

Canterbury Research and Theses Environment

Canterbury Christ Church University's repository of research outputs

http://create.canterbury.ac.uk

Copyright © and Moral Rights for this thesis are retained by the author and/or other copyright owners. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder/s. The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given e.g. Bennetts, K. (2016) Solo recorder music of the 1990s: analytical approaches to the repertoire and its performance. Ph.D. thesis, Canterbury Christ Church University.

Contact: create.library@canterbury.ac.uk



Solo Recorder Music of the 1990s:

Analytical Approaches to the Repertoire and its Performance

by

Kathryn Bennetts

Canterbury Christ Church University

Thesis submitted

for the Degree of Doctor of Philosophy

Abstract

This thesis is the result of practice-based research concerning the analysis and performance of solo recorder repertoire composed during the 1990s. Its purpose is to demonstrate that recorder music can support critical scrutiny, and that knowledge gained from analysis can develop a deeper understanding of the rational and empirical aspects of both structure and content, leading to compelling performances governed by, and reflecting, informed choices.

This work includes a catalogue of solo pieces for the recorder composed during the 1990s, totalling 326 items, from which five have been selected for detailed analysis and performance. They are by: Peter Crossley-Holland; Calliope Tsoupaki; Donald Bousted; Gerhard Braun, and Maki Ishii. These pieces have been contextualised with reference to some of the important aesthetic concepts prevalent in the 1990s, particularly those regarding conservative and progressive ideas. Three methods of analysis have been used for the repertoire in focus: structural, paradigmatic, and parametric, leading to an understanding of the compositional process at both macro and micro levels. The repertoire demands a vast range of instrumental techniques, many rediscovered from historical treatises as much as from avant-garde style experimentation, including microtones, percussive, and vocalized sounds, providing a serious challenge to both the performer and the instrument. Each is discussed within the context of the selected pieces.

The effects of globalisation at the end of the twentieth century are evidenced in the selected composers' use of ideas from many cultures, including historical references to early Western music, as well as to those of Japan and Indonesia. Specific references are made to Derrida and *différance*, and the influence of the Japanese aesthetic and structural principles of *wabi sabi* and *jo ha kyū*.

Acknowledgements

I am indebted to Canterbury Christ Church University for granting a full scholarship for this work to be undertaken. My thanks go to: Dr Eva Mantzourani, for her infectious enthusiasm and encouragement in the initial stages of my work; to Professors Roderick Watkins and Matthew Wright in their respective roles as first supervisors, and to Dr Lauren Redhead as my second supervisor; to Dr Donald Bousted, for writing such technically challenging quarter-tone music for recorder throughout the 1990s; to Jorge Isaac for generously allowing me access to the Contemporary Recorder Music Library at Amsterdam University; to John Turner for answering questions concerning the score of Crossley-Holland's *Invocation at Midsummer*; to the many composers who have kindly emailed scores and mp3 files of their works; to recording engineer Sean Kenny, for capturing the sound of the instrument so beautifully, and to my husband Peter, for his continual support and understanding.

Contents

		Page
Abstract		iii
Acknowledge	ements	iv
Introduction		1
Chapter 1	The Recorder in the 1990s	
1.1	Conservative/Progressive Attitudes	6
1.2	Conservative/Progressive Instrument Design	7
Chapter 2	Important Issues of the 1990s	
2.1	Introduction	11
2.2	Modernism/Postmodernism	12
2.3	Globalisation	14
2.4	The Return of Tonality	16
2.5	Technical and Aesthetic Challenges Arising	
	from the Selected Repertoire	18
	Notation	27
	Overview of Chapter 2	33
Chapter 3	Methodologies	
3.1	Introduction	34
3.2	Analytical Methods	37
Chapter 4	Peter Crossley-Holland: Invocation at Midsummer	
4.1	Introduction	41
4.2	Structural Analysis	43
4.3	Paradigmatic Analysis	46
4.4	Parametric Analysis	
	Pitch Range	48
	Phrasing	49

	Dynamics	50
	Articulation	53
	Tempo	53
	Rubato	54
	Vibrato	55
	Ornaments	56
4.5	Conclusion	58
Chapter 5	Calliope Tsoupaki <i>Charavgi</i>	
5.1	Introduction	59
5.2	Structural Analysis	60
5.3	Paradigmatic Analysis	62
5.4	Parametric Analysis	
	Pitch Range	67
	Trills	68
	Glissandos	69
	Two-part writing	69
	Dynamics	72
5.5	Conclusion	72
Chapter 6	Donald Bousted Piece No.1 from	
	Five Quarter-Tone Pieces for Solo Recorder	
6.1	Introduction	73
6.2	Structural Analysis	74
6.3	Paradigmatic Analysis	76
6.4	Parametric Analysis	
	Pitch Range	81
	Rhythmic Analysis	82
	Articulation	83
	Dynamics	84
	Tempo	89
6.5	Conclusion	91

Chapter 7	Gerhard Braun Albumblätter
7.1	Introduction92
7.2	Structural Analysis of <i>Albumblatt I</i> 92
7.3	Paradigmatic Analysis97
7.4	Parametric Analysis
	Pitch Range98
	Compound Melody98
	Instrumental Techniques99
7.5	Structural Analysis of <i>Albumblatt II</i>
7.6	Paradigmatic Analysis
7.7	Parametric Analysis
	Pitch Range106
	Multiphonics
	'H'
7.8	Structural Analysis of <i>Albumblatt III</i>
7.9	Paradigmatic Analysis
7.10	Parametric Analysis
	Pitch Range114
	Texture
	Tone Colour
7.11	Conclusion
	Translation of Performance Directions
	for 3 Albumblätter
	Klanglandschaften
Chapter 8	Maki Ishii East•green•spring
8.1	Introduction
8.2	Structural Analysis
8.3	Paradigmatic and Parametric Analysis

	Pitch Range128
	Section A
	Section B
	Section C
8.4	Conclusion
Chapter 9	Summary and Conclusion147
Reference Li	st
Bibliography	165
Appendix 1	Catalogue of Solo Recorder Music of the 1990s184
Appendix 2	Method for Determining Fingerings on the Recorder192
Appendix 3	Fingering Chart for Renaissance Alto Recorder194
Appendix 4	Fingering Chart for Alto Recorder195
Appendix 5	Fingering Chart for Tenor Recorder
Appendix 6	Braun, Chart of passages from Albumblatt III197
Appendix 7	Ishii, Chart of Section B
Appendix 8	Scores
	P. Crossley-Holland <i>Invocation at Midsummer</i> 200
	C. Tsoupaki <i>Charavgi</i>
	D. Bousted Piece No. 1
	from Five Quarter-Tone Pieces for Solo Recorder215
	G. Braun 3 Albumblätter219
	M. Ishii East•green•spring
Appendix 9	CD of Examples (inside back cover)
	Track 1. Crossley-Holland. The pitch B flat and the harmonic pitch
	31 cents lower
	Track 2. Crossley-Holland, bars 30-31
	Track 3. Crossley-Holland, bars 37.4 – 42 in time
	Track 4. Crossley-Holland, bars 37.4 – 42 with rit. at end
	Track 5. Crossley-Holland Invocation at Midsummer

- Track 6. Tsoupaki, lines 26-27, humming and playing simultaneously
- Track 7. Bousted, bars 1-4, unevenness of tone with standard fingerings
- Track 8. Bousted, bars 1-4: using non-standard fingerings to adjust the tone colour
- Track 9. Bousted, bar 7, tremolo with fingerings to support the dynamic changes
- Track 10. Bousted, bar 7, tremolo using *rubato* to express the dynamics
- Track 11. Bousted, bars 30-31, colouristic tuning over wide intervals
- Track 12. Bousted, Piece No. 1, from Five Quarter-Tone Pieces for Solo Recorder
- Track 13. Braun, Albumblatt I
- Track 14. Braun, Albumblatt II, bar 12 rustle tones
- Track 15. Braun, Albumblatt II
- Track 16. Braun, *Albumblatt III*, bars 22-4 colouristic tuning over wide intervals
- Track 17. Scale of harmonics
- Track 18. Braun, Albumblatt III, bar 13 harmonics
- Track 19. Braun, *Albumblatt III*, bar 13 with non-standard fingerings
- Track 20. Braun, *Albumblatt III*, bar 13 with fingerings using the covered register
- Track 21. Braun, Albumblatt III, bar 31
- Track 22. Braun, Albumblatt III, bar 32 b flat with clean sound (flat)
- Track 23. Braun, *Albumblatt III*, bar 32 with b flat multiphonic sound
- Track 24. Braun Albumblatt III

- Track 25. Ishii, opening melody, favouring the melody
- Track 26. Ishii, opening melody, favouring the ornamentation
- Track 27. Ishii, beginning of bar 57, line 1
- Track 28. Ishii, beginning of bar 57, line 5
- Track 29. Ishii, beginning of bar 57, line 9
- Track 30. Ishii, bar 58 graphic notation favouring the high notes
- Track 31. Ishii, bar 58 graphic notation mixing high and low pitches

CD of examples performed by Kathryn Bennetts, and recorded at Ten21 Recording Studios, Bearsted, Kent by Sean Kenny, 6th June 2016.

