahms

Developing variation

On the face of it, Schoenberg's 1947 essay 'Brahms the Progressive' (1975b) – adapted from a 1933 radio talk – was prompted by musicological concerns. For many at the time, it was more than a matter of chronological fact that Brahms was considered a nineteenth-century composer. His seemed an aesthetic with little perceivable distance left to run; few saw in his music anything on a par with the uncompromising futurism of Wagner, the enduring purity of Mozart, or the 'forever contemporary' Beethoven – all figures whose music was already 'escaping' its own time in popular criticism.

The label of conservatism had at no point been entirely unanimous. In addition to Eduard Hanslick's adoption of Brahms as a standard-bearer for his aesthetic notions of musical beauty (Hanslick 1957, 47–70), Nicole Grimes has recently observed that a trio of writers for the *Allgemeine musikalische Zeitung* and the *Neue Zeitschrift für Musik* in the 1860s and 1870s – Hermann Deiters, Selmar Bagge and Adolf Schubring – presented a 'significant foreshadowing of Schoenberg's view' (Grimes 2012, 132). Indeed, even following the composer's death, some sought to counter prevailing views; writing in 1929, J.H. Elliot sought to rail against 'a tendency observable in certain aspects of current criticism to deny the existence of a complete and all-round significance in the symphonic music of Brahms' (Elliot 1929, 554).

Nevertheless, Schoenberg's article offered, as its title indicates, a muchneeded reappraisal of a figurehead of the Austro-German Romantic tradition whose music was being written off more and more frequently by scholars as antiquated. Promotion from a figure conventionally regarded at the time as one of the most progressive in Western art music may well have helped to facilitate what Michael Musgrave described as 'a period when it is no longer necessary to play the advocate to Brahms' (1990, 136). In particular, Peter Gay and J. Peter Burkholder have both made compelling cases for re-evaluations, Gay with regard to the detrimental effects of cultural overfamiliarity on our reception (1977), Burkholder in considering the music of the twentieth century: 'He has provided the model for future generations of what a composer is, what a composer does, why a composer does it, what is of value in music, and how a composer is to succeed.... In this respect, the "music of the future" has belonged not to Wagner but to Brahms.' (1984, 81).

Threaded through 'Brahms the Progressive' was a thematic principle that Schoenberg had been expounding for some time, that of 'developing variation': the basic trace of a motif retained throughout a process of 'endless reshaping' (Schoenberg 1975, 129). The specifics of the theory have long been the subject of debate. Grimes notes the first appearance of the concept in a 1917 manuscript: 'Coherence, Counterpoint, Instrumentation, Instruction in Form' (Schoenberg, 1994). From the text, she delineates six types of musical change that can contribute to the process: rhythmic, intervallic, harmonic, phrase, instrumentation and dynamic. Writing before the publication of that text, Walter Frisch (1984, 1–2) finds a particularly helpful explanation in a much later essay, 'Bach' of 1950. Here, Schoenberg moves beyond the obviously musical, alluding to the more conceptual underpinning of the principle; developing variation allows the 'idea' of the piece to be 'elaborated', producing 'all the thematic formulations which provide for fluency, contrasts, variety, logic and unity on the one hand, and character, mood, expression, and every needed differentiation, on the other hand' (Schoenberg 1975, 397).²⁵

Although writing about variation form more generally, Jeffery Swinkin eloquently outlines a way in which such attitudes towards musical material can translate into broader aesthetic outlooks:

The implicit corollary of the belief that Classical variations are essentially decorative is that the theme in a Classical set is an autonomous entity with fixed melodic and harmonic components, susceptible to embellishment but not reinterpretation... By contrast, anyone who granted variations greater interpretative potency would probably regard the theme not as an *a priori* entity

²⁵ For a detailed examination of the wider impact of Brahms's music upon Schoenberg's thought, see Musgrave 1979.

but as something whose identity is contingent upon the processes to which it is subjected. (2012, 37)

However, it is Frisch himself who provides the most persuasive interpretation of the notion with regard to broader musical structure:

Schoenberg values developing variation as a compositional principle because it can prevent obvious, monotonous, repetition ... And Brahms's music stands as the most advanced manifestation of this principle in the common-practice era, for Brahms develops or varies his motives almost at once, dispensing with small-scale rhythmic or metrical symmetry and thereby creating genuine musical prose. (1984, 9)

Of course, Schoenberg had a dual agenda. Beyond his concerns for the reception of Brahms, he was also busy engineering his own place in musical history. In portraying a progressive artistic bloodline flowing from J.S. Bach through Haydn, Mozart, Beethoven and Brahms, he was carefully establishing his own aesthetic inheritance. Overtly, Brahms's music was being promoted through re-evaluation, but this reframing process was also the product of a covert motive, paving the way for Schoenberg's own particular brand of radical serialism. Indeed, Frisch's descriptions of the 'inversions and combinations ... augmentations and displacements' (1984, 9) that comprise developing variation fall tellingly close to the lexicon of twelve-tone composition.

The significance of Brahms being utilised in this way should not be underestimated. After all, Schoenberg was calling upon his music to help precipitate – perhaps even prescribe – one of the most significant sea-changes in Western musical history, through a radical rethinking of tonality and its function within – and indeed its bearing upon – musical form. It certainly provides a useful retort to accusations of artistic conservatism. But for the purposes of this study, it might in turn be of use to adapt Schoenberg's concept of developing variation, namely by moving beyond specific musical characteristics to focus upon its fundamental aural effect. It could be concluded that, at its core, developing variation is a treatment of time. Presenting a blend of repetition and change allows equilibrium of focus to be established: past events are directly recalled to mind, but are placed within the context of audible alterations that emphasise the passing of time. Reminiscence is grounded within a palpably future-bound present. A

121

temporal paradox of simultaneous dynamism and stasis is set in motion: the aural sensation is at once both linear and circular. Beyond simply taking the shape of a compositional approach to melody, developing variation becomes a force of structural continuity in the heard form of the music. Aspects of this perceptual effect will be discussed in the course of the case study that follows, with the apparent interplay between movement and stillness that it facilitates forming a point of focus.

Multiple forms – Abrahamsen

Tempo can be fast or slow and perhaps life has the same thing [...]. We can be living seemingly quickly, but under the surface something moves more gradually. Sometimes we have to acknowledge this and wait it out, like living through the winter. (Molleson 2015)

Viewing the notion of developing variation in a broader, temporal light, opens the floor to more recent music. Being at its heart a juxtaposition of change and retention, the continuity the concept requires can be achieved through a variety of means beyond the melodic. The work of Danish composer Hans Abrahamsen (b. 1952) acts as an intriguing case in point, not least given that he was aligned early in his career with the 'New Simplicity' of his compatriots in the 1960s, a pointed response to the 'new complexity' serialism advocated by many in central Europe (Beyer 2016). Although the composer distances his current work from the reactionary nature of those initial pieces (Molleson 2015), he has cultivated subsequently a deeply personal style in which, as Anders Beyer observes, 'a modernist stringency and economy are incorporated into an individual musical universe' (Beyer 2016). In broader terms, his approach might well be considered 'post-avant-garde' in the truest sense, having stepped out of a style characterised by extreme 'newness' (itself a counter to an equally radical trend) to embrace a range of historical influences and preoccupations. Indeed, formal rigour still features prominently on Abrahamsen's agenda, as he himself outlines: 'My imagination works well within a fixed structure [...]. The more stringent it is, the

more freedom I have to go down into detail. Form and freedom: perhaps much of my music has been an attempt to bring the two worlds together' (Beyer 2016).

In an interview for the Krakow-based Sacrum Profanum Festival in September 2010, Abrahamsen described his own music in terms highly relevant to the perceptual issues that the developing variation concept presents (Abrahamsen 2010):

Perhaps you can compare music to an author. There are authors that are making long novels. But of course a novel can also have different lengths. Some are only 120 pages and then some are a thousand pages. And perhaps I as a composer am a kind like a poem composer. I'm writing short pieces – like a poem – but then they can be put together forming a kind of cycle. (2010)

Here, in outlining his approach, the composer would seem to point towards the very temporal paradox that developing variation generates. Dynamism is provided by the motion from one short piece – or 'poem' – to the next. However, their relevance to one another generates a palpable coherence; remaining, or indeed cycling, within one broad musical 'subject matter' creates a sense of containment, or perhaps even stasis.

Abrahamsen's *Schnee* ('Snow') is an apt reflection of these compositional concerns. Completed in 2008 for the Wittener Tage für neue Kammermusik in Germany, it is written for a nine-piece ensemble divided into three equal groups: strings (violin, viola, and cello), wind (piccolo/flute/alto flute, E-flat/B-flat/bass clarinet, and oboe/cor anglais), and percussion (two pianos, and one performer utilising tam-tam, schellen, and paper). Lasting just under one hour, the work is built up of canons. The composer recalls that he had become fascinated with the genre while arranging works by J.S. Bach in the 1990s. Struck by the idea of taking their repetition to extremes, and by the paradoxes mirrored in the pictures of the twentieth-century Dutch artist M.C. Escher, Abrahamsen began to conceive music in what he describes as a 'new animated world of time in circulation': 'Depending on how one looks at these canons, the music stands still, or moves forwards or backwards. As for my own work, a further idea crystallised: to write a piece that consists of canonic motion, and explores the universe of time' (Abrahamsen 2009).

With regard to the title of the work, its composer readily acknowledges a long-held fascination with winter. His interest in snow lies primarily in its effects:

123

Movement	Instrumentation	Duration
Canon 1a Ruhig aber beweglich	Strings / piano 1	8'43
Canon 1b Fast immer zart und still	Tutti	9'12
Canon 2a Lustig speilend, aber nicht zu lustig, immer ein bisschen melancholisch	Woodwinds / piano 2	6'57
Intermezzo 1	Strings / woodwind	2'01
Canon 2b Lustig speilend, aber nicht zu lustig, immer ein bisschen melancholisch	Tutti	7'24
Canon 3a Sehr langsam, schleppend und mit Trübsinn (im Tempo des 'Tai Chi')	Strings / woodwind	6'53
Canon 3b Sehr langsam, schleppend und mit Trübsinn (im Tempo des 'Tai Chi')	Pianos / percussion	7'20
Intermezzo 2	Strings	1'57
Canon 4a (minore) (Hommage à WAM) Stürmich, unruhig und nervös	Tutti	2'34
Canon 4b (maggiore) Stürmich, unruhig und nervös	Tutti	2'38
Intermezzo 3	Cello / piccolo / clarinet	0'41
Canon 5a (rectus) Einfach und kindlich	Violin / viola / pianos / piccolo / clarinet	1'07
Canon 5b (inversus) Einfach und kindlich	Violin / viola / pianos / piccolo / clarinet	1'15

Fig. 6.1: Schnee, canonic parings across the formal scheme

'Snow can transform a familiar landscape in a couple of minutes and it dampens all the usual noises. It allows us to imagine something different. Seasons are very basic in our lives and winter is a time of slow transition' (Molleson 2015). Whilst snow offers new ways of viewing upon familiar scenes, the canons of *Schnee* incite fresh perspectives on the same sets of material. The ten canons that make up the

Intermezzo	Detuning sequence
	 Cello plays seventh partial harmonic on fourth string (already tuned scordatura from a C-natural down to a G from the start of the work), which provides F-natural lowered by 1/6th;
1	 Cor anglais flattens its concert F-natural accordingly and then plays its newly flattened concert A-natural;
	 Strings, alto flute and bass clarinet adjust to the flattened A-natural; The string trio remains, detuning by a 1/6th pairs of strings in descending fifths before closing with perfect fifth of G-natural and D-natural atop an octave G bass in the cello, gradually fading out.
2	 Cello again plays seventh partial harmonic on fourth string (G now lowered by 1/6th), which provides F-natural lowered by a further 1/6th; Violin and viola adjust their D and A strings downward by a further 1/6th (now 2/6^{ths} flat); Violin and viola then adjust their remaining strings downward in accordance together in a descending pattern of open-stringed fifths; Violin and viola proceed to check their new tunings using octave harmonics on each paring of strings, now in an ascending pattern, to a fade-out.
3	 Cello plays octave harmonic double-stop of D and A strings (still only 1/6th detuned from first intermezzo); Piccolo and E-flat clarinet adjust their tunings accordingly; All three instruments fade out together.

Fig. 6.2: Schnee, detuning process across the three intermezzi

work are arranged in five successive pairs, with short 'haiku-like' (Abrahamsen 2009) musical ideas developed across each coupling (see Figure 6.1).²⁶

However, this surface unity of canon pairings does not proceed uninterrupted. Interposed throughout the form are three brief intermezzi, disrupting the series of couplings. In each intermezzo, different instruments are detuned by microtones ahead of the canons that follow. Rather than simply indicating a pause between movements for the detuning to take place, Abrahamsen ensures the continuity of the whole work by carefully engineering the process of each intermezzo, utilising the existing harmonic sonorities of the instruments to precipitate the detuning (see Figure 6.2). In this way, the detuning process becomes part of the architecture of the work, each intermezzo showcasing a particularly effective set of sonorities and minute harmonic shifts. The effect is striking, with the short movements offering a stark contrast with the surrounding

²⁶ Durations taken from recording listed in primary resource list (Ensemble Recherche. Music Edition, Winter & Winter: 910 159–2).

Canons 5a & 5b	2,		4b I3 C5a C5b	
Intermezzo 3	1'	mings	2 C4a C	pective
Canons 4a & 4b	6,	rith approximate ti	C3b	ing structure' pers
Intermezzo 2	2,	perspective w	C3a	g to 'diminish mezzo)
Canon 2b, Canons 3a & 3b	21'	al scheme in 'four movement' _l	C2a 11 C2b	l scheme segmented according (C = Canon, I = Interi
Intermezzo 1	2,	: <i>Schnee</i> , form		<i>Schnee</i> , forma
Canons 1a & 1b, Canon 2a	25'	Fig. 6.3	Cla Cl	Fig. 6.4:

										$\left \right $																			-			
Bars	-	9	7 25	33	41	49	57	65	73	81 8	39 9	1 1	05 1	13 1	21 1	[29]	137	145]	153	161	169	177	185	193	201	209	217	225	233	241	253	261-311
Cycles:	1	2 3	4	S	9	2	8	6	10	11 1	12 1	3 1	4	[5]	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	'Coda'
Frisch							Expc	ositio	u									De	evelop	ment					Fre	e/Par	tial Re	ecapit	ulatio	L		Coda
Pascall	1 st su	ıbjec	بب			Br	ridge					2	^{1d} Sul	oject	R¢	ecap		Ď	evelop	ment		L	rans		Reca	pitula	tion r	esum	ed		c) c)	out final ycle
Osmond- Smith				3/	/2 - I	3 min	or				3,	/2	En	najor			E min	or wit	h initi	al ther	ne rec	ap.		Form	ial rec	ap.	č	ontinu	lation		ດງ Spun-	out final ycle
Rostand					1 st ep	isode	a)					2 ⁿ	^d Epi	sode			R¢	sturn t	to ope	ning te	empo		-		Retu	rn of o	penir	ng the	me		32 3	33 34 35

Fig. 6.5: Fourth Symphony, fourth movement, outline of cyclical form displaying structural divisions drawn by Frisch (2003, 130-40), Pascall (1989, 233-245), Rostand (1955, 291-299), and Osmond-Smith (1983, 147-65).

Dynamic Continuities

canons through an audible lack of rhythmic definition and a wash of subtly shifting harmonic sequences. Perhaps more profoundly, their placement throughout the work allows them to act as aural dividers, suggesting a new overall form of the four larger 'movements' (see Figure 6.3).

In addition, there is a further, more gradual formal process at play here that can be deduced from an overview: the decreasing length of the canon pairings and, by extension, the four 'movement' groupings. Abrahamsen candidly admits that when he envisaged the full work following the composition of the first canon pairings, he had a more obviously staggered shortening process in mind:

The first pair lasts two times nine minutes, so I conceived the following pairs in terms of 2 times seven minutes, 2 times five minutes, 2 times three minutes, and 2 times one minute. Finally, time runs out, just as that of our lives runs ever faster to its end. This was my initial vision, and the temporal idea; the execution turning out a bit differently, and *Canons 3a* and *3b* in particular got longer. (2009, 3)

Even though the composer's original plans for a gradually diminishing structure may not have worked out in such detail, the effect remains a notable part of the performance (see Figure 6.4). Indeed, the whole work is lent an increasingly palpable sense of onward motion towards its close thanks to this audible process of structural compression and reduction - the broader transience Abrahamsen speaks of is evoked by the formal playing out of the music. Even within the context of a formal overview of Schnee, at least three different formal gestures can be observed: five pairings of canons, four longer 'movements' delineated by three interludes, and one gradually diminishing series. Aspects of each can be perceived in the course of the piece, with different points of unity and division moving between the background and foreground of awareness at different times. It is the interactions between these contrasting structural interpretations that emerge as the work unfolds that will form the focus of this case study. A parallel analysis of the finale of Brahms' Fourth Symphony will be presented in tandem; here, comparably distinct formal readings that arise as the piece develops will be examined.

Innovation within tradition - Brahms

The symphonies of Brahms might not appear the most likely candidates for a comparison with Abrahamsen's multi-faceted structure. The intricacies and logistical complexities of the genre itself do not lend themselves readily towards formal experimentation, and, at a glance, Brahms's four contributions do little to exempt themselves; each follows the four-movement structure that had remained the norm for the best part of a century, with inner constructions deviating relatively little from post-Classical conventions. His symphonies emerged more or less in pairs. While the First Symphony endured a gestation period of at least 15 years before it was finally completed in 1876, its successor followed with relative ease during the summer of the following year. Although a gap of seven years ensued before he would put pen to paper on the Third – written entirely within the summer of 1883 - his compositional choices for the Fourth were already well underway; in January 1882, he discussed with Hans von Bülow and Siegfried Ochs the potential for utilising a chaconne by J.S. Bach as the basis for a symphony movement, expressing his own reservations in the process: 'But it is too clumsy, too straightforward. One must alter it chromatically in some way' (Knapp 1989, 4). The work came to fruition across two consecutive summers, in 1884 and 1885, and was premièred in Meiningen under the composer's baton on 25 October 1885 (Bozarth and Frisch, Grove).

On its surface, the Fourth Symphony might not seem like particularly ideal ammunition against accusations of conservatism. A sonata-form first movement exploits recurring triadic relationships in its melodic and harmonic content; a slow movement – set in the Phrygian mode – adapts that sonata form through its removal of the development section; a scherzo also employs a variant on sonata form, combining various compressions with allusions to older minuet and trio constructions. Indeed, it is only the finale – upon which this chapter will focus – that departs from expectations. Here, Brahms utilises a chaconne ostinato from the final movement of J.S. Bach's Lutheren church cantata 'Nach dir, Herr, verlanget mich', BWV 150, to set in motion a cyclic seventeenth-century passacaglia form – a bold yet seemingly antiquated move.

Music built upon numerous levels of repetition may well seem to be the least likely method of producing a 'progressive' symphony. If Brahms was in any way looking to dismiss suspicions of a desire simply to recycle and perpetuate the music of the past, this description would seem to be one of the least efficient ways of going about it. But then such a summary could never give the full picture. What can be *heard* is a subversive orchestral narrative, expectations repeatedly aroused, averted and denied. The progressive character of the Fourth Symphony is not a consequence of boundaries broken and traditions defied, but rather of a quiet determination to employ the parameters of the past as a framework for a dynamic, innovative musical drama.

The first movement glides into view as if unannounced, the violins slipping effortlessly into a sinuous theme that traces a pattern of 'descending' thirds (incorporating upwards displacements); the underpinning accompaniment provides the continuity of a self-perpetuating harmonic cycle. Versions of these sequences underpin the long-term thematic and tonal structure of not only the first movement but also the second; David Osmond-Smith makes a compelling case for the harmonic path of the *Andante moderato* providing an inverted continuation of the modulations that characterise the first movement, observing a 'series of third-based relations that once more imply an upward rising chain' (1983, 156–57). The movement is heralded by an undulating horn call; although the motif itself appears in the Phrygian mode suggesting something akin to C major, the extended subject that follows from it – and the movement at large – is set in E major.

This tonal duality is only enhanced further by the scherzo, set in C-major proper – purportedly, at least; the movement holds particular significance for Kofi Agawu, not least on account of the notable lack of 'tonal desire' it displays towards its apparent 'home' (1999, 150). Its whirlwind figures seem regularly to threaten to spin out of control, their pulsing drive and ever-shifting rhythmic accentuations often hurling them beyond the reach of typical phrase structures. As profoundly worked out as the overall formal scheme of the movement is, what is heard is an uncomfortable, hyper-active passage of music, even in its supposedly calmer central episode. Agawu's suggestion of a 'mosaic' like construction might offer further explanation for this, drawing 'affinities with other musical traditions in



Fig. 6.6: Fourth Symphony, fourth movement, harmonic reduction of passacaglia ostinato (bars 1–8)

which metrical, textural and phrase-structural play serve to inaugurate a modernist trend' (1999, 151).

Notions of change and dynamism prove central to the finale of the work, which may come as a surprise given its formal scheme: 32 iterations of the same fundamental ostinato figure, each lasting eight bars in length, followed by a spiralling coda in which versions of the theme are distorted and spun out in a variety of ways (see Figure 6.6). Capped by a skywards-climbing melody, the figure in fact opens in the subdominant: this sets in motion a restless sequence of triadic relationships that wheel inevitably towards the tonic, imbuing the same sense of perpetual onward motion as with the material of the first movement.

The initial statement fronted by woodwind and brass gives way to stringled variations, rhythmic expansions and evasions allowing phrases to seemingly overflow their original eight-bar shape. The variations gradually grow calmer in character, allowing meandering woodwind solos to emerge. Forays into E major further broaden the character of the figure beyond recognition and, as the clarity of the metrical divisions becomes increasingly lost, it is hard not to sense a growing sense of comparative timelessness; the urgency of the opening chorale has been robbed of its purpose, leading to stasis and a seemingly melancholic stagnation. A reiteration of the chorale in its initial state reinvigorates the full orchestra to a cataclysmic re-engagement. Earlier principles of rhythmic and metrical instability are now carried to the furthest possible degree, variations. The severity of the E-minor close seems an inevitability, the ensemble working multiple fragments and snippets of the chorale into the closing passages. A final nod towards C major in the closing bars nevertheless offers a referral back to the tonal duality that has surfaced previously in the course of the symphony, seemingly suggesting that the minor-key conclusion has not gone unchallenged.

Tracing boundaries - Fourth Symphony: Finale

Although the first movement of the symphony has provided a great deal of interest for scholars, perhaps its most intriguing interpretation arises in light of the finale. It has been asserted that both movements take on the shape of chaconnes, the opening Allegro non troppo implicitly, the finale explicitly. The most detailed interpretation of the first movement in this way is provided by Jonathan Dunsby (1981), who initially picks up up on comments made first by Edwin Evans with regard to the 'spirit' of the passacaglia form running through the entire work (1935, 146-71), and later by Claude Rostand (1955, 291-299) on account of the first movement's thematic recurrence.²⁷ Using as a springboard the apparent metrical asymmetries of the nonetheless 'mechanical' opening theme and its sequential nature, Dunsby unveils thematic procedures along the lines of developing variation, finding in the exposition a 'mixed form, reconciling the idea of transformed repetition - that is, a variation process - with the sonata process' (1981, 76). Indeed, for him it is in some senses the less orthodox symphonic form that frequently prevails: 'The transformations which move forward the sonata structure are often far more subtle than the repetitive characteristics: the tension between the two processes of the mixed form chaconne and sonata - often swings in favour of the chaconne, because the repetitive characteristics are so strong' (1981, 77).

It could certainly be argued at the very least that principles of developing variation play a major role in the working out of the first movement, with altered repetition displayed on macro and micro levels. More broadly, the sequence of thirds that the opening theme sets in motion is mirrored in the tonal map of the

²⁷ Although Evans points to features of the first movement that prelude the finale, including the Bach-like 'leading characteristics' of its theme, he ultimately seems unconvinced by the attempted fusion of symphonic and passacaglia structures: 'The attempt, though resulting in fine work, only proves that these forms can never be united and places the frank passacaglia-form of the finale of this symphony in the light of a *revanche* for certain traits of the first movement' (1935, 148).



Fig. 6.7: Fourth Symphony, first movement, reduction of string parts to show canonic interplay at climax (bars 393–403)

movement, as Frisch and Edward Cone both attest to (Frisch 2003: 117). Meanwhile, thematic repetitions begin audibly to overlap, a climactic point in the recapitulation allowing the primary subject to briefly take on the shape of a canon (bars 394–401) (see Figure 6.7).

A number of writers have shown this to be a two-way street, pointing to divisions akin to that of a sonata form design in the passacaglia finale, including Frisch (2003, 130-40), Pascall (1989, 233-245), Rostand (1955, 291-299), and Osmond-Smith (1983, 147–65). A comparison of these interpretations of the form of the movement can be found in Figure 6.5. However, whilst all are agreed in principle, the underlying shape of this apparent architecture is subject to some disagreement. Frisch presents perhaps the most straightforward interpretation in terms of its adherence to convention, outlining an exposition comprising two theme groups linked by a bridge, a development section (from bar 129), a free recapitulation (from bar 193), and a coda (from bar 253). The architecture Pascall outlines is broadly identical to that of Frisch, but contains added complexity within the 'development' section. For Pascall, 'development and recapitulation are mixed processes in a responsive second half to the form' (1989: 239): the return to Eminor and the 3/4 metre at bar 129 signals not the opening of the development section but, in fact, the first point of recapitulation. A development section intercedes in the following chaconne cycle, taking hold before a 'retransition' occurs in ahead of the resumption of the recapitulation at bar 193. Osmond-Smith, meanwhile, seems initially less comfortable with imposing a full sonata form onto the movement, content instead to suggest a more thorough merging of sonata and passacaglia forms (1983, 161-65). Rather than asserting the status of an exposition with first and second subject groupings onto the opening passages, his divisions lie more in line with the conventions of chaconne form, with changes of metre (from 3/4 to 3/2 in bars 97-128) and mode (from E minor to E major in



Fig. 6.8: Fourth Symphony, third movement, harmonic reduction of early appearance of chaconne ostinato fragment (bars 317–26)

bars 105–28). It is in the second half of the work that he shows an interest in notions of recapitulation – both from bar 129 and again from bar 193 – and coda.

Even the number of cycles of the chaconne theme seems to be a subject for debate. Both Pascall and Osmond-Smith depict 32 cycles, with the final cycle spinning out directly into a coda conclusion. Although Rostand remains in agreement that the coda commences at bar 253, he chooses to lend more structural credence to what the others are content to label as an extended coda: he presents a five-part subdivision, determining four 'cycles' of unequal bar lengths (8, 12, 16, and 16) giving way to a seven-bar passage in which the final cadence is affirmed (Rostand 1955, 299).

Frisch opts to label the cycles as variations; consequently, he portrays the movement as comprising an eight-bar theme, 30 subsequent variations, and a coda separate in status from the variations but nonetheless still beginning at bar 253 (2003, 130–40). Whilst this keeps the interpreted form of the work very much in line with the principle of developing variation that Frisch propounds elsewhere, the idea of the first eight bars of the finale taking the shape of a concrete starting point – the 'origin' of the movement – could in fact be seen as somewhat undermined by Frisch elsewhere in his writings. In *Brahms and the Principle of Developing Variation*, he draws attention to an interruption at the close of the third movement of the symphony (bars 317–25) in which a direct transposition (downwards by a perfect fifth) of the imminent passacaglia ostinato (downwards by a perfect fifth), E^a – G^a – A^a – B^b becoming A^a – B^a – C^a – D^a – E^b) is 'expanded into a grotesque parody' by way of 'enourmous registral displacement' (see Figure 6.8). Frisch explains that, with the onset of the finale, the process Brahms undertakes is one of 'restoring dignity and logic to the theme', citing the suggestion

from the composer's pocket calendar that the passacaglia may well have been composed before the scherzo, with the ostinato reference deliberately planted in light of what was to come in the course of the symphony: 'He returns it to a single register and completes it by raising the sharped fourth to a fifth and resolving that pitch to the tonic. He then pays tribute to the resuscitated theme by proceeding to build an entire variation movement from it' (1984, 143).

Finding dynamism

There can be no doubt that these interpretations all have value, not least with regard to shrugging off the percieved 'self-conscious archaism shot through with romantic feeling' that, as Agawu notes, often dominates discussion of the movement (1999, 150). Nevertheless, to what extent they reflect a present-tense listening experience remains in question; whilst many of the structural markers outlined can indeed be heard as musical 'events', or crystallisations of change, the focus of audience attention is less likely to be the nuances of their formal role. Perhaps it is worth considering these architectural elements in terms of their aural consequences. A passage taken from Peter Smith's aligning of Brahms and Heinrich Schenker in their responses to sonata form offers some perspective in this way:

With respect to recapitulation, the most significant element of sectionalisation in sonata form, Brahms and Schenker strove to subsume the elements of division and repetition within a continuous and dynamic unfolding. While they remained committed to a historically validated formal type characterised by the restatement of large blocks of material, they refused to sacrifice the romantic ideal of an unbroken, goal-directed flow. They both struck a compromise between a strong organicist impulse and their sensitivity to the realities of a formal type based in part on the dramatic delineation of a parallel thematic design. (Smith 1994: 78)

Regardless of whether it might be classified as an adaptation of theme and variation, passacaglia or sonata forms, the finale of the Fourth Symphony – when performed – takes the shape of just such a 'continuous and dynamic unfolding'. As significant as the progression proves, the aural experience is not simply reduced to identifying successions of cycles, pinpointing the conclusion of one and the

commencement of the next. Indeed, Brahms demonstrates particular skill in adopting an obviously variation-based approach without incurring the boundaries that might typically accompany it. By blurring the lines that traditionally divide cycles in the passacaglia form, emphasis is placed upon change and continuity rather than stasis and demarcation.

The composer achieves this blurring principally through two types of ambiguity: metric and harmonic.²⁸ Occurring at notable points in the movement, metric ambiguity is implemented largely through relatively small alterations in rhythmic emphasis that, when embedded within or against recurring patterns and figures, contribute to a wider sense of structural destabilisation. A change in time signature at the centre of the movement (bars 97-128) also allows for more profound expansion of metrical possibilities. Harmonic ambiguity, meanwhile, proves more pervasive, with the opening cycle itself seemingly predisposed towards harmonic motion. The first four bars in particular reveal a tension between tonic, subdominant and submediant (see Figure 6.6), the resultant nod of the root positions of these chords towards an A-minor triad in turn alluding to the patterns of thirds that punctuated the first movement of the symphony. The voicing of the subdominant chord that opens the work has implications for how the movement plays out: with C^{\natural} and E^{\natural} featuring as the lowest and highest pitches respectively, invoking the long-term tonal significance of those keys across the preceding movements. The ascent of the top-register 'theme' to an F[#] in the following bar serves to foil what might otherwise have been a more powerful assertion of the subdominant by nature of the bass drop to A-natural. The E-minor chord of the third bar does not provide the aural stability assigned to a tonic key, failing to offset a recasting of the opening in bar four, a first-inversion subdominant chord with registers now further extended in both directions. The cadence that ensues across the four bars that follow is riddled with chromatic inflections that serve to complicate matters (bars 5–8). The upwards semitone step of the upper 'theme' to an A# helps facilitate F# major, here assuming the role of a secondary dominant with regard to the part it plays in bringing the first phrase to its culmination; with the continued presence of E^{\ddagger} as the seventh in the timpani

²⁸ For further discussions of this kind of ambiguity in Brahms's music, see Smith (1996) and Murphy (2009).

forces the sequence onwards. E minor reappears but once again fails to provide respite, giving way to a dominant seventh distorted by a diminished fifth that resolves to the major mode of the tonic.

The consequence of all this is an opening cycle that, in spite of its progressions neatly contained within an eight-bar phrase, proves inherently dynamic thanks to its restless harmonic construction. Whilst E[‡] remains a constant presence through all but the penultimate bar, it seems to emerge as more of a tonal pivot than an unchallenged tonic, failing to provide the necessary resolution in the course of its three root sonorities. This initial sequence is adapted through the course of the opening cycles as the ascending upper-register theme becomes embedded within the bass parts, insuring E minor as a tonal centre and facilitating variations in the harmonic path.

The first metrical ambiguities begin to creep in as the tempo slows towards the time signature expansion from 3/4 to 3/2 that accompanies the start of the 13th cycle (from bar 97). The latter halves of both the ninth and 10th cycles (bars 69–72 and 77–80) introduce a drop in momentum through the introduction of barto-a-bow slurred figures in the strings with descending chromatic scales in the woodwind. The opening of the 11th cycle (bar 81) reveals the first hints of E major as a starting point for the iteration, rather than as an ending. Instead of aurally initiating another cycle, the impression of a through-composed development is given, a change in tonal direction offering a new avenue of musical explanation. The loss of rhythmic drive at this point and the sudden reliance upon a block-like dialogue of chords between strings and woodwinds gives the sense of the initial drive and rigour of the movement beginning to lag. Here, a precise balance is struck: a drop in metric momentum is countered by the exploration of more interesting harmonic avenues.

Ebb and flow

The expansion of the time signature to 3/2 without any change in tempo for the 13th iteration (from bar 97) – a doubling of the cycle duration – arouses disorientation. Rhythmic emphasis, falling on the crotchet offbeat in the upper



Fig. 6.9: Fourth Symphony, fourth movement, flute melody (upper line) with reduction of strings and horn accompaniment (lower line), bars 97–104

strings as a counterpoint to the plaintive, searching flute melody, gives little clue as to the exact nature of the change that has taken place (See Figure 6.9). However, it soon becomes clear that cycles are now progressing more slowly, with versions of the now familiar chord sequence now seemingly the most reliable way of distinguishing the rate of change. The harmonic sequences, in turn, are soon made more difficult to discern through the full switch to E major from the 14th cycle (bars 105–12). The sonorities themselves are mostly expressed in the middle and upper registers, with the bass emphasis largely absent. The result is an increased sense of stasis, with the goal-directed drive of the initial cycles diminished in presence; this is initially emphasised by an E-natural pedal throughout the 14th cycle in the violas and horn, with the pedal continued by the horn throughout the 15th (bars 113–20). Bass emphasis does not return until the final bar of the 16th iteration (bar 128), with the low A^{\(\)} of the celli emphasising A minor, and providing a direct connection with the reprise that follows. In the meantime, the metre of the music has remained largely ambiguous; although the wind instruments have provided two eight-bar cycles of consistent rhythmic phrase structure, this has been routinely undermined by the emphasis of the strings upon the second minim beat of each bar.

The first four bars of the 17th cycle (bars 129–32) bring the first, and indeed only, point of direct repetition in the course of the movement, the opening 'theme' of the opening reprised in the woodwind and brass. The descending string



Fig. 6.10: Fourth Symphony, fourth movement, selected reduction of bars 129–36

passage that appears in counterpoint to the ascending 'theme' instigates a cataclysmic redirection, curtailing the iteration not in E major but in an harmonic collision (bar 136): a minor third of E^{\ddagger} and G^{\ddagger} is pitched against a violent reappearance of the secondary dominant, an F[#] bass underpinning a suspension resolving towards F[#] major through the first violins drop from D^{\$} to C[#] (see Figure 6.10). Nevertheless, the chromatic inflections that dog the two largely ascending cycles that follow, serve not only to reinstall E minor as a tonal centre but also to blur the eight bars of each cycle into one cohesive upward gesture. With the stable broader metre of each iteration re-established, focus shifts from the 'vertical' nature of the harmonic content to the 'horizontal' development of melodic and rhythmic figures. Broader rhythmic shifts prove a particular point of aural interest, with the beat of emphasis in prominent orchestral parts changing for each iteration. A particularly dynamic pattern can be observed from the 20th cycle through to the 23rd, with the point of focus shifting from the off-beat quaver figure of the 20th cycle (bars 153–60) to the *sforzando* second crotchets of each bar (an accompaniment used in tandem with the newly tripletised-quaver figure in the upper strings) in the 21st (bars 161–68), and the weighted second and fourth bars in the 22nd (bars 169–76).

By the arrival of the suddenly subdued 23rd cycle (bars 177–84), a sense of metrical disorientation has taken hold, with off-beat quaver punctuations in the woodwind now juxtaposed with an undercurrent of motoric triplet quavers in the strings. The ascent of the 24th cycle (bars 185–192) towards the a climactic point of partial recapitulation continues this juxtaposition, arpeggiated triplet quavers ascending forcefully above descending straight quavers in the lower strings.

1	. 2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17 18	19 2	0 21	22 23 2	4 25	26	27	28	29	30	31	32 – Coda
1															1	1											

First Gesture (4'30" approx.)

Second Gesture (4'30" approx.)

Fig. 6.11: Fourth Symphony, fourth movement, formal scheme of two gestures, with cycles depicted in proportion to approximate durations

Adding to the confusion, two woodwind interjections begin on the quaver upbeat rather than at the start of bars 186 and 188, lending the passage an onward lurching sensation. Angular descending outbursts then project a contradictory duple time across the final three bars of the cycle, a beat of silence allowing the full orchestra to reassemble for the partial recapitulation of the 25th, 26th and 27th cycles, reframing earlier material from the second, third and fourth iterations respectively. The 27th cycle in particular (bars 209-16) reintroduces a particular harmonic question from the early stages of the movement, with a C[‡] pedal in the basses not only casting the passage in the light of C major, but reintroducing the sonority to the opening of the subsequent iterations. Meanwhile, metric evasions continue to abound, from chromatic bass hemiola (bars 209-12) to the forwardtripping off-beats and syncopations that characterise the run-in towards the coda (bars 233–52). The coda itself presents a reversal of the balance found ahead of the recapitulation at the mid-point of the movement: from here the harmonic avenues are considerably narrowed, with E-minor gaining a relentless stranglehold on the course of the music. Rather it is rhythm and metre that enters a state of overdrive, as cycles are truncated, spliced, and extended with ferocious abandon.

This mirroring might be viewed within the context of an additional way of viewing the form of the movement, one in keeping with an aural experience of it. Taking into account that the partial recapitulation that opens the 17th cycle is the only point of direct repetition, it is possible to divide the piece at this almost precise mid-point (with respect to both number of cycles and performed duration). The finale of the symphony can be heard as two gestures of equal length, two directions in which the passacaglia might be taken: the first gradually slows, metre becoming more disparate, harmony more ambiguous; the second accelerates into overdrive, relentless driving rhythms underpinning a close tonal circling of E minor (see Figure 6.11).²⁹ Although played in succession to one another, these gestures could be thought of as presenting two alternate timespans, stemming from the very same starting point – two long formal gestures in which the same fundamental material is worked out to very different ends.

Layers of time - Schnee: Canon 1a

As with the finale of the Fourth Symphony, there are several different ways in which the form of Abrahamsen's *Schnee* might be interpreted; as has been discussed, surface divisions could be made according to the canon pairings, as a consequence of the placing of the intermezzi, or the work might be seen as a diminishing series of partitions. However, again in a manner comparable to Brahms's passacaglia, an aural experience of the work reveals a considerably more dynamic, continuous composition. The success of both works, it would seem, lies as much in their ability to defy or subvert their own formal boundaries in performance as it does in their ability to retain the clarity of those divisions when analysed after, or indeed before, the fact. In this light, the discussion of the work that follows here will – as it did to a large degree with the Brahms – be concerned with the linear passage of the piece, and will be structured as such with a view to gaining a deeper understanding of some of the perceptual processes listeners may experience in the course of a performance.

Abrahamsen echoes Brahms's manner of presenting two alternate timespans in succession throughout the course of *Schnee*. Much of the short-term continuity of the work depends upon an audible recognition of this process occurring within the five pairings of canons: each pair is underpinned by one fundamental musical idea that is rendered in two different ways. The composer invokes Baroque forms, particularly those of Bach, describing the second canon in each pair as a kind of 'double' of the first. In the case of Canons 1a and 1b, which had originally been both conceived and premièred as a standalone coupling in 2006, Abrahamsen is candid about both his selection of repeating structures and

²⁹ Durations taken from recording listed in primary resource list (Wiener Philharmoniker, conducted by Carlos Kleiber. Deutsche Grammophon: 457 706-2).



Fig. 6.12: Schnee, Canon 1a, bars 1-6 (reproduction of Abrahamsen 2008)

the desired effect these choices have upon the listening experience: 'It is basically the same music, but with many more canonic levels superimposed. So the two form a pair, and should be heard as such. They are like two big musical pictures which, when heard with distant, unfocussed ears, may produce a third, three-dimensional picture' (Abrahamsen 2009, 3).

Any danger of this approach translating into an aurally transparent accumulative process in practice, though, is countered by an intricately designed complication. Inspired by late-nineteenth-century stereoscopic photography techniques in which two pictures taken from slightly displaced perspectives are overlaid to create an illusory three-dimensional image, Abrahamsen attempts to reframe this idea in temporal terms, asking: 'If one laid two 'times' over one another, would a deeper, three-dimensional time be created?' (2009, 2). It is

perhaps in this way that *Schnee* not only mirrors aspects of Baroque counterpoint (independent melodic lines layered polyphonically, each starting at different points and in many instances moving at different speeds within a set metre) but also heightens it through the introduction of multiple metrical layers. The simultaneity of these competing metres proves to be an important feature of the listening experience, with the interaction between them contributing to the perceivable development of the work. In the composer's own words, 'in the course of each individual canon, a gradual process is revealed: one that sheds light upon various aspects, each pushed into either the foreground or the background' (2009, 3).

This process of changing perspectives and positions can be observed across the first two pairs of canons. Canon 1a opens with a direct juxtaposition, the steady quaver pulse of the violin at odds with the sparse interjections of the piano (see Figure 6.12). Whilst both instruments initially use only A^ts, their aural effects are more distinctive; the artificial harmonics of the violin, and the cello soon after, sound so high in pitch that there comes, in the composer's description in the score, 'only air, like an icy whisper, but with a pulsation', whilst the high pitch of the piano notes lends them a chilling incisiveness, cutting through the texture with rhythmic clarity. Indeed, the rhythm of the piano line is outlined in such minute detail – frequently through the use of contradictory duplet and triplet punctuations - that it seems deliberately to counter the regularity of the violin quavers, presenting an obviously competing metre from the very start of the work as it outlines the rising and falling canon theme. Although the piano line would seem to hold a great deal more interest than that of the violin, the two are prevented from entering into a simple foreground-background hierarchy by the fact that they appear to function as a structural unit, with the end of the initial canon theme in the piano prompting the violin also to curtail its repetitions at the close of bar five, with a quaver of silence at the start of bar six allowing the cello to pick up the ostinato, piano swiftly following suit. This brief aural comma is repeated not only at the close of the first-time bar (bar 10) and through the repeat of bar five, but is prolonged at the close of the second-time bar (bar 10a) through a notated pause, in which the viola holds an harmonic open fifth on A^{\(\beta\)}.

Even as further levels of activity are added towards the centre of the movement, the sense of hiatus at the close of each iteration of the canon theme is maintained, lending the impression less of thoroughly independent polyphonic parts, but rather a collection of distinct lines that exhibit connections with one another at various points. In fact, the most notable change that occurs in the movement - the transformation of the violin's *pianissimo* repeating quaver ostinato into fortissimo triplet semi-quavers complete with artificial harmonic glissandi (from bar 19) – turns out to be very much in-keeping with pre-existing material; although this new figure initially appears as a foreground textural feature, its *glissandi* in fact create a translucent doubling of the canon theme, the piano's lucid punctuations acting as momentary 'stations' for the violin and cello, inciting the necessary changes in pitch direction. The consequence of the frenetic character of this central episode (bars 19-30a) is one perhaps comparable to that of a traditional ternary form, with a second contrasting section allowing a fresh perspective on the musical landscape of the first section when subsequently it returns. This interpretation is certainly supported by Abrahamsen's labeling of these three successive passages as numbered 'parts', with all other succeeding canons in the work - save 5a & 5b - also following this design. However, this structural change does not necessarily preclude a completely new set of musical materials. In Canon 1a, the metrically evasive theme presented by the piano is present throughout; rather, it is its setting that is altered, with its 'accompaniment' moving from background to foreground before retreating once more. The return of the comparatively static quaver ostinato from bar 31 ('Part Three'), serves to reestablish the piano theme as a point of focus; familiarity renders the rhythmic discrepancies (initially heard perhaps as a metrical incompatibility) between the two figures as a source of interplay rather than of competition. With this dialogue now accepted as a unified musical flow, the passage is allowed to assume a more dynamic quality giving the impression of a perceptual acceleration to the close of the movement.



Fig. 6.13: Schnee, Canon 1b, bars 1-3 (reproduction of Abrahamsen 2008)

Horizontal perspectives - Schnee: Canon 1b

The material of Canon 1a is reframed from the outset of its double, Canon 1b. Whilst the fundamental theme is retained, certain elements of its character are now concealed, allowing other facets to come to the fore (see Figure 6.13). Whilst the piano line (now performed on the second piano) is enhanced through upper-register octaves, the quaver ostinato is robbed entirely of pitch, performed now through the rhythmic rubbing of paper on the surface of a table. These lines are now overlaid by distortions of their material: the quaver ostinato is now offset by a percussive 'guiro' effect produced on the first piano via *glissandi* with the fingernails across the white keys in line with the rhythms and distances specified
in the score. Meanwhile, violin and viola (the latter in rhythmic unison but transposed down a perfect fifth) utilise artificial harmonics to outline the canon theme in long sustained gestures, an idea then taken up by piccolo and clarinet from bar six – an all-new 'horizontal' perspective on what has hitherto been presented as a more punctuated 'vertical' thematic idea. Although these new layers are audibly related to the features carried over from the preceding movement, they serve to introduce a contrasting metre, working in tandem to set 15/16 phrases against the broader 9/8 time signature; their sound, however, is not so unified, with the gliding string line lending the passage an increased sense of freedom in contrast with the the obviously rhythmic input of the 'guiro' ostinato. Yet again, though, this effect of duple 'times' is not one of two indifferent musical paths; the ensemble still operates as a unit for an abrupt hiatus at the close of each five-bar phrase.

The clarity of these independent musical lines is gradually lost as the movement progresses. The first signs of this occur as the strings and woodwind previously sharing responsibilities for the same lines - begin to diverge from one another: in the course of a viola and cello iteration of the sustained canon theme, oboe and clarinet offer a chromatically-inflected and metrically displaced distortion of the line, floating at first in parallel before taking over from the strings completely (bars 11–18a). This initial split preludes the more intricate branching that occurs in the central episode - the second 'part' in the ternary form design - of the movement (bars 19-30a). The return from the opening movement of glissandi triplet semi-quaver figures staggered across violin and cello curtails the 'guiro' effect, but ushers in trilled echoes of the canon theme in the viola, piccolo and clarinet, accompanied by sharp punctuations from the oboe. The continuation of the canon theme in the second piano is soon set in dialogue with a delayed variation of the theme in the first piano, the ricochet effect created by the resulting interlocking rhythms giving an overall phasing effect with the theme reflected and refracted in the midst of the notably thickened texture. Indeed, at this point in the movement there are now five broader musical ideas now employed simultaneously, with three of those ideas further separated in multiple layers of displacement.

This surface novelty conceals a radical continuity: the canon theme has been a constant feature of *Schnee* from its very opening. By the close of Canon 1b, this motif has been perpetually repeated throughout the 17-minute duration of the two movements, a temporal undercurrent left almost entirely untouched by the more fleeting 'times' that have emerged and faded around it. This feature is underlined in the third 'part' of the movement (bars 31–48a): a notably prolonged hiatus – marked by a sustained cello pedal on the scordatura low open-string G[‡] (the detuned C-string, its first deployment and indeed the lowest pitch of *Schnee* thus far) – curtails the central section; in its wake, the ternary-esque return of the material which opened the movement brings the canon theme of the piano into the foreground once more, highlighting its continued presence as a familiar landmark, consistent in spite of the surrounding textural trends.

Temporal dimensions – Schnee: Canon 2a

Similar processes can be observed in the second pairing of canons, in which the three-part form of each is subdivided further: as well as signposting each of the three parts, silent pauses also split each part into two sub-sections, usually also signaling textural changes. Canon 2a (for woodwind trio and second piano) opens in a notably direct manner: alto flute and clarinet alternate to set in motion a 'theme' of seemingly perpetual quavers built of arpeggio fragments seemingly gravitating towards D minor (see Figure 6.14). Both are encouraged to produce



Fig. 6.14: *Schnee*, Canon 2a, bars 1–4, canon theme (excluding left-hand open note in piano part)

Dynamic Continuities

notes that are 'half pitch and half air', with syllables of short phrases exclaiming the arrival of snow and the onset of winter ('Es ist Schnee!' and 'Es ist Winternacht, Winternacht jetzt!') underpinning each note. The result is a particularly percussive sound, enhanced by Blu-tack-muted F^{\ddagger} punctuations from the piano, wider resonance provided by the silent depression of the F^{\ddagger} key an octave lower. The established line soon assumes a broader familiarity, with just a handful of short patterns subjected to a great many repetitions. However, this recycling process is far from simple; in addition to nearly every bar presenting a change of time signature (9/8 and 8/8 initially proving the most common), repeat markings present at the end of every bar or pairs of bars create a subversive texture for listeners, with aroused expectations of sequences and rhythms routinely undermined by small alterations.

Only a short time passes before this unit of thematic interplay is itself disrupted. The piano breaks from its usual muted F⁴s, producing two *staccato* C⁴s in bars 15–16, and a further three in bars 22–23. The sound is tonally distinctive, with C⁴ falling outside the established D-minor purview, and indeed far louder than the muted F⁴s used so far. However, these interjections protrude most notably in a rhythmic sense, contradicting the wider quaver pulse with the effect of dotted quaver off-beats; the aural effect is one of a jarring hemiola, a metrical mismatch subverting the alternating patterns of three- and two-quaver groups. However, in the second sub-section of the first part of the movement this interruption is gradually integrated within the theme; its more consistent appearances allied with its increasingly melodic oscillation between C⁴ and C[#] allow it to be rhythmically normalised, no longer disrupting but rather phasing in and out of sync with the



Fig. 6.15: *Schnee*, Canon 2a, excerpts to show scoring of introduction of metrically subversive piano C⁴ and its subsequent integration

more familiar quaver groups (see Figure 6.15). The result is a direct musical representation of Abrahamsen's stereoscopic photography analogy of two images overlapping to create the illusion of a further dimension, two metres moving in and out of alignment with one another.

The second part of the movement sees the piano's repeated Fths retained as a constant whilst textural shifts occur around it. The once perpetual arpeggiated figures become increasingly sporadic in the alto flute line, with the quaver pulse often maintained only by new oscillating shapes in the piano line. Instead, the primary dialogue takes place between piano and the quintuplet punctuations of the newly introduced cor anglais, *staccato* underlinings from the clarinet also becoming increasingly frequent both towards and during the second section of the part. Meanwhile, the alto flute produces increasingly abstract figures, starting with the downward *glissandi* effects that recur frequently from bar 70 onwards, and culminating in the violent 'wind-like' *sforzando* arcs that first appear in the movement's third part (from bar 155) alternated with hyperactive trills.

Shifting focus - Schnee: Canon 2b

These changes highlight the wider agitation that has taken hold of the ensemble. Continuing quintuplet quaver patterns displaced between cor anglais and clarinet grow in prominence towards the close of the second part, masking what remains of the canon theme which began the movement. What occurs in the course of the third part is a gradual return to this basic textural unit. Cor anglais and clarinet reenter into the cyclic dialogue of the theme, allowing the piano – which proved crucial in retaining the quaver pulse throughout the second part – to reassert its apparent 'duple time' hemiola. The final subsection of the movement (bars 179– 207) recreates the same textural landscape of the opening, only sporadic returns of the piano's hemiola interjections a reminder of the layering process that has taken place.

The two-minute interlude that intercedes the second canon pairing proves particularly striking in its focus upon 'horizontal' material rather than 'vertical', the series of de-tunings providing an opportunity for long sustained notes. It is the

Dynamic Continuities

first point in Schnee at which rhythmic momentum is abandoned entirely, the onward metrical drive of the opening three movements replaced by an altogether freer expansive of successive merging chords. It signals a sea change for the music that follows. Elements of this sojourn creep audibly into the opening of Canon 2b, cello and bass clarinet both undertaking drones (F[‡] and F[‡] respectively) with dovetailing hairpin dynamics to create a discordant throbbing effect. Viola and cor anglais alternately contribute their own sustained looping calls (initially an F[‡] and a D_{\flat} respectively). The return of the canon theme, meanwhile, is a scattershot affair, with its already conglomerate nature now enhanced further by the fact that violin and alto flute are now rendering it in nontuplet and octuplet quavers, metrically incompatible with the regular quaver pulse maintained by the two pianos. The result is a stuttering texture, momentum frequently stilted or stalling as part of a muddled dialogue. The material appears half remembered, fragments reappearing in an uncontrolled, inconsistent manner, like separate streams of time interrupting or jostling with one another. The music attempts to continue in a manner similar to the preceding movement but with only limited success, energy ebbing and flowing throughout. Whilst recognisable features resurface, in particular the more abstract violent 'wind-like' flute arcs that are also echoed by the violin and two pianos in the third part, the effect is of familiar material lost among numerous other layers, its original clarity and rhythmic strength now clouded by the distortions and displacements that surround it.

It is through this building up of layers across the first two pairs of canons that it becomes possible to enter into a mode of listening similar to the one Abrahamsen himself suggests. Perhaps, though, his prescription for 'distant, unfocussed ears' lands slightly wide of the mark. Rather, an aural experience of *Schnee* might be said to be by contrast both 'close' and 'focussed' at certain times; instead of simply assuming one 'point' from – or 'manner' in – which to listen, the process that is gradually unveiled in the course of the work seems to encourage audience members to actively *alter* their 'position', shifting their focus and distances to engage with particular patterns or combinations of patterns at particular moments, or for given passages. The continuous nature of the theme in Canon 1a, for example, seems to invite closer examination in its earlier stages before it is veiled beneath new layers of material, a static feature (of sorts) within a

Dynamic Continuities

moving scene; it is designed to be taken increasingly for granted. When it is spot-lit once more towards the close of the movement by virtue of its returned textural prominence, its familiarity means it does not need to be utilised as a point of deliberate focus in the same manner as before but can instead be heard as if from a distance. The realisation of its continuous nature in spite of wider changes sparks an automatic change in perspective; the lack of need for focussed aural analysis, allows it to assume a more dynamic presence than it previously possessed.

Comparable processes occur across the second pairing of canons. The perpetual 'theme' of Canon 2a is taken for granted in the course of the movement once its subversive shifts in rhythmic emphasis have become familiar; it moves from a point of focus and examination to a peripheral constant, a background feature. However, its reappearances in Canon 2b as a fragmentary presence in a state of metric flux serve to change its character entirely. Whilst it is reasserted as a point of aural interest, its haphazard movements across the ensemble and its mercurial metric character make it impossible to utilise as a singular point of focus; rather, a more 'distant' listening approach proves necessary, with focus readjusted to encompass the wider frame of reference required to make sense of the journey the motif takes. Focus is no longer trained on one 'time' – instead it shifts between the multiple overlapping 'times', from the background to the foreground, creating the sense of a three-dimensional sonic landscape that Abrahamsen intended – a transient mode of listening.

The pattern established in the course of the piece so far is of increasing textural complexity, each canon presenting an idea that is subsumed by new complementary – or, in some instances, contradictory – ideas resulting in multi-layered passages. This recognisable trend of increasing density prompts new questions for the wider form of the work. In a sense, Abrahamsen faces similar structural issues to Brahms. Whilst the compositional challenge in the finale of the Fourth Symphony seems to have been to lend a fundamentally cyclic movement the effect of a through-composed narrative, in *Schnee* it is relevant to wonder how a form assembled unambiguously from ten audibly paired sections might maintain a sense of continuity; beyond the deliberate 'interruptions' of the three intermezzi, how can this piece *sound* as a unified whole?



Fig. 6.16: Schnee, Canon 3b, pianos (bars 1-4)

Disintegration – Schnee: Canons 3–5

The answer to these questions seems to begin to emerge in the third pairing of canons. Canon 3a provides a stark contrast to what has come before, with a sudden drop in tempo and in easily perceivable metre seemingly coaxing a new listening approach from its audience. The bass clarinet sets in motion a theme of sorts, a slow throbbing three-note figure which rumbles away at frequent but not precisely regular intervals. Violin and viola soon begin to bridge some of these patterns with sustained figures that culminate in a descending *glissando*, working together in a similar manner to Canon 2b: in rhythmic unison, but separated by a perfect fourth. These initial exchanges between woodwind and strings set the tone for the whole movement. Although these roles are exchanged and further related layers are quietly added, the listening experience is seemingly guided by this slow momentby-moment dialogue; what may have in the earlier, faster stages of the piece have been heard as rhythmically interlocking gestures are now understood in a much freer sense. The nature of the music serves to realign the aural focus once more, with the previously prominent concepts of rhythm and metre moving to the peripheries whilst space, tone, interaction, and silence become points of greater interest.

Whilst the broader structural trend of *Schnee* so far might create the expectation of an increase in musical complexity and textural density in Canon 3b,

Dynamic Continuities



Fig. 6.17: Schnee, Canon 4a, bars 1–3 (reproduction of Abrahamsen 2008)

what occurs is in fact, aurally speaking, the opposite. At this crucial juncture – the formal centre of the work – the process is reversed: through the use of just percussion and pianos, the thematic material of the preceding canon is reduced to its very essence, the throbbing patterns now barely recognisable having been transferred to the circular motions of paper on a table. The two pianos, meanwhile, attempt to recall the more sustained gestures of the strings and woodwind through



Fig. 6.18: *Schnee*, parallel presentation of piano parts of Canon 5a and Canon 5b (bars 1-4) to show exchange of canon theme and rhythmic patterns

the use of pedal; however, limited by the inability to perform *crescendi*, the effect is of a perpetual dying away, a sonic transience marked all the more by the silences that intercede gestures (see Figure 6.16). Tonal changes serve to highlight this particularly desolate musical landscape: although perfect fourths and fifths still abound, the harmonic waters are muddied by recurring semitones, augmented sevenths and flatted ninths, enhancing a broader sense of tonal drifting and disintegration. Although the third canon pairing lasts no longer than the second, the broader loss of momentum it contains serves to stretch the perceptual 'time' outwards, creating a space at the core of *Schnee* devoid of the rhythmic drive that had previously dominated.

Dynamic Continuities

This notion of disintegration – underlined by the steady detuning process of the intermezzi - is taken to the opposite extreme in Canons 4a and 4b, two movements which mirror one another and allude in form to 'minor' and 'major' versions of a minuet and trio respectively, the composer labeling them in the score as an homage to 'WAM' - Wolfgang Amadeus Mozart (Abrahamsen 2009, 4). The spiky canon theme - played by violin, viola, flute and clarinet - appears rhythmically fragile; rumbling chromatic piano lines and a pair of sleigh bells (themselves a nod to Mozart's Die Schlittenfahrt, K. 605 No. 3) outlinine two separate pulses (one marking each beat of the 3/8 bars, the other marking a quaver quintuplet for each bar), serving to further distort any perceived regularity (see Figure 6.17). Gradually more and more features from the early stages of the piece are recalled, including sustained iterations of the canon theme in the violin and viola (from bar 10 onwards) echoing Canon 1b, and the 'wind-like' sforzando arcs and trills of the flute harking back to Canons 2a and 2b (from bar 13 onwards). The return of such features seems to nudge the ensemble towards two central 'trios' of eerily sudden stasis, momentum suddenly dropping to reveal a partial recollection of the first canon pairing, violin providing a pulse of harmonics whilst the two pianos reproduce a rhythmically steady 'guiro' effect. The cor anglais even begins to outline the descending thirds of the very first canon theme, a gesture veiled by the oboe, clarinet and cello via their own sustained figures. When these half-remembered features fail to produce any momentum of their own, the 'minuet' passages are reprised, launching the ensemble onwards, an unforgiving temporal onslaught.

After the third intermezzo (itself now acting as a brief point of repose), there is little let up towards the close of the work; whilst the tempo of the final two canons is notably more sedate, their surprising brevity gives little opportunity for listeners to absorb the new material. Following the example of JS Bach, Abrahamsen divides the ensemble in two (violin, viola and first piano against piccolo, clarinet and second piano) to present a 'rectus' and an 'inversus', with the material given to each in the former swapped directly over for the latter (see 6.18). Indeed, the material itself is a series of refractions and reflections, with the both groups essentially producing different versions of the same patterns simultaneously. The interlocking piano lines produce a steady quaver pulse

reminiscent of the ostinato at the very opening of the work. Indeed, given that both Canons 5a and 5b present essentially the same music twice, the gap between the movements (marked '*attacca al Canon 5b in tempo*') acts far more as a brief hiatus like those found in the first two movements, lending the close of the work an unsettling circular character, with new material framed in a strikingly similar manner.

Dynamic continuities

Although they harness very different styles over radically different timescales, the two works explored in this case study exhibit similarities in their approach to issues of form. Both Schnee and the finale of the Fourth Symphony are built from small units of repetition. The inevitable challenge facing composers of such pieces is to retain the interest of listeners over a longer period of time by minimising the potential dulling effect of such recurrence. Brahms and Abrahamsen certainly achieve variety, but they do not attempt to conceal the circularity of their forms. Rather they engage with the perceptual aspects of cyclical music over longer periods of time, deploying small-scale repetitive cells in such a way that listeners might be drawn into an interaction with the recurring material, prompting a developing renewal of aural perspective. Brahms manages this through a careful blurring of formal boundaries, more often manipulating the metrical context of recurring material rather than directly altering the content itself. In Schnee, meanwhile, it is the distinctions between content and context that become blurred. As repeating figures surface and enter into dialogue with one another, they move in the minds of listeners between foreground and background, a shifting ecology of motifs and cycles.

It is in this way that both works manage to convey broader continuities, offering forms that, in spite of their built-in circularity, somehow allow listeners the sense of a through-composed musical 'journey'. Whilst Brahms's finale offers two successive time-spans in which the same material is taken in alternate directions, Abrahamsen's *Schnee* takes the shape of a onward process of disintegration whilst never losing sight of its beginnings, with its close hinting at a wider circularity. In this way, the concept of developing variation has profound implications for the way in which forms are perceived, highlighting a seemingly

contradictory duality of stasis and flux. Tensions between segmented repetitions and unfolding forms create added temporal interest, drawing further awareness towards an underlying temporal experience. It is the way in which this broader continuity emerges from these paradoxical experiences that will form the focus of Chapter Seven, with applications of narrative ideas representing a particularly engaging, if sometimes problematic, way of dealing with long-term musical structure.

Seven

Experiencing Time

Perceiving forms

The analyst is concerned with the partially or imperfectly heard, with relationships between musical elements as well as the elements themselves, and with musical contexts. He or she realises that some things which cannot literally be 'heard' – that is, cannot be accurately identified, named, or notated – may still have discernible musical reasons for being in a piece. A psychologist may dismiss as irrelevant structures that a listener cannot identify. [...] But it does not follow that there is no reason for such pieces to be structured the way they are. (J. Kramer 1988, 328–29)

Accounting for musical perception over longer durations proves yet more challenging, not least given the influence of time itself as a crucial factor in comprehending form. This chapter will explore ways of approaching the perception of large-scale musical designs, moving through a number of more cognitive-based approaches to discuss how aspects of perceived continuity might form the basis of structural understanding. Particular focus will ultimately fall upon ways in which narrative concepts might be applied to temporal experiences of compositions, with particular emphasis falling upon contributions from Byron Almén (2003 and 2008), Jann Pasler (2008) and Susanne Langer (1953).

As Hugues Dufourt notes, 'cognitive psychology has shown that mental structures active in perception are above all dynamic and integrating processes which unceasingly compose and transform data' (1989, 223). The developing interplay between small-scale musical elements over prolonged periods makes it increasingly difficult to separate out the effects of these elements when considering long-term structure. In attempting to locate the perceptual limits of what he terms 'form-bearing dimensions', Stephen McAdams considers the contribution of a variety of musical features – principally pitch, duration, dynamics and timbre – to large-scale musical construction (1989 and 1999). The dimensions he outlines might helpfully be summarised with regard to the metaphorical directions they relate to: the structuring over time of significant 'vertical' events,

and the 'horizontal' organisation of related events into sequential and segmented musical streams and groups (1989, 182–83). However, both McAdams and Célestin Deliège (Deliège, 1989) acknowledge that these dimensions are in turn dependent upon abstract knowledge accumulated through received cultural conventions and extensive experience of music that accords with those frameworks: 'This domain is perhaps the most important for the consideration of form-bearing capacity because it is clear that if a system of habitual relations among values along a dimension cannot be learned, the power of that dimension as a structuring force would be severely compromised' (McAdams 1989, 183).

Nicholas Cook provides an insightful overview of the intricacies facing empirical research in this field within the context of the elaborate systems of expectation found in Western art music (1990, 22–43). The network of meanings apparently conveyed by musical works and the conventions they engage with introduces new levels of complexity. Heard performances seem to constitute a duration somewhat removed from the flow of normal time, 'logically distinct from any external context', as Cook puts it: 'Musical form defines an independent and repeatable context within which the events of a musical composition can be heard as meaningful. These events gain a kind of objective identity by virtue of their relationship to this context.' (Cook 1990, 38)

Echoing the dimensional aspect invoked by McAdams, Cook outlines an abstract spatialisation of musical forms. Placing himself in concordance with Schoenberg, Carl Dahlhaus and Thomas Clifton, he expresses a preference for a visual expression of a work in which the interrelation of its parts might be seen as 'constituting an objective structure', a simultaneous expression of a temporal duration (Cook 1990, 38–41). In attempting to account for a broader range of musical styles than Lerdahl and Jackendoff's 'generative theory' (1983), Irène Deliège and Marc Mèlen also propose the notion of an abstracted visualisation of a musical work, advocating a model that seeks to unite surface characteristics (Deliège and Mèlen 1997). Particular motifs and gestures take the form of cues that are, they suggest, abstracted from the linear progress of the work through repetition. These cues are subsequently categorised in vertical (separate groups containing similar cues) and horizontal (relationships between different cue categories) terms, a procedure comparable to that inferred from McAdams above.

The end result is what they term an 'imprint', a 'standard auditory image' that establishes 'the boundary between what is and what is not the norm within a given piece' (1997, 402–08).

The holistic function of repetitive components within a musical work has been the subject of numerous cognitive studies. Issues of coherence and continuity feature heavily in experimentation carried out by Lalitte and Bigand concerning the sensitivity of listeners to large-scale forms, with deliberate alterations to structural orderings picked up upon by listeners who noticed a lack of progression or development (Lalitte and Bigand 2006). Adam Ockleford, meanwhile, supports his own 'zygonic' theory model by venturing to suggest that aurally recognisable derivation of musical material may also play a crucial role in helping to build a 'structural narrative' for the listener, an idea that will be returned to shortly (2004 and 2005).

Jonathan Kramer evaluates a theory of long-term perception in which durations are encoded through the memorisation of the musical mechanisms of particular passages and gestures; whilst he readily accepts 'chunking' as a major contributor to temporal processing, he is keen to emphasise its limitations, stressing that 'music is too complex and musical information is too elusive to form the basis for a quantitative theory of perception' (1988, 342):

The most commonly voiced criticism of the information-processing model is that it is curiously static for a theory of time perception. Surely as we experience an extended duration, information is encoded step by step, not all at once. You read these words one (or a few) at a time, gradually building a mental image of what I am saying; the meaning does not suddenly leap into your consciousness as you finish each paragraph or sentence. (1988, 345)

Kramer convincingly argues that at least two mental processes (information encoding and timing) form the basis of the perception of large-scale structures (1988, 365–67), playing into a broader duality present in musical time perception. Just as 'chunking' is distinct from its less malleable but nonetheless simultaneous 'clock time' counterpart (1988, 337–38), the *act* of listening is a mixture of two cooperative but sometimes seemingly contradictory modes. The first is described as 'still-spectator observation' and provides particular insight into the mechanisms of formal perception:

The still spectator in us builds up a mental representation of the piece, which becomes gradually more complete as we move through the music and as we learn it better with subsequent hearings. Our mental representations are not in themselves dynamic but are more or less static, except when we discover (or are led by a critic's or analyst's insights to uncover) structurally important relationships we had not previously encoded. The gradual accumulation of encoded information in the form of a mental representation of a piece is what nonlinear perception, or cumulative 'listening', really is. (1988, 367)

This relatively static receptive approach is contrasted with a more dynamic one, an 'active listening mode' focussed upon 'continually changing materials and relationships': 'This kind of listening is concerned with expectations, anticipations, and projections into the future. It is less involved with forming representations in memory and more involved with the immediacy of the piece and where it is going (or not going)' (1988, 367). Of course, assigning descriptions of static and dynamic to the two modes in this way is representative of just one perspective. In a paradox typical of temporal philosophy, the labels could just as easily be reversed: the active mode is static on account of its fixation in the present, whilst the observing mode is dynamic with regard to the changing accumulations and figurations of the abstract construction it creates. Musical structures that balance recurrence and change – like those of Abrahamsen and Brahms analysed in Chapter Six – attest to this seemingly paradoxical interchangeability.