Word count: 39,544

Introduction

The recorder as a contemporary instrument is an anachronism. Having reached a final state of perfection during the seventeenth century, it was adapted during the twentieth century to be played at A = 440. However, it retains characteristics of an earlier ideal in relation to dynamics and tone that pertain to *unevenness* and the pursuit of variety, for as Quantz wrote, 'variety is indispensable for good execution in music' (Quantz 1966, 173). The phenomenal surge of interest surrounding the instrument during the twentieth century has resulted in a dramatic increase in the number of new compositions ensuring a secure place for the recorder in the contemporary milieu.

This thesis is the result of practice-based research concerning the solo recorder repertoire of the 1990s, with the purpose of demonstrating that this music can support critical scrutiny and that knowledge gained from analysis will develop a deeper understanding of the rational and empirical aspects of both structure and content, leading to performances governed by informed choices, rich in detail and cultural significance. The 1990s can be identified as a decade during which the recorder became established as a professional instrument with a growing interest amongst players, composers and instrument makers to secure its future through new repertoire, and the development of newly designed instruments. This was a time of emancipation for the recorder, a time when the perception of it changed from being a 'primer', or amateur instrument, to the realisation that it was capable of engaging with the aesthetic of the decade, with a repertoire able to support the interests of a growing number of professional players.

This research is important, as very little in-depth performer-oriented analysis has been undertaken in English about the recorder repertoire, apart from Bowman's PhD thesis (Bowman 2014). At present few English recorder players are involved in the performance of solo contemporary recorder music, an observation borne out by the nationality of finalists of the Moeck/SRP International Recorder Competition over several years² and it is

¹ Rose, P. (1995b) 'Recorders of the Future' *American Recorder* 36:5, 4; Helder, M. (1996) 'The Harmonic Recorder', *Recorder Education Journal*. No. 3: 27-29.

² http://www.srp.org.uk/moecksrp-competition/

hoped that this work will bring this particular repertoire to the attention of aspiring professional performers in the UK and abroad.

The contribution of this thesis is threefold. It is centred on the analysis, commentary and performance of selected repertoire, as there is a recognised gap in the recorder performance literature. I have used three types of analysis for each work: structural, paradigmatic, and parametric, and will show how the paradigmatic charts can be used as practice material in the process of preparing for a performance. One aspect of developing an individual interpretation is found in the selection of fingerings and I will suggest some possibilities for specific passages within the individual analyses. Additional contributions to this study can be identified in the Catalogue of solo works composed during the 1990s, totalling 326 pieces (Appendix I), a method for creating fingerings on the recorder (Appendix 2), and fingering charts for alto and tenor recorders (Appendices 3, 4, and 5).

In the following chapters I will explore the trends and techniques that fed into the culture of the 1990s before giving a detailed analysis of each of five selected pieces and finishing with my conclusions. In Chapter 1, I will outline the range of recorders available to a performer during the 1990s followed, in Chapter 2, by a discussion of the important trends of the twentieth century that played a vital role in creating a decade of multifaceted music in an increasingly multicultural society. In Chapter 3, I will describe the different methodologies that I have used in my analyses of the selected pieces, the individual analyses of which can be found in Chapters 4 to 8. In Chapter 9, I offer my conclusions regarding the importance of the selected pieces and how they reflect the competing styles and techniques of the decade.

I have selected five pieces which I consider to be strong cases for in-depth analysis and which offer different possibilities for interpretation and performance, and they are: *Invocation at Midsummer* by Peter Crossley-Holland (1916-2001); *Charavgi* by Calliope Tsoupaki (b. 1963); Piece No. 1 from *Five Quarter-Tone Pieces for Solo Recorder* by Donald Bousted (b. 1957); *3 Albumblätter* by Gerhard Braun (1932-2016), and *east•green•spring* by Maki Ishii (1936-2003). They each harness a juxtaposition of ideas, evidenced in both the compositional practices and the instrumental techniques, by using cultural influences from Indonesia, East Asia and Western European traditions. As such they can be identified as being part of the pluralist decade of the 1990s. Although the

scores are readily available in print, and those by Ishii and Tsoupaki have been commercially recorded³ they are rarely performed in the UK.

The aim of my performance is centred on Kramer's advice that one must give 'an eventful interpretation of the work *without* [it] *ceasing to be* a rendition of the work it interprets' (Kramer 2011, 276, author's italics), as 'the performance of a score is an invitation to the performance of an understanding' (Kramer 2011, 277). The five selected pieces, for alto and tenor recorders, can be divided into two groups: pieces by Crossley-Holland and Tsoupaki are more traditional and conservative in style, while those by Bousted, Braun and Ishii each explore a wide range of techniques, pushing the instruments to their respective limits. The pieces also have an underlying connection as they all exhibit elements of the (arguably) 'exotic', a term that composers and scholars aim to avoid, but which consistently resurfaces in the 'push-and-pull of musical life' (Locke 2009, 278).

Peter Crossley-Holland, composer and ethnomusicologist, specialised in the music of Asia and the Celtic tradition, and maintained a 'long-term investigation into music and metaphysics' (Harper 2002, 2). In *Speaking of my Life* Crossley-Holland commented that 'people seem to turn to the older music as a refuge from the conflicts of life' (Crossley-Holland 1979, 76), while Porter confirmed that Crossley-Holland was attracted by the 'older' civilisations 'because of the ritual order and serene wisdom that underlay their musical practice' (Porter 2002, 323). *Invocation at Midsummer* brings together ideas of the natural and ancient worlds, expressed through the use of the Fibonacci sequence and rhetorical devices relating to the sun.

Greek composer Calliope Tsoupaki studied in Athens with Xenakis, before moving to Holland. Following studies in The Hague with Louis Andriessen, she settled in Amsterdam, working as a pianist and composer, and since 2007 has taught composition at the Koninklijk Conservatorium. Her output includes solo pieces, chamber operas, orchestral, and multimedia works (Tsoupaki). *Charavgi* bridges the gap of the early music and contemporary music divide referred to by Hauwe (b. 1948) and quoted below (see p. 6), through the use of the renaissance instrument, discussed further in Chapter 1. This,

³ Ishii's *east•green•spring* recorded by Gudula Rosa is available on Ko Kû CD 21039 and by Dan Laurin on BIS CD-655. Tsoupaki's *Charavgi* recorded by Julia Whybrow is available on Bayer-Records CAD 800911 and by Genevieve Lacey on Move Records MD 3216.

together with seventeenth century rhetorical devices, serves to maintain the links with the instrument's heritage, which is then imbued with contemporary nuances of tonality, dynamic extremes and virtuosic instrumental writing that go beyond the technical levels of former times.

Donald Bousted has a portfolio career as 'a composer, sound and installation artist, film maker and guitarist' (Bousted). His quarter-tonal recorder compositions have been important works for developing an understanding, particularly in the UK, of the microtonal possibilities of the recorder. My work with Bousted and Peter Bowman, during the 1990s, established dedicated fingerings for precise quarter-tone pitches, which formed the basis of *The Quarter-Tone Recorder Manual* (1998) and the subsequent recorder repertoire developed by Bousted. Piece No. 1, of *Five Quarter-Tone Pieces for Solo Recorder*, is a study in microtonality, and as such fulfils the modernist ideal of deconstructing and reassessing the importance of tonality, and yet, in its absorption of Javanese scalic models, it can be said to reflect a postmodern stance of inclusivity in the juxtaposition of Javanese and Western musical concepts.

Gerhard Braun was a highly regarded flautist, recorder player, artist and prolific composer of stage-works, works for choir, orchestra and chamber ensemble. His significant contribution to the recorder repertoire totaled thirteen works for solo recorders during the 1990s. From 1971-1995 he was Professor for flute and recorder at the Staatliche Hochmusikschule in Karlsruhe and in 1992 he founded the European Recorder Teachers' Association in Germany, serving as its first president until 1997. His collection, *Albumblätter*, reflects an intimate knowledge of the recorder, integrating many extended techniques and Japanese influences, expressed via a baroque structure, in a postmodern idiom.

Maki Ishii studied composition in Tokyo and Berlin, and from 1958-1961 he was a student of Josef Rufer, musicologist and former student of Schoenberg. He subsequently worked as a composer, conductor and concert organiser in Japan. In his writings he recounted how his early childhood experiences had influenced his music, especially the regular performances of *Gagaku*, the traditional music of the Imperial Court of Japan, which he had attended with his father. These, coupled with his own visits to the Buddhist ceremonies at Nara, made a powerful and lasting impression, as he describes in *Sounds of*

East – Sounds of West (Ishii 1997, 23). These influences are clearly prevalent in east•green•spring, which serves as an example of the fusion between Western classical music having been created by a composer with a non-western background, and a Japanese work imbued with modernist Western techniques, which are discussed further in Chapter 8.

This thesis documents the results of my research and is accompanied by a (CD) recording comprising examples of selected passages from the analysed pieces, and performances of three works: Crossley-Holland's *Invocation at Midsummer*; Bousted's Piece No. 1 from *Five Quarter-Tone Pieces for Solo Recorder*, and Braun's *3 Albumblätter*, as they are currently not commercially available. A live performance will also be given as a further demonstration of my research.

Chapter 1

The Recorder in the 1990s

1.1 Conservative/Progressive Attitudes

In the introduction to the second volume of The Modern Recorder Player, Hauwe wrote, 'the "Modern" recorder is a young instrument, still in its adolescence' (Hauwe 1987, 7), and by the beginning of the 1990s he considered that:

the recorder in Europe [had] reached a cross-roads [with what he described as] two absolutely different types of recorder players. There are those who want to see it as an old instrument ... and there are players who don't want to deal with early music any more and are just interested in contemporary music (Hauwe 1990, 22).

By the 1990s, there was a repertoire of established 'new' music performed by an increasing number of players who had raised their technical level to match the demands of the repertoire. However, O'Kelly considered that:

the modern recorder repertoire contains few real masterpieces; good music certainly, but little that is comparable with those composed for mainstream instruments. Most of the works are the direct result of the stimulus of a few master performers with a specific interest in contemporary music (O'Kelly 1990, 165).

Indeed, it has to be conceded that the professionalism of the Dutch and German recorder players had had a strong influence on compositions for the instrument, in marked contrast to the dominating amateur status in the UK,⁴ and this is reflected in the less technically demanding work of Crossley-Holland. Bousted, on the other hand, was working directly with myself and Peter Bowman, both students of Dutch teachers, and was clearly influenced by the technical facility and information developed at that time.⁵ An example of

_

⁴ O'Kelly, E. (1995) 'The Recorder in Education', in J. M. Thompson (ed.), *The Cambridge Companion to the Recorder*. Cambridge: Cambridge University Press. 190-195. Although Trinity College of Music, London introduced recorder exams c. 1939-1940, ABRSM waited until 1986, and The Royal Academy of Music appointed its first professor of Recorder in 1988 (Bennetts 2012, 55-56)

⁵ Bousted explains my involvement with this piece in his PhD dissertation (Bousted 2001a, 80).

the prevalent conservative attitude is found in a letter of 1972 from recorder player and commissioner of new music, Carl Dolmetsch (1911-1997) to composer Martin Dalby, in which Dolmetsch wrote:

Although I told you that third and quarter tones are possible on the recorder, on further reflection I would prefer to adhere to the standard twelve semitones, since we have a difficult enough task as it is to convince people that the recorder can be played in tune. Nor do I want any avant-garde gimmicks alien to the character of the instrument – to my mind an affront to its innate dignity! (Quoted in Mayes 2003, 138-139).

Following the influence and guidelines of Carl Dolmetsch, a conservative repertoire continued to be supported during the 1990s in the UK, resulting in an instrumental technique, which remained at the level found in historical music. The dominating support of the recorder in the UK by the Society of Recorder Players had also compelled the recorder community to serve the interests of the amateur market. The lack of interest in the European avant-garde repertoire resulted in a lack of technical development such as was forging ahead in Europe, particularly in Holland, Germany and Switzerland.

Specific technical expertise had been documented: by van Hauwe in his three volume series *The Modern Recorder Player* (1984, 1987, 1992), described by O'Kelly as 'a distillation of all the thinking on teaching methods' (O'Kelly 1995, 192); by Johannes Fischer (1990) in *Die Dynamische Blockflöte*, which explores the variety of possibilities for the realisation of expressive, dynamic playing, and by Bennetts, Bousted and Bowman (1998) in the *Quarter-Tone Recorder Manual*. With this information players could hone their skills, confident in the knowledge that they were developing a technique that would meet the demands of contemporary music. In the analyses of the selected pieces, Chapters 4 - 8, I will look at these demands, particularly in relation to fingering, dynamics and tone-colour, in more depth.

1.2 Conservative/Progressive Instrument Design

Recorder players in the 1990s had a wide range of instruments at their disposal, from modern copies and reconstructions of historical instruments to the latest in recorder design. Instruments came in a range of different sizes and styles: renaissance, baroque and modern,

and a performer on tour would 'have anything from six or eight to more than twenty recorders in professional use' (O'Kelly 1995, 175). Music of the renaissance and baroque periods flourished alongside a burgeoning interest in giving the recorder a place in contemporary music making, the standard model for which was a baroque-style instrument tuned to A=440.

Dedicated instrument makers, many of whom specialized in particular models, also experimented with historical designs in an attempt to create an instrument that could serve the demands of the new music. During the 1970s, some recorder makers, notably Fred Morgan and Bob Marvin, looked at reconstructing a renaissance recorder that could be played with Ganassi's fingerings (Brown 2006, 17). Surviving instruments from the renaissance period form two groups. The first group comprises those with a 'large, practically cylindrical bore and a pronounced flare below the lowest finger-hole' (Heyghen 1995, 35). Referred to as the 'Ganassi' model, it had large finger-holes, a range of two octaves and a sixth using Ganassi's own fingering charts, and a 'thin sound' to the notes in the third octave which Ganassi recognized as 'not being really useful for musical purposes' (Heyghen 1995, 35). Marvin concluded from his work that it was 'unlikely that such an [instrument] would have been developed just to play the third 8va [octave]; it would seem more likely that the tone quality was what was sought, with the upper register a serendipitous bonus' (quoted in Brown 2006, 18). The second group comprises instruments with a conical bore that taper towards the end, often described as the 'choke' bore. The position of the 'choke' however varied: the lower down the bore i.e. in the foot joint, the more flexible the instrument will be for playing high notes, and extending the range. However, it is only in the Ganassi model that the harmonics of the fundamental note, obtained by over blowing without changing fingering, are in tune with the fundamental itself, and with each other.

The Ganassi model was the inspiration for the new Harmonic Tenor Recorder, available from 1995, (and later the alto model), created by Maarten Helder in collaboration with Nikolaij Tarasov. It was so named because the harmonics were tuned in such a way as to make it possible to play very strong and stable low notes with a tone quality matching that of the higher registers. Its range covered three octaves from b-c"", with four main keys, and an optional *piano* key operated by the index finger of the left hand, which could raise the pitch by up to five cents overall, giving the player enough flexibility to create a

decrescendo by lowering the breath pressure. This instrument also had an adjustable block, which could be raised or lowered to adjust the timbre and produce special sound effects. The instrument also had a number of replaceable windway roofs of different materials and shapes. Leading performers Walter van Hauwe and Johannes Fischer (b. 1962) gave premieres using this instrument,⁶ and Fischer subsequently used it most advantageously for playing the classical and romantic flute repertoire (Rose 1996, 20). Gerhard Braun, however, commented that the tone of the modernized instruments was neutral. 'Players of historic instruments will miss the individual, personal colour of Baroque copies. Many will perhaps also find the high register somewhat thin' (Braun 1998a, 22).

The new 'harmonic' instrument also influenced the writing of Donald Bousted who, once aware of the possibility of more flexible dynamics, began to notate them more freely in his works. However, because of the key-work, a full range of quarter-tones is not possible, and therefore, I will perform his piece on a modern copy of a baroque-style instrument without keys.

Braun's *3 Albumblätter* also make great demands of an alto recorder particularly in terms of the prescribed pitches of multiphonics, and the pitch that sounds when all the finger holes and the bell-hole is closed, as this can vary between instruments. I have chosen to play these pieces using a Coolsma alto, as it has a clear bright tone, which I consider to be ideal for expressionistic, serial music. Furthermore, it is capable of sounding the myriad of harmonics within a nuanced dynamic.

Tsoupaki's *Charavgi* was composed for a renaissance alto recorder. At the time of composition the Ganassi-model was widely used in performances of this piece, but with subsequent developments in design it is possible to use a conical-bored instrument, the tone of which is arguably more suited to the quiet portrayal of dawn. However, *Charavgi* is full of detailed dynamic contrasts and the wider bore of the Ganassi-style instrument allows the player to create clear variations of tone-colour to support the changing dynamic.