Continuity and narrative potential

Although earlier lengths may not *determine* later lengths in the same way that earlier materials or tonal relations *generate* later ones, the simple fact that the music is heard in sequential order may cause us to compare later durations to earlier ones. In other words, although there may be no clear *implications* about proportions early in the piece, we may still form *expectations* about durational spans based on the way the piece initially unfolds. Our listening strategy, then, may well be linear even if the music is nonlinear. (J. Kramer 1988, 326)

Although a sense of overriding linearity might seem to be an obvious characteristic of temporal experience, Kramer's observations allude to implications for formal readings that might easily be overlooked. A recurring concern throughout the case studies in this thesis has been the reconciliation of time-bound impressions of musical performances with seemingly atemporal - or at least retrospective structural interpretations of the forms of the works in question. Examining the formal anticipations of listeners remains, of course, particularly difficult. Articulating with clarity something which ultimately may not come into being is a daunting task; analysts must often settle for exploring the ways in which emerging musical structures fulfill, or leave unfulfilled, broader expectations. Janet Schmalfeldt attempts to approach early nineteenth-century forms from the perspective of a perceptual unfolding with her study In the Process of Becoming (Schmalfeldt 2011). Meanwhile, notions like Robert Hatten's 'markedness' - in which musical features are 'asymmetrically valued' according to other opposing features (Hatten 1994, 291) - feed into issues of long-term tension that echo the suggestion of scholars, as Byron Almén notes, 'that it is the relations between elements and not the elements themselves that are the foundation of narrative' (Almén 2008, 36).30

That the term 'narrative' continues to appear is no coincidence. Indeed, although Ockleford takes the notion in a very specific analytical direction, his broader description of a 'structural narrative' stands as an apt summation of a central contrast in music perception: a stable, logically-designed whole intuited via a succession of perceived moments and events. Although it does not fall within the remit of this thesis to appraise the concept of musical narrative in full, certain aspects of the idea retain relevance. All discussions of narrative persist in engaging with fundamental continuities of works and performances, in short the binding essence of experienced musical time. For Jean-Jacques Nattiez it is the linearity of this basis succession of events that incites narrative attachment (1990, 257). Just as musical form entwines with the inescapable linearity of temporal experience, his recognition of a 'narrative impulse' in musical listening (discussed in Chapter Two: Alternative Paths) strikes upon an apparently universal trend in human

³⁰ Notably, among those writers to whom Almén alludes is Joseph Campbell with his crosscultural narrative study *The Hero with a Thousand Faces* (2008); Campbell's thoughts on universal aspects of narrative are discussed in Chapter Two (Alternative Paths).

nature. Anthropologists Elinor Ochs and Lisa Capps delineate the cross-cultural social role that narratives play in depicting temporal transition (Ochs and Capps 1996). The chronological dimension of these narratives lends a 'reassuring coherence' to disconnected events, serving to affirm not only order but also senses of self and meaning:

Personal narrative simultaneously is born out of experience and gives shape to experience. In this sense, narrative and self are inseparable. Self is here broadly understood to be an unfolding reflective awareness of being-in-the-world, including a sense of one's past and future. We come to know ourselves as we use narrative to apprehend experiences and navigate relationships with others. The inseparability of narrative and self is grounded in the phenomenological assumption that entities are given meaning through being experienced and the notion that narrative is an essential resource in the struggle to bring experiences into conscious awareness. (Ochs & Capps 1996, 20–24)

A long tradition exists of scholars utilising this inherent leaning towards continuity as a springboard for interpretations which organise musical forms according to facets of literary and dramatic structure. As Fred Everett Maus explains, listeners can perceive musical events 'as characters, or as gestures, assertions, responses, resolutions, goal-directed motions, references, and so on. Once they are so regarded, it is easy to regard successions of musical events as forming something like a story, in which these characters and actions go together to form something like a plot' (1991, 6). Numerous features of musical works lend themselves to such treatment: the use of sung texts or accompanying stories can inspire more detailed programmatic readings; the manipulation of thematic subjects can be viewed as mirroring dramatic character development principles; changing phrase structures can be equated to rhetorical and syntactical conventions (Almén 2008, 14–15).

Of course, there are limitations to such readings. Many of the features listed above are prevalent only in music that accords with Classical and Romantic styles. The majority of narrative theories deal with works from the late-eighteenth and nineteenth centuries because the governing tonal principles of those pieces are decidedly teleological. It is simply easier to attach established plot templates (tragedy, romance, comedy) to music that echoes the cultural relevance of such

archetypes through its formal construction, with motivic, harmonic and tonal continuities reflecting the necessary tensions of conflict and resolution, departure and return. Just as the distinct musical continuities (or, indeed, non-continuities) found in many recent pieces may well call for a fresh set of narrative archetypes, an exploration that seeks to place old and new works in parallel will likely require fresh, perhaps broader perspectives on formal understanding.

Expressing concerns that narrative readings have little benefit for posttonal music, Robert Adlington airs far broader reservations regarding what he deems 'one of the vogues to have emerged from the recent rush to celebrate music's ways of meaning and its manifold relations to other cultural practices' (1997b, 121–23). Narrative analogies and descriptions, he argues, have become so embedded within the critical lexicon that even some more recent attempts to evade the subjectivity of nineteenth-century modes of analysis serve instead to reinforce them: 'So the attribution of what may loosely be termed narrative characteristics to music frequently occurs quite innocently – in (for instance) the prioritisation of sequential order, the assumption of the relatedness of events, and the expectation of a measure of retention of the course of events' (1997b, 124).

For Adlington, the notion of 'unfolding structure' is just one such way in which a bid to sidestep extra-musical attachments still ends up relying on literary principles, albeit in a less overt manner. Just as the suggested meaningful 'unfolding' burdens listening with a syntactic dramatisation, imagery is invoked unavoidably through the idea of 'structure'; the linguistic and visual readings that are supposedly bypassed emerge as underlying perceptual concepts. Furthermore, though they are both commonly harnessed by analysts to provide cohesive readings of pieces, Adlington argues that verbal and visual approaches to form address irreconcilably distinct aspects of musical experience, and that these differences are implicitly glossed over or rarely questioned by writers and readers alike (1997b, 140–48). The cultural implications have proved damaging, with a more traditional emphasis upon the score itself and the supposed need to 'explain' it creating decidedly awkward circumstances for contemporary music. Here composers seem compelled to preface performances with affirmations of narrative

elements that do not feature so prominently (if at all) for first-time audiences, leading to questions of inadequacy on all sides:

All too rarely does such a failure to trace musical narrative prompt an alternative response: namely, a confrontation of the assumptions about musical form that so regularly serve to embarrass and demean. Rather than automatically assume that one's experience has been inadequate, it might be argued that conventional beliefs about music's affinity with narrative are in some way unsatisfactory and misleading. The manner in which listeners organise sound is simply not done justice by the analogy. (1997b, 125–26)

The failure of such approaches to support experiences of less conventional music in this way proves to be a killing blow for narrative theories as far as Adlington is concerned. Parallels with literary forms burden listeners with the task of perceiving and understanding works as a plot, with only a comprehensive realisation of the sequence of events constituting an 'adequate musical experience'. Questioning the ability of pieces to convey sequential relations as effectively as language, he casts doubt upon the specificity that many identify in music: 'Although we are often loath to admit it, music, particularly on first hearing, frequently gives little enduring sense of its sequential form, leaving instead only the sketchiest long-term impressions' (1997b, 133–34).

Questioning continuity

The line of questioning Adlington presents constitutes a welcome appraisal of aspects of narrative and meaning that might easily be taken for granted. However, it is pertinent to wonder if his conclusions serve to underestimate the capacity of listeners to engage with, and derive meaning from, the temporal continuity of musical experience. Jean-Jacques Nattiez reaches similarly sceptical conclusions regarding narrative theory and its applications to musical form; 'nothing but superfluous metaphor' is his somewhat damning indictment (1990, 257). However, he does find a positive means of progress through aspects of temporal continuity:

But if one is tempted to do it, it is because music shares with literary narrative that fact that, within it, objects succeed one another: this linearity is thus an incitement to a narrative thread which narrativizes music. Since it possesses a certain capacity for imitative evocation, it is possible for it to imitate the semblance of a narration without our ever knowing the content of the discourse, and this influence of narrative modes can contribute to the transformation of musical forms. (1990, 257)

Given that a central premise of narrative – or of any kind of journey – is its engagement with aspects of temporally-bound continuity and coherence, the employment of narrative concepts in accounting for form in any music is helpful in as far as the continuity of those pieces unfolds as a palpable structural feature. Inevitably, the receptiveness of listeners to different kinds of continuity will vary according to an innumerable number of determining factors shaped by social, cultural and artistic experiences. But these are discourses with which any search for musical meaning must engage; more often than not the application of narrative theory constitutes such a quest. In this sense, the application of narrative ideas to a piece of music might be seen as offering something akin to a theoretical middleground, offering a more interdisciplinary slant on more traditional, structuralist perspectives that emphasise the self-sufficiency of musical forms. As Rose Rosengard Subotnik writes: 'Structural listening looks on the ability of a unifying principle to establish the internal "necessity" of a structure as tantamount to a guarantee of musical value'. In these terms, what might be described as the 'inner logic' of a musical composition renders it discrete and whole, with its development (often in the Classical mould) audibly expressing the composition's own 'selfdetermination' (Subotnik 1996, 159).

By contrast, more recent poststructuralist leanings in scholarship display a willingness to navigate the intricate networks of 'extra-musical' forces that contribute to musical meaning; they offer what Alastair Williams describes as 'a powerful critique of music's institutions and methodologies, and do much to bring musicology into general humanities discourses, preventing perception of it as an isolated discipline with its own narrow concerns. It highlights the textual qualities of music and its discourses, demonstrating just how interdependent they are' (Williams 2001, 41). Although he takes care to emphasise the ways in which

such scholarship presents a 'continuous transformation' of the traditions of structuralist thought, Williams does not shy away from highlighting the neglect it seeks to address (2001, 21–22):

Like materialist criticism, structuralism recognised that cultural artefacts, including music, are underpinned by deep structures; but unlike materialism, it failed to understand that self-regulating sign systems might be culturally determined. Although structuralism daringly broke the notion of musical meaning away from authorial intent and scandalised established humanist notions of art, its fetish of detachment refused to contemplate the social mediation of apparently abstract structures (Williams 2012, 230).

Lawrence Kramer scrutinises further this vague attitude towards the location of meaning. Criticising a perceived inclination of music analysts to prize notions of unity that have been largely discarded by literary theorists (to 'totalise', as he puts it), he argues that narratology has acted as a 'methodological halfway house in which musical meaning can be entertained without leaving the safe haven of form' (L. Kramer 1995, 98–99). Kramer exercises particular caution when it comes to the formal implications of narrative readings, describing narrative elements as 'forces of meaning' rather than of structure, and portraying the narrative condition as 'fractious and disorderly': 'Structure and unity are its playthings, and its claims to truth are strongest where most contingent, most mixed up with the perplexities of identity and power, sex and death' (1995, 119.)

The enquiries of poststructuralism certainly go some way towards providing the more open-minded theoretical basis necessary for analysing a variety of compositional styles. Contrary to Lawrence Kramer's pessimistic view of narrative as a catalyst for formal interpretation, scholars have explored ways of expanding narrative theory to account for contemporary music that might be thought of as being 'fractious and disorderly' in character. Noting the apparent desires of many recent composers to 'reject the paramountcy' of narrativity in music through the subversion of audience expectations, Jann Pasler (2008) seeks a more adaptive approach that invites comparison with Jonathan Kramer's inclusive temporal outlook. She outlines three broad types of alternative narrative developed by composers in the course of the twentieth century. The first – 'antinarrative' – might be thought of as a counterpart to Kramer's ideas of

multiple-time, describing musical works in which conventional narrative expectations are continually aroused only to be frustrated, subverted or offset through structural juxtapositions, contrasts and jump-cuts. The second – 'nonnarrative' – does not negate the idea of narrative altogether but rather structures musical features traditionally indicative of such linearity in a way that does not fulfil their supposed narrative function; much minimalist music, with its non-directed sense of pulse and tonal bearing, might be described in these terms. Pasler's third category – 'nonnarrativity' – is distinct from 'nonnarrative'; as with Kramer's 'vertical time', it concerns music that shuns any discernible organising principle, structure or syntax, and thus attempts to 'erase the role of memory' (Pasler 2008, 39–43).

Perhaps of greater relevance, though, is Pasler's assessment of novel approaches to musical narrative developed by composers within the last two decades of the twentieth century, highlighting what she views as attempts to reconcile the diverging paths forged by styles that seeks to emphasise either structural principles or ease of perception. Although she focuses primarily on textbased works – operas by John Cage and Harrison Birtwistle, and song cycles by Bernard Rands – her conclusions hold wider relevance:

These narratives borrow the most important attributes of traditional narratives – the use of signifieds, well-defined structures, configuration, unifying reference points, transformation, and memory. But they continue to respond to the modern desire for expressing the multiplicity of existence, fragmentary and seemingly irrational orders, and meanings that go beyond those that are known. [...] Even if their configuration is not that of a dramatic curve, their structures generally have clearly defined beginnings and endings, and they reach closure of one sort or another. [...] But perhaps most important, such works may incorporate more than one narrative, either successively or simultaneously. (2008, 46–47)

Byron Almén is similarly receptive to less conventional narrative types, noting the frequent absence of a perceivable 'topic' (a primary expressive feature often established early in a piece, frequently defined in opposition to another topic in the manner of Robert Hatten's 'markedness' principle (1994, 291)) in many serial and minimalist works. The absence of this contrast – and thus directedness, Almén asserts – can in turn produce pieces that fail to support narrative readings

(Almén 2008, 90–91). Although he deems the questions as to the limits of narrativity that these non-narratives raise as being beyond the remit of his own enquiries, Almén's own theoretical framework proves particularly compelling. Looking to evade an outlook in which musical narrative is derived primarily from literary modes, he proposes a more productive 'sibling' model in which both are indirectly related as 'distinct media sharing a common conceptual foundation' (Almén 2008, 12–13). Indeed, he suggests that this theoretical distinction proves to be a liberating factor for musical meaning, with the lack of semantic specificity inherent in literature and drama facilitating 'wider applicability and greater immediacy' for musical narratives. Many of his working definitions of music narrative reflect this concern for reception and semantics:

It is a psychologically and socially meaningful articulation of hierarchical relationships and our responses to them. It involves the coordination of multiple structure of meaning at multiple levels. It crucially depends on a confluence of factors – abstract conventions of meaning, specific musico-temporal successions, and individual interpretation both conscious and unconscious. It is capable of supporting multiple interpretive strategies invoking different political and temperamental imperatives. (2008, 27)

Dynamic forms

Ultimately the mapping of more detailed constructs such as narrative onto musical form is a matter of interpretation. Whether such processes prove helpful or not with regard to perceiving and forming an understanding of particular pieces of music will vary, often drastically, according to a wide range of factors; these include the style and character of the work in question, the performance of that work, the context of that performance, and disposition and frame of mind of the audience. Of course, such variety stands as a seemingly unsurpassable obstacle to any effort to develop a detailed theory that might address all kinds of music with some degree of success. However, this would be to miss the point: any embrace of diversity is bound to involve, in turn, an equally open-minded approach towards theoretical variety. As far as narrative goes, the most helpful unity that might be identified across musical styles is their universal time-bound character. For all the

ways in which composers have manipulated their forms to subvert a linear experience – whether through the use of discontinuous features, or total elusion via an attempt to invoke a non-narrative – the overriding temporal experience of their work will invariably include fundamental parameters of start- and stoppoints, if not the formal closure of a recognisable beginning and end as Jonathan Kramer distinguishes (Kramer 1982, 1). Similar limitations apply in literature and other media.³¹ In discussing the 'menu-driven tree structure' that websites offer their readers, allowing them to create their own sequence rather than succumb to an enforced linearity, Peter Elbow aptly notes that such time-saving strategies do not enable an avoidance of time altogether: 'They let us escape an enforced sequence through a text, but they do nothing to help us escape sequence itself. Human readers are still stuck with the ability to read only a few words at a time' (2006, 653).

Any counter-claim to this overruling linear reality, like the assertion of narrative, might well be considered the product of an illusion. However, these illusions retain crucial importance as the products of subjective musical experience. If anything, the contrasts and conflicts between the broader passage of time and the distortions of the way it is experienced might help inform analysis. A palpable tension is often induced between this overriding connection of duration and the musical subversions contained within it that might confront or defy it. The reassuring onward stability of the passage of time ensures a broader continuity that is nevertheless allowing of and receptive to experiences of internal discontinuity. Susanne Langer touches on this tension through her preference for multiple temporal forms over a 'one-dimensional' time:

But life is always a dense fabric of concurrent tensions, and as each of them is a measure of time, the measurements themselves do not coincide. This causes our temporal experience to fall apart into incommensurate elements which cannot be all perceived together as clear forms. When one is taken as parameter, others become 'irrational', out of logical focus, ineffable. Some tensions, therefore, always sink into the background; some drive and some drag, but for perception they give

³¹ Almén presents an interesting critique of Nattiez's inference that causality is a prerequisite for narrative, utilising examples from literature – including a short story by Kazuo Ishiguro – to demonstrate that connections between events are ultimately made by the observer rather than by the author or composer (Almén, 2008: 30–32).

quality rather than form to the passage of time, which unfolds in the pattern of the dominant and distinct strains whereby we are measuring it. (1953, 112–13)

Langer's hesitation to include notions of form here is seemingly tied to her wider temporal outlook. Actual experience, she asserts, has no 'closed form'; rather it is memory that creates form, shaping experience 'into a distinct mode, under which it can be apprehended and valued'. 'It is the real maker of history,' she writes, 'not recorded history but the *sense of history* itself, the recognition of *the past* as a completely established (though not completely known) fabric of events, continuous in space and time, and causally connected throughout'. However, the emphasis she places upon memory as a selection of the many impressions of present experience hints at the more significant part that in-the-moment listening might play; indeed, she asserts that 'to remember an event is to experience it again, but not in the same way as the first time' (1953, 262–63). The immediacy of experienced event *does* contribute to a broader impression of musical construction, not just as an abstracted memory but as an encounter that must be in some way relived in order for its role within the form to be adequately realised.

It is the wider temporal, and thus formal significance of such moments in musical performances that are at risk of neglect within theories that place emphasis upon accepted perceptual hierarchies of music: rhythmic and metrical groups, segments and proportions. There can be no doubt that the ways in which we derive meaning from these notions feature heavily in formal thought. However, this can come at the expense of a consideration of how particular events and passages can influence overall structural impressions. These moments do not necessarily have to subvert larger structural continuities; rather they can sometimes pull them into focus, or temporarily render them unimportant in the minds of listeners. Articulating or identifying the effect of such moments can be particularly difficult, not least given the mercurial nature of subjective experience: the character of moments may never appear the same way twice, and what might seem a particularly lucid and significant passage during one hearing of a work might well slip by almost unnoticed during another. But there can be no doubt that in order to account for such events, broader ideas of form should retain a flexibility in-keeping with this subjectivity. Just as the musical relationships that help to

create perceptual continuities within pieces may shift and alter, so should conceptions of form maintain a sense of dynamism.

There can be little doubt that the unusual temporality found in these instances is a major contributor to their significance. Examples of descriptions and explorations of comparable phenomena appear across a broad range of literature. Edward T. Hall proposes the cultural notion of 'sacred time' as an immersive, removed alternative to the passage of ordinary 'profane time' (Hall 1984, 25–26, discussed in Kramer 1988, 16–18, and in Lushetich 2014, 77–78). Jonathan Kramer asserts that music possesses the ability to reflect both sacred and profane time (Kramer 1988, 17), a conclusion echoed by Barbara Barry in her outline of musical time comprising a dialectic between finite 'structured' and infinite 'transcendent' modes. These ideas have been adapted to narrative terms; Pasler suggests that moments of narrative transformation serve to interrupt the linearity of a musical work (Pasler 2008, 33–36), whilst Almén makes reference to points of crisis in pieces and their effects upon perceived resolution (Almén 2008, 22).

Passages such as these seem to facilitate a phase of anti-hierarchical time, a significant temporal experience that might appear at once isolated from and profoundly connected to its musical surroundings. It is in these moments that some kind of recognised formal significance - whether a convergence or divergence of material, a change in direction, a motivic recasting, a return to earlier ideas, or a restart – enables an immersive time. A heightened awareness of time is prompted in listeners, enabling a broader perceptual 'space' in which the content and its wider relevance can be explored beyond the regularity of continuous linear time. It might be argued that such phenomena constitute some of the closest experiences to 'timelessness' (as an immersive moment set apart from a comparatively 'timed' context) that music can provide. The case study that follows will begin by exploring two such examples and their impact within the context of two very different musical works: the first movement of Beethoven's 'Eroica' Symphony and Kaija Saariaho's piano trio Je sens un deuxième coeur. Utilising parallel passages at the heart of both pieces as a springboard for consideration of their wider designs, some of the narrative implications for the perceived temporal forms will be explored.

Eight

Narrative Possibilities

Kaija Saariaho & Ludwig van Beethoven

Many of the analyses within this thesis – whether explicitly or not – began with specific landmarks in musical structures, catalytic passages in long-term forms. The springboard for this case study takes the shape of a brief parallel between two pieces, a correspondence that is characterised by melody. This chapter, in a sense, comes the closest to utilising Lawrence Kramer's 'hermeneutic windows' approach as a starting point, with his notion of 'structural tropes' proving particularly apt: 'Since they are defined in terms of their illocutionary force, as units of doing rather than units of saying, structural tropes cut across traditional distinction between form and content. They can evolve from any aspect of communicative exchange: style, rhetoric, representation, and so on' (1990, 9–10). An examination of these two passages will give way to an exploration of the broader architectures of both pieces, and the manner in which their temporal narratives might facilitate these moments of significance.

The first passage can be found at the centre of Kaija Saariaho's (b. 1952) *Je sens un deuxième coeur* for viola, cello and piano (2003). Here, an episode characterised by dissonance and a rhythmic drive of relentless force reaches a point of burn-out. It gives way to a shrouded atmosphere as the third movement begins, a slowly lapping piano accompaniment underpinning the strings as they present the first notable gestures of melodic unison in the course of the piece (third movement, bars 1–10). Arching figures echo fragments of previously heard material before repeatedly disintegrating into whispered harmonic trills, discernible pitch content ebbing away atop a dissonant, tonally static accompaniment. The self-perpetuating, onward insistence of the preceding movement has all but vanished, with the music seemingly recoiling from its ferocity, retreating into itself. A sense of disillusionment takes hold, claustrophobia setting in as the same harmonic shapes are treaded and retreaded, the ability to generate any lasting motion seemingly disabled.

The second passage constitutes a particularly distinctive passage in Western musical history. The opening Allegro con brio of Beethoven's (1770-1827) Third Symphony (1804) reaches near-total meltdown at a structural point that early listeners must have assumed would signal a homecoming to the opening material. A succession of dizzyingly rapid modulations precipitates – instead of a triumphant return – a cataclysmic series of juxtaposed chords, violent syncopation and brutal dissonance threatening to wipe the slate clean of the established metre and harmony (first movement, bars 248–79).³² Melodic content, too, is under siege as William Kinderman describes: 'So unrelenting is this rhythmic fragmentation and compression that the thematic material is virtually dissolved into nothing at about that point when the recapitulation would normally be expected' (1995, 91). As brutal unison string chords ricochet and fade in the fallout, a coiling melody emerges in the woodwind, one altogether distinct from the themes that have thus far taken centre-stage in the work. The foreign nature of the subject is matched by the key in which it is presented: E minor, one step away from the furthest tonal point from the E_{\flat} -major tonic on a dominant cycle. The results are audibly alien, a sense of disorientation aroused.

The detachment and loss that can be experienced in both of these passages might seem to lie at odds with the rigorous structures they sit within. In these passages, time appears distorted, as if detached, or released, from its surroundings. Beethoven's first movement is unquestionably linear in character, its restless tonal desire imbuing its duration with a seemingly irrepressible urgency. In spite of numerous small-scale metrical disruptions, the product of this design is an overriding temporal continuity. It is in the wake of the developmental climax that this progressive approach is briefly called into question, with the distant E-minor melody seemingly highlighting the alienating cost of such progress. Saariaho's trio, meanwhile, at times gives the outward *impression* of a similar kind of driven continuity in the two faster segments that flank this central movement. However, this chapter will explore to what extent the surface linearity of these movements affects temporal character of the work at large, and indeed how this apparent

³² Whilst the 'Eroica' has been treated to a rich reception history of analyses and commentaries, they will rarely form part of the discussion here, with the exception of Scott Burnham's dissection of the work in light of heroic tropes (1995). For an insightful consideration of this reception history, see Lockwood 1982.

advancement can be reconciled with the static disquiet at the core of the work. Through an evaluation of both of these passages within their respective works, it is hoped that they can be shown as 'structural tropes', constituting formal procedures that also emerge as recognisable expressive acts (L. Kramer 1990, 10). Their roles within the perceived temporalities of the works are particularly significant, offering at once a sense of detachment from the temporal journey at large whilst simultaneously pulling the course of that journey into focus. The purpose of this case study, with regard to the discussion in Chapter Seven (Experiencing Time), is not to map out or advocate specific narrative plans for these pieces. Rather it is to highlight potential interpretive levers - perceptible formal and temporal elements of the music rooted in conceptions of continuity, energy and perspective - that might serve as a basis for such readings. Ultimately, it is the way in which these structures might be heard and understood over time both in the moment of listening, and in retrospect - that will pave the way for the discussion of approaches to musical form in the theoretical discussion that follows in Chapter Nine (Understanding Time).

Surface balance

Although these two works were conceived almost two centuries apart, and take very different courses with regard to musical style and substance, the comparable sensations of disorientation – emotional, temporal and spatial – that are induced at their structural cores offer a revealing parallel. It is obvious that these apparently related ends are achieved through differing means. Nevertheless, a glance at the wider architectural properties of both pieces reveals a shared emphasis on balanced proportion. The five segments of Saariaho's trio are lent a collective symmetry through their placement: three slow sections interceded by two faster episodes, bar numbers, metronome marks, and typical performance durations all corresponding to create two approximate movement types. The central slow movement lies perceptually furthest from the relative clarity of the opening and

Movements	Bars	Crotchet pulse (bpm)	Duration
1. I unveil my body	35	c. 40 (within senza tempo)	3'37
2. Open up to me	88	c. 92–104	1'59
3. In her dream, she was waiting	58	c. 66	4'03
4. Let me in	96	c. 86	2'17
5. I feel a second heart	56	c. 63	4'48

Fig. 8.1: Saariaho, Je sens un deuxième coeur, formal scheme

Sonata form component	Bars	Sub-component	Bars	Duration
Exposition	304	First exposition	153	2'45
		Exposition repeat	151	2'42
Development	244	Departure	126	2'22
		Return	118	2'06
Recapitulation	274	Recapitulation	159	2'55
		Coda	115	2'30

Fig. 8.2: Beethoven, 'Eroica' Symphony, first movement, formal scheme

closing sections, its stifling inactivity and disorientation presenting a stark contrast to the faster outbursts that immediately bookend it (see Figure 8.1).³³

The opening *Allegro con brio* of Beethoven's Third Symphony broadly follows the architectural patterns of sonata form. Conventionally speaking this might give the impression of a bipartite form, with the repeated exposition balanced out by a brief development section and a rounding recapitulation. However, even just comparing the 'Eroica' to earlier symphonic first movements serves to indicate an expansion, its 15-minute-plus timescale easily eclipsing predecessors. What proves fascinating, however, is not the expansion itself but *where* it has occurred. Far from simply being stretched outwards, Beethoven seeks

³³ Durations taken from recording listed in primary resource list (Jonathan Moerschel, viola; Eric Byers, cello; Gloria Cheng, piano. Harmonia Mundi: HMU 907578).

to change the structural make-up of the music from within, identifying and broadening the sections typically granted less scope (see Figure 8.2).³⁴

The sonata form is transformed from a bipartite to a tripartite form, with exposition, development, and recapitulation granted relatively equal weighting. Paradoxically, what might be viewed as a manipulation – a structural deformation, as Hepokoski and Darcy would describe it - of the classical form in fact aligns with the very ethos of that outlook, as defined by Charles Rosen: 'the symmetrical resolution of opposing forces' (1997, 83); indeed, it is the palpable strain precisely of the attempt to provide this kind of rhetorical balance that might enhance a 'deformational' reading, with Beethoven seemingly applying - in Hepokoski and Darcy's words - 'compositional tension and force to produce a surprising, tensionprovoking or engaging result' (2006, 617). Furthermore, it is possible to view the form in an increasingly episodic manner, sub-dividing these structural boundaries to reveal six approximately comparable smaller segments of between 115 and 159 bars in length, each assuming a different role in the developing narrative of the piece. To achieve a heightened mode of expression, the scope of the musical narrative has been broadened to encompass a greater sense of journey and conflict.

The principle expansions are found in the development and the recapitulation sections, both of which are doubled in conventional size relative to the formal proportions of the movement. Rather than simply propelling the material through points of tension and climax back towards the tonic, Beethoven's development section here takes the shape of two gestures, the first carrying the music further away from tonic stability before a return occurs throughout the second. The cataclysmic breakdown that occurs just before the E-minor landmark of disorientation lies at the traditional point of recapitulation. Instead of proximity to stability, audiences are presented with a palpable distance from it, the music in an apparent state of deconstruction rather than reconstruction. In spite of this apparent deformation, it is still notable that the fundamental changes contained within the development might still be understood according to the normative zones that Hepokoski and Darcy outline, with a sequence of linking, preparatory,

³⁴ Durations taken from recording listed in primary resource list (La Chambre Philharmonique, conducted by Emmanuel Krivine. Naïve: V 5258).

central action, and retransitional functions emerging (2006, 229–30). Indeed, the violent eruption at the centre of the section might be thought of as an amplification of the very qualities that William Caplin (1998) ascribes to the typical 'core' of the development, projecting 'an emotional quality of instability, restlessness, and dramatic conflict' (1998, 142); Caplin's description of the musical features that might help to create to this effect prove particularly relevant if carried to extremes: 'The dynamic level is usually *forte*, and the general character is often one of *Sturm und Drang*. The core normally brings a marked increase in rhythmic activity projected by conventionalised accompanimental patterns. Polyphonic devices – imitation, canon, fugal entries – can contribute further to the complexity of the musical texture' (1998, 142).

The coda, meanwhile, achieves the paradox of calling the stability of the tonic into question precisely by affirming it, 'recapitulating the entire process of the movement,' as Burnham asserts (1995, 23). The entire movement could theoretically conclude with the close of the first part of the recapitulation, a gradual fade occurring in the tonic key. It is at this point, however, that the primary theme is forced downwards via two outbursts, the first in Db, the second in C major paving the way for the coda – a two-step motion derived from the subversive manoeuvre from Eb to C \ddagger in the celli in bars 6–7. Through a series of further modulations, the tonic is eventually re-established and ecstatically stated at the movement's close. More generally, it demonstrates a further questioning of the security and dominance of the tonic framework and the primary material that accompanies it, the varied perspectives granted through the tonal and thematic distance offered in the expanded sections acting to weaken the sense of hierarchy. Paradoxically, it is through a heightened sense of proportional balance in temporal form that a palpable degree of instability is reinforced.

Internal narratives

Metaphors involving human actions engage the imagination more directly, overtly and powerfully than those detailing faceless processes that are meaningly organic. (Burnham 1995, 8)

The subject matters that served as inspirations for both pieces are strikingly different. Forming a major part of the mythology surrounding the piece,

Beethoven's 'muse' is well known: the original score of the work bore the header 'Buonaparte'. The composer had originally conceived of dedicating the work to Napoleon Bonaparte but had instead opted for his patron Prince Lobkowitz for the practical purposes of obtaining both a première and a fee. The First Consul of France had instead assumed the apparent status of subject, the personification of the ideals of freedom and equality that had permeated the recent French Revolution. As his pupil Ferdinand Ries recalled, it was while finishing the piece, in May 1804, that Beethoven furiously withdrew the title-page inscription upon hearing of Napoleon's all but self-appointment as 'Emperor', declaring: 'So he too is nothing more than an ordinary man! Now he will also trample all human rights under foot, and only pander to his own ambition; he will place himself above everyone else and become a tyrant!' (Sipe 1998, 54-56). The political catalyst for the work was, nevertheless, something that Beethoven made little effort to conceal, subsequently revealing the inspiration both to his publishers (describing it as the real title) and finally naming the work as an 'heroic symphony, composed to celebrate the memory of a great man' (Robbins Landon 1974, 93-94). Heroism itself had become the subject.

Je sens un deuxième coeur grew initially from Saariaho's work on her second opera Adriana Mater, premièred three years after the completion of the trio at the Opéra Bastille in Paris. The stage-work concerns a mother in an unnamed modern country on the verge of insurgence and war. As the opera's director Peter Sellars explains (2012), the content of each movement stems from particular scenes in the opera. The music of the first movement is - in the opera - the woman's dream of freedom in a claustrophobic stifling world: 'The gesture of unveiling is provocative but innocent, adult but celebrating a sensuality that moves deeply inside every human being.' The second section is utilised as her alcoholic boyfriend violently appeals to her to let him into her house, while the central alienated movement takes the form of a dream sequence in which war actually breaks out in their city, familiar landscapes ravaged: 'Strange, stolen moments of tenderness contrast with horror – watching at a distance in a dream the terrible things that human beings are capable of.' The vision becomes a reality and the music of the fourth movement, most shockingly, accompanies a scene in which the woman's drunken boyfriend, now a member of the local militia, attempts and succeeds to batter

down the door – he enters, and rapes the woman. The trio closes – in an intriguingly circular manner – with the starting point for the opera: the mother's sensed physical relationship with the unborn child she bears as a result of the horribly violent act:

The emotional depth that we associate with any mother carrying any child is made deeper by the fact that her sister encourages her to have an abortion, to kill the monster that is growing inside her, a living embodiment of her violation. This mother chooses to keep the child, and singing to it as she carries it inside her, she decides that her voice will help shape this child. This child will not be a monster, but a loving, whole, sane, and valued human being. (2012, 9–10)

Although both composers may have approached the compositional process with more concrete images in mind, the ties between the pieces and their initial subject matters have been deliberately weakened. Beethoven's response to – what was in his eyes – Bonaparte's eventual transfiguration into the very monster the man had set out to destroy, was to remove his status as the standard bearer of the symphony. The composer's convictions regarding the work itself remained unblemished. The relationship between Saariaho's music and its subject matter, meanwhile, is demonstrated in her general attitude towards opera:

It's always the inner space that interests me. And in a way that makes my operas very difficult to stage. In *Emilie*, this woman is writing a letter for 90 minutes – so what do you do with that? It's very private: everything is happening in this woman's mind during one night when she's working. Like all of my operas, it should have the effect of being fundamentally private music, music that I want to communicate with the inner world of my listeners, just as it expresses my inner imagination. (Saariaho and Service 2011, 14)

Accordingly, it is this communication with the internal – and its side-effect appeal to the universal – that allows the trio to take on a life of its own beyond its operatic genesis. While the titles of each movement refer specifically to significant fragments of Amin Maalouf's libretto, only a comprehensive knowledge of the opera itself would allow a listener to apply a specific 'synopsis'. Saariaho's programme note for the trio allows a glimpse on the altogether separate thematic content that served as a compositional catalyst, emphasising a twice-abstracted take upon the piece:

The title of the first section, 'I unveil my body', became a metaphor: the musical material introduced was orchestrated to reveal the individual characters of the three instruments and their interrelations. The second and fourth parts both start from ideas of physical violence. In the context of this trio the violence has turned into two studies on instrumental energy. Part three is a colour study in which the three identities are melded into one complex sound object. The last section brings us to the thematic starting point of my opera, again very physical: the two hearts beating in a pregnant woman's body. (2003)

The subjects of both works might, in a somewhat obvious sense, be said to encompass the concept of an 'other'. Beethoven's subject – heroism – is a state that can only truly be identified in relation to its surroundings, more specifically some kind of opposition. Heroic qualities, like most character traits, are at least partially defined by their opposites; the performance of heroism typically involves *overcoming* something. While the 'other' of Saariaho's opera may fluctuate according to the development of the plot (the boyfriend, the sister, conflict and war itself), the composer indicates that the central image at the heart of the abstracted trio is of the relationship between a mother and her unborn child. It presents a fascinating paradox – the 'other' that is found within, an internal dialogue.

This literal internalisation offers the potential for a new way of viewing both pieces. In Saariaho's conception of motherhood, the narrative may be said to concern an attempt to understand oneself as much as it does to understand the 'other' within oneself – an interdependence is at work here. Meanwhile, although Beethoven's subject of heroism could on its surface be seen to concern conflict with an external figure, a more classically-grounded conception of the hero echoes the idea of an inward perspective. This redirection of expectations is summed up eloquently by Joseph Campbell in his dissection of protagonist narratives in cultural mythologies: 'Where we had thought to travel outwards we shall come to the centre of our own existence; where we had thought to be alone, we shall be with all the world' (2008, 18). Both the *Allegro con brio* of the 'Eroica' and the macro-symmetry of *Je sens un deuxième coeur*, for all their outward violence, might instead be heard as grappling inwardly.
Fulcra

In spite of the surface linearity that the five-movement structure of *Je sens un deuxième coeur* presents, its temporal experience would seem to possess facets of circularity. There are numerous points of audible return, recognisable harmonic and melodic shapes frequently re-emerging in the course of the work. Rather than taking the form of specific materials that recur in a leitmotivic fashion, the significance of these recurrences seems to lie in the sonorities themselves and the tonal power that they gain through their very repetition and recasting. In attempting to make further sense of these structural markers, it is useful to draw upon an idea presented by another figure featured in this study, the British composer Thomas Adès. He expresses a preference for certain pitches as points of audible recurrence in the course of a work:

It's something in the way that I hear all music, actually, this idea of there being a single note – a particular pitch on a particular instrument – that has a crucial function across whole structures... You see it everywhere: in Beethoven or Mozart, Haydn or Chopin: there will be a note that will be a fulcral point for whole pieces. And often it won't be the tonic. Often it will be a note that has become an obsession, around which the whole piece hinges. (Adès and Service 2012, 48)

Certainly an obvious 'fulcrum' emerges in the course of the first movement through the repetition of octave G is in the bass-line of the piano. Initially resounded twice (bars 1–7), the octave is disrupted by the introduction of a B in place of the lower G is (bars 8–11). After an series of alternate bass resonances (bars 12–28: A is -Ab - Di = Eb - F), G is returns in the form of a tremolo pedal that lasts from bar 29 to the close of the movement, underpinning the ascent to a climax in both dynamic and activity levels (bar 31) and the fade that follows.

Whilst G^{\u03eq} certainly appears to be established as something of a bass fulcrum in the course of the first movement by virtue of its recurrence – the 'obsessive' character suggested by Adès very much demonstrated – its role within a tonal context is not quite clear. Although its function would seem to encompass that of a tonic, providing a potential basis for a stable framework, no transparent harmonic hierarchy is subsequently outlined. Indeed, the very repetition and grounding nature of the G^{\u03eq} pedal seems to incite a kind of perceptual restlessness; rather than



Fig. 8.3: Je sens un deuxième coeur, second movement, bars 54-57

providing security, as the G^k is comprehensively assimilated into the accepted harmonic geography of the music, a growing need for change sets in. Thus by the close of the movement a kind of aural claustrophobia has taken hold; the musical content has seemingly peaked without precipitating a new direction, its accumulated potential energy now in need of an outlet. In this sense, the pedal approaches the function of a dominant rather than a tonic, providing a springboard of sorts for the kinetic outburst that follows.

The harmonic grounding that is presented at the opening of the second movement provides a step away from the established fulcrum and, in doing so, opens up the possibility for what could be viewed as a second focal point: continued reiterations of A^{\\\epsilon} dominate the opening 28 bars (interestingly A^{\\\epsilon} proved to be the first fully-fledged bass departure from G^{\\\epsilon} in the course of the first movement at bar 12). Following a series of swift harmonic jolts, the A^{\\\epsilon} fulcrum is reasserted at a structural landmark, a climactic, *fortissimo* point of emphasised rhythmic convergence amid the ricocheting dialogue at bar 55 (see Figure 8.3). It lands almost exactly at the 'golden section' of the movement, a frequent peak of a esthetic interest in the temporal and architectural scheme of a piece, the 55th bar of a total of 88 (the Golden Ratio of 88 being 54.38699101166787); it is also notable with regard to its significance within the Fibonacci sequence, 55 and A^{\\\epsilon} also features within the violent, thrice-repeated, nine-note chord that brings the movement to its close, itself a conglomeration of significant harmonic bass pedals that occur in the course of the movement (see Figure 8.4).



Fig. 8.4: *Je sens un deuxième coeur,* reductions of closing sonorities of second and fourth movements

Movements	Opening fulcrum sonorities	Closing fulcrum sonorities
1. I unveil my body	Gi in bass	G¦ pedal
2. Open up to me	A¦ outlined in bass	Gկ & Aկ included within dissonant outbursts
3. In her dream, she was waiting	A⊧ in higher registers, F♯ and F⊧ in bass	A५ in higher registers, F♯ and F५ in bass
4. Let me in	Ab/Ab trill leading to Gb emphasis in bass	Gէ and Aէ included within dissonant outbursts
5. I feel a second heart	G4 in bass	G4 pedal

Fig. 8.5: Je sens un deuxième coeur, table detailing fulcra shifts

Taking the idea of G\ and A\ as competing, or at the very least interacting, fulcra has interesting implications, not least with regard to the circularity of the work. Simply taking the presence of these two notes within the opening and closing gestures of each movement reveals a traceable harmonic narrative (see figure 8.5). With A\ having G\ as the bass grounding at the outset of the second movement, the disorientation at the outset of the ensuing central dream sequence seems to arise from the absence of such lower-register clarity. Although the movement is introduced by A\ is in the strings, the notes seep in via the higher registers, with any meaningful tonal sway immediately displaced by the dissonance in the left hand of the piano: F\ and F\ (third movement, from bar 2). This loss of tonal clarity in what follows would appear – at least in part – to be due to the absence of a clear fulcrum. Indeed, it might be suggested that for the majority of the movement, the concept is broadened to instead encompass the



Molto espressivo, sempre flessibile



entire area surrounding G\u03c4 and A\u03c4. Semitone relationships dominate much of the lower-register content throughout. In this way, F\u03c4-F\u03c4 and its 'dominant' pairing C\u03c4-C\u03c4 hold great sway in the early stages of the movement (bars 1–26), repeatedly disrupting any audible security established by the fulcra; see Figure 8.6 for an example of the clashes and interactions between F\u03c4-F\u03c4. in the piano left-hand, and G\u03c4 in the right-hand, all beneath sustained A\u03c4s in the viola and cello). A\u03c4 does begin to show as something of a temporary arrival point, struck upon frequently at the close of slowly descending left-hand phrases in the piano (from bar 32 onwards) before emerging briefly in definitive octaves (bars 40–41). G\u03c4 also emerges as the lower voice of an ostinato piano phrase (combined with E\u03c4 and F\u03c4), one bar long, that appears erratically at first (in bars 42, 45 & 48) before enjoying an undisturbed five bars of repetition towards the close of the movement (bars 50– 54). It is nonetheless supplanted by the return of the F\u03c4-F\u03c4 octave pairing from the opening of the movement in the final bars (bars 55–58).

What has thus far remained a largely horizontal dialogue becomes a vertical one from the outset of the fourth movement, the two fulcra set directly against one another. The initial piano trill creates a haze of A_{2}^{1} and A_{3}^{1} , a hangover from the chromatically muddied waters of the previous section. The repeated pattern that then quickly evolves in the lower registers of the piano spans a ninth, G_{3}^{1} at its



Fig. 8.7: Je sens un deuxième coeur, fourth movement, bars 1-4, (piano)



Fig. 8.8: Je sens un deuxième coeur, fourth movement, bars 40-42, (piano)

lowest point, A_{\natural} at its highest. Although tonal weight initially seems to lie with G_{\natural} , its depth combined with a first beat emphasis, added notes and a rapid shift from straight semiquavers to quintuplets and finally sextuplets allows a displacement, with G_{\natural} now acting as an upbeat, A_{\natural} as the downbeat of each ostinato gesture (see Figure 8.7).

Let me in takes the form of an exaggerated, manic return to the fast material of the structurally symmetrical second movement. Discontinuity permeates the musical landscape, manifesting itself in the shape of unexpected 'jump-cuts' precipitated by sharp, dissonant tutti chords that curtail the perpetuating sequences. Each renewal of sequential activity following these interruptions sees a new move in the power struggle between the two fulcra, G\u00e4 or A\u00e4 usually emerging as repeated punctuations of patterns, often audible as the lowest pitch: take, for example, the appearances of G\u00e4 from bars 16 and 19, or A\u00e4 from bars 12 and 23. The cycling four-note pattern (B\u00e4 - A\u00e4 - G\u00e4) that appears in the bass of the piano from bar 34 onwards in conjunction with rapid right-hand scales – and that eventually dominates the final passages of the movement – sees both fulcra pitted against one another once more, G\u00e4 again assuming the stance of a bass upbeat, A\u00e4 ringing out an octave higher than the rest of the phrase (see Figure 8.8). Even as the pattern becomes misshapen and deformed towards the close of the movement (bars 74–92), the two fulcra remain within its grasp with notable consistency, the



Fig. 8.9: *Je sens un deuxième coeur*, openings of first and fifth movements, reduction to highlight reversal of note series (viola and cello)

reintroduction of chromatic elements in close proximity ultimately doing little to dull their impact. The two notes even assume roles within the chord that is frequently utilised as a sudden interruption, almost always paired in the strings (with frequent piano backing) with an additional A_{\flat} , a chromatic blurring again recalling the disorientation of the central movement (bars 54–58, 63, 67 and 69).

Finally, both fulcra are crucially contained within the 10-note chord that violently concludes the movement (see Figure 8.4). Closely related to the parallel figuration that concludes the second movement, the chord seems to perform the function of wiping the tonal slate clean, allowing a confident bass octave reassertion of G μ from the very start of the final movement. In audibly circular fashion, the music here in many ways mirrors the opening of the entire piece, broader arching gestures still present yet now underpinned by a quicker metrical motion. Indeed, a reversal of the opening rise-and-fall idea in the strings can be heard within the first three bars, $E\mu - F\mu - C\mu$ now presented in retrograde with an interceding D μ now introduced in the cello (See Figure 8.9).

Intriguingly, the bass resonances presented in the lowest registers of the piano also echo – at least initially – the broader path of the first movement: a Bb is soon introduced in place of one of the octave Ghs (from bar 5), with octave Ahs introduced (from bar 9) followed by Abs (from bar 13). After further episodes rooted by notably triadic bass notes (Bb and Dh) as well as extended spells with Ah and Ab, it falls to a seven-bar Gh pedal to conclude the work (bars 50–56), the unresolved sensation of the close of the first movement now displaced and

counterbalanced by a sense of return. The perception lies far closer to that of a tonic, the first fulcrum confirmed as the true architectural foundation.

In search of stability

Whilst the essential theory of two properties interacting and competing can certainly be transferred from *Je sens un deuxième coeur* to the first movement of the 'Eroica', it is difficult to apply 'fulcrum' labels to specific sonorities or elements. Expanding the 'fulcra' concept somewhat, it is possible to view Beethoven's *Allegro con brio* architecture as comprising a dialogue created by motions between two extremes of a spectrum: stability and instability. The resulting sensation is of musical content held in an ever-present but shifting tension between these two poles. It is, perhaps, what Burnham touches on when he describes the 'latent trend towards death' he hears in the C♯ of bar seven (1995, 22). Going further, it might be portrayed as a two-way relationship, inherent tendencies of one towards the other: stability towards self-destruction, instability towards resolution.

In the course of the 'Eroica', stability manifests as the very building blocks of conventional Classical tonality: the triad itself. For its first four bars, the opening theme of the work takes the shape of an unambiguous expression of this, remarkably utilising only the three constituents of the tonic chord with the downbeat emphasis falling solely on E_{\flat} (see bars 3–6 in Figure 8.10). Its supremely static nature presents a paradoxical subject, on the one hand a blank motivic canvas ripe for development on account of its simplicity, and on the other a statement of stability so bold that it almost seems to demand its own deconstruction if anything new is to come from it. Its figuration also raises new ideas when contrasted with the two explosive tutti E^b outbursts that come before it: a vertical expression of the triad (two chords) followed by a horizontal one (an arpeggiated subject). The relationship between the two gestures at this stage in the work presents two expressions of energy: potential and self-perpetuating, the latter casting the arpeggio shape in a dynamic rather than a static manner. While the triadic purity of this theme remains unmatched, many of the themes that follow all outline the triad to some degree, the three notes providing the framework of



Fig. 8.10: 'Eroica', first movement, bars 1-14 (violins, violas and cellos)

much of the subsequent motivic construction and development. Even the 'new' melody that appears in the wake of the central implosion (from bar 284) audibly traces the E-minor triad with its phrased contours. Indeed, the apparent novelty of the theme is, in many ways, a facade; the subject is in fact a fusion of earlier ideas taken from the exposition (see Figure 8.11). The result is a fresh and unusual perspective on highly familiar materials.

The stable manoeuvres of the these triadic figures interact with broader gestures of instability that initially stem from a motivic cell introduced in the seventh bar, a two-part semitone step downwards in the celli from E_{\flat} to C\$, the harmonic result briefly taking the shape of a diminished chord on G\$. (see bars 7–11 in Figure 8.10) The tonal consequence is the quick establishment of a palpable relationship between stable and unstable tonal forces; Robert Hatten describes the C\$ as a 'seed of instability' (1994, 121). Almost immediately (from bar 9), the



Fig. 8.11: 'Eroica', first movement, thematic derivation of E-minor development

repulsion from the tonic created through the sharpened submediant is corrected through a diametric assertion of the mediant, a re-attraction to E♭ induced through a reversal of the semitone drop in the bass. In many ways, this C♯ might be seen as representative of the subversive 'opposition' against which the heroism of the movement might be judged. However, it seems particularly significant that this chromatic disruption emerges audibly from the cello theme itself rather than from a different source. Here, Hatten's concept of 'markedness' – an asymmetrical evaluation of different or opposing features (1994, 34–43) – is evoked within the same broad melodic shape. As with the conceptual narrative of *Je sens un deuxième coeur*, the opposition, and the conflict that ensues, stems from within.

The semitone slip pervades the rest of the movement almost as prominently as the triad itself, at first facilitating multiple shifts away from E (bars 17–24) that have to then be reversed, further destabilising the status of the key. In many ways, its aural status as the tonic – as a definite point of departure – rarely seems in doubt; rather the effect is of the very significance of the tonic and its broader structural implications being called into question, an initial statement of unparalleled stability tending towards chaos. The result of these subversions upon the wider architecture may well be a gradual dislodging of an aural reliance on the role of the tonic. The effect on the exposition repeat is profound, with even the initial stability now perceptually subverted for the audience, E almost assuming a mirage-like quality.

As the movement progresses, the chromatic slip is constantly cast and recast in apparent attempts to counteract its destructive tendency, to normalise the gesture within a more conventional tonal framework. The peak of this struggle is



Fig. 8.12: 'Eroica', first movement, harmonic reduction, bars 248-84

reached at the core of the development section, ever-continuing drops and violently syncopated chromatic shifts creating strained modulations, eventually reaching a point of no return (see Figure 8.12 for an harmonic reduction of this passage). As the onward rhythmic motion begins to disintegrate, a diminished chord on D# – underpinned by Aa – momentarily gives way to two bars of C major in its second inversion (bars 274–75). The sudden unalloyed major triad seems frighteningly alien at this point in the work, the four bars that follow comprising an equally terrifying F-major chord in the second inversion riddled with sevenths, invoking a chaotic collision of F major and A minor (bars 276-279). Rather than precipitating a long-awaited standard modulatory return to the tonic via the now theoretically touchable Bb dominant, an entirely different harmonic route is sought through an unsettlingly spelled B-major diminished-seventh chord clouded for two bars by an added flattened ninth for the switch to the audibly foreign territory of E-minor (bars 280-84).

Burnham insightfully notes the role that the linearity – both tonal and temporal – of the movement's design plays in the disorientation experienced here: 'For if we do find ourselves in what may retrospectively be adjudged an impossibly remote harmonic realm, we are made to feel the ineluctable continuity of the process through which we arrived there'. He is also right to note that the passage constitutes a 'long-range underlying tonal preparation of E minor' (1995, 11–12); the sustained B-major triads in bars 262–65 act as a major contributor in affirming the eventual move through a perfect cadence (bars 280–284). However, it cannot

Narrative Possibilities

Bars	Tonal leaning	
284-91	E minor	
292–99	A minor	
300-07	C major	
308-12	C minor	
313-15	Ab major – Db major – Bb major	
316-19	Eb major	
320-29	Eb minor	
330-37	Gb major	
338	Bb major	

Fig. 8.13: 'Eroica', first movement, tonal leanings, bars 284–338

be emphasised enough that this procedure is embedded not only within layers of dissonance but also within a polyphonic 'pulling apart' of both the harmonic and metrical fabric.

As has been noted, the E-minor theme that then emerges is not as novel as it may appear, essentially derived from pre-existing – and audibly recognisable – compositional elements and providing a characteristic outline of the new triadic tonal basis. Perhaps the disorientation here stems not from the content's unfamiliarity, but precisely from its haphazard familiarity; the theme takes the shape of a recollective conglomeration of the core motivic ideas of the work, concepts that now teeter on the edge of irrelevance in the wake of such a brutal assault on – and dismantling of – the traditional tonal scheme. With a desolate extension of the development section now unfolding where a triumphant return home would conventionally sit, this is not simply a denial of aural expectations, but a violent rejection of them.

In the wake of this tonal implosion, it is the semitone slips that drive the music onwards in its wake, incessant upward gear-shifts setting in as the passage seems to strive for an alternative direction with renewed vigour (see Figure 8.13). The search extends in such a frantic manner that E_{P} major is in fact struck upon in

its early stages, though its lack of relevance to the immediate harmonic scheme leaves it bypassed in favour of its own minor key, proof of a full tonal alienation achieved (bars 316-22). The frenzied drive of the music eventually reaches a point of burn-out, stalling at a B^b-major-seventh chord (from bar 378) with the added flattened-ninth introduced in the first violins from bar 382 (a direct reference to the same intervallic addition in bars 282-83 ahead of the move to E-minor). In the moment of listening, the horn call of the returning first subject (bars 394–95) seems to surface 'prematurely', arriving before the ensuing nod to a dominant seventh in the violins has been given a chance to resolve to the tonic, preempting aural expectations that a point of return might be imminent. Certainly the appearance of the motif seems to jar with the context: semi-quaver repetitions in the violins providing a skeletal reference to the dominant-seventh harmony (adjacent A_{\flat} and B_{\flat}). It is a discontinuity that seems to echo with the by-now strengthened desire for a return to the tonic realm, perhaps a hang-up from the metrical disruptions and jump-cuts that have taken place throughout the development section. However, this discontinuity is absorbed into the continuity of the whole in retrospect in the way that it provides a new perspective on the first subject; tonal emphasis now falls upon the fifth rather than the tonic, precipitating the final tutti rush to the recapitulation (bars 394-98).

When the recapitulation gradually slows to a halt (bars 551–56), the E^b tonic successfully re-established as an audible point of return, the movement could hypothetically conclude very easily. But just as with the corresponding juncture at the centre of development section at which the recapitulation is denied, Beethoven projects the architecture further ahead, delaying the conclusion of the movement. The fading reminiscences of the primary triad subject are thrust downwards through a broadening of the semitone slip, D $_{i}$ and C $_{i}$ becoming D $_{i}$ and C $_{i}$ (bars 557–64).³⁵ The most notable aspect of this extension is the enharmonic transformation of C $_{i}$ to D $_{i}$, the very representation of instability now assimilated as part of a potential solution to the form of the movement. What this brief but significant harmonic shift creates is an opportunity for a re-route to the tonic with the intent of establishing a greater sense of stability. The repulsive power of the

³⁵ Other commentators who have argued this include Sipe (1998, 103), Burnham (1995, 21) and Basil Lam (1966, 122).

semitone slip is harnessed as a tool to emphasise the audible power of the tonic triad via an increase in tonal momentum for the final approach to it. More broadly speaking, the establishment of a final 'coda' section confirms a new sense of balance and symmetry of structure – the sonata form is here no longer bipartite, but tripartite.

Self-destruction

The wider result of this perceived instability is a rigorous interrogation of the triad itself engineered through changing perspectives upon it. Beyond merely setting up a hierarchical system of harmonic interactions and patterns of antecedence and consequence, the 'Eroica' seems to call into question its very fabric and, more broadly, tonality itself as a means by which a framework can be provided for musical structure. Through the heavily triadic character of the initial material, the repeated chromatic subversions that disrupt it, and the subsequent attempts to reassert conventional tonal power and stability, an inward examination of musical function is precipitated.

The 'Eroica' is often highlighted by commentators on account of its perceived outward violence: its brutal rhythmic disregard for its metre, its blatant flouting of traditional structural boundaries. Conrad Wilson, after describing the 'unstoppable momentum' of the first movement, draws attention to the second in terms of notably public gesture: 'The music, complete with sonorous oration, is hugely atmospheric and at times thunderously graphic' (2003, 34). Perhaps, though, its most compelling force is directed within, spiralling inward. The centre of the movement takes the form of an implosion rather than an explosion. The simplicity of the core subject from which the work stems – the E^b-major sonority – is such that its very nature is ultimately placed beneath the microscope; it is the triad itself that one hears dismantled and evaluated. This questioning might even be extended to the broader form itself with regard to the way in which the structure has been manipulated. In drawing attention to the reshaping of form and its parallel implications for expressive content through the course of the nineteenth century, Hepokoski and Darcy suggest that 'the presence of any sonata deformation whose implications extend over the generic structure of the whole piece would seem ipso

facto to call into question the legitimacy of the sonata strategy to provide a solution to the compositional or expressive problem at hand' (2006, 254).

The interactions of tonal stability and instability across the entire structure facilitate a broader sense of fluctuating tensions within an aural magnetic field. The overall feeling is one of departure and return, with the symmetrical sonata-form extension providing a perfect vehicle for a balanced perceptual narrative, the point of greatest alienation occurring at the very centre of the movement and precipitating a parallel 'homecoming'. The piece can be viewed as a three-part structure, with a six-part subdivision, each pairing interacting in a very direct, almost antecedent-consequent fashion. The tonal and structural uncertainties of the first airing of the exposition allow for a development of these doubts and instabilities within its repeat. When the opening half of the development leads not to recapitulation but to crisis, the second half - after an initial disquiet - comprises a re-energised hunt for formal direction and clarity. When it is finally reached, the recapitulation successfully traverses sequences of material once more to bring the music back to E_{\flat} , but the coda that follows serves to realign and reassert the tonic with an end-weighting that brings the final section into line with a symmetrical structural scheme. The temporal consequences are paradoxical: the intense compression of climactic events and of metrical energy contrasts with the extreme length of the structural and tonal journey to enable a musical time that appears at once short and long, condensed and exhaustive.

Rather than presenting calm, inner reflection, the introspection of the 'Eroica' is never lacking in force. Its process of self-analysis reveals an inwardly-directed violence, a constant desire to undermine its own character through the repeated testing of its ability to maintain its shape when put under extreme pressure from diametric forces; in musical terms, this is expressed through an examination of tonal function through the subversion of systematic triadic structures through recurring chromatic and dissonant features. The movement does not so much take the form of an 'outward' development as an internal assault, representing a barrage of attempts to undermine the significance of the major triad. Here the introspective process proves violent in many senses, taking the form of an almost frenzied chipping away at oneself to access something within.

Fresh perspectives

Interpreting Je sens un deuxième coeur according to the conception of fulcra certainly aids an architectural understanding of the piece, providing a framework for its construction. The notion of a fulcrum – a hinge or a support – implies stasis, an object that may facilitate movement and change but in itself remains unaltered and immovable. Whilst both G¹ and A¹ often reappear in the same guise, their characters and their broader meanings are transformed across the course of the work. G₄, for instance, is frequently manifested as octaves in the lower registers of the piano. While its persistent, often pedal-like presence in the first and last movements proves comparable in many respects, how an audience might *hear* the fulcrum may well be radically different at the end of the work than at the start. This is principally to do with the changes in the musical energy that the pedal facilitates. The early predominance of G₄ as a grounding for the piece incites a desire for, and ultimately precipitates, change. Although it is presented in the same essential manner in the final movement, what is perceived is a point of arrival, a return to a familiar landmark which, although acting earlier as a springboard for departure, can now be settled upon for the purposes of closure. The fulcra do indeed accord with a static interpretation, but the range of different perspectives offered upon them change throughout the course of the piece as a consequence of the harmonic shifts that occur around them. A parallel could even be drawn, in terms of traditional tonal function, with a transformation of the same sonority from a dominant to a tonic.

While the idea of a piece centering around a pair of fulcra is conceivable, it is worth observing that two pivot-points in fact interact, proving as complementary to one another as they are competitive. Mirroring its earlier introduction (first movement, bar 12), the assertion of A\\\ at the opening of the second movement does not simply challenge the authority of G\\. Rather, it offers a temporary but much-needed resolution, realising the change in trajectory – and indeed the release of rhythmic energy – that the closing pedal of the first movement demands. When the two fulcra do develop a more notably combative relationship in the fourth movement, the immediate consequences may well appear violent, but the

end result – in the fifth movement – is a recapitulation of the tonal collaboration of the opening of the work.

The co-operative facets of the relationship between the two fulcra are demonstrated best in the third movement by the *absence* of G^{\natural}. While A^{\natural} maintains a strong presence, it is rarely in so definitive a form as the bass octaves that permeate the other slow movements in the work. Often assuming positions in the higher registers, it is frequently juxtaposed with other surrounding chromatic notes, F^{\natural} and F^{\sharp} initially occupying the lower regions. With the previously lucid bass tonality now blurred and muddied by a lack of clarity, it becomes obvious that the disappearance of G^{\natural} creates a fulcral imbalance, one that has an expressive function in the sense of disorientation that this absence helps to arouse. Not only are the two focal points of the work interdependent, but the stability and orientation of the piece seems to depend on both the existence and functioning of their relationship.

The fulcra might be thought of as serving as an underlying aural anchor, emphasising for an audience the the ebb and flow of tension throughout the work. Crucially, a precise understanding of these recurring sonorities and their roles is not required. The manner in which their interaction with one another permeates each movement might be said to bring about a subconscious aural delineation of the broader musical architecture; it is possible to *sense* the change in perspective, the inclinations towards departure and return, the contrasts between conflict and cooperation. These changes are also reflected on a smaller scale through the motivic material from which the content of the piece is constructed. In a masterstroke of economy, the composer ensures that a sense of aural continuity is established by placing emphasis not on one specific subject or melodic shape, but instead upon the relationships within a three-note formation: two notes a semitone apart placed with a third note of a more disparate interval – two objects in close proximity juxtaposed with a third object that provides harmonic perspective on that pair. Rather than being presented as the organic basis for the work, the figure does not dominate its opening stages, presented instead with the utmost subtlety, integrated within a broader rising gesture in the piano line (see Figure 8.14).



Fig. 8.14: Je sens un deuxième coeur, first movement, three-note motif

emergence, bars 26–28 (piano)



Fig. 8.15: Je sens un deuxième coeur, second movement, bars 9-17

It is in the second movement that the motif is perpetuated in an almost obsessive manner, the opening low A⁴s in the piano immediately giving way to a repeated pattern alternating the fulcrum with G⁴ and F⁴ (bar 3). The cello cuts the piano short, presenting a new sequential figuration of the same three-note idea: F⁴, G⁴, C⁴ (bars 4–6). It in turn is interrupted by the viola with a third, contracted sequence: C⁴, E⁴, D[#] (bars 7–8). The piano fulcrum returns for two bars (bars 9–10), precipitating, from bar 11, a tutti in which fragmented facets of the motif are expressed in each instrumental line (see Figure 8.15).

With the precedent now set for the proliferation of the figure, it pervades the entire movement, harmonic gear shifts relying primarily on sudden re-calibrations, compressions and extensions of the motif itself. Indeed, the movement seems so fixated with the pattern that it is soon fully absorbed as the recognisable material from which the music is constructed. Propelled through various harmonic gravitations the effect is soon one of disorientation, the consequence being the brutal burn-out at the close of the movement, the motif notably appearing in the final chord in the left-hand of the piano with a barely recognisable but nonetheless significant conventional tonal leaning towards the original fulcrum (bars 86-88: D^{\pm}, G^{\pm}).



Fig. 8.16: Saariaho: *Je sens un deuxième coeur*, third movement, viola and cello melody, bars 4–7



Fig. 8.17: *Je sens un deuxième coeur*, fourth movement, reductions of interrupting chords, selected bars



Fig. 8.18: Je sens un deuxième coeur, fifth movement, bars 1-3 (piano)

The figure becomes more thematically distinct in the central slow movement. The first moment of notable, sustained melodic unison in the work is in fact a re-imagining of the motif, the three notes ($A \ddagger$, $B \ddagger$, $E \ddagger$ – a notable leaning towards the triadic features of the second fulcrum) traced by viola and cello delicately as if in a slow-motion free-fall from bars 4 (see Figure 8.16). The melodic developments that follow continue to trace variations on the motif.

The return to violence in the fourth movement sees the motif mutated, with added notes serving to increase its dynamism as the members of the trio are seemingly thrown forward on a collision course with one another. Here the threenote patterns are not as clearly defined as in the earlier, parallel fast movement, instead absorbed within longer gestures of greater momentum. While both the treatment of material and the modulatory behaviour accords with the earlier

episode, it is this loss of control and definition that brings about a second cataclysm, frequent vertical interruptions comprising multiple expressions of the motif eventually leading to a recasting of the second movement's final chord (see Figure 8.17). Finally, the motif is adapted in the fifth movement to assume a specific falling gesture in the upper registers of the piano twinned with a further vertical expression of it in the left hand (see Figure 8.18). While the precise shape of the pattern changes throughout the movement, the figure essentially takes on the status of a mercurial ostinato, still present at the very close of the work in a more rhythmically straightforward manner.

Renewed focus

Listening to Je sens un deuxième coeur sets in motion a paradoxical temporal experience; though it undoubtedly encompasses episodes of dynamism and surface linearity, the ultimate effect is of a broader stasis. Though the interactions between the three-note motivic intervals and the tonal fulcra provide sensations of moment-by-moment change, the overall effect is less of a linear journey but rather a cyclical one, in which emphasis is placed not on changes in the content itself but on the changing perspectives of listeners upon that content. The kaleidoscopic process of the same materials being recast and reinterpreted allows for fresh views on familiar ideas. The constant manoeuvres of realignment create varying degrees of visibility of the musical content, resulting in a blurred first movement, a fixated second, a disorientated glimpse of clarity and alignment in the third, a distorted fourth, and a calmer, accepting fifth. Whereas the sense of alienation experienced in the E-minor passage at the heart of Beethoven's first movement stems precisely from a realisation - through a linear continuity of design - of the vast tonal distance that has been hitherto travelled, the despondency that might be perceived in the third movement of Saariaho's trio arises from an awareness articulated by the re-calibrated motivic material - of how little distance has in fact been traversed in spite of the energy expended. The sense of disorientation in both pieces does originate in a heightened awareness of the experienced formal

continuity, but these comparable sensations arise from very different musical properties. Moving beyond these work-specific instances, much of the theoretical discussion that follows (Chapter Nine: Understanding Time) will dwell upon the tensions that might develop between such unique, disruptive gestures, and the wider, continuous, supposedly unified forms they appear within; indeed, the question as to whether such conflicting conceptions require some kind of reconciliatory approach has been the subject of some debate among analysts and musicologists.

A narrative drawn from Je sens un deuxième coeur might not take the shape of an outward journey, but rather of an introspection. Emphasis is placed not upon a distance travelled or a transformation achieved, but on a heightened selfknowledge facilitating new views upon pre-existing ideas. The inward process of self-directed violence and contemplation showcased throughout the piece is comparable to the parallel action in Beethoven's 'Eroica'. And although the direct consequence of this interaction between stability and instability seems to be, in both works, an inclination towards a self-destruction that seems to threaten the very architecture of the music, the consequence is in fact a kind of resolution. The 'chipping away' identified in the 'Eroica', and the constant desire to realign and rearrange results in a new sense of self-discovery, in the same way that a sculpture is constructed from a block of stone by the removal of outer, superfluous material in a bid to uncover the willed form within. Saariaho presents this process comprehensively. By the end of the piece, the same set of essential material is still being utilised, but it has struck upon a fresh character, a renewed alignment with itself. Beethoven's stretch of music is only the tip of the iceberg with regard to the broader form of the entire work, but it sets the very same process in motion, one that reaches its apotheosis in the driving simplicity of the finale and, perhaps it might be argued, in the invigorated, triadic-enforced classicism that characterises the composer's sequel, his Fourth Symphony.

Nine

Understanding Time

Formal impulses

Time becomes matter in music; therefore composing is exploring time as matter in all its forms: regular, irregular. Composing is capturing time and giving it a form. (Saariaho 2000, 111)

Kaija Saariaho makes a profound connection between time and form.³⁶ For her, the act of composition involves a direct engagement with, and mediation between, these two perceptual concepts. Indeed, the openness with which she addresses both ideas bears great relevance here. Time comprises a dynamic experience, varying in regularity; any compositional form that it might be 'given' constitutes just one of many potential options. Musical forms can be as numerous and varied as the different temporal impressions they articulate for their audiences. Effective performances allow listeners the opportunity to 'compose' forms, harnessing common 'organising impulses' to structure sequences of events in ways that might facilitate meaning.

Although numerous cultural factors can have a substantial impact upon the precise nature of these impulses, they amount to a seemingly universal human predisposition to attempt to make sense of auditory information, to understand its sequence. Indeed, such influencing factors serve only to enhance the inherent dynamism of musical acts. Creative attempts to relive the past induce particularly meaningful paradoxes (as shall be underlined in the final case-study of Chapter Ten). The onward-bound asymmetry of temporal experience imbues musical repetition with both a desire to return to the past and a tacit acknowledgement that it can only be accessed as memory. Compositional approaches such as developing variation prove especially interesting precisely because they demonstrate – and indeed incite – a conscious engagement with both past and future through present-tense musical change.