⁶ Hauwe premiered C. de Bondt's concerto for recorder and symphony orchestra in November 1995 (Helder 1996, 28); Fischer premiered T. Schneid's Manchester – metrics, C. Dell's *Lob des Schattens*, and R. Bürck's *Tenant en haleine* for tape and amplified recorder at the ERTA Conference in Kassel, June 1996.

Two of the selected pieces are for tenor recorder and both make use of folk-like melodies that lie comfortably within the middle range of the instrument. Crossley-Holland's *Invocation at Midsummer* remains within the traditional range of two octaves and one note, but Ishii, in *east•green•spring*, utilises the full pitch range at both ends of the spectrum and a full dynamic range. The tenor recorder, with a length of 62cm, reflects the modern Japanese *Shakuhachi*, the standard length of which is 54.5cm. The tenor recorder with its lower pitch range may also have been selected for its ability to imitate the vocal style of the *Shōmyō* novice priests that Ishii had heard in a ceremony at Nara, described in chapter 8 (see p. 138), but maybe it was simply that the tenor recorder, during the 1990s, was promoted by Walter van Hauwe as a principal instrument, as he considered that 'the lower pitch and wider bore often gives better results in special effects' (Hauwe 1992, 8). For these two pieces therefore, I will use a baroque-style tenor recorder by Coolsma for its warm sound, clarity of tone, and dynamic flexibility.

In summary, this chapter has explored the key issues concerning the recorder's position during the 1990s in relation to the professionalism of the instrument, the tension between early music and contemporary music among performers, the relatively conservative attitudes maintained in the UK, and the availability of technical literature dominated by Dutch and German authors. With regard to developments in instrumental design I looked at three main areas that were specific to the repertoire of the decade: copies of the widely used baroque-style model, the Ganassi-style renaissance model and the new Helder instrument. In relation to the selected pieces I then discussed my choice of instruments for use in performance. As each instrument can vary within the same model and maker, pragmatic choices had to be made based on the instrument's capability to produce the required pitches and musical effects.

Chapter 2

Important Issues of the 1990s

2. 1 Introduction

The remarkable and fast-moving pace of the twentieth century was reflected in the arts in so many diverse ways that by 1992 John Cage had identified that:

'we live in a time I think not of mainstream, but of many streams, or even, if you insist upon a river of time, that we have come to a delta, maybe even beyond delta to an ocean which is going back to the skies' (Cage 2001, 1).

This 'delta' of the 1990s supported a broad range of trends and a juxtaposition of compositional styles described at the time as a 'value-free pluralism' (Ferneyhough 1993, 39), a 'confusion engendered by multiplicity' (Meyer 1994, 88), and as a 'terrain of immense diversity and complexity' (Whittall 1999, 346).

This diversity has been identified through terms such as *collage*, used to explain 'the assemblage and rearrangement of a rich parade of cultural loans involving textures, timbres, temperaments, and generative procedures ranging from the banal to the esoteric' (Watkins 1994, 3), through 'polarities and pluralities' (Whittall 1999, vi), and themes such as purity, silence, lament, fragmentation and sonic flux (Metzer 2009, v). The 1990s witnessed the rapid development and accessibility of technology and electronic music, yet this was heard alongside traditionally titled acoustic forms of symphony, concerto, and string quartet. As was observed by Straus early in the decade, compositions were 'extraordinarily rich in allusions to the music of the past, including the distant past ... resulting in a conflict between the traditional elements and the post-tonal context that [subsumed] them' (Straus 1991, 431).

_

⁷ Ligeti, Violin Concerto (1993); Macmillan, String Quartet No. 2, (1998).

2.2 Modernism/Postmodernism

The early part of the twentieth century was dominated by Modernism, an art movement defined by its rejection of the past and its emphasis on innovation and experimentation. It was associated with new materials, new techniques and utopian ideas of life and society governed by a belief in continual advancement. The idea of maintaining a tradition was thought to detract from the teleological progress of history yet Botstein suggests that 'what links its many strands is a common debt to the historical context from which it emerged (Botstein). The 'new' was reflected in the cubist, or multiple perspective works of Picasso and Braque, the 'readymades' of Duchamp, and the music of Schoenberg and Stravinsky. Cubist art looked at the essential characteristics of a subject and re-arranged them to offer a 3D perspective in a two-dimensional plane, fragmenting the elements into geometric shapes (Tate). In architecture, geometric, especially rectangular shapes were prevalent, with open plan designs and minimal ornamentation (Waters) exemplified in the work of Le Corbusier.

Bürger succinctly outlines the concept of the new as being a variation of a continuing tradition of newness within the very confined limits of a genre, using a structure that remains the same and [which] accommodates the new "shock", or a new structure (Bürger 1984, 60). Serialism, considered by Schoenberg to have emanated from the tonal system, securing the emancipation of the dissonance and dissolving the hierarchies of tonality, continued to be presented in traditional forms, for example, the use of a Baroque minuet in his *Serenade* op. 24. However, Schoenberg's attempt to standardize the atonal idiom has, according to Davison, not brought about a fundamental change in the long held need for tonal orientation, for without consonance, dissonance can have no effect (Davison 2001, 128).

Watkins described Modernism as resembling 'a curio cabinet, where unrelated objects are placed together and achieve cohesion through arrangement and proximity' (Watkins 1994, 1). This collage was seen as an antidote to serialism, for which material could be taken from one work and used as a starting point for a new work, but the material would be manipulated, such that any quotation or point of reference would negate any original meaning. As Bürger explains, collage or montage 'may be considered the fundamental principle of avant-gardiste art. The "fitted" (*montierte*) work calls attention to the fact that it is made up of reality fragments' ... [the intention being] to destroy art as an institution

(Bürger 1984, 72), and is exampled in Braun's *Albumblätter* and Ishii's *east•green•spring*, discussed in Chapters 7 and 8. Yet, as Bürger continues, the 'anti-artistic intent [was] being used for artistic ends' (Bürger 1984, 57), and although experimental techniques and processes challenged the notion of art, art itself 'proved resistant to the avant-gardiste attack' (Bürger 1984, 57). Avant-garde techniques also attracted several Asian, and especially Japanese composers who, according to Toop, 'showed how non-Western art musics could offer new perspectives to Western "new music" (Toop 2004, 457). Just as Takemitsu integrated Japanese instruments into works for a Western orchestra, Ishii fused traditional Japanese form with western techniques, described further in Chapter 8.

The term Postmodernism describes developments that led to a more inclusive position for both traditional and experimental ideas in a continuing exploration of the new in art. As Williams discusses, these developments were 'interpreted not as the successor to modernism but as the latter in its nascent state, the stage of disintegration that precedes a period of artistic consolidation' (Williams 1997, 124). Metzer, however, explains that the 'typical postmodern work blends styles and periods' (Metzer 2009, 244), generating a pluralism that embraces both historical and world cultures, while the claims of postmodernism, for Kramer, are 'critical ... of the ideal of impartial reason ... [as] they seek to enhance the mobility of meaning [and] insist on the relativity of all knowledge' (Kramer 1995, 6). Again, the work of Bousted is a typical example, through his use of Javanese scales within an eighteenth century Western formal structure. Postmodernism has also been described as a period of reaction to modernism (Botstein) and as a continuing modernism (Metzer 2009, 1). Characterized as an attempt to reconcile the avant-garde with traditional and historical concepts, this inclusivity led to sharp juxtapositions of ideas exampled in the 'combines' of Robert Rauschenberg (1925-2008), for example *Monogram* (1955-1959), and expounded in the philosophy of Derrida (1930-2004).

As one of the most important postmodern philosophers of the last quarter of the century, Derrida, developed a form of semiotic analysis known as 'deconstruction'. It is a style of analysis that challenges the assumptions of Western culture, with the aim of creating an understanding of a text that goes beyond binary oppositions because, as Norris explains, they are 'strictly undecidable as regards [their] order of priority' (Norris). It is a way of embracing the elements of a piece of music that at once seem to be irreconcilable. Deconstruction attempts to 'reconceive the difference that divides self reflection (or self

consciousness)' (Lawlor), and is defined by evocation and plurality of meaning within a text. By using semiotic analysis it is possible to deconstruct a text to two opposing ideas which, according to Derrida, will be linked in some way, since there can be no pure state of being: one idea having come into contact with another idea becomes contaminated: 'one term always and necessarily "infects" the other' (Lawlor). Where 'purity' in the past was aligned to just one meaning, for Derrida it is inclusive of a plurality of meanings (Lawlor). This difference in meaning, when something is situated within another context, is referred to as *différance*. This is evidenced in the work of Bousted through the use of microtonality within the context of a sonata form, and in Braun with the use of an idiomatic baroque phrase placed within an atonal frame of reference.