³⁶ Kaija Saariaho's thoughts on composition and time are discussed further in Moisala 2009, 54, and Rofe 2001, 81.

Saariaho's comments touch upon an ongoing tension for composer, performer and listener: although particular aspects of its contents can be recorded and reproduced, time cannot be 'captured' or retained. Though controllable elements of events can be repeated, the subjective and ecological contexts of those events cannot. We can never hear, or by extension understand, something quite the same way twice; as listeners, our organising impulses are unavoidably dynamic. The case studies in this thesis are intended to support a position that embraces this mercurial state of affairs rather than circumvent or turn a blind eye to it. The interplay between various musical continuities and discontinuities in compositions both old and new ensures the emergence of fresh formal perspectives, not least when these pieces are placed side by side.

With regard to meaning, the complex musical interactions perceived by listeners are entwined with the social networks of performance situations. In seeking to account for some of the nuances of these relationships, Christopher Small proposed 'musicking' as a verb that encompasses all manner of participation within performance, listening included. Questions of the meaning and value of a 'work' - a fragile concept in these terms - are therefore relocated to specific performance situations (Small 1998, 9-10). David Burrows (1997) places similar emphasis upon music as performance, drawing parallels with dynamical systems theories, time-dependent understandings of causal processes utilised across a range of fields. He portrays works as 'perceptual exercises', aligning much of their value with the way in which they demand an act of 'temporal synthesis' on the part of listeners (1997, 533). With the intention of avoiding a stable conception of form, he asserts that the 'primary identity' of a work constitutes an 'emergent that accompanies the very process of synthesising the impressions made by a flow of sounds' (1997, 545). Nevertheless, his views regarding musical meaning seem strangely conclusive:

Music gives us concrete, sensorially grounded, but at the same time, safely contained exercise in managing the dynamical systems that constitute our lives. It also offers us a consequent glowing sense of our competence in doing so. Life resists comprehension; music invites it. Participating in music is accompanied by a renewed sense of mastery, such as models provide for a wide range of problematic phenomena, over the processes of our self-creation. (1997, 545)

Small, by contrast, presents the more compelling possibility that perception and the processes of mental organisation that accompany it constitute an encoding that even more comprehensively mirrors our ecology (1998, 50–56). The affirming closure that Burrows achieves is thus replaced by a far more realistic, open-ended complexity:

If, as I have suggested, musicking is an activity by means of which we bring into existence a set of relationships that model the relationships of our world, not as they are but as we would wish them to be, and if through musicking we learn about and explore those relationships, we affirm them to ourselves and anyone else who may be paying attention, and we celebrate them, the musicking is in fact a way of knowing our world – not that pre-given physical world, divorced from human experience, that modern science claims to know but the experiential world of relationships in all its complexity – and in knowing it, we learn how to live well in it. (Small, 1998, 50)

It is an holistically minded approach such as this that offers the potential for a more realistic appraisal of musical experience – itself a network of physical and psychological relationships – and the ways in which a variety of distinct but often overlapping interpretations might be drawn from it. Performances might be said to constitute temporal 'spaces' comprising amalgamations of musical and social interactions. A musical work might accordingly be taken as signifying a kind of blueprint for how certain aspects of that timespan will play out aurally, with the manner of this structural process inviting readings of a particular leaning. But crucially it is here that the reach of the composed work is exceeded. As Eric Clarke observes, listeners retain an 'utterly individual' perspective incorporating their 'skills, needs, preoccupations, and personal history' (2005, 125). Indeed, he expresses a preference for an expanded view of perceptual meaning, encompassing not only the immediate acoustic and geographical contexts of a performance but also cultural, ideological and emotional factors frequently dismissed as too abstract; rather, he argues, these phenomena also constitute 'sources', since they 'constitute the conditions and circumstances that give rise to the music' (2005, 189–90).

Autonomy

Although Clarke develops a particularly convincing ecological account of perceived musical meaning, he remains open to the ways in which notions of the musical work can impact aural experiences. He provides an incisive evaluation of the autonomy with which works are often imbued, moving past the surface incompatibility between this assertion and an ecological approach to discuss ways in which the two outlooks might benefit one another.³⁷ Perhaps surprisingly, facets of ecological listening are often found to play into autonomous sensibilities, with the very act of attending to sounds themselves (rather than as signifiers of other subjects or objects) imbuing pieces with a degree of self-governance (2005, 126–155). It is precisely through this mode of reception that more structurally-minded readings of compositions can flourish:

Musical autonomy may be an illusion, but it has given rise to a kind of listening that has particular characteristics and preoccupations. This style of listening arises from the interaction of a number of factors: listening circumstances, the relationship between perception and action, the organisation of musical material, and listeners' predispositions. (2005, 154)

For Nicholas Cook, the autonomy of a work also emerges through its repetition as an 'independent and repeatable context', both within its form and of its form, with musical events gaining 'a kind of objective identity by virtue of their relationship to this context: when a theme is repeated in a symphony, one's experience of the repetition is not a subjective one ("I feel like I did before") but an objective one ("this bit is like the previous bit")' (Cook 1990, 38). The acknowledgement that this autonomy is an aesthetic figment does not necessarily preclude it from featuring in more grounded ecological approaches. It is a paradoxical duality that is reflected in temporal perception. The overriding, onward nature of time does not invalidate listening experiences that threaten to alter, subvert, or transcend that linearity in a perceptual manner. The challenges to temporal continuity that many performances offer are largely illusion, the

³⁷ Clarke follows this discussion by providing an insightful analysis of a work steeped in the compositional trappings of the autonomous tradition – the first movement of Beethoven's String Quartet in A minor, Op. 132 – by utilising ecological principles (2005, 156–88)

products of cultural constructs. But these illusions contribute to the value we ascribe to musical experiences, as the emphasis upon such phenomena – durational distortion, circularity, stasis, impressions of timelessness – throughout this thesis demonstrates.

Unity

Of course, these conceptual interrelationships leave a considerable challenge for scholars willing to address them. Arnold Whittall (1999) provides an astute survey of attempts to reconcile the formalist, analysis-driven approaches of the autonomous tradition, and the 'worldly' relativism of new musicology, highlighting the difficult of producing an 'interpretative musicology that is adequately plural and adequately coherent' (1999, 101). He expresses particular concerns regarding the marginalisation of analytical techniques, in particular those such as Heinrich Schenker's that emphasise principles of organic coherence, and the effect that this might have upon the musicological landscape:

A deconstructed musicology ceases to be musicology at all if it resists direct engagement with composer and composition, and side-steps the possibility that works of art may be defences against the world as much as products of the world. It is understandable that committed deconstructionists should (single-mindedly) regard the idea of a less monolithic but still work-centred musicology as seeking to achieve the old coercive objectives by only slightly different means. Yet, for that very reason, those same committed deconstructionists, in their zeal to transform musicology into something else, may be reluctant to accept that much, if not all, of what they desire can actually be better achieved from within an enriched musicology than from outside it. (1999, 100)

Whilst Whittall balances his concerns with a broader receptiveness towards an integrated musicological approach, Robert Morgan expresses something more akin to alarm at what he perceives to be a recent 'anti-unity' leaning in analytical writing (Morgan, 2003). Troubled by an apparent opposition to coherence as a point of focus for interpretation, he embarks upon detailed critiques of five analyses of canonic repertoire (by Kofi Agawu, Daniel Chua, Joseph Dubiel, Kevin Korsyn and Jonathan Kramer), seemingly highlighting a certain futility – an

apparent dearth of meaning – in their emphasis upon disunifying elements in musical works: 'Once disunity is asserted, they have nothing more to say of an analytical nature. Unity is certainly not the only thing worth analysing, but, in this music at least, the alternative is not disunity but a different analytical perspective altogether' (Morgan 2003, 43). Whilst he concedes that certain kinds of intentional musical disunity can be meaningful, such meaning is only rendered possible through its connection with other matters, in other words via an overriding unity. To assert disunity in a composition is not only to label that work a failure, but also to curtail analytical commentary 'immediately and entirely' (2003, 27).

Many of the arguments Morgan presents simply stem from structuralist aesthetic preferences; his invocation of the notion of an 'objective account of music' – and more specifically the idea that an anti-unitarianist position might eliminate the possibility of it – speaks volumes (2003, 22). However, it is difficult to reconcile his claimed embrace of a post-structuralist desire to evolve and adapt analytical conceptions (2003, 41–43) with his apparent unwillingness to lend any validity to the ways in which others might hear the same pieces of music. Appraising analyses of works by Haydn, Mozart, Beethoven and Brahms, he seeks explicitly to 'dissolve' the arguments against unity made by other scholars through the recognition of particular 'readily perceivable' unifying features of the music.

Inevitably such single-minded prescriptivism has drawn forceful responses from those it criticises. Daniel Chua (2004) finds Morgan's treatment of the first movement of Beethoven's String Quartet in A minor, Op. 132, unsettling precisely on account of its disregard of temporal impressions, as if this 'dissolving' approach could render the piece 'rational, transparent and coherent': 'There is not even a process of formal struggle in his analysis, since his analytical insights are based on static structural identities. The disruptive features and gestures that I see as integral to the articulation of the form *in time* are neutralised by Morgan as merely surface variation in space' (Chua 2004, 354–55).³⁸ Jonathan Kramer (2004), meanwhile, calls Morgan out on his failure to go further in defining his conception of unity and his attempted denial of a potentially enriching interplay between unity and disunity. Kramer argues instead for a broader notion of coherence 'based

³⁸ Kevin Korsyn also offers an incise rebuttal of Morgan's criticism of his Brahms analysis in Korsyn, 2004.

on differences as well as similarities, on lack of precedent (of certain events or segments) as well as clear precedent' (J. Kramer 2004, 368). Expressing empathy with scholars anxious at the prospect of traditional analytical tools losing their relevance, he persuasively calls for the same kind of integrated musicology pondered by Whittall, opening up more formalist methods to frameworks that are not based solely on the 'elucidation of unity':

The analyses that I most value do not try to prescribe how a piece ought to be heard, but rather they suggest ways that it might be heard. And those ways should, and for me sometimes do, respond to other aspects of the work than just its unity. A piece of music is like a person, or like life. It is not totally neat. Not all parts of it belong together in clear-cut ways. It can do strange things. It can be easier to love than to understand. It can contain moments of irrationality, of disorder, even of chaos – which can be appreciated as important contributors to meaning and experience. (J. Kramer 2004, 369–70)

Kramer's desire to demote unity from its 'privileged position as a universal or necessary condition' (2004, 370) is pre-echoed by Fred Everett Maus (1999) who not only firmly denies that analysis necessarily equates a search for unity, but above all treats with scepticism any claims regarding unity or its absence 'that do not give a central claim to musical experience' (1999, 188). Maus also explores the plurality of what can be meant when issues of unity are discussed. He points to inconsistencies in the language used to address unifying musical elements, highlighting the subtle but nonetheless important distinctions between seemingly related terms: synthesis (discrepant items brought into satisfactory relationship), integration (acceptance of internal diversity over time), integrity (events over time preserving and displaying a core value), and logic (events succeeding one another with a sense of non-empirical necessity) (1999, 183–86). Indeed, perhaps it might be concluded that the temporal aspect to which Maus refers constitutes one of the most consistent elements across these notions, that unity at once comprises continuity and coherence through the playing out of musical elements over time.

Perhaps most significantly, musical experiences can elicit a sense of paradox through the way in which they are often able to sustain contrasting analytical approaches such as those discussed. Performances can support interpretations that emphasise both unity and disunity, presenting a perceptual

coexistence of contrasting characteristics. In a further echo of the ecological mirroring that Small proposes (1998, 50-56), coherent or continuous readings of works can be drawn from an amalgamated network of musical and social relationships that might just as easily facilitate an emphasis upon incoherence and disruption. A musical form might possess the capacity to be heard simultaneously as conclusive and ambiguous, 'closed' and 'open'. In the spirit of this potential for paradox - and in the acknowledgement emphasised throughout this thesis that music seemingly possesses the ability to articulate things about time that words cannot – this thesis will begin to draw to a close with one final case study, a pairing of musical works by Jean Sibelius and Thomas Adès. On the face of it, their alignment is particularly close: two symphonies for large orchestras, lasting approximately twenty minutes in length, both cast in single-movement forms demarcated by intricate sequences of related tempo changes. Of greater interest, though, are the ways in which both pieces highlight the profound incongruities of long-term repetition. Through aspects of their construction, they suggest different ways of understanding recurring content in changing contexts. Ultimately, both pieces facilitate meaning through their reconciliation of journeys that are experienced as simultaneously onward and circular. Mirroring broader temporal experience, they somehow affirm a dynamic, Heraclitean flux whilst raising the possibility of a static, Parmenidean ideal. Like this thesis, their conclusions are open ended; closure is both attained and denied. Perhaps the encouragement such music offers us as listeners is comparable to what E.M. Forster asks of the novelist:

After all, why has a novel to be planned? Cannot it grow? Why need it close, as a play closes? Cannot it open out? Instead of standing above his work and controlling it, cannot the novelist throw himself into it and be carried along to some goal he does not foresee? ([1927] 2005, 95)

Ten

Energy and Equilibrium

Thomas Adès & Jean Sibelius

This project has revolved around juxtapositions of old and new, drawing attention to the different ways in which various composers have approached temporal issues through their structuring of musical ideas. These observations have been primarily utilised as catalysts for wider discourses addressing aspects of our experiences of time. I have deliberately tried to avoid emphasising direct comparisons between musical works. This closing case study – twinning Thomas Adès's *Tevot* with Jean Sibelius's Seventh Symphony – will be an exception. In most respects, it provides the most likely of pairings within the thesis: two onemovement orchestral works, both lasting approximately 20 minutes, both purportedly engaging with the symphonic tradition. It certainly seems that these surface similarities are the product of design rather than accident; as will be shown, Adès himself has expressed his own thoughts on Sibelius's music (another unique aspect of this pairing) and it seems quite plausible that *Tevot* might be viewed as an extension of this engagement.

However, I would suggest that their most profound connections are aural. Consider both openings: two gestures – one ascending, the other descending – that in spite of their simplicity, seemingly hold the potential for the forms that will unfold. At the beginning of the Seventh Symphony, a rising scale fragmented through several instrumental parts obliquely references several potential keys before offsetting these mounting expectations by coming to rest on an entirely different harmonic plane (see Figure 10.1); the arrival at an entirely unrelated triad creates an immediate friction between two sets of sonorities, a complex tonal tension that will come to define the unfolding of the work and requires resolution over time. At the outset of *Tevot*, meanwhile, stratospheric cascades of falling fifths seamlessly emerge in the upper strings, their oscillations underlined by sustained woodwind to create the impression of a chromatically descending chorale-like texture (see Figure 10.2). The effect is not so much of a direct source of harmonic conflict; rather a tonal restlessness takes hold, a seemingly perpetual series of

Energy and Equilibrium



Fig. 10.1: Sibelius, Symphony No. 7, reduction of bars 1-4



Fig. 10.2: Adès, Tevot, reduction of bars 1-4

onward-leaning modulations engendering an audible dynamism that will provide a continuing source of structural direction.

Both of these openings possess cellular qualities: the musical tensions they contain ultimately prove decisive in the way in which their broader forms play out. This audibly organic mode of composition can be viewed not only as an engagement with the symphonic tradition but also as an expression of temporal thought. Through different harmonic, rhythmic and motivic vocabularies, both Adès and Sibelius offer striking perspectives on issues of continuity, recurrence and direction. They create large-scale musical structures that double as engaging, wordless narratives, encouraging listeners to consider to what extent the apparent closure these pieces provide translates into a sense of catharsis, and to question connections between time and meaning. This case study will explore some of these ideas through analytical discussion, examining selected passages from across both works in order to re-emphasise the broader paradoxes – stasis and dynamism, closure and openness – that have underpinned the temporal perspectives offered by this thesis. The epilogue that then follows will offer a brief consideration of some of the implications these broader findings might have for an open-ended outlook upon music and time.

Symphonic renewal

Just as Jean Sibelius (1865–1957) summarised the finale of his Symphony No. 3 in C major, Op. 52 (1907) as 'the crystallisation of ideas from chaos' (Tawaststjerna 1986, 66), the work as a whole might be said to represent a stylistic watershed. Presented through notably sparse orchestration, its three relatively brief movements announce a departure from the late-romantic gestures that had dominated the composer's previous efforts in the genre. Characteristics latent in his earlier music here emerge, with a renewed sense of motivic economy and formal concision seemingly referencing Classical tendencies. As Tim Howell observes, 'much that is original – progressive – about Sibelius's composition comes not from a rejection of earlier practice but from its reinterpretation' (2001, 37–38). Many of the features presented in the Third Symphony would subsequently develop through the course of the composer's four further contributions to the genre; Harold Truscott even goes so far as to draw a 'genealogical tree' from the work to the remainder of Sibelius' significant orchestral output (1967, 92-98). The composer's broader preferences are exhibited deftly in his later works, with his oft-quoted remarks to Mahler regarding the 'profound logic' of symphonic style and structure (Rickards 1997, 96) clearly reflected in both the organic developments and the pared-down instrumentation of those works.

Sibelius's determination to rely solely upon what he deemed necessary reaches its zenith in his Symphony No. 7, Op. 105 (1924). Here his prior

experiments in formal compression – executed to varying extents in the Third and Fifth Symphonies – culminate in one extraordinary, 20-minute-plus unbroken span, characters and contrasts of conventionally separate movements assimilated into a single cohesive stretch of music. The label 'symphony' was ascribed tentatively by the composer; even at the time of its Stockholm première on 23 March 1924, it was still entitled 'Fantasia sinfonica', and it was only following careful subsequent consideration that the name change was undertaken (Murtomäki 1993, 242).

While its status as a symphony has rarely been questioned directly, scholars have often struggled to reach a consensus regarding its structure. Although the work exhibits an undeniably changing, episodic form, delineating it according to more conventional expectations has not necessarily proved easy. Truscott, to give an early example, expresses a personal struggle to come to terms with the architecture of the work, asserting its one-movement plan to be 'a contrivance rather than a growth [...] no more a one-movement symphony than is Schumann's Fourth' (1967, 92-98). Cecil Gray overcomes such difficulties by attempting to reconcile the piece with conventional design, claiming it to comprise four successive interconnected movements whilst simultaneously constituting 'a single and indissoluble organism' (1935, 71). However, Simon Parmet's suggestion - that it would be fruitless to attempt a reading of its form that hinges upon 'terms and concepts borrowed from an earlier period' (Parmet 1959, 127; also discussed by Murtomäki 1993, 245–46) – proves insightful; his portrayal of the work takes into account its performed duration and revolves around musical developments framed by two C-major 'cornerstones' placed at either end of the work (Parmet 1959, 128-29). Writing more recently, Veijo Murtomäki places emphasis upon novel elements in his interpretation of the work, proclaiming it to be neither a singular sonataform expanse nor a conglomeration of several movements but rather 'something new and revolutionary in the history of the symphony' (1993, 242).

Other modern contributors, however, appear more content to adapt more conventional constructions in their readings. Edward Laufer, for example, draws upon Sibelius's original intention for 'an Hellenic rondo' to conclude the symphony. Using this description as a springboard, he maps a rondo structure onto the work, envisioning a 'bold refashioning of the classical design' as a means to a thorough

sense of musical continuity: 'By *not* concentrating the developmental passages in one larger section as in a sonata form movement, but by placing them throughout so as to *introduce* and thereby enhance the expositional sections, a sense of continuous growth, cumulation, and completion of sections is achieved' (Laufer 2001, 355). Nevertheless, perhaps among the most convincing interpretations of the symphony is that provided by Arnold Whittall who highlights an interplay between a wider sense of structural symmetry and a more episodic leaning towards 'imbalance and instability'. His more conceptual framing of the compositional architecture of the work proves particularly useful: 'One of the most remarkable aspects of the Seventh Symphony is the sense in which it subverts the essentials of symmetrical stability while never completely losing sight of positive, affirmative modes of expression: balancing modernism and classicism, in other words' (Whittall 2004, 62–63).

The balances that Sibelius managed to strike with his Seventh Symphony have proved particularly influential in the years since its composition, not only helping to open the floodgates to numerous other one-movement orchestral works - whether the word 'symphony' features as a title or not - but also helping to reiterate an older working definition of the genre. Beyond simply making reference to surface structures or orchestral forces, the term 'symphonic' engages more keenly with the organic character and musical content of a piece, implying something 'extended and thoroughly developed' (Larue, Wolf, Bonds, Walsh and Wilson, Grove). On account of its 'total unity', the Seventh even serves as a point of closure for Lionel Pike in his exploration of the symphonies of Beethoven and Sibelius, with the work conforming to Pike's definition of 'symphonic' as the very kind of unified, interconnected 'profound logic' that Sibelius propounded to Mahler (Pike 1978, 203). Meanwhile, composer David Matthews has cited Sibelius's symphonies as a direct influence on his own, pointing to the seemingly paradoxical 'true stasis' they attain 'through energy and movement' (Dufallo 1989, 154): 'I have learnt a lot from his control of pace, his welding together of different kinds of movement, his imperceptible transitions from fast to slow or slow to fast.' Matthews associates the Seventh in particular with a kind of symphonic essence (Matthews 1993, 190): 'The Seventh Symphony... is always moving symphonically; evolving, changing direction, sometimes with slow deliberation, sometimes with

athletic swiftness.' Such dynamism resonates with Howell's perceptive impression of the 'continuous development' present in the work (a Sibelian hallmark), and its reliance upon 'context rather than content to define function' (Howell 1989, 86)

Symphonic resolution?

The kind of momentum Matthews describes does indeed seem to pervade the symphony, an advancing dynamism palpable in the 'working out' of the music. A sense of unmistakable development is imbued without the unified sweep of the work being damaged; on the contrary, musical progression seems to enhance the structural prolongation. Written just two years after the symphony, the tone poem *Tapiola*, Op. 112 is often used by scholars as a litmus test for the symphonic nature of the Seventh. At a surface glance, it would appear to bear much in common with the symphony: a single-span, twenty-minute orchestral work with its material derived organically from its opening gestures. However, it is in how the work plays out that the differences emerge. Stephen Walsh highlights the 'dialectical and dynamic force' of the Seventh, pointing to its exceptional ability to settle largescale musical conflicts in just one extended movement: 'As a descriptive and imaginative work Tapiola is a considerable achievement. But it can hardly be denied that the symphony, in satisfactorily resolving more complicated issues within the same time-span, is musically and intellectually the more substantial work' (Walsh, Grove).

Intriguingly, it is through this comparison of pieces that Thomas Adès (b. 1971) – a British composer – arrives at very different conclusions. His notion of symphonic gravitates towards a musical impulse to resolve – to 'close a circle', as he puts it. With this in mind, he expresses the view that the symphonies of Sibelius betray a conflict between this inclination to conclude and an 'inner desire' (one inherent in the material) to venture outwards into new territories:

The conflict becomes more powerful as the symphonies go on. In the Fifth it is a huge struggle which is achieved, in the Sixth it seems so powerful that it has to happen just offstage, and in the Seventh there is a sense that although he makes it in the end he is all but broken by the effort. It becomes an increasingly agonising process. But in the tone poems, he is released from the conflict of having to make

Energy and Equilibrium

an abstract argument that functions logically. So the end of *Tapiola* is deeply conclusive, but the end of the Seventh Symphony is painfully inconclusive. (Adès and Service 2012, 172)

It is interesting that what Whittall, for example, identifies as a successful fusion of 'fundamental elements of tradition with freedom and flexibility' (2004, 61), Adès seemingly hears as a point of extreme artistic friction. The composer highlights this as a particularly progressive and influential aspect of Sibelius's contribution to the genre:

I'm saying that with Sibelius, the function of symphonic completeness passed from the 'abstract' into the 'metaphorical', and I think it has stayed there. I think he was the first to break, painfully, the mistaken idea that a symphonic argument had to have a sort of structural order to it. (Adès and Service 2012, 173)

However, with regard to the broader tradition he has reservations, expressing misgivings with regard to the expectations of 'an inevitable kind of structure or decorum' that he feels accompany the 'symphony' title (2012, 173). It seems significant then, given such qualms, that the label is one he has employed, utilising it to describe *Tevot*, a work for large orchestra composed from 2005–6 and premièred on 21 February 2007 by the Berlin Philharmonic Orchestra under the direction of Sir Simon Rattle.³⁹ The title of the work carries several meanings. In modern-day Hebrew it signifies 'vessels', adapted in musical terminology to represent bars of music; however, in its singular form – tevah – it is utilised specifically in the Bible to represent two unique vessels: Noah's ark and the Nilebound reed basket in which the baby Moses is placed by his mother (Adès 2007: iii, and Griffiths 2014, 7). Describing the title as being like a 'gift', Adès outlines the ways in which its meaning provided a conceptual springboard for the composition:

I liked the idea that the bars of the music were carrying the notes as a sort of family through the piece. And they do, because without bars, you'd have musical chaos. But I was thinking about the ark, the vessel, in the piece as the earth. The earth would be a spaceship, a ship that carries us - and several other species! - through

³⁹ Adès's 1997 work for large orchestra *Asyla* has also been described as a symphony by numerous commentators (for example Griffiths 2014, 7), not least on account of its four-movement structure. However, the composer himself has not invoked the label to the work in so explicit a manner as with *Tevot*; in this sense, *Asyla* is a symphony by formal allusion rather than by overt design.

Energy and Equilibrium

the chaos of space in safety. It sounds a bit colossal, but it's the idea of the ship of the world. (Service 2007)

It seems likely that – in writing a 20-minute, one-movement symphony – Adès would have been all too aware of the parallels that might be drawn with Sibelius's Seventh. Indeed, given his apparent willingness to discuss his views upon Sibelius's music, it would be unwise to rule out the possibility that these surface allusions may well be deliberate. Certainly, when Tom Service introduces Adès's own music into their discussion of Sibelius, the composer is quick to invoke both *Tevot* and *Polaris* – a shorter orchestral composition completed in 2010 – in much the same comparative manner as he has just spoken of the Seventh Symphony and *Tapiola* (Adès and Service 2012, 172–73).

Interestingly, though, he does seem to have intended *Tevot* to be imbued with the kind of musical resolution that he finds Sibelius's symphony to be lacking. Service's attempt to associate *Tevot* with Adès's 1997 orchestral work *Asyla* via the suggestion that the title of the more recent work implies a 'haven-like place of refuge – an asylum' draws a particularly definitive response from the composer: 'A haven sounds as if one is hiding from something, and I don't think that about *Tevot*. In this piece, it's more like a final resolution – a real resolution – rather than that one is escaping from something'. Indeed, Adès is unafraid of emphasising the goal-directed facets of the work, discussing it in terms of an abstract narrative: 'I thought of the piece as one huge journey, but in order to make that journey truthful, to give it movement, there had to be many quite sudden and instant changes of landscape' (Service 2007).

Tonal energy

At the end of a great symphony there is the sense that the music has grown by the interpenetrative activity of *all* its constituent elements. Nothing is ever allowed to lapse into aimlessness, or the kind of inactivity that needs artificially reviving... The great thing to keep constantly in mind is that no single element is ever abandoned, or deliberately excluded, that the composer must master them all and subordinate them to the demands of the whole. (Simpson 1966b, 10)
Although made four decades before *Tevot* had been completed, Robert Simpson's observations regarding successful symphonies seem as relevant to the work of Adès as they do to that of Sibelius. Both composers exercise precise control over the way in which materials are presented and structured, exhibiting particular skill in their handling of musical energy. Whilst this energy management is related principally to aspects of tempo and rhythm, it also extends beyond pulse-based issues to encompass motivic and harmonic development.

Although Sibelius's symphony - still rooted in post-romantic formal principles - inevitably exhibits tonal governance in a comparatively cogent manner, it is worth emphasising that *Tevot* also displays a considered treatment of sonority and its bearing upon large-scale structure. Adès sidesteps a more traditional hierarchical framework in favour of an ever-shifting harmonic gravity, immediately establishing this dynamism with the passage described at the outset of this chapter. This cellular figure - an open fifth followed by a falling minor second - is in fact characteristic of the composer's style, as outlined by Dominic Wells (2012, 6–12). The '5+2' progression, as Wells dubs it, surfaces as a common feature in a number of works in the composer's catalogue.⁴⁰ However, whilst Wells points to many of these instances in terms of their melodic effect, he highlights three works in particular upon which the progressions have a more notably harmonic bearing: The Tempest (2003-4), Violin Concerto (2005), and Tevot (2007). Opting to discuss only the first two of these pieces, he outlines the ways in which both exhibit the clear establishment of tonic keys that are then subverted through a falling minor second (Wells 2012, 11–13).

Tevot, by comparison, displays a heightened sense of transience. No sooner has the first open fifth sounded in the violins, flute and piccolo than a further fifth is extended downwards. The ensuing semitone fall in the second bar creates the model for the parallel descending sequences that then emerge, new chains entering at regular intervals. Adès's propensity to utilise open fifths as a catalyst

⁴⁰ Wells makes reference to varied appearances of the '5+2' figure in Arcadiana (1994), Asyla (1997), The Fayrfax Carol (1997), These Premises are Alarmed (1998), January Writ (1999), and America: A Prophecy (1999), as well as in The Tempest (2003–4), Violin Concerto (2005), and Tevot (2007).

for both harmonic and melodic content has been frequently noted.⁴¹ However, here this approach is extended yet further, with these descending chains of oscillating determining both subject and tonality. The '5+2' progression is embedded as a stratospheric sequence, with interrelated streams of fifths now cascading downwards in apparent perpetual motion, its passage continually renewed in the upper reaches of each instrument (see the woodwind reductions in Figure 10.2 for an example of the orchestrational detail, and the treble clef line in Figure 10.3 for an harmonic reduction of this sequence). John Roeder notes the multidimensional effect of a comparable figure in a bass oboe passage in the second movement of Asyla, observing the way in which one line melodic sequences of descending semitones separated by larger intervals helps to give the impression of separate scales occurring in different registral bands (2006, 126-27). While the proliferation of this idea throughout multiple instruments at the opening of Tevot certainly heightens this kind of temporal multiplicity, his larger point - that this kind of writing helps to establish continuity – still stands here. However, this type of polyphonic construction avoids the completion of the transformational pitchchange cycles that occur in much of Adès's music, a source of closure for Roeder (2006, 127).

The general lack of emphasis upon the beginning or end of these cycles has a harmonic bearing. Instead of any hierarchy being established and subsequently uprooted, the 'tonality' of the work moves by allusion, with passing nods to various sonorities hinting at a tonal centre in constant motion: a mercurial point of aural reference. The effect is also rhythmic: the only judge of small-scale pulse being the triplet quaver-semiquaver oscillations of the violins, whilst on a larger scale listeners are encouraged to gauge the passing of time by the gradual semitone descents. Comparisons might be drawn here with the composer's Piano Quintet (2000) in which Philip Stoecker identifies cyclic structures that are superimposed, juxtaposed and extended to such a degree that 'the underlying cyclic source is essentially unrecognisable' (2014, 59).

The introduction of a contrasting figure in the lower wind and strings from the fourth bar offers an audible foothold, providing a temporal marker beyond the

 ⁴¹ For examples, see Barkin 2009, 168; Fox 2014, 47; Roeder 2006, 146 & 151; Venn 2006, 108–9; Whittall 2003, 22.



Fig. 10.3: *Tevot*, reduction of harmonic changes that accumulate within each bar (bars 1–13)

perpetual harmonic descent as it develops through the opening minutes of the work (see the bass clef line in Figure 10.3 for an harmonic reduction of this subject). The block-like homophonic gesture creates a tonal juxtaposition, sporadic successions of three-part chord changes inciting an independent rate of motion, but one seemingly united more broadly with the free-floating tonality. Indeed, whilst these harmonic shifts remain consonant in isolation – largely comprising interrelated major triads with one additional note – the harmonic clashes that emerge with the descending fifths material create a cluster-chord effect. Nevertheless, a small thematic contrast is notable, with upper lines in the modulations often tracing subtle but unmistakable stepwise ascents.

This opening passage proves cellular in a number of senses. Principally, it is through the interaction between these two parallel ideas that the sense of perpetual motion that pervades the rest of the work is established. In conjunction, the gestures present three different kinds of tension: between harmonic clarity and ambiguity, between ascent and descent in pitch, and between a contentgenerated need to sustain tonal mobility and an evident inherent desire to resolve. The form of the piece is devoted to settling these frictions. The only additional feature of note is a brief horn motif: a majestic upward leap of a minor seventh that occurs in bar 21. In spite of its simplicity, it remains strikingly prominent, occurring not only within a space between the chordal figures but constituting the only noticeably wide intervallic jump within the context of an intricate orchestral texture characterised by stepwise movements.

The cellular function of the opening to Sibelius's symphony, meanwhile, has been noted by several commentators. The initial white-note scale in the strings has been described in terms of a variety of harmonic functions, predominantly as being in the C-major tonic (Howell 1989, 87), in G major as a dominant to that tonic on account of the initial Gt timpani roll (Howell 1989, 87, and Murtomäki 1993, 261), and in A minor on account of the cello note that follows it (Pike 1978, 204). These readings not only serve to underline a degree of tonal uncertainty at this early stage, but each also grants the ensuing Ab minor chord a notably subversive presence. However, as compelling as these perspectives remain with regard to the long-term unfolding of the symphony, they inevitably require a degree of familiarity on the part of an audience. Without the ability to identify the notes of the scale by ear, or prior understanding of the sequence of musical events, the symphony may emerge for a first-time listener in an unsettlingly vague manner, notes ascending step by step with little indication of the roles they may assume in any kind of broader tonal scheme.

Without doubt, the A[↓] minor chord sits at odds with what has preceded it, but arguably more by its novelty (its first and fifth degrees are absent from the preceding material) than by a particular tonal jarring within the context of any established key. The *Tristan*-esque chromatic slips that occur in its wake underline further the notion that no clear tonal centre has thus far been cemented; the overriding sensation might well be one of searching, the gradually shifting chordshapes throughout the passage lending it an almost improvisatory quality. The harmonic tension present here is indeed palpable, but not yet in a way that might make broader structural sense. The long-range tonal potential of these sonorities remains aurally veiled for the time being as far as an audience might be concerned. Given this initial ambiguity, the passages that ensue – usually lying beneath the umbrella label of an 'introduction' – assume a crucial role, serving not just to affirm C major as a key of central importance but to establish it in the wake of such uncertainty.

Although clear allusions to this tonic emerge through the leanings of both melodies and pedal points from the seventh bar onwards, the sequential

repetitions that ensue maintain nods towards more dissonant routes. Ab continues to feature prominently, although is frequently audibly normalised within F minor figures. Indeed, it is through this process of harmonic familiarization and assimilation that the dominant is reasserted in bar 21, preparing the way for the richly polyphonic string passage that follows in which C major is repeatedly underlined with increasing emphasis. The reassertion that begins at bar 50 incites a full convergence, the entire ensemble uniting on an unmistakable perfect cadence in bars 59–60, the arpeggiated trombone theme – itself seemingly derived with inaudible subtlety from the second violin line from bars 35-43, as John Gardner has pointed out (1977, 912) – capping the first significant point of arrival in the work. Howell points to the accumulative process of this introductory passage in support of his broader notion of the 'continuous development technique' that pervades both the thematic and the tonal course of the work; for him, the opening segment acts as a miniaturised reflection of this principle through its 'initial denial of, but eventual preparation for, the establishment of C major by reinterpretation of the same elements which interrupted that goal in order to confirm it' (1989, 87). In this sense, it comes as no surprise that it is via the reemergence of Abs and Ebs that the climax is eventually curtailed, the ensemble jolted into an F-minor diversion from bar 71. As the ensemble departs from the stability it has so elaborately established, it becomes clear that an audible balancing act has been set in motion.