2.3 Globalization

Our awareness and understanding of music of other cultures, as a result of globalization, has brought an interconnectedness by 'migration, travel, and instant communication' (Locke 2009, 276). While some observers consider this may result in cultural loss 'others (including many ethnomusicologists) stress the new and creative synthesis that can result' (Locke 2009, 277). Tan Dun explained the synthesis within his own work in this way: 'my purpose is to be flexible and freely flying around among all kinds of experience. Not to be driven by the wave of culture – fashion, trends, isms, schools – but to create my own unity' (quoted in Locke 2009, 298). Ishii likewise wrote: 'my creative consciousness is alive with both eastern and western sounds... I have [not] deliberately aimed to create a fusion between East and West. I have tried to adopt an entirely natural approach ... I have pressed forward with the creative act armed with only intuition and inspiration' (Ishii 1997, 47). Ishii has explained in his writings how traditional Japanese music served as his inspiration whilst studies in Germany introduced him to serial techniques and, as my analysis of east•green•spring in Chapter 8 shows, there is more depth to his work than this statement would suggest. A clear structure can be identified with clearly contrasting passages, as well as instrumental techniques of both European and Japanese traditions, indicating a more considered approach to the composition than 'intuition and inspiration'. Ishii's work is an example of the cross-fertilisation of ideas: Western music is concerned with the relationships between sounds, whereas Japanese composers are more interested in the

-

⁸ As an example Peter Crossley-Holland considered that '*regional traditions* are not weakened but enriched by *universal* trends' (Crossley-Holland 1964, 16).

'quality of the sound rather than [the] melody' (Burt 2001, 239) and Ishii, as with Takemitsu, has combined these elements in his work.

It has been acknowledged, by Reich, that 'non-Western music is ... the single most important source of new ideas for Western composers and musicians' (Reich quoted in Locke 2009, 287).

By the late nineteenth century ... exotic artifacts ... had come to signify at least three major aspects of modern European life: ... as an embodiment of cultural supremacy, ... as a symbol of the rising economic order, ... and the exotic bestowed a degree of legitimacy to the pursuit of sensuous pleasure for its own sake (Kramer 1995, 209).

The aesthetics of Asian cultures, and particularly of Buddhism, played an important part in creating an awareness of music that was defined not by tension and resolution, but by stasis, in which silence became as important as the sound that had been created. The role of silence is an essential part of Japanese sound aesthetics, and is encapsulated in the concept of time and space called *ma* (間) (Burt 2001, 237). Globalisation has enabled composers to explore other cultures and to appropriate ideas for their own purposes, as will be discussed in Chapter 7 with reference to Braun's *Albumblätter*, which also demonstrates the influence of Japanese instrumental techniques.

Ishii's east*green*spring exhibits many influences of Gagaku, (meaning elegant music), the traditional music of the Imperial Court of Japan, and as the title suggests, natural forces play an important role in the understanding of this piece. Interest today in Gagaku is due in part to 'the appeal of its dissonant texture to modernist sensibilities [and] during the second half of the twentieth century it became a source of inspiration for Western composers such as Messiaen and Stockhausen, as well as for many Japanese composers' (Marett). The traditional Japanese aesthetic is identified by the 'avoidance of regular rhythms, fast tempos, symmetrical forms, and strongly contrasting blocks of sound, in favour of a slowly and organically unfolding flow suggested by meditation, dreams, landscape, weather, the elements, and the seasons' (Burton). The three wind instruments of the Gagaku ensemble are each associated with distinct cosmological concepts: the hichiriki is said to express the voice of the people living on earth; the ryūteki represents the sound of 'a dragon that flies in the space between heaven and earth' and the shō expresses a 'ray of heavenly light' and

when all 'are played together, heaven, earth and that which lies between become one and represent the universe' (Hideki 1999, 30-31). In a treatise dating from 1185, *Kangen ongi*, or *Principles of Instrumental Performance*, Ryokin outlined the musical philosophy and system of metaphysics for *Gagaku*, in which each season and point of the compass is allied to one of the five natural elements, a colour and a specific musical mode:

East corresponds to the point from which the sun rises, to the morning, and to the spring. Due to its association with natural growth, east [also] corresponds on the level of matter to wood and bamboo. On the level of sound, east is associated with the *Sojo* [myxolydian] mode because of this particular mode's association with the sound of wood, and on the level of colour the association is with green as symbolic of nature (Kido 1997, 217-219).

Evidence of this is found in Ishii's composition and as Kido explains: 'In East Asia, musical modes acquired a metaphysical meaning within a general philosophical context. Sound was not merely a physical phenomenon' (Kido 1997, 209-213). With the modes being aligned to the five basic elements of wood, fire, earth, metal, and water 'the music of East Asia may be interpreted as a translation of matter into sound; sound then serves as the medium for reconstituting the order of the cosmos' (Kido 1997, 219). The *Sojo* mode, used in *east*green*spring*, is particularly appropriate in this context as the recorder, traditionally made of wood, also has historical associations in Western art with both pastoral scenes and the supernatural (Rowland-Jones 2005, 97). The post-modern embrace of old and new, of modality and traditional Japanese culture are evident here, and are discussed further in Chapter 8. In the first of Bousted's *Five Quarter-Tone Pieces*, we find the use of the Javanese scale forms used in *gamelan*, of *Slendro* and *Pelog*, discussed in more detail in Chapter 6.

2.4 The Return of Tonality

Minimalism is a term borrowed from the visual arts to describe a style of composition characterized by an intentionally simplified rhythmic, melodic and harmonic vocabulary (Potter), and is a style dominated by the works of Steve Reich and Philip Glass, in which repetition plays a vital role. The minimalist ethos was summarised succinctly by Brian Eno when he said 'repetition is a form of change' (quoted in Ross 2012, 556). Ross continues to explain that 'repetition is inherent in the science of sound, [since] tones move through

space in periodic waves, ... and in the way the mind processes the outside world [concluding that] in a sense, minimalism is a return to nature' (Ross 2012, 556). Minimalism had by the 1970s become a part of the 'recuperation of simplicity and definition in music' (Griffiths 2010, 241), and later 'evolved into a mainstream way to bring traditional harmony, melody, and rhythmic appeal back into music' (Swed quoted in Fink 2004, 550). 'From the nineteen-eighties onwards, tonality, even triadic tonality, discretely began to return to new music, as did spirituality ... [sourced from] exotic cultures ... "pop" music ... and minimalist music' (Borstlap 2001, 160-161), and although Minimalism, in terms of repetition, had not been so influential on the repertoire, it was one of the ways that composers re-engaged with tonality from the 1960s onwards.

Interest in the past attests to a profound sense of nostalgia as 'a historical emotion ... a yearning for a different time - the time of our childhood, the slower rhythms of our dreams ... as a rebellion against the modern idea of time' (Boym). The use of traditional folksong and ritual chant allows us to maintain a living link across the ages, and as Stravinsky identified, 'a real tradition is not the relic of a past that is irretrievably gone; it is a living force that animates and informs the present ... Far from implying the repetition of what has been, tradition presupposes the reality of what endures' (Stravinsky quoted in Davison 2001, 78-79). As part of an oral tradition, folk songs were subject to a continual process of renewal, 'a product of evolution ... dependent on the circumstances of continuity, variation, and selection (Cohen). 'Folk music derives its power from its connection to universals – the cyclic revolve of the seasons and the ritual year – and from archetypes that can be discovered and reinterpreted again and again across many of the world's legends' (Young 2011, 607).

This representation of the myth of rural life, of Eden and Arcadia, predates the Enlightenment with 'the superimposition of the biblical/Miltonic Paradise onto the golden age of the ancient Greeks [which] has been a necessary survival mechanism for British culture' providing 'mental insulation' against the processes of industrialization and the horrors of war (Young 2011, 606). Yet this 'Paradise is a kind of false-memory syndrome, a clinging refusal to let go of an illusory golden age ... where the voices of these ghost memories tend to linger. The British imagination seems peculiarly well attuned to their uncanny cries' (Young 2011, 10), affirmed by Crossley-Holland's 'idea to remain true to my own culture in musical terms' (1979, 88), and in his statement 'I believed in the need

for tradition and a common language' (Crossley-Holland 1979, 91). A return to tonality, therefore, represented a return to the ideas of the past. Bürger, however, considered that 'the blending of old and new is "precarious," but it is through that combination and the confrontation with the compositional challenges inherent in mixing the two that modernism will find a way to push on' (Bürger quoted in Metzer 2009, 239-240). By the 1990s the use of tonality was arguably re-established, via among others, folk song and minimalism, both as a means of invoking the past, and as a way of fusing together elements of other eras into something more meaningful. 'For almost any composer, music created in the 1990s is likely to be less disjunct, less heterodox, and less challenging than work of the 1960s or early 1970s' (Griffiths 2010, 366), and while Griffiths considers the 'growth towards consonance, harmonic progression, and tonal stability ... [represented] a deep cultural shift' (Griffiths 2010, 365-366), the inflections of folk music, modality, and the increasing use of microtonality appear to have been overlooked.