Temporal multiplicity: Sibelius

The handling of rhythmic energy throughout both works amounts to far more than just a linear-minded ebb and flow. Rather, instilled continuities help to create more complex perceptual structures, granting listeners the impression of a pluralistic temporal experience. Sibelius does not go so far as to support the tempo changes outlined in the Seventh Symphony with metronome markings; Parmet relays the composer's general aversion to employing them, drawing parallels with Beethoven in his assertion that tempi are best intuited rather than prescribed (1959, 4). However, even without such specificity, the symphony emerges as an equally

Energy and	Equilibrium
------------	-------------

Speed type	Tempo (Time signature)	Bars	Duration
Slow	Slow Adagio (3/2)		0'00–7'58
	Un pochett meno adagio	93-100	7'58–8'20
	Poco affret.	101-128	8'20-9'37
Transitional	Poco a poco affrettando il Tempo al	129-133	9'37–9'47
	Former $d = \text{new } d$. (6/4)	134–155	9'47–10'15
Fast	Vivacissimo	156-212	10'15–11'09
Transitional	<i>Rallentando al</i> Former $J = \text{new } J$ (3/2) at bar 220	213-221	11'09–11'24
Slow	Adagio		11'24-12'23
Transitional	Poco a poco meno lento al	237-241	12'23-12'35
Moderate	Former $d = \text{new } d$. (6/4)	242-257	12'35–12'59
	<i>Allegro molto moderato</i> (with fermata at bar 255)	258-282	12'59–13'51
Transitional	TransitionalUn pochett. Affrettando		13'51–13'54
Moderate Allegro moderato		285-289	13'54-14'02
Transitional	TransitionalPoco a poco meno moderato		14'02-16'49
Fast	Vivace	409-448	16'49–17'24
	Presto	449-463	17'24–17'35
Transitional	Poco a poco rallentando al	464-475	17'35–17'49
Slow	Adagio (3/2)	476-495	17'49–19'10
	Largamente molto	496-505	19'10–20'10
	Affetuoso	506-521	20'10-21'47
	Tempo I	522-525	21'47-22'17

Fig. 10.4: Symphony No. 7, ta	le displaying tempo changes and durations
-------------------------------	---

complex construction, with its many speed changes deployed in what on the surface might not appear to be an overtly systematic manner (see Figure 10.4).⁴²

⁴² Durations taken from recording listed in primary resource list (London Symphony Orchestra, conducted by Sir Colin Davis. LSO Live: LSO0552).

An initial foothold might be gained by identifying recurrences. Most notable are the three Adagio passages that bookend and intersect the structure. The two stretches that lie between comprise noticeably more changeable, faster music, with little in the way obvious recurrence. However, these varied speeds may in turn be sorted into two broader categories: fast music (including Vivacissimo, Vivace, Presto) and moderate, transitory music (the gradual acceleration to the first Vivacissimo, the Allegro molto moderato and the Allegro moderato). In relation to the musical content they present, these three tempo groupings - slow, moderate and fast – serve a greater purpose than simply outlining different speeds at which the music moves. They represent three parallel temporal threads, ongoing strands of development, each acting in independent but ultimately interconnected ways. The paradoxical simultaneity of both slow and fast music is enhanced by the middle-ground transitions that, in bridging the two extremes, also offer glimpses of the way in which they interlock. The rallentando (bars 213-22) passage that connects the Vivacissimo with the ensuing Adagio, does more than simply join the dots; the carefully staggered metrical shifts of the chromatic scales in the strings heighten the continuity of the formal change, drawing attention to the potential for long ('slow') phrase structures in fast music, and to the presence of rapid, scalic, harmonically unstable gestures within more tonally secure, metrically slower content. This presence of the fast within the slow - and vice versa - is reinforced by the fact that what is then notated as an acceleration to Allegro molto moderato (from bars 237–57) might easily in fact be heard as a speed change in the opposite direction. In a similar way, the later jump to Presto (bar 449) is in fact made as a means by which to reach the subsequent Adagio rather than as an end in itself, the propulsive string sequences providing a candid, moment-by-moment demonstration of the way the same material can function within 'slow' and 'fast' contexts. Viewing the work in terms of these contrasting yet cooperating temporal levels may offer a reading that supports the seamless mercurial but nonetheless logical aural impression the Seventh Symphony leaves with audiences. Its musical energy is directed not in one direction but in three, creating a dynamic multilevel structure. Tempo changes require less in the way of departure and arrival but rather an aural readjustment; focus can fall on fast-moving detail, or a slowermoving bigger picture, or it can transition back and forth between the two.



Fig. 10.5: Symphony No. 7, trombone theme, bars 60-70

The three passages of 'slow' music that punctuate the Seventh Symphony have been frequently shown not only to frame the architecture of the work but also to imbue it with stability. For Whittall, it is the contrast that these episodes provide in which the 'strength and originality' of the piece can be found; he writes of them as 'the most explicit thematic and tonal pillars of the unified design', describing the 'imbalance and instability' that emerges in the surrounding music (2004, 63). Certainly these sections exhibit a clear degree of consistency with their recurring trombone theme (see Figure 10.5) acting – via a notably stable arpeggiated shape – as an aural affirmation of the key of C: the major mode in the bookending segments, the minor mode in the central one.

Pike draws a further parallel with Beethoven in the apparent acknowledgement of both composers that themes invariably prove more memorable than tonalities (1978, 209). However, it would certainly seem in the case of the Seventh Symphony that Sibelius is intent on utilising both. Periods of transience - both in terms of pulse and tonality - are dominated by scalic melodic activity; the linear, seemingly goal-directed nature of such figures directly conveys motion and provides an accumulation - and, at points, an over-saturation - of harmonic material that contributes to an overriding loss of stability. Meanwhile, the three passages that oversee an arrival at the C¹ sonority, and provide assurances of its tonal significance, are prominently capped by the trombone theme; its harmonically firm, arpeggiated shape not only reinforces the security of the first C-major episode, but proves an important factor in instilling stability thereafter. At these points in the symphony, subject and sonority act effectively as a unit, alerting listeners to an unmistakable recurrence of motivic and harmonic content. These static aspects certainly lend a wider sense of stability to the aural experience. Tonally speaking, they offer credence to the notion of the work being 'in C', or perhaps rather *on* it, with the sonority affirmed through clearly delineated perfect cadences in the course of each *Adagio* passage.

However, even taking these passages in isolation, an image of such stasis does not paint the full picture. There is a paradox at play here. Three ostensibly static formal segments perform the same stabilising function, yet do so in a manner that betrays a kind of musical development; they are not only affected by the harmonic shifts that take place in the interceding episodes but incite the tonal unrest that prompts them. Although they present essentially the same sonority, these passages are also indicative of, and indeed receptive to, change - a musical reminder that recurrence cannot circumvent an awareness of the passage of time. In this light, the form of the Seventh Symphony seems to evidence a collision of what Howell outlines as a distinction between two attitudes towards temporality: functional, onward-leaning repetition and retrospective, melancholic recollection (2013, 103–104). When Sibelius's emphatic attempts to revisit the past directly fall victim (via audible harmonic changes) to the linear-minded narrative, the result is a rather special hybrid of repetition and recollection. Whilst a desire to return to the affirmation and security of the opening cadence point becomes apparent, the inevitable variations that infiltrate the recurrences facilitate an onward, developmental function; the audible denial of a full return lends the passages a simultaneous air of reminiscence. At such moments, the symphony might be said to possess 'times' that, in spite of their unified narrative direction, could be heard as 'facing' in opposite directions.

Temporal multiplicity: Adès

Considering *Tevot* purely in terms of the metronome marks specified in the score, it seems to fall into two approximate halves: the first characterised by change, the second by consistency. Reconciling this with an aural impression – and by extension equating these tempo changes with the recorded clock timings at which they occur – three structural segments in fact emerge: an initial longer period punctuated by regular fluctuations in pulse (bars 1–256) eventually gives way to a shorter but nonetheless more spacious passage that, by contrast, stays at one

Bars	Pulse	Stated tempo interrelation	Duration
1–52	_) = c. 80	Con moto	0'00–3'58
53-91	- = c. 80	former) = new	3'58–5'12
92-101	= 120	former $\int_{a}^{3} = \text{new}$	5'12-5'25
102–111	= 108	-	5'25–5'36
112–125	= 92	_	5'36–5'53
126–141	= 80	_	5'53–6'15
142–184	- = 160	former) = new	6'15-7'20
185–213	J = 120	former d = new d	7'20-8'00
214–222	= 80	former → = new → (Tempo of 'F', bar 53)	8'00-8'15
223–250	- = c. 108	former $rangering = \text{new}$	8'15-8'49
251–256	- = c. 160	former \int_{0}^{3} = new \int_{0}^{3} (Tempo of 'L', bar 142)	8'49-9'02
257–284	h = c. 52	_	9'02-12'01
285-286	Calando molto e rit	_	12'01-12'08
286-300) = c. 80	<i>Tempo I</i> : previous \int_{a}^{3} = new \int_{a}^{3}	12'08-13'26
300-302	Rit.	-	13'26-13'39
302-390) = 80	A tempo, sereno ma con moto	13'39–19'23
391-392	Poco piu largamente	_	19'23–19'37
393-398	- = c. 80	-	19'37–19'54
399-440	- = 160	<i>Doppio movimento</i> : former • = new •	19'54–21'31
441-444	Molto rallentando al fine	_	21'31-22'05

Fig. 10.6: Tevot, table detailing tempo changes in score and performance durations

notably slower speed (bars 257–285); this stability seems to precipitate the final, and indeed the longest structural stage which returns to and (save for three brief pull-ups) maintains a single pulse, with the notated motion doubled at the close of the work from bar 399 (see Figure 10.6).⁴³

On the face of it, this reading would appear to indicate three radically different passages of music. However, one feature would seem to hint at an underlying continuity: a pulse of 80bpm – or its doubled expression of 160bpm – recurs frequently through the course of the piece, a point of constancy in the midst

⁴³ Durations taken from recording listed in primary resource list (Berliner Philharmoniker, conducted by Sir Simon Rattle. EMI Classics: 4578132)

of change (appearances highlighted by bold type in the 'Pulse' column of Figure 10.6). By equating the three occurrences of the 160bpm marking to its halved speed demarcation, it is possible to view *Tevot* as possessing a single, central pulse, a core 'time' that acts as a point of aural reference from which departures may be made.

Growing unrest in the opening passage seemingly prompts the first departures from this central pulse. The perceived regularity of the established onward tonal flux and the steady interaction between contrasting ideas proves short-lived; from bar 24 onwards, a gradual but nonetheless palpable process of divergence begins to occur as subtle additions to the orchestral texture begin to convolute the audible division between different gestures. The chordal progressions not only start to become more frequent but eventually begin to lose their rhythmic unity and, by extension, their harmonic coherence; these separating strands of sustained material serve to muddy the harmonic waters further as the descending fifths patterns continue, chromatic inflections now creeping in to their trajectory. This ramping up of tonal tension is supported not only by an increasingly cluttered texture but also by a gradual ensemble crescendo that culminates in a moment of release at bar 53, most of the amassed orchestra suddenly dropping away to reveal an abrupt change in metre, content and structure. Skittering woodwind burst into an ongoing dialogue of angular staccato triplet-quavers, pitched percussion contributing glittering punctuations.

In spite of the surface change from bar 53, an underlying continuity is perceivable; although its trajectory is now fragmented, a broader descent of fifths and minor seconds – and the mobile tonal centre that accompanies it – is still audible, even if the inclusion of new intermediary notes (thirds in particular) renders it less direct (see Clarinet, bars 53–54 in Figure 10.9). This transformation proves to be a blueprint of sorts for the way in which the first half of the work proceeds, with motivic changes precipitating audible structural changes whilst maintaining a sense of interrelation by underlining or reframing different facets of the materials with which the work began: a kind of varied repetition. The simplicity of the shapes Adès employs prove especially functional in this way, with different motivic fragmentations and expansions preserving a sense of cohesion,



Fig. 10.7: *Tevot*, examples of motivic developments incorporating or manipulating open-fifth relationships (cello, bars 65–68, and violin 1, bars 92–99)





even if tracing the specific origins and processes involved in these changes proves tricky in the course of listening.

The two intervals that underpin the opening are adapted to produce material that performs different structural functions. The distinctive open fifth relationships are utilised to create notably dynamic passages (see Figure 10.7), being at times, inverted and augmented (from bar 65) and accentuated in angular motifs (from bar 92). Meanwhile, the potential for tonal friction contained within the minor second relationship is audibly exploited as a way of ramping up structural tension. The first noticeable derivation emerges as a sliding chromatic figure that develops through the strings (bars 72-91), its perpetual stepwise descent a recognisable nod to the sequential scoring of the opening, with semitone patterns now enhanced through a more gradual, stepwise falling gesture. As the figure spreads throughout the orchestra, its dissonant collective presence serves to muddy the tonal waters, precipitating motivic and structural changes from bar 92. However, the subject continues to plague the music, reappearing in violent glimpses (bars 101–102 and bars 111–12) before returning in a growingly frantic unified version from bar 119; its chromatic effect upon the tonal direction necessitates a steadying structural change from bar 142, the trumpet solos (see



Fig. 10.9: Tevot, counterpoint motifs utilised in bars 53-91

Figure 10.8) underpinned by ascending pedals ($B \natural - C \ddagger - D \natural - E \flat - E \natural$). A slower paced but more rhythmically angular reinvention of the theme takes hold in the oboes from bar 175, snowballing through the full orchestra; it eventually gives way to a recommencement of its earlier sliding incarnation (from bar 214), thoroughly saturating both tonal and textural palates.

One formal impression, here, might be a set of variations on the opening passage, with the simplicity of the material allowing listeners to take for granted its broader unity and to focus moreover upon its gestural content, with long-term dialogues emerging between ascending and descending trajectories and between wide and narrow intervals. However, the dynamic nature of this variation-led form becomes clear in the overlapping, and often outright simultaneous, presentation of its developments. This intricate reappraisal of motifs takes the form of divergences and convergences, with new ideas emerging and developing in parallel with one another. Within a very short space of time of the skittering woodwind and percussion figure (from bar 53), it is placed in counterpoint first with the metrically jarring inversion and augmentation of fifths from bar 65 (a bold clash of descending and ascending gestures), and subsequently with the sliding chromatic shapes, which gradually take precedent from bar 72 (see Figure 10.9).

The sequence of largely interrelated tempo changes that takes place across the first half of *Tevot*, whilst indicative of an intricate formal continuity, only paints a picture of block-like, vertically implemented change. Passages of counterpoint, as above, point to further levels of development, transformations taking place in parallel rather than in direct succession. Indeed, the rhythmic variety on offer in such episodes adds complexity to the interpretation of pulse demarcation.

Although the tempo itself may make frequent returns to reference points (principally that of 80bpm or its double, 160bpm) the metrical emphasis contained within this framework is regularly shifting by virtue of the material deployed. So characteristic do these changes become that without the visual cue of the score or a conductor, determining which gestures accord with the broader time signature and which flout it proves a particularly difficult, if not a seemingly irrelevant, task; the overriding experience amounts to something much more fluid and mercurial.

Adès's inclination to employ different temporal levels in his music has not gone unnoticed. Christopher Fox has produced a detailed examination of multiple time-scales in the first movement of his Violin Concerto, highlighting shifts in smallscale (varying speed of semitone drops) and large-scale (differing instrumental 'orbits') recurrences (2014, 28-56). Paul Roeder, meanwhile, frames such compositional techniques within the context of Jonathan Kramer's observations on the multiplicity of postmodern music. Surveying a quintet of pieces composed in the 1990s, he concludes that while this music could indeed be deemed postmodern, such descriptions prove insufficient in accounting for its sheer temporal variety, pointing to the paradoxical manner in which a 'narrative, linear interpretation may emerge quite readily from the higher-level perception of locally various concurrent periodicities and trends' (Roeder 2006, 149). Although Roeder points to Arcadiana – with its intricate web of allusions, references and quotations - as the most obvious exponent of these characteristics, he asserts that they are nonetheless facilitated through fundamental musical means, above all a treatment of rhythm.

Tevot certainly exhibits aspects of what Roeder terms 'multiply-paced polyphony' (2006, 149), with particular thematic ideas departing from view only to reappear in new guises, often with changing rhythmic properties allowing either a cohesive or pointedly jarring counterpoint with parallel figures. Consider the varied appearances of the sliding chromatic descent figure discussed earlier (see Figure 10.9), with its changing shape not only demonstrating a particularly malleable approach to motivic development but also expanding musical scope without sacrificing continuity. This overlapping technique calls to mind the parallel temporal streams of Sibelius's Seventh Symphony, the stark juxtaposition of – and

interaction between – different materials, metres and tempi engendering an audible multiplicity.

Nevertheless, in spite of these apparent divisions, a clear linear narrative remains in both works. The interrelated nature of the materials lends the musical discourse an unmistakable singularity, disparate rates of motion ultimately united in their direction, mobile tonal centres urging all textural components restlessly onwards. Beyond this, the music seems to exhibit an obvious will for its separated elements to converge, with a number of episodes not only seeking to combine close and wide pitch intervals but also attempting, unsuccessfully, to reconcile the orchestra in more unified textures. The most prominent of these attempts sees the entire ensemble save the horns unite on a disjointed, dissonant triplet-crotchet figure, descending semitone patterns fragmented by unpredictable leaps in pitch and irregular rhythmic breaks (bars 223–250). When the horns enter, it is only to compound the volatile distortions of this figure, their fanfare-like countermelody characterised by triadic shapes descending by semitone steps. Try as it might, the violent passage fails to force any kind of resolution and, shortly after it has been curtailed by a reprisal of the arching, *legato* trumpet figure (bars 251–256), an abrupt drop in tempo precipitates an unprecedented structural change (from bar 257). With rhythmic momentum vastly depleted, metrical definition is now lost in a sighing ebb and flow of dissonant clusters, throbbing punctuations, semitone ascents and descents still perceivable in the middle registers; the energy so relentlessly accumulated throughout the first ten minutes of the work has dissipated, with little in the way of resolution achieved.

Disruption

As with *Tevot*, it is the tension inherent in the figures that open Sibelius's Seventh Symphony that incites structural change. The composer's management of harmonic conflict and competition emerges as a particularly potent tool for addressing issues of long-term resolution. To accord tonal change with the earlier mapping of three different temporal levels, a clear correlation emerges, with swifter, less predictable modulations taking place in the course of the faster music.



Fig. 10.10: Symphony No. 7, reduction of strings and horns, bars 106-8

Indeed, the first tempo shifts are seemingly precipitated by an increase in harmonic activity: a build in musical energy is created by the content itself, sequential motivic exchanges across the orchestra inciting greater tonal motion with pulse following suit (bars 71–105). As the steadiness engendered by the C-major cadence begins to fade, tonality becomes more transient, with a variety of new harmonies and pulses explored. In the course of this gradual accelerando, that tonal instability is maintained through allusions to different harmonic realms. Listeners are left with a searching sensation as new sonorities – or ones at least audibly removed from the recent climax – are explored with increasing speed.

Nevertheless, a network of references to the initial disparity between the tonic and its Ab subversion serves to keep these new occurrences within the context of the pre-existing tensions. In addition to the extensive melodic exploration of scalic patterns alluding to the white-note ascent of the opening, a more specific reference to the tonic appears in the horns at bars 107–108 with a brief recalling of the trombone theme from the first grand cadence. This latter occurrence also acts as the first notable point of arrival within the course of this transitory passage, a full crescendo atop an Et pedal (bars 104–105 in the timpani and double basses) culminating in an incisive contrary motion scale in the strings. The scale plateaus into a middle-register dissonance characterised by whole-tone relationships (F \sharp , Bb and Dt) that is in turn transformed through a tonic emphasis in the bass into a C-major resonance, with added seconds and flattened sevenths hinting at the juxtaposition of a G-minor triad; the resulting clash allows an alternative view, G-minor with an added sixth producing a *Tristan*-esque resonance (see Figure 10.10).

A^b proves an important pivot point in the increasingly *scherzo*-like music that ensues, with a descending bass manoeuvre from bars 115–18 concluding with two pointed A^b major chords that are then enharmonically transformed, with the

resulting G\$\$ helping to prepare for the transience of the forthcoming *Vivacissimo* (from bar 156). Although the key change to three flats at bar 134 proves indicative of the eventual direction of the music with regard to the forthcoming C-minor *Adagio*, it bears more immediate relevance to the on-going explorations of E_{\flat} , for Howell 'the only unequivocally and conventionally established secondary key' (1989, 106). In any case, at the time of its implementation this notated change has little impact on aural proceedings with the string figures in the approach to the *Vivacissimo* seemingly hinting at a number of tonal centres, E_{\natural} and C\$\$ emerging as temporary contenders. From here on, there is little let up in tonal motion until the arrival at G-major in bar 208; the unison chromatic gestures that follow in the strings allow its presence to be prolonged, cementing its status as the dominant to the minor rather than the major mode of the tonic for a transformed return of the cadence material.

This alteration of the tonic mode for the central Adagio prompts a reconsideration. The first grand C-major cadence has indeed proved to be the only point of true stability in the whole work, one that not only required extensive affirmation to be truly established but that then swiftly faded from view. The gradual increase in tempo that followed has been matched by a loss in tonal stability; rather than any kind of conventional alternative key having been found, insecurity has taken hold, with fluctuations in energy now supplanting a relative stasis. Pike's interpretation of the symphony as comprising two tonal axes – C¹, G¹ and D \ddagger on the one hand, A \flat , E \flat and B \flat on the other – seems particularly apt in this light (1978, 210–11). Rather than a more traditional hierarchical approach to the tonal centres of the symphony, Sibelius establishes a careful balance between a number of keys, setting in motion what more often appears to be a kind of harmonic pendulum effect, coexistence more often chosen in favour of direct conflict. As disruptive as the presence of A_{\flat} may frequently appear to be, it precipitates the structural instability that the otherwise largely static C-major tonic requires for the work to play out, allowing its repeated reaffirmations to demarcate the broader architecture.

Attaining equilibrium

Although it can seem easier to assign specific tonal axes to the formal segments of the Seventh Symphony, the aural reality is that both are often present simultaneously to varying extents, hinting at a kind of equilibrium. Indeed, much of the success of the single-span form depends on this, continuity of structure ensured through the thorough integration of contrasting ideas. The appearances of Ab in the opening passages may be read as subversions but really they set in motion a tonal balancing act, introducing the very uncertainty that requires repeated affirmations of an architecturally functional tonic; as disruptive as these features first seem, they are revealed to perform a very different function over time. Just as C-major resonances are then able to maintain a presence in the course of the faster transitions (at bar 107, for example), the influence of the many modulations within the realms of A^{\flat} and E^{\flat} necessitates the minor-mode conversion of the tonic for the central cadence. This also helps to emphasise the continuing remnants of faster music – above all the underpinning chromatic-scales in the strings – that lie beneath the surface of the slower chorale-like material in the wind and brass.

The consequences of this balance of sonorities can be heard in the faster music that ensues in the wake of the central *Adagio* cadence passage, in which the earlier tonal transience is redeployed with notably less aural disorientation, a more direct interplay between stable and unstable axes becoming more obvious. A brief but audible jolt to E major in bar 242 paves the way for a further miniaturisation of the tonal plan at large: two successive approaches to the tonic in its major mode. The first proves unsuccessful, diverted through downward minor-key chromatic shifts to C \ddagger minor and C minor (bars 252–57); the second is more fruitful, with unaccompanied sequential repetitions ascending quickly through G, A and B \flat (bars 258–60). However, rather than a triumphant return to the tonic, the arrival at C major (from bar 261) seems to trigger a brief hesitation in onward momentum, a notated pause highlighting a tonic pedal overlaid by a D-minor triad (bar 265). The melodies that ensue seem to continue this harmonic juxtaposition, with the melodic exchanges that follow seemingly outlining D-minor shapes whilst

exhibiting a clear audible gravitation towards the tonic, with dominant leanings soon following (bars 266–274).

Capitalising upon this uncertainty, the contrasting tonal axis continues to shape the unfolding form: a brief lurch to $A\flat$ (bar 309) precipitates an A-minor diversion, with the passage eventually curtailed by a descending $A\flat$ -major arpeggio (bars 320–21). This change in tonal direction prompts a lapse in energy: a series of downward modulations eventually brings the ensemble to a point of rest, dissonant string dialogues giving the impression of a loss of rhythmic and harmonic direction (bars 334–336). However, a solitary dominant pedal in the horns seems to offer a reminder of the more stable axis (bar 337); the dissonant string sequence is reinitiated, the violas intercede with the arpeggiated melody that first marked the arrival at *Allegro moderato* (from bar 285), and both rhythmic momentum and tonal stability are restored.

From here on, the two tonal axes seem to achieve a more obvious state of equilibrium. Although a clear relationship between speed of tempo and rate of tonal change is still evident, potential interruptions and diversions – such as the prominent A^{\downarrow} timpani punctuations (bars 346–48), and the two chromatically inflected passages that engineer modulations to B^{\downarrow} and E^{\downarrow} (bars 359–362 and 370–374, respectively) – do little to disrupt the flow and indeed the upbeat nature of the material. Indeed, once the stuttering comma-led jump to *Vivace* has been navigated, even the winding harmonic shifts that eventually lead back to the dominant for the onset of the *Adagio* by way of the *Presto* (from bar 449) seem far less startling, with such manoeuvres having been somewhat normalised by the comparable procedures that prepared the first *Adagio*.

Sibelius's implementation of contrasting tonal axes offers a further separation of the roles that these different speeds contribute to the development of the tonal plan. In essence, all three energy levels grant different temporal perspectives upon the tonic, approaching the sonority of C by different means and thus at different speeds. The three *Adagio* segments in essence offer three extended perfect cadences, C – in both its major and minor modes – asserted and reasserted in audible 'slow-motion' but rarely without small tonal disruptions, principally through figures incorporating Ab. The moderate, transitory formal segments seem to offer more unsteady attempts to maintain this tonic, with

passing harmonic centres prompted by earlier disruptions (principally $A\flat$, $E\flat$ and $B\flat$). However, these new paths are not simply periods of instability, but rather necessary sojourns designed to strengthen the tonic resolve. Both ensuing fast sections act as extended preludes to the *Adagio* passages that follow, continuing the exploration of more distant harmonic areas with the ultimate goal of an arrival at the dominant, offering a direct route back to the tonic. It is in this way that the passages of the greatest instability ultimately serve to reinforce the structural security of the symphonic form, with the momentum of the work geared towards tonal recurrence.

Sonority and memory

Most variation-based forms are self-perpetuating in character. Their structural direction is instilled through an inherent propensity to re-express; continual reinvention becomes the aural goal. Without embedding more conventional formal issues of contrast and conflict within a variation-led piece, its conclusion will struggle to attain the sense of required resolution that other designs can offer. If it cannot operate cyclically, returning to something approaching its basic shape, the sense of an ending might often be deliberately implemented through a ramping up of tension that is eventually released in a culminating passage. By the mid-point of *Tevot*, it appears that this release has proved elusive. Numerous reinterpretations of the same basic gestural harmonic ideas have been aired, often in an overlapping manner, all perpetuating the same sense of mobile tonal gravity. The result, from bar 257, seems to have been a point of burnout: several increasingly violent rhythmic collisions have failed to provide any kind of resolution, instead leading to a loss of energy: the drifting harmonic sequences - now aimlessly undulating rather than perpetually descending - are now underpinned by ominous fragmentations of the oscillating textures from the opening of the work. The broader formal frustration of this passage is seemingly vented through a further outburst, its figures ascending to an anguished climax, shifts of seconds and thirds colliding in orchestral-wide dissonance (bar 280). The composer's take on variation form seems to have arrived, for now, at a particularly bleak conclusion.

Energy and Equilibrium



Fig. 10.11: Tevot, reduction of bars 302-323

It is at this point that a watershed occurs. With a resumption of the initial tempo, Adès calls upon the particularly distinctive sonorities and textures of the opening of the piece – chains of fifths in the upper strings and wind – but gradually implements them in ascending, rather than descending, sequences (bars 287–302, with unified ascending patterns achieved from bar 293). This retrograde gesture gives the impression not of a direct recapitulation, but of a specifically musical return to a remembered point in the work; this effect of a 'return to' rather than a 'recurrence of' is enhanced by the reversal of pitch direction, a concerted effort to audibly turn back musical 'time'. Reintroductions of intermittent harmonic clusters in the brass and the upward leaping horn motif, both notable features from the opening of the work, underline this treatment of musical material as something to be actively navigated and explored by the listener rather than passively experienced.

Eventually, this ascent plateaus into a stratospheric chorale divided among the violins (from bar 303). This tentative succession of shifting consonant resonances gives the impression of a downward-drifting harmonic series. Mediant

completions provide a full harmonic rendering of the open fifths that have thus-far dominated. The heart of the shifting tonal centre that has pervaded the work is here revealed in its essence, as if its very genesis has been unveiled: a chain of interconnected, predominantly consonant sonorities – many integrating major triads – led perpetually onwards by a dynamic tonal gravity (see Figure 10.11). The apparent absence of any hierarchy in this series negates any immediate desire for resolution, imbuing the music with a new kind of stability characterised by clearer boundaries of harmonic and rhythmic energy.

This new consistency paves the way for one final variation, a floating melody that emerges in the piccolos atop this harmonic bed (from bar 314). The theme has an uncanny presence, bearing a striking novelty whilst still seeming familiar. It is in fact a hybrid subject, conglomerated from various aspects of preceding variations. It comprises two parts: the first is a direct stepwise ascent an inversion of the falling seconds of the opening that, in its first four bars, allows a spelt-out traversal of the rising seventh interval of the horn call in bar 21; the second is a slower descent - tentative oscillations of tones and semitones are gently lowered in pitch in a more stabilized version of the comparable figure that first took hold in the lower strings from bar 72. More significantly, this new material conforms - both metrically and harmonically - with its background. The result is a gesture of post-romantic tranquility, and as the figure begins to proliferate in slow majestic counterpoint through the woodwind and onwards through the entire orchestra, it begins to accumulate an almost Mahlerian tension. Almost the entire second half of the work proceeds in the manner of one final, grand variation, melody and chorale figures finally united in their steady, onward tonal motion. As it might be understood in the act of listening, reconciliation between the conflicting ideas presented in Tevot is achieved through a 'revisitation' of the work's 'origins', its essential matter realigned in order that it might be heard in a more cohesive way. The composer's own take on Stravinsky that his music might be heard as 'saying goodbye to a former type of writing at the same time as welcoming a new one' - seems apt in this light. In particular, Adès's interpretation of The Rake's Progress proves especially telling: '[...] it's almost as though the material has a tenderness, it's soft and malleable because it's preparing

for a metamorphosis; it's the end of one thing, the disintegration of one way of thinking and the beginning of another one...' (Adès and Service 2012, 76).

Indeed, so powerful does this newly acquired stability prove that it almost seems that the onward tonal path must be deliberately diverted in order for a conclusion to be reached. At the peak of a gigantic textural and dynamic build, the sudden stalling of tonal motion – via successive sustained triads of C major and G major (bars 393–98) – seems to precipitate a huge ensemble convergence on an A pedal, E[§] completing the open fifth as oscillations reappear in the violins and flutes (bar 399). Harmonic dynamism is now replaced by block-like changes of sonority: two further reassertions of the orchestral chord, precipitated by solo trumpet figures, combine the pre-existing fifth of A[§] and E[§] with one a tone lower, bass emphasis falling first upon G[§] (bar 415) and then upon D[§] (bar 429).

These seemingly jolting reorientations are explained within the context of the final outburst in bar 441: an emphatic return to an open fifth on A¹, underlined by tuned percussion in the following bar. The chord is allowed to fade into silence, dying oscillations in the violins acting as a subtle aural reminder that *Tevot* has returned to the very resonance with which it began. How conclusive this closing gesture proves depends upon the perspective of the listener. The circularity evident in the return to the opening sonority would certainly seem to exhibit a kind of closure. However, it may simultaneously nudge audiences towards ideas of the infinite; formal circles, by their very definition, provide closure whilst hinting at the idea that the shape itself can continue, repeating itself without end. In this sense, however, Tevot offers not one circle but perhaps something more akin to a figure of eight. Two returns to the opening material – one at the centre of the work, the other at its close - suggest a broader kind of variation structure, a process of formal re-evaluation and reinvention. Alternate times are presented: whilst the work seemingly acknowledges that the past cannot be relived, attempting to repeat key events can inform new perspectives and provide different ways of approaching the same ideas.

While Sibelius seemingly addresses the same kind of temporal concepts with his Seventh Symphony, the resulting experience does not necessarily produce this kind of catharsis. Here the underlying acknowledgement that the past cannot be relived is repeatedly challenged, perhaps deliberately so. Whilst *Tevot* twice (at



Fig. 10.12: Symphony No. 7, reduction of strings and horns, bars 500-10

its centre and at its conclusion) makes clear references back to its opening material, these recurrences act as springboards for formal changes. By contrast, whilst the similarly positioned cadence passages in the Seventh Symphony do precipitate wider changes, they themselves become the focal points of the structure. No sooner has the ensemble departed from the emphatic certainty of the first C-major *Adagio* than it expresses a desire to return to it, a recalling of both the sonority and the trombone theme (bar 107–08) seemingly expressing dissatisfaction with the new harmonic agenda that is taking hold. Although the ensuing central cadence – a minor-key compromise with the contrasting tonal axis – allows a period of relative clarity, its effect does little to stabilise proceedings in the manner of the earlier episode. The confidence of the trombone theme is undermined by the chromatic inflections of the continuing faster music, its reprisal rendered as a futile attempt to regain a lost security.

This apparent need to return to the past is confirmed by the final segue into *Adagio*, an emphatic attempt that comes far closer to achieving its goal. However, having facilitated the return to the major mode of the tonic in the first place, the alternate tonal axis cannot be shaken. Repeated F \sharp s in the strings (from bar 484) may appear supportive of the dominant but they pave the way for further dissonances, E \flat s almost immediately creeping in in the horns and woodwind to allude to the minor-mode once more. The F-minor diversion that first appeared at bar 71, instead of serving to calm the climax, now sends the orchestra off on a violent upward sequence as it continues in search of its resolution. As the ensemble strays further from the safety of the tonic it resorts to a desperate

attempt at structural symmetry, curtailing the sequence with a violent *tutti* chord to allow the strings an opportunity to reprise their C-major-affirming chorale. However, context wins out over content. The result is a dissonant, anguished descent; the realisation that the tonal axes must continue to coexist is further cemented as – following a further *tutti* punctuation – the strings continue their outburst with a held A^b major chord with an added augmented sixth at bar 500, a German sixth construction seemingly devoid, in any direct sense, of its conventional pre-dominant function (see Figure 10.12). A final stuttering ascent stalls on an A^b before sinking back to the dominant, horns and bassoon ushering back in the tonic with a truncated echo of the trombone theme (bar 506–09), an apparent gesture of resignation in the wake of the failed attempt to regain the stability of the opening *Adagio*. Vague allusions to a symmetrical design continue with flute and bassoon providing fragmented slow-motion reminiscences of the flitting theme they aired in the opening passages (bars 511–17 referencing bars 7– 10) atop a *tremolo* accompaniment. The closing cadence of the work underlines a resignation to the coexistence of the two tonal axes, the prominent shift from B₄ upwards to C_{\ddagger} in the strings perhaps offering a final nod to the A_{\flat} minor subversion which set the form of the symphony in motion. Emphasis is placed once again upon a tension that has audibly developed, yet seemingly remains as balanced – or, indeed, as inconclusive – as it did when it was first heard. To what extent this ending provides resolution may depend upon the perspective of a listener. As with *Tevot*, the Seventh Symphony's closing evocation of an aspect of its opening seemingly poses further questions regarding the extent to which notions of closure and return might intertwine.

Eleven

Epilogue: Open endings

To remember an event is to experience it again, but not in the same way as the first time. (Langer 1953, 263)

The temporal experiences of *Tevot* and the Seventh Symphony prompt questions regarding the nature of repetition. Points of return draw attention to circular aspects of structural design, making listeners aware of tensions between static and dynamic formal characters. The way in which both pieces conclude warrants further consideration of beginnings and endings, of closure and continuation. Returns might in some sense convey a sense of conclusion, but by the same token reawaken the impulses that began the journey in the first place. In these terms, musical repetition might be seen as engaging with long-term continuity in a paradoxical manner, evoking an attempt at temporal symmetry comparable to that outlined by Søren Kierkegaard: 'Repetition and recollection are the same movement, except in opposite directions, for what is recollected has been, is repeated backwards, whereas genuine repetition is recollected forward' (1983, 89).

In a similar manner, this thesis has also exhibited circular characteristics. Just as many of the works analysed have been shown to engage with the same broad formal issues, seemingly new lines of enquiry have frequently led to recurrences of wider temporal questions. This remains, I would argue, a necessity of exploring what will always amount to a subjective experience. Attempts to separate so broad and all-encompassing a phenomenon out into multiple components will ultimately prove frustrating. As has been shown, the discussion of time will inevitably involve numerous other factors that might at first glance appear distinct but on closer examination constitute a network of interdependent, often overlapping concepts. As with the forms of these works by Adès and Sibelius, this study has served to affirm the possibility for the coexistence of both static and dynamic temporal outlooks, and the place of both within musical analysis. These are ideas that, whether they are stated or not, I would argue come into play whenever issues of continuity, repetition, energy and perspective are discussed

with regard to ideas of form. Indeed, this thesis has maintained that consideration of such concepts might provide a fruitful springboard for ways of analysing music that not only remain open to the multiplicity of time but to a diverse range of compositional styles.

Many of the tenets of this thesis gravitate towards, or indeed are prompted by, what might be thought of as poststructuralist concerns: a desire to contextualise the construction of musical compositions within the complex web of cultural relationships and perceptual interactions that encompass it. Nevertheless, the analyses presented here still bear something of a structuralist streak, emphasising the important roles that musical form can assume within these networks. Indeed, the underlying notion of temporal linearity (the necessary progression from a beginning to an ending of some kind) as a fundamental audible continuity could even perhaps be portrayed as a more conventional reliance upon unity as an analytical parameter. Notions of unity, coherence and stability have regularly featured as essential issues in these case studies, even if the focus has been the ways in which they exist in balance, or imbalance, with their opposites: disunity, incoherence and instability. The very acknowledgement of this tension would seem to engage with the idea - often taken as a given of traditional analysis - that pieces of music should 'make sense', that they retain some kind of selfsufficient logic. In the end, this is at best a profoundly meaningful illusion that listeners might willingly buy into - at worst it might be considered a potentially restrictive fallacy. Rose Rosengard Subotnik offers a helpful reminder that both music and its audiences prove considerably more diverse, asserting that the 'rational substratum of musical knowledge finally on some act, choice, or principle that is not itself rationally demonstrable' (1996, 170):

Only some music strives for autonomy. All music has sound and a style. Only some people listen to music structurally. Everyone has cultural and emotional responses to music. These characteristics and responses are not uniform or immutable but as diverse, unstable, and open-ended as the multitude of contexts in which music defines itself. (1996, 175)

As persuasive as analytical explorations of more formalist concepts like unity can be, not least in lending aural experiences a sense of retrospective closure, their propensity towards catharsis cannot grant them domination over alternative

Epilogue: Open endings

ways of hearing pieces. Eric Clarke attributes the cultural power that autonomy wields in part to the 'intensely absorbing ... perceptual meanings' music affords, but nevertheless insists that it is 'just one among many ways of listening' (2005, 188). The continuities and discontinuities discussed here ultimately take the shape of interpretive suggestions – no more, no less. They are ways of reaching understandings of pieces of music rather than *the way* of reading them. In these terms, Joseph Dubiel's notion of structure as a route to new meaningful comprehensions – a call to exploration – proves particularly resonant. It is, he writes, 'a way to hold open the possibility of discovery, the possibility of responding aurally to something in a piece to which I was not antecedently attuned' (Dubiel 2004, 198).

Though several analytical styles have been utilised, it has not been a concern of this study to advocate or develop more a specific listening or indeed musicological strategy beyond a broader receptiveness to issues of perceived musical time and, accordingly, an open-minded approach to the diversity of meanings these experiences might facilitate.⁴⁴ Mark Hutchinson, in his explorations of late-twentieth century repertoire (Hutchinson 2012 and 2016), similarly locates a kind of unity in the plurality that his analyses uncover. Through examinations of works by Ligeti, Adès, Saariaho, Takemitsu, and Kurtág, he convincingly argues that the experiences of potent cohesion they offer arise as a consequence of their 'multi-layered and 'sometimes seemingly-contradictory' content rather than in spite of it (Hutchinson 2012, 37). He continues not by prescribing a specific approach but rather echoing Whittall (1999) and Kramer (2004) in their call for an adaptive approach to pre-existing conceptual and analytical frameworks (Hutchinson 2012, 279).

I would propose, though, that the dynamic redefinitions of coherence that Hutchinson outlines might not necessarily be limited to more recent music. As the case studies presented in this thesis have hopefully shown, even more familiar, canonic works can contribute to ongoing – some might say progressive –

⁴⁴ Lawrence Ferrara (1984) suggests a phenomenological procedure that maintains an admirable emphasis upon repeated, 'open listenings' that focus gradually on different structural levels. However, the conclusions he draws are tied to notions of syntax, semantics and ontology, more specific hierarchies of meaning that lie beyond the scope of this thesis.

Epilogue: Open endings

musicological and compositional dialogues. Time, I have suggested, is an everrelevant point of conceptual focus in this regard. It has been shown to provide a means by which formalist elements might retain a voice within poststructuralist thought without precluding either from a place within the perceptual ecology of musical performance. Similarly, whilst old and new music can be heard as sitting at stylistic odds, both can be nevertheless shown to engage with essential issues of experienced continuity and its absence. Temporality itself can become a springboard for analytical endeavours that facilitate a dialogue between stylistically disparate works. Time – as the essential binding force of experience – emerges as a tool by which contemporary listeners might, for a while, sidestep the historical and cultural contexts that could sometimes appear at risk of limiting the impact of pieces.

On the other hand, time frequently appears unbound. Temporal experience is, at its heart, inconsistent. It can seem fractious and unpredictable whilst nevertheless maintaining the same ecological reliability that allows us to coordinate countless social and cultural networks with its passing. Listening to music constitutes a creative act that draws us into engagement with this paradox and the impact it might have upon the way we live our lives. When writers like Jonathan Kramer (1988, 5) and Nicholas Cook (2013, 126) ask, in their own fascinating ways, whether music unfolds in time or whether time unfolds in music, it is not that they expect to find any kind of definitive answer. Rather they recognise that both perspectives have a function in musicological and philosophical thought. Both present meaningful avenues of exploration, and neither should be closed off. The contradictions they present through their coexistence encourage us to attempt to understand further our own experiences of time and its meaning.

In a study characterised by repetition and plurality, drawing a suitable conclusion is no easy task. However, perhaps something to be learned from the various listening approaches suggested in these pages is that notions like closure rest almost as much upon our attitudes towards experiences as they do upon the nature of the experiences themselves. It is perhaps timely to acknowledge T.S. Eliot's contention that circularity and change are not always mutually exclusive, especially when taking into account the transformations of perspective that result

from the act of revisiting: 'We shall not cease from exploration / And the end of all our exploring / Will be to arrive where we started / And know the place for the first time' (Eliot 1944, 59). Going round in circles can, given the chance, prove meaningful after all.

Primary Resources

Scores

The composition date is presented first, with the publication date listed after the publisher where it differs.

Abrahamsen, Hans. 2008. Schnee – Ten canons for nine instruments. Copenhagen: Edition Wilhelm Hansen. Adams, John. 1982. *Shaker Loops* for string orchestra (1982 Revision). New York: Associated music Publishers, 1989. Adès, Thomas. 2007. *Tevot* for large orchestra, op. 24. London: Faber Music, 2014. Beethoven, Ludwig van. 1804. Symphony No. 3 in E-flat major, Op.55, 'Eroica'. Mainz: Eulenburg, 2009. Benjamin, George. 1997. Viola, Viola for viola duo. London: Faber Music, 1998. Brahms, Johannes. 1885. Symphony No. 4 in E minor, Op. 98. London: Eulenburg, 1998. Mozart, Wolfgang Amadeus. 1778. Sonata for violin and piano in E minor, K. 304. Leipzig: Breitkopf & Härtel, 1879. Saariaho, Kaija. 2003. Je sens un deuxième coeur for viola, cello and piano. London: Chester Music. Schubert, Franz. 1828. Piano Sonata in B-flat, D. 960. New York: Dover, 1970. Sibelius, Jean. 1924. Symphony No. 7, Op. 105 (Revised Edition). Copenhagen: Edition Wilhelm Hansen, 1980.

Recordings

- Abrahamsen, Hans. 2009. *Schnee*. Ensemble Recherche. Music Edition, Winter & Winter: 910 159–2.
- Adams, John. 2000. *Minimalist Adams / Glass / Reich / Heath* [inc. *Shaker Loops*]. London Chamber Orchestra, conducted by Christopher Warren-Green. Virgin Classics: 7243 5 61851 2 8.
- Adès, Thomas. 2010. *Tevot / Violin Concerto / Three Studies from Couperin / Dances from Powder Her Face*. Berliner Philharmoniker, conducted by Sir Simon Rattle. EMI Classics: 4578132.
- Beethoven, Ludwig van. 2011. Complete Symphonies [inc. Symphony No. 3 in E-flat major, Op.55, 'Eroica']. La Chambre Philharmonique, conducted by Emmanuel Krivine. Naïve: V 5258.
- Benjamin, George. 2004. Shadowlines / Viola, Viola / Three Studies / Piano Sonata.Tabea Zimmerman and Antoine Tamestit, violas. Nimbus: NI5713.
- Brahms, Johannes. 1981. *Symphony No. 4*. Wiener Philharmoniker, conducted by Carlos Kleiber. Deutsche Grammophon: 457 706-2.
- Mozart, Wolfgang Amadeus. 2007. Complete Sonatas for Keyboard and Violin, Volume 4 [inc. Sonata in E-minor, K. 304]. Rachel Podger, violin; Gary Cooper. Channel Classics: 24607.
- Saariaho, Kaija. 2012. The Edge of Light: Messiaen / Saariaho [inc. Je sens un deuxième coeur]. Jonathan Moerschel, viola; Eric Byers, cello; Gloria Cheng, piano. Harmonia Mundi: HMU 907578.
- Schubert, Franz. 2004. *Mitsuko Uchida Plays Schubert* [inc. Piano Sonata in B-flat, D.960]. Mitsuko Uchida, piano. Decca: 475 6282.
- Sibelius, Jean. 2004. *Symphonies No. 3 & 7*. London Symphony Orchestra, conducted by Sir Colin Davis. LSO Live: LS00552.

Bibliography

- Abraham, Gerald. 1952. 'The Symphonies.' In *Sibelius: A Symposium*, edited by Gerald Abraham, 14–37. London: Oxford University Press.
- Abrahamsen, Hans. 2009. 'Schnee (2006–08).' Liner notes for Hans Abrahamsen: *Schnee*. Ensemble Recherche. Music Edition, Winter & Winter: 910 159–2.
- _____. 2010. '8th Sacrum Profanum Festival Modern Classic Interview with Hans Abrahamsen.' YouTube video, 5:33. Filmed 2010. Posted by biurofestiwalowe on 1 December, 2010. Accessed 1 September 2016. https:// www.youtube.com/watch?v=ShT8dVqggCg.
- Adams, John. 2008. *Hallelujah Junction: Composing an American Life*. New York: Picador.
 - _____. 2014. '*Shaker Loops* for string septet (1978)'. Accessed 22 February, 2013. www.earbox.com/chamber-music/shaker-loops.
- Adams, John, Rebecca Jemian and Anne Marie de Zeeuw. 1996. 'An Interview with John Adams.' *Perspectives of New Music* 34 (2): 88–104.
- Adès, Thomas, and Tom Service. 2012. *Thomas Adès: Full of Noises, Conversations with Tom Service*. London: Faber and Faber.
- Adorno, Theodor W. 1997. *Aesthetic Theory*. Translated by Robert Hullot-Kentor and edited by Gretel Adorno and Rolf Tiedemann. London: Athelone Press.
- _____. 2005. 'Schubert (1928),' translated by Jonathan Dunsby and Beate Perrey. 19th-Century Music 29 (1): 3–14.
- Adlington, Robert. 1997a. 'Review of *Shaping Time: Music, the Brain, and Performance* by David Epstein.' *Music Analysis* 16 (1): 155–71.
- _____. 1997b: 'Temporality in Post-tonal Music.' PhD thesis, University of Sussex.
- _____. 2003: 'Moving beyond Motion: Metaphors for Changing Sound.' *Journal of the Royal Musical Association* 128 (2): 297–318.
- Agawu, Kofi. 1999: 'Formal perspectives on the symphonies.' In *The Cambridge Companion to Brahms*, edited by Michael Musgrave, 133–55. Cambridge: Cambridge University Press.
- Aitken, Stuart. 1998. 'Review of Thirdspace: Journeys to Los Angeles and Other Realand-Imagined Places by Edward W. Soja.' Geographical Review 88 (1): 148– 51.

Almén, Byron. 2003. 'Narrative Archetypes: A Critique, Theory, and Method of Narrative Analysis.' *Journal of Music Theory* 47 (1): 1-39.

_____. 2008. *A Theory of Musical Narrative*. Bloomington: Indiana University Press. Angrilli, Alessandro, Paolo Cherubini, Antonella Pavese and Sara Mantredini. 1997.

'The influence of affective factors on time perception.' *Perception and Psychophysics* 59 (6): 972–82.

Athanasopoulos, George, Siu-Lan Tan and Nikki Moran. 2016. 'Influence of literacy on representation of time in musical stimuli: An exploratory cross-cultural study in the UK, Japan, and Papua New Guinea.' *Psychology of Music* 44 (5): 1126-1144.

_____. 2008. *A Theory of Musical Narrative*. Bloomington: Indiana University Press. Aristotle. 1996. *Poetics*, translated by Malcolm Heath. London: Penguin Books.

- Arnheim, Rudolf. 1978. 'A Stricture on Space and Time.' *Critical Inquiry* 4 (4): 645–55.
- Arstilla, Valtteri, and Dan Lloyd, editors. 2014. *Subjective Time: The Philosophy, Psychology, and Neuroscience of Temporality*. London: MIT Press.
- Augustine. 1991. *Confessions*, trans. Henry Chadwick. Oxford: Oxford University Press.
- Baggott, Jim. 2011. 'Quantum Theory: If a tree falls in the forest...' Oxford University Press Blog, 14 February. Accessed 30 August 2016. http://blog.oup.com/ 2011/02/quantum.
- Bailey, Nicole, and Charles S. Areni. 2006. 'When a few minutes sound like a lifetime: Does atmospheric music expand or contract perceived time?' *Journal of Retailing* 82: 189–202.
- Barkin, Elaine R. 2009. 'About Some Music of Thomas Adès.' *Perspectives of New Music* 47 (1): 165–73.
- Barry, Barbara R. 1990. *Musical Time: The Sense of Order*. New York: Pendragon Press.
- Begbie, Jeremy. 2000. *Theology, Music and Time*. Cambridge: Cambridge University Press.
- Bent, Ian D. 'Hermeneutics.' In Grove Music Online. Oxford Music Online. Oxford University Press. Accessed 21 February, 2014, http:// www.oxfordmusiconline.com/subscriber/article/grove/music/12871.

- Bennett, David C. 1975. Spatial and temporal uses of English prepositions: an essay in stratificational semantics. London: Longman Group.
- Berger, Karol. 2007. *Bach's Cycle, Mozart's Arrow: An Essay on the Origins of Musical Modernity*. Berkeley: University of California Press.
- Bernard, Jonathan W. 2003. 'Minimalism, Postminimalism, and the Resurgence of Tonality in Recent American Music.' *American Music* 21 (1): 112–33.
- Beyer, Anders. 'Abrahamsen, Hans.' Grove Music Online. Oxford Music Online. Oxford University Press, accessed 1 September, 2016. http:// www.oxfordmusiconline.com/subscriber/article/grove/music/46325.
- Bierwisch, Manfred. 1996. 'How much space gets into language?' In Language and Space, edited by Paul Bloom, Mary A. Peterson, Lynn Nadel, and Merrill F. Garrett, 31–76. Cambridge: MIT Press.
- Boltz, Marilyn G. 1991. 'Time estimation and attentional perspective.' *Perception and Psychophysics*, 49 (5): 422–33.
- Born, Georgina, editor. 2013. *Music, Sound and Space: Transformations of Public and Private Experience*. Cambridge: Cambridge University Press.
- Bozarth, George S., and Walter Frisch. 'Brahms, Johannes.' In Grove Music Online. Oxford Music Online. Oxford University Press. Accessed 6 September, 2016, http://www.oxfordmusiconline.com/subscriber/article/grove/music/ 51879.
- Bretherton, David. 2012. 'Review of *A Theory of Musical Narrative* by Byron Almén.' *Music Analysis* 31 (3): 414–21.
- Brendel, Alfred. 2001. *Alfred Brendel on Music: Collected Essays*. Chicago: A Cappella Books.
- Bromberger, Eric. 2007. 'About the Piece: Wolfgang Amadeus Mozart: Violin Sonata, K. 304.' Accessed 23 February, 2015. http://www.laphil.com/ philpedia/music/violin-sonata-k-304-wolfgang-amadeus-mozart.
- Brown, Scott W. 1997. 'Attentional resources in timing: Interference effects in concurrent temporal and nontemporal working memory tasks.' *Perception & Psychophysics* 59 (7): 1118–40.
- _____. 2010. 'Timing, resources, and interference: Attentional modulation of time perception.' In *Attention and time*, edited by Anna C. Nobre and Jennifer T. Coull, 107–22. New York: Oxford University Press.

- Brown, Scott W., and Alan N. West. 1990. 'Multiple timing and the allocation of attention.' *Acta Psychologica*, 75: 103–21.
- Burkholder, J Peter. 1984. 'Brahms and Twentieth-Century Classical Music.' *19th-Century Music* 8 (1): 75–83.

Burnham, Scott. 1995. Beethoven Hero. Princeton: Princeton University Press.

- Burrows, David. 1997. 'A Dynamical Systems Perspective on Music.' *The Journal of Musicology* 15 (4): 529–45.
- Butler, Chris. 2012. *Henri Lefebvre: Spatial Politics, Everyday Life and the Right to the City*. Abingdon: Routledge-Cavendish.
- Butler, David. 1992. *The Musician's Guide to Perception and Cognition*. New York: Schirmer Books.
- Cahill, Sarah. 'Adams, John.' *Grove Music Online. Oxford Music Online*. Oxford University Press, accessed September 23, 2016, http:// www.oxfordmusiconline.com/subscriber/article/grove/music/42479.
- Caldwell, Clare, and Sally A. Hibbert. 1999. 'Play that one again: The effect of music tempo on consumer behavior in a restaurant.' *European Advances in Consumer Research* 4: 58–62.
- Campbell, Joseph. 2008. *The Hero With A Thousand Faces* (Third Edition). California: New World Library.
- Caplin, William E. 1998. Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven. New York: Oxford University Press.
- Carl, Robert. 1991. 'Reviews of Analytic Approaches to Twentieth-Century Music by Joel Lester; Meta + Hodos and META Meta + Hodos: A Phenomenology of 20th-Century Materials and an Approach to the Study of Form by James Tenney; The Time of Music: New Meanings, New Temporalities, New Listening Strategies by Jonathan Kramer.' Notes 47 (4):1107–10.
- Casasanto, Daniel, Olga Fotakopoulou and Lera Boroditsky. 2010. 'Space and Time in the Child's Mind: Evidence for a Cross-Dimensional Asymmetry.' *Cognitive Science* 34. 387–405.
- Childs, Barney. 1977. 'Time and Music: A Composer's View.' *Perspectives of New Music*, 15 (2): 194–219.
- Chua, Daniel K.L. 2004. 'Rethinking Unity.' *Music Analysis* 23 (2/3): 353–59.
- Churgin, Bathia. 1998. 'Beethoven and the New Development-Theme in Sonata-Form Movements.' *The Journal of Musicology* 16 (3): 323–43.
- Clark, Herbert. H. 1973. 'Space, time, semantics, and the child.' In *Cognitive development and the acquisition of language*, edited by Timothy E. Moore, 27–63. New York: Academic Press.
- Clark, Philip. 2015. 'Minimalism at 50' *Gramophone*, 19 June, 2015. Accessed 23 September 2016, http://www.gramophone.co.uk/feature/minimalism-at-50.
- Clarke, David. 2011. 'Music, Phenomenology, Time Consciousness: Aeditations after Husserl.' In *Music and Consciousness: Philosophical, Psychological, and Cultural Perspectives*, edited by David Clarke and Eric Clarke, 1–24. Oxford: Oxford University Press.
- Clarke, David and Eric F. Clarke, editors. 2011. *Music and Consciousness: Philosophical, Psychological, and Cultural Perspectives*. Oxford: Oxford University Press.
- Clarke, Eric F. 1989. 'Issues in Language and Music.' *Contemporary Music Review* 4 (1): 9–22.
- _____. 2005. Ways of Listening: An Ecological Approach to the Perception of Musical Meaning. New York: Oxford University Press.
- Clarke, Eric F., and Nicholas Cook, editors. 2004. *Empirical Musicology: Aims, Methods, Prospects*. Oxford: Oxford University Press.
- Clarke, Eric F., and Carol L. Krumhansl. 1990. 'Perceiving Musical Time.' *Music Perception: An Interdisciplinary Journal* 7 (3): 213–51.
- Clayton, Martin. 2000. *Time in Indian Music: Rhythm, Metre, and Form in North Indian Rag Performance*. Oxford: Oxford University Press.
- Clifton, Thomas. 1983. *Music as Heard: A Study in Applied Phenomonology*. New Haven: Yale University Press.
- Cohn, Richard L. 1999. 'As Wonderful as Star Clusters: Instruments for Gazing at Tonality in Schubert.' *19th-Century Music*. 22(3): 213–232.
 - _____. 2004. 'Uncanny Resemblances: Tonal Signification in the Freudian Age.' Journal of the American Musicological Society 57 (2): 285–324.
 - _____. 2012. *Audacious Euphony: Chromaticism and the Triad's Second Nature*. New York: Oxford University Press.

- Cone, Edward T. 1974. *The Composer's Voice*. Berkeley: University of California Press.
- Cook, Nicholas. 1983. 'Review of *Music As Heard: A Study in Applied Phenomenology* by Thomas Clifton.' *Music Analysis* 2 (3): 291–94.
- _____. 1990. Music, Imagination, and Culture. Oxford: Clarendon Press.
- _____. 1998. *Music: A Very Short Introduction*. New York: Oxford University Press.
- _____. 2001. 'Theorizing Musical Meaning.' *Music Theory Spectrum*, 23 (2): 170–195.
- _____. 2013. *Beyond the Score: Music as Performance*. Oxford: Oxford University Press.
- Cook, Nicholas and Mark Everist, editors. 1999. *Rethinking Music*. Oxford: Oxford University Press.
- Cross, Ian. 1998. 'Music Analysis and Music Perception.' *Music Analysis* 17 (1): 3–20.
- Cumming, Naomi. 1997. 'The Horrors of Identification: Reich's "Different Trains."" Perspectives of New Music 35 (1), 129–52.
- Cutietta, Robert A. 1993. 'The Musical Elements: Who said they're right?' *Music Educators Journal* 79 (9): 48–53.
- Dainton, Barry. 2010. Time and space (Second edition). Durham: Acumen.
- de Man, Paul. 1983. 'Form and Intent in the American New Criticism.' In Blindness and Insight: Essays in the Rhetoric of Contemporary Criticism (Second edition), 20–35. London: Routledge.
- Damschroder, David. 2010. *Harmony in Schubert*. Cambridge: Cambridge University Press.
- Deliège, Célestin. 1989. 'On form as actually experienced.' *Contemporary Music Review* 4 (1): 101–15.
- Deliège, Irène. 1989. 'A perceptual approach to contemporary musical forms.' *Contemporary Music Review* 4 (1): 213–30.
- Deliège, Iréne, and Marc Mélen. 1997. 'Cue abstraction in the representation of musical form.' In *Perception and Cognition of Music*, edited by Irène Deliège and John Sloboda, 387–412. Sussex: Psychology Press.

- Deliège, Iréne, Marc Mélen, Diana Stammers and Ian Cross. 1996. 'Musical Schemata in Real-Time Listening to a Piece of Music.' *Music Perception: An Interdisciplinary Journal* 14 (2): 117–59.
- Deliège, Irène, and John Sloboda, editors. 1997. *Perception and Cognition of Music*. Sussex: Psychology Press.
- Dell'Antonio, Andrew, editor. 2004. *Beyond Structural Listening: Postmodern Modes of Hearing*. Berkeley: University of California Press.
- Deutsch, Diana. 1980. 'Music Perception.' The Musical Quarterly 66 (2): 165–79.
- Dowling, W. Jay. 1989. 'Simplicity and complexity in music and cognition.' *Contemporary Music Review* 4 (1): 247–53.
- Drake, Carolyn and Daisy Bertrand. 2003. 'The Quest for Universals in Temporal Processing in Music.' In *The Cognitive Neuroscience of Music*, edited by Isabelle Peretz and Robert J. Zatorre, 21–31. Oxford: Oxford University Press.
- Droit-Volet, Sylvie, and Warren H. Meck. 2007. 'How emotions colour our perception of time.' *Trends in Cognitive Sciences* 11 (12): 504–13.
- Dubiel, Joseph. 2004. 'Uncertainty, Disorientation, and Loss as Responses to Musical Structure.' In *Beyond Structural Listening: Postmodern Modes of Hearing*, edited by Andrew Dell'Antonio, 173–200. Berkeley: University of California Press.
- Duffalo, Richard. 1989. *Trackings: Composers Speak with Richard Duffalo*. New York: Oxford University Press.
- Dufourt, Hugues. 1989. 'Music and cognitive psychology: Form-bearing elements.' *Contemporary Music Review* 4 (1): 231–36.
- Dunsby, Jonathan 1981. *Structural Ambiguity in Brahms: Analytical Approaches to Four Works*. Michigan: UMI Research Press.
- Eagleman, David M. 2010. 'Duration illusions and predictability.' In *Attention and time*, edited by Anna C. Nobre and Jennifer T. Coull, 151–62. New York: Oxford University Press.
- Earman, John. 1970. 'Space-Time, or How to Solve Philosophical Problems and Dissolve Philosophical Muddles without Really Trying.' *The Journal of Philosophy*, 67 (9): 259–277.
- Egeland Hansen, Finn. 2006. *Layers of Musical Meaning*. Copenhagen: Museum Tusculanum Press.

Elbow, Peter. 2006. 'The Music of Form: Rethinking Organization in Writing.' *College Composition and Communication* 57 (4): 620–66.

Eliot, T.S. 1944. Four Quartets. London: Faber and Faber.

Elliot, J.H. 1929. 'Brahms as Symphonist.' The Musical Times, 70 (1036): 554.

- Elliott, Richard. 2011. 'Public consciousness, political conscience, and memory in Latin American nueva canción.' In *Music and Consciousness: Philosophical, Psychological, and Cultural Perspectives*, edited by David Clarke and Eric Clarke, 327–39. Oxford: Oxford University Press.
- Epstein, David. 1985. 'Tempo Relations: A Cross-Cultural Study.' *Music Theory Spectrum*, 7: 34–71.
- _____. 1987. *Beyond Orpheus: Studies in Musical Structure*. New York: Oxford University Press.
- ______. 1990. 'Brahms and the Mechanisms of Motion: The Composition of Performance.' In *Brahms Studies: Analytical and Historical Perspectives, Papers delivered at the International Brahms Conference Washington, DC, 5-8 May 1983*, edited by George S. Bozarth, 191–228. Oxford: Clarendon Press.
- _____. 1995. *Shaping Time: Music, the Brain, and Performance*. New York: Schirmer Books.
- Erickson, Robert. 1963. 'Time-relations.' Journal of Music Theory 7 (2): 174–92.
- _____. 1975. *Sound Structure in Music*. Berkeley: University of California Press.
- Evans, Edwin. 1935. *Handbook to the Chamber and Orchestral Music of Johannes Brahms: Second series, Op. 68 to the end*. London: William Reeves.
- Fachner, Jörg. 2011. 'Drugs, altered states, and musical consciousness: reframing time and space.' In *Music and Consciousness: Philosophical, Psychological, and Cultural Perspectives*, edited by David Clarke and Eric Clarke, 263–76. Oxford: Oxford University Press.
- Ferrara, Lawrence. 1984. 'Phenomenology as a Tool for Musical Analysis.' *The Musical Quarterly* 70 (3): 355–73.
- Firmino, Érico Artioli, José Lino Oliveira Bueno, and Emmanuel Bigand. 2009. 'Travelling Through Pitch Space Speeds up Musical Time.' *Music Perception: An Interdisciplinary Journal* 26 (3): 205–09.
- Fish, Stanley. 1976. 'Interpreting the "Variorum".' *Critical Inquiry* 2 (3): 465–85. Fisk, Charles. 2001. *Returning Cycles: Contexts for the Interpretation of*

Bibliography

Schubert's Impromptus and Last Sonatas. Berkeley: University of California Press.

- Forster, E.M. (1927) 2005. Aspects of the Novel. London: Penguin Classics.
- Fox, Christopher. 2004. 'Tempestuous Times: The Recent Music of Thomas Adès.' *The Musical Times* 145 (1888): 41–56.
- _____. 2014. 'Multiple Time-Scales in Adès's *Rings.' Perspectives of New Music* 52 (1): 28–56.
- Fraser, Julius T. 1978. *Time as Conflict: A Scientific and Humanistic Study*. Basel: Birkhäuser.
- _____. 1985. 'The Art of the Audible "Now".' *Music Theory Spectrum*, 7: 181–84.
- Friedman, William J. *About time: Inventing the Fourth Dimension*. Cambridge: MIT Press, 1990.
- Frisch, Walter. 1982. 'Brahms, Developing Variation, and the Schoenberg Critical Tradition.' *19th-Century Music* 5 (3): 215–32.
 - _____. 1984. *Brahms and the Principle of Developing Variation*. London: University of California Press.
- _____. 2000. "You Must Remember This": Memory and Structure in Schubert's String Quartet in G Major, D. 887.' *The Musical Quarterly* 84 (4): 582–603.
 _____. 2003. *Brahms: The Four Symphonies*. New Haven: Yale University Press.
- Frisch, Walter and Alfred Brendel. 1989. "Schubert's Last Sonatas": An Exchange.' *New York Review of Books*, 16 March, 1989. http://www.nybooks.com/ articles/1989/03/16/schuberts-last-sonatas-an-exchange/.
- Gardner, John. 1977. 'Sibelius 7.' The Musical Times 118 (1617): 912.
- Gay, Peter. 1977. 'Aimez-vous Brahms? Reflections on Modernism.' *Salmagundi* 36: 16–35.
- Gentner, Dedre. 2001. 'Spatial metaphors in temporal reasoning.' In Spatial schemas in abstract thought, edited by Merideth Gattis, 203–22. Cambridge, MA: MIT Press.
- Gentner, Dedre, Mutsumi Imai, & Lera Boroditsky. 2002. 'As time goes by: Evidence for two systems in processing space-time metaphors'. *Language and Cognitive Processes*, 17 (5): 537–565.
- Goehr, Lydia. 1992. The Imaginary Museum of Musical Works: An Essay in the Philosophy of Music. Oxford: Clarendon Press.

- Gooddy, William. 1969. 'Disorders of the Time Sense.' In *Handbook of clinical neurology*, edited by Pierre J. Vinken and George W. Bruyn, 229–50. New York: Wiley.
- _____. 1977. 'The Timing and Time of Musicians.' In *Music and the Brain*, edited by Macdonald Critchley and Ronald A. Henson, 131–40. London: William Heinemann Medical Books.
- Gray, Cecil. 1934. Sibelius. London: Oxford University Press.
- _____. 1935. *Sibelius: The Symphonies*. London: Oxford University Press.
- Greene, David B. 1982. *Temporal Processes in Beethoven's Music*. New York: Gordon and Breach.
- Griffiths, Paul. 1985. New Sounds, New Personalities: British Composers of the 1980s in Conversation with Paul Griffiths. London: Faber and Faber.
- _____. 2014. Programme note on Thomas Adès, *Tevot* (2007). City of Birmingham Symphony Orchestra, Thomas Adès (conductor), Symphony Hall, Birmingham, 11 June, 2014. 17–19.
- Grimes, Nicole. 2012. 'The Schoenberg/Brahms Critical Tradition Reconsidered.' *Music Analysis* 31 (2): 127–75.
- Grimley, Daniel M, editor. 2004. *The Cambridge Companion to Sibelius*. Cambridge, Cambridge University Press.
- Grünbaum, Adolf. 1973. *Philosophical Problems of Space and Time* (Second edition). Boston: Reidel.
- Gurvitch, Georges. 1964. *The Spectrum of Social Time*. Dordrecht: D. Reidel Publishing Company.
- Hall, Edward T. 1984. *The Dance of Life: The Other Dimension of Time*. New York: Doubleday.
- Hanslick, Eduard. 1957. *The Beautiful in Music*. Translated by Gustav Cohen, edited by Morris Weitz. New York: The Bobbs-Merrill Company.
- Hargreaves, Jonathan. 2008. 'Music as Communication: Networks of Com*position*,' PhD thesis, University of York.
- Hasty, Christopher F. 1981a. 'Rhythm in Post-Tonal Music: Preliminary Questions of Duration and Motion.' *Journal of Music Theory* 25 (2): 183–216.
- _____. 1981b. 'Segmentation and Process in Post-Tonal Music.' *Music Theory Spectrum* 3: 54–73.