2.5 Technical and Aesthetic Challenges Arising from the Selected Repertoire

The recorder is an instrument of flexible pitch and microtones can be created with surprising accuracy. However, as with all instruments, the ear finds it hard to discern this accuracy over large intervals, for 'when played at great speed they [the microtones] are almost impossible to hear, when played slower they often, particularly in string playing, sound like poor intonation and are more successful in the woodwind with specific fingerings for quite accurate tuning' (Heaton 2012, 794). Heaton continues 'when played slowly they can be clearly heard as either inflections or bends ... or as specifically tuned pitches' (Heaton 2012, 794-795). Mid-twentieth century explorations by composers and performers led to a greater awareness of the possibilities of using microtones on the recorder, summarized by Bowman as 'a gradual shift over time from a primarily inflective use of microtones in a tonal environment during the late 1960s, through to the use during the mid 1990s of an expanded version of twelve-tone equal temperament' (Bowman 2014, 321).

The understanding and expectation of the division of the octave into 24 quarter-tones is that each note will be equi-distant from its neighbour i.e. 50 cents apart. However, in reality, as has been shown with recordings of string players, pitch is much more flexible and varies according to context. Mieko Kanno cites the work of Fyk in 1995, in which four

distinctive types of intonation are outlined: harmonic, melodic, corrective and colouristic tuning (quoted in Kanno 2003, 36-37). In harmonic and corrective tuning the tendency is toward just intonation and is more relevant to ensemble performances. With melodic tuning 'it is observed that the intonation is raised in the context of an ascending melody ... and lowered in the context of a descending melody' (quoted in Kanno 2003, 36). Also with:

colouristic tuning: when the performer plays a rising series of two notes with an octave interval between them, the interval is in precise tuning (having the frequency ratio of 2:1). However, when the same series of two notes has an overlapping period in between them, it is observed that the performer raises the higher note as soon as the lower note disappears. A hypothetical explanation for this phenomenon is that there is an unconscious tendency for the player to wish to differentiate the resonance of the two notes by raising the pitch of the upper note by a fraction, thus "brightening up" the colour of the upper note. This suggests that the control of very small pitch changes manifests itself as differences in tone colour (quoted in Kanno 2003, 37).

Kanno continues: 'microtonality from the performer's point of view is an empirical reflection of the relationship between pitch and intonation, between what is given and what can be created with it' (Kanno 2003, 52). Colouristic tuning will be particularly evident in performances of works by Bousted and in Braun's *Albumblatt III* (Audio Examples, CD Tracks 12 and 24).

The use of inflection varies between cultures, being limited in 'classical European traditions ... [to the] tasteful use of vibrato or the occasional use of portamento, and in the case of vocal music, tremolo' (Frere *et al*). Yet there are distinct 'blue' notes used in Jazz, and in many Asian traditions inflection is given considerable prominence. In Japanese aesthetics this is referred to as *wabi sabi*, a term used to define beauty in which the idea of perfection is enhanced by the visibility of damage, (Juniper 2003, 1), as for example, in the loss of an objects' patina, or in a broken ceramic repaired with golden glue, which both mends and highlights the repair as something precious in itself. *Wabi* means cultivation of the serene and *sabi* means tranquil resignation. The inflections of Japanese melodies then, can be understood in terms of *wabi sabi* as the golden glue, highlighting the ornamentation of a simple melody, as can be heard at the beginning of Ishii's *east*green*spring* (Audio Examples, CD Tracks 25 and 26). Another important element emanating from Zen Buddhism is the concept of

'fusoku-furi', which literally describes a relationship between two entities which are neither connected (fusoku) nor separate (furi). In musical terms, relationships of this kind can be seen in numerous instances, for example when one part (instrumental or vocal) is in this kind of relationship with another; when one melodic pattern is in this kind of relationship with another; and when one structural section of a piece is in this kind of relationship with the next structural section. This may be seen as an important characteristic of Japanese traditional music. Stated in reverse, it can be said that the Japanese possess a musical sense and attitude towards music that not only permits but actually enjoys the existence of this kind of relationship within music. (Eishi 2009, 89).

This ancient practice is reflected in Derrida's sense of internal oppositions within a text, discussed earlier (see p. 13), and is a further example of the effect of globalization, and how western philosophy has assimilated concepts from cultures such as that of Japan.

The 1990s exhibited a wide range of forms, and sonata form in particular, has proved to be a flexible vehicle for expressing music throughout the twentieth century. The structural form serves as a 'hook' on which to hang contemporary practices that can both allude to the past, and be a vital part of a continuing tradition. Sonata form and microtonality, or sonata form amalgamated with the process of serialism, coupled with a full range of techniques discussed in relation to the selected pieces in Chapters 4-8, are examples of this plurality of ideas. However, sonata form also embraces the important component of humour, for as Rosen explains, the classical style was originally a comic style (Rosen 1976a, 96). Wit, being dependent on an 'exquisite balance of phrase' (Rosen 1976a, 60), was firmly embedded in the established four-bar phrase as the model of articulation for the classical style. Although the four-bar phrase is not preeminent in the repertoire of the 1990s, the humour that Rosen singles out in Haydn's Trio in D Hob. XV: 7 (third movement) as an example of 'the highest form of wit, the musical pun' (Rosen 1976a, 96) is found in the works of Bousted and Braun. At the end of Bousted's Five Quarter-Tone Pieces for Solo Recorder No. 1, our perception of pitch is teased by an expectation of a leading note created for the final cadence, but in reality a microtonally lowered pitch is offered, accented and off the beat, indicating that it has been 'marked for consciousness' (Cooper and Meyer 1960, 8). The effectiveness of the humour, however, is possibly available only to the initiated: to those who are aurally aware of the function of particular pitches, or to those who know the score. In many cases these jokes are for the connoisseurs (Kivy 2003, 6), for the performers and perhaps a close circle of colleagues, as it was for

Haydn working at Esterhazy (Rosen 1976a, 143). It is through jokes that it is possible to see 'the world from the same communal eyes, and [be] suddenly at home even in what is the most absurd and incongruous ... [as] wit propagates the sense of membership' (Scruton 1997, 465). Kivy clarifies this further, explaining that 'joke-telling and the laughter it elicits are distinctly an expression of "multiculturalism."' (Kivy 2003, 12). What is used to support the 'insiders' also distances the 'outsiders', and in this case the recorder would be identified as an 'outsider' in the world of classical music playing, yet arguably it can be included via the musical structures it can articulate.

Many artistic structures have been created using mathematical models and as Scruton explains "when understanding mathematics we have access to the order of creation, and this order is eternal, like the numbers themselves (Scruton 1997, 64). Mattheson, however, considered mathematics to be 'only a human art [for] Nature is a Divine Power' (Bartel 1997, 26). The eighteenth century Enlightenment, defined by Kant as 'humankind's release from its self-incurred immaturity' (Bristow 2011) resulted in a synthesis of science and art, with the purpose of 'moving the listener through affective text interpretation and through a musical representation of the cosmic order' (Bartel 1997, 28). One such representation was found in the Fibonacci series, a natural pattern identified in the number of petals in single flowers, and in the proportions of snail shells (Tatlow). Described in the West, in 1202 by Leonardo of Pisa (1170-1250), as 'a sequence of numbers in which each is the sum of the previous two: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34 etc.' (Tatlow), it is now known that this formation of numbers was first expounded by the Indian Virahanka who lived between the sixth and eighth centuries (Singh 1985, 233) and that the 'concept of the sequence of these numbers in India is at least as old as the metrical sciences of Sanskrit and Prakit poetry' (Singh 1985, 232). The Fibonacci series in particular, has been used by some twentiethcentury composers notably Bartok and Stockhausen, as a tool to control structural proportions (Tatlow and Griffiths), and Crossley-Holland explained his use of the Fibonacci series in his work *The Forest of Finchale*, as being a means to unite the diverse materials (Crossley-Holland 1979, 93). In Chapter 4 I have discussed this series used in combination with sonata form in Crossley-Holland's *Invocation at Midsummer*, where it is used as a way of connecting the perceived natural order with the scientific and rational understanding of the world, and can be understood as an added layer of meaning to the apparent simplicity and transparency of the work.

Jo ha kyū is a structural device used to organise rhythm and tempo in Japanese arts and was applied to *Gagaku* and *Noh* theatre, to the literary form of *Renga* or linked verse, *Ikebana*, flower arrangement and *Chado*, or *Chanoyu*, the tea ceremony. *Jo, ha, kyū* translates as introduction, development and conclusion (Quinn 1993, 58) or as 'preparation - breaking i.e. development – rushing, i.e. accelerated conclusion' (Ishii 1997, 61). The musicologist Koizumi explains that:

rather than being three independent parts, jo, ha and $ky\bar{u}$ are:

- 1. Connected mutually and organically to each other as parts of changes in successive movements,
- 2. *Ha* in particular, as the part that shows the possibility of change, has many characteristics, making it hard to grasp without making numerous qualifications, and
- 3. The rapid $ky\bar{u}$ possesses a concision concentrated to a single point in terms of both tempo and content, and at its end it reverses itself, slowing down its tempo (quoted in Ishii 1997, 145).

The form of jo, ha and $ky\bar{u}$ was first expounded by Zeami (c. 1363 – c. 1443) in $F\bar{u}shi$ Kaden (Teachings on Style and the Flower) written between 1402 and 1418 in relation to Noh, and in Sando (The Three Ways), 1423, he explained how to work the three phases of $jo\ ha\ ky\bar{u}$ into five sections or dan (steps), considering this to be the ideal form (Quinn 1993, 63):

There are five dan in the jo-ha-kyu progression. Jo forms one dan; ha, three dan; kyu, one dan' (Zeami, quoted in Quinn 1993, 61). The form was used at both macro and micro levels of structure: 'within each dance or sound, moreover, there should be the fulfillment of jo-ha-kyu. In the one gesture of turning a sleeve, in the resonance of one stamp, there should be jo-ha-kyū (Zeami, quoted in Quinn 1993, 59).

It is important for the performer to be aware of this tradition when playing Japanese and Japanese-inspired works, in order to be able to judge the timing of the various sections, as they do not correspond to a Western understanding of balance. Also in the details of gestures, of single notes, and phrases, the form must be audible for, as in 'shakuhachi music ... Ichion Jōbutsu - with one sound one becomes the Buddha ... suggesting that the universe is explored in a single sound' (Takemitsu 1995, 65-66). This is a reference to 'blowing Zen or suizen (吹禅) ... the practice of using the shakuhachi as a tool of Zen meditation', [in which] 'the flow of the music is decided by the natural rhythm of the

players' breath ... and not a strict metrical pulse' (Horan) and has clear implications for my performance, discussed further in Chapter 8.

'The history of music is a history of performers continuously transcending what were thought to be limits, but rarely as rapidly as in the 1960s and early 1970s. Wind players learned to produce not only multiphonics but also percussive noises ... and microtones, as well as unusual sounds...'(Griffiths 2010, 210) and yet in the case of the recorder many of these techniques were already known and assimilated by renaissance players, particularly singing into the instrument described by Mersenne in 1636 (Griscom and Lasocki 2012, 361), and the extension of the lower pitch range by partially, or completely, closing the bell hole, evidenced in the writings of Agricola (1486-1556) and Cardanus (1501-1576), discussed in Miller (1971, 123). Closing the bell hole features in the selected works by Bousted, Braun (*Albumblatt III*) and Ishii and, where this technique is required for extended periods, it is usual for the player to sit for the performance.

The mastery of a vast range of techniques is required to perform the repertoire of the 1990s including extensions to the register both high and low; flutter-tongue; multiphonics; several types of vibrato: finger-, labium- and tongue vibrato; flageolet tones; detailed articulation; extreme dynamics; and microtonality, and all have become prominent features of this music, as well as 'unvoiced mouth sounds such as sucking and blowing noises, tongue-clicks, lip-smacking, kissing noises, laughter etc.' (O'Kelly 1990, 110). Composers such as Gerhard Braun have created a characteristic compositional style by making use of 'verbal sounds developed out of the articulation syllables' and these have been 'variously employed in the structure' of his works (Devroop 1992b, 108), discussed further in Chapter 7.

Juxtaposing conventional techniques with avant-garde techniques creates unevenness, and it is in this domain that the recorder excels, as it is an instrument with an inherent unevenness of both tone and dynamic. Unevenness, often discussed as variety, was important to both composers and performers of the eighteenth century. In their discussions of tongue strokes, unevenness was expressed using the syllables "ti' and 'di' in diverse ways' (Quantz 1966, 75), and Quantz reflected that 'in quick passage-work the single tongue [stroke] does not have a good effect, since it makes all the notes alike, and to conform with good taste they must be a little unequal' (Quantz 1966, 74).

The full pitch range of the recorder presents numerous challenges for the performer, the first of which is to find an instrument that will sound the pitches with accuracy, especially when dealing with quarter-tones. The extremes of register are less flexible than the midrange of the instrument, and the speed of air required to attain the highest notes sometimes precludes the pitch from forming, resulting in a windy sound. The design of the recorder bore also precludes the low b-flat from sounding accurately, required in Braun's *Albumblatt III*, as closing the bell hole can result in an 'a' being sounded on some models.

'The term *phrase* means, structurally, a unit approximating to what one could sing in a single breath' (Schoenberg 1967, 3) immediately connecting us to the advice of Ganassi who encouraged players to 'imitate the expression of the human voice (Ganassi 1956, 9), and to *Ichion Jōbutsu*, referred to above (see p. 22). Within a phrase there are notes of repose, usually those that form the tonic triad, and 'mobile' notes, those pitches that move away from, and towards, the tonic and create melodic movement (Cooper and Meyer 1960, 118). It is the 'mobile' or moving notes that create the interest and tension in a melody and, when stressed a little in performance, can add direction to the phrase.

Walls explains that during the nineteenth century it was considered important to 'override, or disguise, a natural dominance of strong beats in the interests of communicating a more fluid sense of metre' (Walls 2012, 545). Where the first beat of the bar is usually stressed it can make for a very four-square performance, and many composers find ways to detract from this first beat stress. An example is taken from Crossley-Holland's *Invocation at Midsummer*, (Ex. 2.1), in which the anacrusis to bar 158 is phrased across the bar, in effect hiding the ensuing downbeat, and resulting in a strengthening of the *tenuto* on the lowered B flat at the beginning of bar 159. In contrast to this, the bars that follow all highlight the first beat of each bar with ornamentation.



Ex. 2.1 Bars 158-162, Crossley-Holland's Invocation at Midsummer

In phrases of a more fragmentary nature there is a temptation to breathe more often, and the broader sense of phrasing becomes lost. In Ex. 2.2 of the opening of Braun's

Albumblatt I, the first phrase can be divided into three parts with breaths taken between them, but it is essentially one phrase, one gesture.



Ex. 2.2 The opening of Braun's Albumblatt I

The study of early music established the detailed articulation of melodic movement in which *legato* was described by Keller as 'the most natural articulation ... to bind together ... the intervals of seconds, to separate slightly the notes of the middle-sized intervals by means of *portato*, and to separate distinctly the large intervals (... "leaps")' (Keller 1973, 36) which has become an accepted hierarchical system of rhetorical enunciation. This is further clarified by Keller: 'the smaller the intervallic distance between individual melody tones, the more easily the melody flows through them, with very little inhibition in diatonic scales and still less in chromatic scales' (Keller 1973, 36). Staeps, in the preface to his *Sonata in E flat*, dated 1951, explained that 'phrasing-marks in the recorder part indicate a *legato* in the special sense understood by recorder-players: notes grouped under such a phrasing-mark should be neither slurred nor separated, but evenly tongued. Notes without phrasing-marks are to be played *non legato*' (Staeps 1957). Markus Zahnhausen in *Jahreszeichen* warns us by writing 'still, with recorder music in particular, misunderstandings can easily arise, especially with regard to articulation' (Zahnhausen 1992, 10) and explains that he favours the use of *portato* as the basic form of articulation.

Philipp Emanuel Bach explained that 'the notes marked [portato] are drawn out and each one equally receives a noticeable weight [and in the case of the clavier is referred to as] the carrying of the notes' (Keller 1973, 52). During the nineteenth century this became 'a special area of expression, which lends delicacy, care, often also hesitation, indecision, and ... an inconsistent notation' (Keller 1973, 52). Portato will be discussed again in Chapter 6 in relation to Bousted's work.

The subtleties of phrasing are, however, dependent on the performer's skill of combining breath control, tonguing, and fingering. Fingering on the recorder plays a particularly

special role as the tone can change considerably between standard and 'piano fingerings' (Linde 1991, 28). Instruments can vary such that generic fingerings need to be modified to each situation, discussed further in Appendix 2, p. 192.