- ____. 1984. 'Phrase Formation in Post-Tonal Music.' *Journal of Music Theory* 28 (2): 167–90.
- _____. 1986. 'On the Problem of Succession and Continuity in Twentieth-Century Music.' *Music Theory Spectrum* 8: 58–74.

_____. 1997. *Meter as Rhythm*. New York: Oxford University Press.

- Hatten, Robert S. 1994. *Musical Meaning in Beethoven: Markedness, Correlation, and Interpretation*. Bloomington: Indiana University Press.
- Hepokoski, James. 2009. *Music, Structure, Thought: Selected Essays*. Farnham: Ashgate.
- Hepokoski, James, and Warren Darcy. 2006. *Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth-Century Sonata*. New York: Oxford University Press.
- Hinckfuss, Ian. 1975. The Existence of Space and Time. Oxford: Clarendon Press.
- _____. 1988. 'Absolutism and Relationism in Space and Time: A False Dichotomy.' *The British Journal for the Philosophy of Science* 39 (2): 183–92.
- Hodges, Donald A. and David C. Sebald. 2011. *Music in the Human Experience: An Introduction to Music Psychology*. London: Routledge.
- Horwich, Paul. 1978. 'On the Existence of Time, Space, and Space-Time.' *Noûs* 12 (4): 397–419.
- _____. 1987. *Asymmetries in Time: Problems in the Philosophy of Science.* London: MIT Press.
- Howat, Roy. 2003. 'Reading between the lines of tempo and rhythm in the B flat Sonata, D960.' In Schubert the Progressive: History, Performance Practice, Analysis, edited by Brian Newbould, 117–138. Aldershot: Ashgate.
- Howell, Peter, Ian Cross and Robert West, editors. 1985. *Musical Structure and Cognition*. London: Academic Press.
- Howell, Tim. 1989. Jean Sibelius: Progressive Techniques in the Symphonies and Tone Poems. New York: Garland Publishing.
- _____. 2000. 'Restricting the Flow: Elements of Time-scale in Sibelius' Sixth Symphony.' *Tijdschrift voor Muziektheorie*, 5 (2): 89–100.
- _____. 2001. "Sibelius the Progressive." In *Sibelius Studies*, edited by Timothy L. Jackson and Veijo Murtomäki, 35–57. Cambridge: Cambridge University Press.

_____. 2013. 'Brahms, Kierkegaard and Repetition: Three Intermezzi.' *19th-Century Music Review* 10 (1): 101–17.

- Howell, Tim, Jon Hargreaves and Michael Rofe, editors. 2011. *Kaija Saariaho: Visions, Narratives, Dialogues*. Farnham: Ashgate.
- Hubbard, Phil, Rob Kitchin and Gill Valentine, editors. 2004. *Key Thinkers on Space and Place*. London: Sage.
- Hugo, Victor. 1982. *Les Misérables*. Translated by Norman Denny. London: Penguin Classics.
- Husserl, Edmund. 1991. On the Phenomenology of the Consciousness of Internal Time (1893–1917), translated by John Barnett Brough. Dordrecht: Kluwer Academic Publishers.
- _____. 2014. 'The Structure of Lived Time,' translated by James Mensch. In *Subjective Time: The Philosophy, Psychology, and Neuroscience of Temporality,* edited by Valtteri Arstilla and Dan Lloyd, 61–74. London: MIT Press.
- Hutchinson, Mark. 2012. 'Redefining coherence : interaction and experience in new music, 1985-1995.' PhD thesis, University of York.
- _____. 2016. *Coherence in New Music: Experience, Aesthetics, Analysis*. Abingdon: Routledge.
- Imberty, Michel. 1993. 'How do we perceive atonal music? Suggestions for a theoretical approach.' *Contemporary Music Review*, 9: 325–37.
- Jackson, Timothy L. 2001. 'Observations on crystallization and entropy in the music of Sibelius and other composers.' In *Sibelius Studies*, edited by Timothy L. Jackson and Veijo Murtomäki, 175–272. Cambridge: Cambridge University Press.
- Jackson, Timothy L., and Veijo Murtomäki, editors. 2001. *Sibelius Studies*. Cambridge: Cambridge University Press.
- Johnson, Julian. 2015. *Out of Time: Music and the Making of Modernity*. New York: Oxford University Press.
- Johnson, Mark L. and Steve Larson. 2003: "Something in the Way She Moves" Metaphors of Musical Motion.' *Metaphor and Symbol* 18 (2): 63–84.
- Johnson, Timothy A. 1994. 'Minimalism: Aesthetic, Style, or Technique?' *The Musical Quarterly* 78 (4): 742–73.

- Kantonen, Taito Almar. 1934. 'The Influence of Descartes on Berkeley.' *The Philosophical Review* 43/5: 483–500.
- Karl, Gregory. 1997. 'Structuralism and Musical Plot.' *Music Theory Spectrum*, 19 (1): 13–34.
- Keil, Charles M. H. 1966. 'Motion and Feeling Through Music.' *The Journal of Aesthetics and Art Criticism* 24 (3): 337–49.
- Kellaris, James J., and Robert J. Kent. 1992. 'The influence of music on consumers' temporal perceptions: Does time fly when you're having fun?' *Journal of Consumer Psychology* 1 (4): 365–76.
- Kellaris, James J., and Susan P. Mantel. 1996. 'Shaping time perceptions with background music: The effect of congruity and arousal on estimates of ad durations.' *Psychology and Marketing*, 13 (5): 501–15.
- Kerman, Joseph. 1985. Musicology. London: Fontana Press.
- Kierkegaard, Søren. 1983. *Fear and Trembling, Repetition: Kierkegaard's Writings, VI.* Princeton: Princeton University Press.

Kinderman, William. 1995. Beethoven. New York: Oxford University Press.

- Kivy, Peter. 2002. Introduction to a Philosophy of Music. Oxford: Clarendon Press.
- Knapp, Raymond. 1989. 'The Finale of Brahms's Fourth Symphony: The Tale of the Subject.' 19th-Century Music 13 (1): 3–17.
- Kogler, Susanne. 2003. "Timelessness" and "Released Time" Franz Schubert and Composition Today.' In *Schubert the Progressive: History, Performance Practice, Analysis*, edited by Brian Newbould, 89–100. Aldershot: Ashgate.
- Korsyn, Kevin. 1999. 'Beyond Privileged Contexts: Intertextuality, Influence, and Dialogue.' In *Rethinking Music*, edited by Nicholas Cook and Mark Everist, 55– 72. Oxford: Oxford University Press.
- Kramer, Jonathan D. 1973. 'Multiple and Non-Linear Time in Beethoven's Opus 135.' *Perspectives of New Music* 11 (2): 122–45.
 - _____. 1978. 'Moment Form in Twentieth Century Music.' *The Musical* Quarterly 64 (2): 177–94.
- _____. 1981. 'New Temporalities in Music.' Critical Inquiry 7 (3): 539–56.
- _____. 1982. 'Beginnings and Endings in Western Art Music.' *Canadia University Music Review* 3: 1–14.

- _____. 1985. 'Studies of Time and Music: A Bibliography.' *Music Theory Spectrum* 7: 72–106.
- _____. 1988. The Time of Music: New Meanings, New Temporalities, New Listening Strategies. New York: Schirmer Books.
- _____. 2004. 'The Concept of Disunity and Musical Analysis.' *Music Analysis* 23: 361–72.
- Kramer, Lawrence. 1990. *Music as Cultural Practice: 1800–1900*. Berkeley: University of California Press.
- _____. 1995. *Classical Music and Postmodern Knowledge*. Berkeley: University of California Press.
- _____. 2002. *Musical Meaning: Toward a Critical History*. Berkeley: University of California Press.
- _____. 2005. 'Saving the Ordinary: Beethoven's *Ghost Trio* and the Wheel of History.' *Beethoven Forum* 12 (1): 50–81.
- _____. 2007. *Why Classical Music Still Matters*. Berkeley: University of California Press.
- _____. 2010 *Interpreting Music*. Berkeley: University of California Press.
- Lakoff, George. 1993. 'The Contemporary Theory of Metaphor.' In *Metaphor and Thought* (Second edition), edited by Andrew Ortony, 202–51. Cambridge: Cambridge University Press.
- Lakoff, George and Mark Johnson. 1980. *Metaphors We Live By*. Chicago: University of Chicago Press.
- Lalitte, Philippe, and Emmanuel Bigand. 2006. 'Music in the Moment? Revisiting the Effect of Large Scale Structures.' *Perceptual and Motor Skills* 103: 811–28.
- Lam, Basil. 1966. 'Ludwig van Beethoven.' In *The Symphony, Volume One: Haydn to Dvořák*, edited by Robert Simpson, 104–74. Aylesbury: Penguin Books.
- Langer, Susanne K. 1953. *Feeling and Form: A Theory of Art Developed from* Philosophy in a New Key. London: Routledge and Keegan Paul.
- Larson, Steve. 1997. 'The Problem of Prolongation in "Tonal" Music: Terminology, Perception, and Expressive Meaning.' *Journal of Music Theory* 41 (1): 101–36.
- Larue, Jan, Eugene K. Wolf, Mark Evan Bonds, Stephen Walsh, Charles Wilson. 'Symphony.' In *Grove Music Online*. Oxford Music Online. Oxford University

Press. Accessed 1 September, 2016, http://www.oxfordmusiconline.com/ subscriber/article/grove/music/27254.

- Latham, Alan. 2004. 'Edward Soja.' In *Key Thinkers on Space and Place*, edited by Phil Hubbard, Rob Kitchin and Gill Valentine, 269–74. London: Sage.
- Laufer, Edward. 2001. 'Continuity and Design in the Seventh Symphony.' In *Sibelius Studies*, edited by Timothy L. Jackson and Veijo Murtomäki, 352–90.
 Cambridge: Cambridge University Press.
- Layton, Robert. 1965. Sibelius. London: J. M. Dent and Sons .
- Le Poidevin, Robin and Murray Macbeath, editors. 1993. *The Philosophy of Time*. New York: Oxford University Press.
- Lefebvre, Henri. 1991. *The Production of Space*, translated by Donald Nicholson-Smith. Oxford: Blackwell Publishing.
- _____. 2013. *Rhythmanalysis: Space, Time and Everyday Life*, translated by Stuart Elden and Gerald Moore. London: Bloomsbury.
- Lerdahl, Fred, and Ray Jackendoff. 1983. *A Generative Theory of Tonal Music*. London: MIT Press.
- Leman, Marc. 2008. *Embodied music cognition and mediation technology*. London: MIT Press.
- Lewin, David. 1986. 'Music Theory, Phenomenology, and Modes of Perception.' *Music Perception: An Interdisciplinary Journal* 3 (4): 327–92.
- Lewis, C.S. 1961. *An Experiment in Criticism*. New York: Cambridge University Press.
- Lippman, Edward A. 1984. 'Progressive Temporality in Music.' *The Journal of Musicology* 3 (2): 121–41.
- Lochhead, Judy. 2016. *Reconceiving Structure in Contemporary Music: New Tools in Music Theory and Analysis.* New York: Routledge.
- Lockwood, Lewis. 1982. "Eroica" Perspectives: Strategy and Design in the First Movement.' In *Beethoven Studies 3*, edited by Alan Tyson, 85–106. Cambridge: Cambridge University Press.
- London, Justin. 2004. *Hearing in Time: Psychological Aspects of Musical Meter*. Oxford: Oxford University Press.
- Lushetich, Natasha. 2014. Fluxus: The Practice of Non-Duality. Amsterdam: Rodopi.

- Mailman, Joshua Banks. 2007. 'Review of Repetition in Music: Theoretical and Metatheoretical Perspectives by Adam Ockleford.' Psychology of Music, 35 (2): 363–375.
- March, Daniel. 1997. 'Beyond Simplicity: Analytical Strategies for Contemporary Music,' PhD thesis, University of York.
- _____. 2011. 'From the Air to the Earth: Reading the Ashes.' In *Kaija Saariaho: Visions, Narratives, Dialogues*, edited by Howell, Tim, Jon Hargreaves and Michael Rofe. 3–14. Farnham: Ashgate.
- Margulis, Elizabeth Hellmuth. 2005. 'Review of Decentering Music: A Critique of Contemporary Musical Research by Kevin Korsyn.' Psychology of Music, 33 (3): 331–37.
- Marston, Nicholas. 2000. 'Schubert's Homecoming.' *Journal of the Royal Musial Association* 125 (2): 248–70.
- Matthews, David. 1993. 'Living Traditions.' The Musical Times 134 (1802): 189-91.
- Maus, Fred Everett. 1988. 'Music as Drama'. *Music Theory Spectrum*, 10 (10th Anniversary Issue): 56-73.
- _____. 1991. 'Music as Narrative.' *Indiana Theory Review* 11: 1–34.
- _____. 1997. 'Narrative, Drama and Emotion in Instrumental Music.' *The Journal of Aesthetics and Art Criticism* 55 (3): 293-303.
- _____. 1999. 'Concepts of Musical Unity'. In *Rethinking Music*, edited by Nicholas Cook and Mark Everist, 171–92. Oxford: Oxford University Press.
- McAdams, Stephen. 1989. 'Psychological constraints on form- bearing dimensions in music.' *Contemporary Music Review* 4 (1): 181–98.
- _____. 1999. 'Perspectives on the Contribution of Timbre to Musical Structure.' *Computer Music Journal* 23 (3): 85–102.
- McClelland, Ryan. 2009. 'Brahms and the Principle of Destabilised Beginnings.' *Music Analysis* 28 (1): 3–61.
- McTaggart, J.M.E. 1993. 'The Unreality of Time.' In *The Philosophy of Time*, edited by Robin Le Poidevin and Murray Macbeath, 23–34. New York: Oxford University Press. Originally published as 'Time' in *The Nature of Existence*, ii (Cambridge: Cambridge University Press, 1927).
- Mellor, D.H. 1993. 'The Unreality of Tense.' In *The Philosophy of Time*, edited by Robin Le Poidevin and Murray Macbeath, 47–59. New York: Oxford

University Press. Originally published in *Real Time* (Cambridge: Cambridge University Press, 1981).

- Mensch, James. 2014. 'A Brief Account of Husserl's Conception of Our Consciousness of Time.' In Subjective Time: The Philosophy, Psychology, and Neuroscience of Temporality, edited by Valtteri Arstilla and Dan Lloyd, 61–74. London: MIT Press.
- Metzer, David. 2009. *Musical Modernism at the Turn of the Twenty-First Century*. New York: Cambridge University Press.
- Meyer, Leonard B. 1956. *Emotion and Meaning in Music*. Chicago: University of Chicago Press.
- Micznik, Vera. 2001. 'Music and Narrative Revisited: Degrees of Narrativity in Beethoven and Mahler.' *Journal of the Royal Musical Association* 126 (2): 193–249.
- Miller, Izchak. 1984. *Husserl, Perception, and Temporal Awareness*. Cambridge: MIT Press.
- Moisala, Pirkko. 2009. Kaija Saariaho. Urbana: University of Illinois Press.
- Molleson, Katie. 2015. 'A composer for the season.' *The Herald*, 14 January, 2015. Accessed 1 September, 2016. http://www.heraldscotland.com/arts_ents/ 13197029.A_composer_for_the_season/.
- Morgan, Robert P. 2003. 'The Concept of Unity and Musical Analysis.' *Music Analysis* 22 (1/2): 7–50.
- Mundle, C.W.K. 1967. 'The Space-Time World.' Mind 76 (302): 264–69.
- Murphy, Scott. 2009. 'Metric cubes in some music of Brahms.' *Journal of Music Theory* 53 (1): 1–56.
- Murtomäki, Veijo. 1993. *Symphonic Unity: The Development of Formal Thinking in the Symphonies of Sibelius*, translated by Henry Bacon. Helsinki, Studia Musicologia Universitatis Helsingiensis.
- Musgrave, Michael. 1979. 'Schoenberg and Brahms: A study of Schoenberg's response to Brahms's music as revealed in his didactic writings and selected early compositions.' PhD thesis, Kings College London.
- _____. 1983. 'Brahms the Progressive: Another View.' *The Musical Times* 124 (1683): 291–94.

- ____. 1990. 'Schoenberg's Brahms.' In Brahms Studies: Analytical and Historical Perspectives, Papers delivered at the International Brahms Conference Washington, DC, 5-8 May 1983, 123–138. Oxford: Clarendon Press.
- _____, editor. 1999. *The Cambridge Companion to Brahms*. Cambridge: Cambridge University Press.
- Nattiez, Jean-Jacques. 1990. 'Can One Speak of Narrativity in Music?' Translated by Katharine Ellis. *Journal of the Royal Musical Association* 15 (2): 240–57.
- Newbould, Brian, editor. 2003. *Schubert the Progressive: History, Performance Practice, Analysis*. Aldershot: Ashgate.
- Newell, Robert. 1976. 'Four Tiers on the Foundation of Time.' International Review of the Aesthetics and Sociology of Music 7 (2): 147–74
- Nice, David. 2013. 'St Lawrence String Quartet, LSO String Orchestra, Adams, LSO St Luke's.' *The Arts Desk*, 24 January, 2013. www.theartsdesk.com/classical-music/st-lawrence-string-quartet-lso-string-orchestra-adams-lso-st-lukes.
- Nobre, Anna C., and Jennifer T. Coull, editors. 2010. *Attention and time*. New York: Oxford University Press.
- Norris, Christopher. 2005. 'Music theory, analysis and deconstruction: How they might (just) get along together.' *International Review of the Aesthetics and Sociology of Music*, 36 (1): 37–82.
- Oakes, Steve. 2003. 'Musical tempo and waiting perceptions.' *Psychology and Marketing* 20 (8): 685–705.
- Ochs, Elinor, and Lisa Capps. 1996. 'Narrating the Self.' *Annual Review of Anthropology* 25: 19–43.
- Ockelford, Adam. 2004. 'On similarity, derivation and the cognition of musical structure.' *Psychology of Music* 32 (1): 23–74.
- _____. 2005. *Repetition in Music: Theoretical and Metatheoretical Perspectives*. Aldershot: Ashgate.
- Orlov, Henry F. 1979. 'The Temporal Dimensions of Musical Experience.' *The Musical Quarterly* 65 (3): 368–78.
- Osmond-Smith David. 1983. 'The retreat from dynamism: a study of Brahms's Fourth Symphony.' In *Brahms: Biographical, documentary and analytical studies*, edited by Robert Pascall. Cambridge: Cambridge University Press.

- Paddison, Max and Irène Deliège, editors. 2010. *Contemporary Music: Theoretical and Philosophical Perspectives*. Farnham: Ashgate.
- Pascall, Robert, editor. 1983. *Brahms: Biographical, documentary and analytical studies*. Cambridge: Cambridge University Press.
- _____. 1989. 'Genre and the Finale of Brahms's Fourth Symphony.' *Music Analysis* 8 (3): 233–45.
- Panagiotidi, Maria and Stavroula Samartzi. 2010. 'Time estimation: Musical training and emotional content of stimuli.' *Psychology of Music* 41 (5): 620–629.
- Parmet, Simon. 1959. *The Symphonies of Sibelius: A Study in Musical Appreciation*. London: Cassell.
- Pasler, Jann. 2008. 'Narrative and Narrativity in Music.' In *Writing Through Music: Essays on Music, Culture and Politics*. Oxford: Oxford University Press.
- Peretz, Isabelle, and Robert J. Zatorre, editors. 2003. *The Cognitive Neuroscience of Music*. Oxford: Oxford University Press.
- Pike, Lionel. 1978. *Beethoven, Sibelius and the 'Profound logic': Studies in Symphonic Analysis*. London: Athlone Press.
- Pöppel, Ernst. 1978. 'Time Perception.' In *Handbook of Sensory Physiology*, III, edited by Richard Held, Herschel W. Leibowitz and Hans-Lukas Teuber, 713–29. Berlin: Springer.
- Potter, Keith. 'Minimalism.' In Grove Music Online. Oxford Music Online. Oxford University Press. Accessed 22 February, 2013, http:// www.oxfordmusiconline.com/subscriber/article/grove/music/40603.
- Powell, Richard. 2014. 'Accessible Narratives: Continuity in the Music of John Adams.' *Contemporary Music Review* 33 (4): 390–407.
- Prior, Arthur N. 1993. 'Changes in events and changes in things.' In *The Philosophy* of *Time*, edited by Robin Le Poidevin and Murray Macbeath, 203–20 New York: Oxford University Press. Originally published in *Philosophy* 37 (1962): 130–47.
- Quinton, Anthony. 1993. 'Spaces and Times' in *The Philosophy of Time*, edited by Robin Le Poidevin and Murray Macbeath, 36–46. New York: Oxford University Press.

- Reynolds, Jack. 2004. 'Chapter Six: Decision.' In *Understanding Derrida*, edited by Jack Reynolds and Jon Roffe, 46–53. London: Continuum.
- Rice, Timothy. 2003. 'Time, Place, and Metaphor in Musical Experience and Ethnography.' *Ethnomusicology* 47 (2): 151–79.

Rickards, Guy. 1997. Jean Sibelius. London: Phaidon Press.

- Rijn, Hedderik van, and Niels A. Taatgen. 2008. 'Timing of multiple overlapping intervals: How many clocks do we have?' *Acta Psychologica* 129 (3): 365–75.
- Robbins Landon, H.C. 1974. *Beethoven: A Documentary Study*. London: Thames and Hudson.
- Roeder, John. 1997. 'Review of *Meter as Rhythm* by Christopher F. Hasty.' *Journal of the Society for Music Theory Music Theory Online* 4 (4): 1–6.
- _____. 2006. 'Co-operating Continuities in the Music of Thomas Adès.' *Music Analysis* 25: 121–54.
- Rofe, Michael. 2008. 'Shostakovich and the Russian Doll: Dimensions of Energy in the Symphonies,' PhD thesis, University of York.
- _____. 2011. 'Capturing Time and Giving it Form: Nymphéa.' In Kaija Saariaho: Visions, Narratives, Dialogues, edited by Howell, Tim, Jon Hargreaves and Michael Rofe. 81–106. Farnham: Ashgate.
- _____. 2014. 'Dualisms of Time.' *Contemporary Music Review* 33 (4): 341–54.
- Rosen, Charles. 1988. Sonata Forms: Revised Edition. New York: W. W. Norton & Company.
- _____. 1997. *The Classical Style: Haydn, Mozart, Beethoven.* London: Faber and Faber.
- Rostand, Claude. 1955: Brahms: Volume 2. Paris: Éditions Le Bon Plasir.
- Rowell, Lewis. 1979. 'The Subconscious Language of Musical Time.' *Music Theory Spectrum* 1: 96–106.
- _____. 1990. 'Review of *The Time of Music: New Meanings, New Temporalities, New Listening Strategies* by Jonathan D. Kramer'. *Journal of Music Theory* 34 (2), 348–59.
- Rupprecht, Philip. 2005. 'Above and beyond the Bass: Harmony and Texture in George Benjamin's *Viola, Viola.' Tempo* 59 (232): 28–38.

- Saariaho, Kaija. 2003. Programme note for Je sens un deuxième coeur. Music Sales. Accessed 21 February, 2014. http://www.musicsalesclassical.com/ composer/work/14333.
- Saariaho, Kaija and Tom Service. 2011. 'Meet the Composer.' In Kaija Saariaho: Visions, Narratives, Dialogues, edited by Howell, Tim, Jon Hargreaves and Michael Rofe. 3–14. Farnham: Ashgate.
- Said, Edward W. 2008. 'Untimely Meditations (review of Maynard Solomon's Late Beethoven).' In Music at the Limits: Three Decades of Essays and Articles. London: Bloomsbury.
- Saariaho, Kaija. 2000. 'Matter and Mind in Music.' In *Matter and Mind in Architecture*, edited by Pirkko Tuukkanen. Helsinki: Alvar Aalto Foundation.
- Saslaw, Janna. 1996. 'Forces, Containers, and Paths: The Role of Body-Derived Image Schemas in the Conceptualization of Music.' *Journal of Music Theory* 40 (2): 217–43.
- Schmalfeldt, Janet. 2011. In the Process of Becoming: Analytic and Philosophical Perspectives on Form in Early Nineteenth-Century Music. Oxford: Oxford University Press.
- Schoenberg, Arnold. 1975a. *Style and Idea: Selected writings of Arnold Schoenberg*, edited by Leonard Stein and translated by Leo Black. London: Faber and Faber.
- _____. 1975b. 'Brahms the Progressive.' In *Style and Idea: Selected writings of Arnold Schoenberg*, edited by Leonard Stein and translated by Leo Black, 398–441. London: Faber and Faber
- _____. 1994. *Coherence, Counterpoint, Instrumentation, Instruction in Form*. Ed. Severine Neff and trans. Charlotte M. Cross and Severine Neff. Nebraska: University of Nebraska.
- Schwarz, K. Robert. 1996. Minimalists. London: Phiadon.
- Sellars, Peter. 2012. 'The Edge of Light: Music of Messiaen and Saariaho.' Liner notes for *The Edge of Light: Messiaen / Saariaho*. Gloria Cheng (piano), Calder Quartet. Harmonia Mundi, HMU 907578, CD.
- Serafine, Mary Louise. 1984. 'The Development of Cognition in Music.' *The Musical Quarterly* 70 (2): 218–33.

- Service, Tom. 2007. 'Writing Music? It's like Flying a Plane: Tom Service on Thomas Adès.' *The Guardian*, 26 February, 2007. Accessed 1 September 2016, https:// www.theguardian.com/music/2007/feb/26/classicalmusicandopera.tomservice.
- ______. 'Minimalism at 50: how less became more' *The Guardian*, 24 November, 2011. Accessed 23 September 2016, https://www.theguardian.com/music/2011/nov/24/minimalism-at-50.
- _____. 2012. 'Schubert: Ferocious, tender, sublime.' *The Guardian*, 19 March, 2012. Accessed 22 February, 2013. https://www.theguardian.com/music/2012/ mar/19/schubert-ferocious-tender-sublime.
- Shakespeare, William, Jonathan Bate, and Eric Rasmussen. 2007. *The RSC Shakespeare: The Complete Works*. Basingstoke: Palgrave Macmillan.
- Shanon, Benny. 2011. 'Music and ayahuasca.' In *Music and Consciousness: Philosophical, Psychological, and Cultural Perspectives*, edited by David Clarke and Eric Clarke, 281–92. Oxford: Oxford University Press.
- Sheldon, Deborah A. 1994. 'Effects of Tempo, Musical Experience, and Listening Modes on Tempo Modulation Perception.' *Journal of Research in Music Education* 42 (3): 190–202.
- Shields, Rob. 2004. 'Henri Lefebvre.' In *Key Thinkers on Space and Place*, edited by Phil Hubbard, Rob Kitchin and Gill Valentine, 208–13. London: Sage.
- Shoemaker, Sydney. 1993. 'Time Without Change.' In *The Philosophy of Time*, edited by Robin Le Poidevin and Murray Macbeath, 63–79. New York: Oxford University Press. Originally published in *The Journal of Philosophy* 66 (1969), 363–81.
- Simpson, Robert, editor. 1966a. *The Symphony: Volume 1*. Aylesbury: Penguin Books.
 - _____. 1966b. *The Symphony: Volume 2*. Aylesbury: Penguin Books.
- Sipe, Thomas. 1998. *Beethoven: Eroica Symphony*. Cambridge: Cambridge University Press.
- Small, Christopher. 1998. *Musicking: The Meanings of Performing and Listening*. Connecticut: Wesleyan University Press.
- Smart, J.J.C. 1949. 'The River of Time.' Mind 58 (232): 483-94.
- Smith, F. Joseph. 1979. *The Experiencing of Musical Sound: Prelude to a Phenomenology of Music*. London: Gordon and Breach.

- Smith, Neil Thomas. 2015. 'Mathias Spahlinger's passage/paysage and "the Barbarity of Continuity." *Contemporary Music Review* 34 (2–3): 176–86.
- Smith, Peter H. 1994. 'Brahms and Schenker: A Mutual Response to Sonata Form.'. In *Music Theory Spectrum* 16 (1): 77–103.
- _____. 1996. 'You reap what you sow: Some instances of rhythmic and harmonic ambiguity in Brahms.' *Music Theory Spectrum* 28 (1): 57–97.
- Soja, Edward W. 1989. Postmodern Geographies: The Reassertion of Space in Critical Social Theory. London: Verso.
- _____. 1996. Thirdspace: Journeys to Los Angeles and Other Real-and-Imagined Places. Oxford: Blackwell Publishers.
- Spence, Charles. 2010. 'Prior entry: Attention and temporal perception.' In Attention and time, edited by Anna C. Nobre and Jennifer T. Coull, 89–106. New York: Oxford University Press.
- Stambaugh, Joan. 1964. 'Music as a Temporal Form.' *The Journal of Philosophy* 61 (9): 265–80.
- Strickland, Edward. 1991. *American Composers: Dialogues on Contemporary Music*. Bloomington: Indiana University Press.
- Stoecker, Philip. 2014. 'Aligned Cycles in Thomas Adès's Piano Quintet.' *Music Analysis* 33 (1): 32–64.
- Subotnik, Rose Rosengard. 1996. *Deconstructive Variations: Music and Reason in Western Society*. Minneapolis: University of Minnesota Press.
- Swed, Mark. 1989. 'John Adams.' The Musical Times 130 (1761): 662-64.
- Swinkin, Jeffrey. 2012. 'Variation as Thematic Actualisation: The Case of Brahms's Op. 9.' *Music Analysis* 31(1): 37–89.
- Tawaststjerna, Erik. 1986. *Sibelius Volume II:1904-1914*, translated by Robert Layton. London: Faber and Faber.
- Taylor, Benedict. 2016. *The Melody of Time: Music and Temporality in the Romantic Era*. London: Oxford University Press.
- Teller, Paul. 1991. 'Substance, Relations, and Arguments about the Nature of Space-Time.' *The Philosophical Review* 100 (3): 363–97.
- Tillmann, Barbara, and Emmanuel Bigand. 1996. 'Does Formal Musical Structure Affect Perception of Musical Expressiveness?' *Psychology of music* 24: 3–17.

- Traugott, Elizabeth C. 1978. 'On the expression of spatio-temporal relations in language.' In *Universals of Human Language, Volume 3: Word Structure*, edited by Joseph H. Greenberg, 369–400. Stanford: Stanford University Press.
- Truscott, Harold. 1966. 'Jean Sibelius (1865-1957).' In *The Symphony, Volume Two: Elgar to the Present Day*, edited by Robert Simpson, 80–103. Aylesbury: Penguin Books.
- Tse, Peter Ulric. 2010. 'Attention underlies subjective temporal expansion.' In Attention and time, edited by Anna C. Nobre and Jennifer T. Coull, 137–50. New York: Oxford University Press.
- Venn, Edward. 2014. 'Thomas Adès's "Freaky, Funky, Rave".' *Music Analysis* 33 (1): 65–98.
- _____. 2015. 'Thomas Adès and the Spectres of Brahms.' *Journal of the Royal Musical Association* 140 (1): 163–212.
- Wagner, Richard. 1988. Wagner on Music and Drama, A compendium of Richard Wagner's prose works, selected and arranged by Albert Goldman and Evert Sprinchorn, and translated by H. Ashton Ellis. New York: Da Capo Press.
- _____. 2008. *Beethoven.* Translated by William Ashton Ellis. Milton Keynes: Dodo Press.
- Walsh, Stephen. '1901–18: Mahler, Sibelius, Nielsen,' in 'Symphony.' In Grove Music Online. Oxford Music Online. Oxford University Press. Accessed 31 August, 2016, http://www.oxfordmusiconline.com/subscriber/article/grove/music/ 27254pg3#S27254.3.
- Weber, William. 1994. 'The intellectual origins of musical canon in eighteenthcentury England.' *Journal of the American Musicological Society* 47: 488–519.
- _____. 1999. 'The History of Musical Canons.' In *Rethinking Music*, edited by Mark Everist and Nicholas Cook, 336–55. Oxford: Oxford University Press.
- Weinert, Friedel. 2013. *The March of Time: Evolving conceptions of time in the light of scientific discoveries*. London: Springer.
- Weingard, Robert. 1977. 'Space-Time and the Direction of Time.' *Noûs* 11 (2): 119–31.
- Wells, Dominic. 2012. 'Plural Styles, Personal Syle: The Music of Thomas Adès.' *Tempo* 66 (260): 2–14.

- Whittall, Arnold. 'Form.' In Grove Music Online. Oxford Music Online. Oxford University Press. Accessed 31 August, 2016, http:// www.oxfordmusiconline.com/subscriber/article/grove/music/09981.
- _____. 1999. 'Autonomy/Heteronomy: The Contexts of Musicology.' In *Rethinking Music*, edited by Nicholas Cook and Mark Everist, 73–101. Oxford: Oxford University Press.
- _____. 2004. 'The later symphonies.' In *The Cambridge Companion to Sibelius,* edited by Daniel M. Grimley, 49–65. Cambridge, Cambridge University Press.
- Williams, Alastair. 1995. *New Music and the Claims of Modernity*. Aldershot: Ashgate.
- _____. 2001. Constructing Musicology. Aldershot: Ashgate.
- ______. 2012. 'Constructing Meanings and Subjectivities in Music: Theories and Practices.' In *Constructing the Historiography of Music: The Formation of Musical Knowledge*, edited by Sandra Danielczyk, Christoph Dennerlein, Sylvia Freydank, Ina Knoth, Mathias Maschat, Lilli Mittner, Karina Seefeldt and Lisbeth Suhrcke, 227–40. Hildesheim: Georg Olms Verlag.
- Williams, Rowan. 1989. 'Postmodern Theology and the Judgement of the World.' In *Postmodern Theology: Christian Faith in a Pluralist World*, edited by Frederic B. Burnham, 92–112. New York: Harper Collins.
- Wilson, Conrad. 2003. *Notes on Beethoven: 20 Crucial Works*. Edinburgh: Saint Andrew Press.
- Yamada, Kōun, trans. 2004. *The Gateless Gate: The Classic Book of Zen Koans*. Boston: Wisdom Publications.
- Yuasa, Jōji. 1993. 'Temporality and I: From the Composer's Workshop.' *Perspectives* of New Music 31 (2): 216–28.
- Ziv, Naomi, and Elad Omer. 2010. 'Music and time: the effect of experimental paradigm, musical structure and subjective evaluations on time estimation.' *Psychology of Music* 39 (2): 182–95.
- Zwart, P.J. 1976. *About Time: A philosophical inquiry into the origin and nature of time.* Oxford: North-Holland Publishing Company.