Physical movement that occurs during playing can also be used to project our understanding of a piece. Small movements that occur as part of the performance process, associated with inhalation, fingering, or feeling the pulse can also play an important part in the reception of music and research has identified some specific movements that are common to both soloists, and ensemble players. These include:

side-to-side torso sways, knee bends and torso movements which often combine into bobbing movements, elbow circling, instrument circling, and raising up of the end of the musical instrument; ... [and] movement effects coincide with musical contours:

The rising and falling of a phrase being associated with knee bending; Held notes associated with a crouched upper body position; Rhythmic passages associated with rocking, swaying and toe-tapping (Davidson 2012, 605).

Stockhausen, in *In Freundschaft*, takes this much further and instructs that 'the intervals and melodic lines should be drawn in the air by moving the instrument up and down in proportion to the sizes of the intervals. Avoid any movement during pauses' (Stockhausen 1984, IV), and in a discussion of musical motion and performance, Shove and Repp concluded that:

Many twentieth-century composers focus on sound qualities or on abstract tonal patterns, and performers of their compositions often neglect whatever kinematic potential the music may have. The absence of natural motion information may be a significant factor limiting the appreciation of such music by audiences (Shove and Repp 1995, 79).

During the 1990s many recorder players remained seated throughout a performance, not just for the practical reason of having to cover the bell hole, but rather to create the effect of something more intimate as for a private circle, or music for a smaller venue, and yet many of the musical gestures demand more of a 'presence' for which standing is more appropriate. This tension between the demands of the music and the reality of the

performance is a particular feature of Bousted's *Piece No.1*, and is also a consideration for the works of Braun and Ishii, discussed within their respective analyses.

The need to create a beautiful sound and maintain technical accuracy has to be balanced by the possibilities available to the performer for an interpretation to have creative integrity. The issues of the realisation define the differences between the score and the performance, and the extreme dynamics asked for in Bousted, Braun, and Ishii need to be interpreted in a relative sense. Ishii especially notates extremes ranging from *ppp* at the beginning of bar 57 to *ffff* at bar 82 and *sffff* at bar 83, which in relation to *ppp* may be perceived as a wild contrast, but in reality will be only a little louder! Physical gestures may have to be incorporated to make up the difference, and dynamics need to be interpreted as compliments to the character of a piece. As an example the *pppp* for the last line of Braun's *Albumblatt III*, ending *al niente*, can be interpreted as an instruction to leave the performance space calmly, rather than representing a specific dynamic level.

Notation

As a performer dealing with music of so many different stylistic traits it is also necessary to be conversant with the notational elements, which have not been standardized. While the selected repertoire, discussed in detail in Chapters 4 - 8, uses mainly standard notation, there are examples of graphic notation and other symbols that have not been standardized, and each composer has found their own solution to notating the idea. Many composers draw on symbols that are already in use, resulting in one symbol having multiple meanings, requiring an explanatory list in the score as, for example Braun's *Albumblätter*, which contains a full page of explanations (see Appendix 8 p. 221).

Signs for flutter-tongue and tremolo are well established, but *sputato*, finger-tapping, microtones and humming have been notated in a variety of ways.

The explanation in Ishii's score for the crossed note-head, or 'slap-tongue' sign is: "Klappengeräusch" – (key-tapping sound). Tapping the finger on the particular hole while abruptly blowing in air'. Slap-tongue at this speed is 'physically impossible' (Hauwe 1992, 80), and Hauwe's suggestion is to articulate with hard consonants, 'T' and 'K', which can be controlled to extreme dynamic levels. An example of Ishii's crossed note-head is given in Ex. 2.3.



Ex. 2.3 Bar 57, Ishii's *east•green•spring*, showing the notation of *sputato* with finger-tapping

Braun uses a simple '+' sign under or above the pitch to indicate *sputato*, as in Ex. 2.4 and, as it is used as an independent action, Braun notates the finger-tapped notes with the sign given in Ex. 2.5.



Ex. 2.4 Bar 1, sputato sign used by Braun in Albumblatt 1



Ex. 2.5 Finger-tapping sign used by Braun in *Albumblatt 1*

Braun also utilises rustle tones, notes mixed with air, and for this it is usual to position the instrument against the lower lip so that air can be blown across the mouthpiece *shakuhuchi*-style. Alternatively, air can be allowed to leak out of the side of the mouth, and the choice depends on just how much windy noise is required. This is notated with crosses replacing the note-head, as shown in Ex. 2.6.



Ex. 2.6 Bar 12, Notation of rustle tones in Braun's Albumblatt II

Despite their widespread use, the notation of microtones has not been standardized. The first bar of *Five Quarter-Tone Pieces for Solo Recorder*, No. 1, shows examples of the

symbols used consistently by Bousted, for a quarter-tone sharp and a quarter-tone flat (Ex. 2.7). These were agreed in collaboration with Bennetts and Bowman as being a simple and practical solution to avoid signs for three-quarter-tones. The pitch was designated according to the pitch of the associated core fingering: for example the notation of F quarter-flat was preferred to E quarter-sharp because the fingering related more to F than E.



Ex. 2.7 Bar 1, quarter-tone signs used by Bousted in *Five Quarter-Tone Pieces for Solo Recorder*, No. 1

However, Ishii used standard chromatic signs with arrows attached as shown in Ex. 2.8 and Ex. 2.9 for quarter-tone sharp and flat respectively.



Ex. 2.8 Quarter-tone sharp sign used by Ishii in east•green•spring



Ex. 2.9 Quarter-tone flat sign used by Ishii in east•green•spring

Ex. 2.10 shows the key signature for Crossley-Holland's *Invocation at Midsummer*, in which the arrow refers to a microtonally lowered B flat. A note in the score explains that this pitch 'corresponds to the seventh partial in the natural scale', which is 31 cents lower than an equal tempered B flat.



Ex. 2.10 Key signature used in Crossley-Holland's *Invocation at Midsummer*

In Braun's *Albumblatt III* there are individual notes and short phrases of harmonics, notated in the standard way with a small circle above the note as in Ex. 2.11.



Ex. 2.11 Notation of harmonics

These are fragile, delicate sounds and risk being inaudible in live concerts. In Chapter 7, I will explain the techniques for playing the harmonics and give some examples of possible fingerings.

Braun explains in the score of *Albumblätter* that he uses the diamond-shaped head and triangle-head signs to indicate a 'change of tone-colour through change of fingering' as shown in Ex. 2.12.



Ex. 2.12 Braun's notation of pitches with changing tone colour

Tsoupaki, however, uses the diamond-head notes to indicate humming, as shown in Ex. 2.13, where the lower note is to be hummed simultaneously with the instrumental note, and as will be discussed in Chapter 5, can be used to create two-part textures from independent lines.



Ex. 2.13 Notes to be sung and played simultaneously in Tsoupaki's *Charavgi*

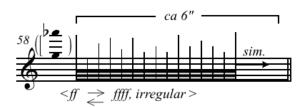
Multiphonics on the recorder are relatively easy to play, and the score of Braun's *Albumblätter* gives a fingering chart with the rubric 'if necessary modify according to type of recorder' (Braun 1997). However, it is not clear whether the modification refers to the fingerings or the pitches, or both. Braun notates the multiphonics in the standard manner as two-part chords with distinct pitches, Ex. 2.14, although the precision of pitch and dynamic

varies between instruments, securing the multiphonic is dependent on subtle alterations to the breath pressure.



Ex. 2.14 Notation of multiphonics in Braun's Albumblätter

At the beginning of bar 58 of Ishii's *east•green•spring* a two-part chord is given which, rather than being a multiphonic, simply outlines the pitch range for the ensuing passages of graphic notation involving random breath levels and fingering in short passages, timed in seconds (Ex. 2.15). The pitch range suggests a preference for the use of the high end of the pitch spectrum, yet the irregular breath will also give lower pitches, which are essential for creating clear pitch contrasts, unevenness and variety throughout.



Ex. 2.15 Bar 58, Ishii's east•green•spring

Historically the recorder has been considered a 'soft' instrument (Mayer Brown 1995, 9), and is still considered by many to have a narrow dynamic range (Hauwe 1992, 19). The standard modern instrument, based as it is on a baroque model, has an intrinsic dynamic gradation increasing with the rise in pitch from low to high. During the 1980s and 1990s, however, the documentation of fingerings for dynamic purposes by Hauwe (1984, 1987, 1992) and Fischer (1990, published in German) enabled the wider recorder playing community to avail itself of information previously known only to small groups of initiated students of elite conservatoires. The extreme levels of dynamic demanded by some composers can be enhanced by other techniques, such as the strength of tonguing, vibrato and physical movement to suggest the drama of the moment, and although the dynamic level may then be perceived to have increased, in reality it is a minimal increase, evidenced by Patterson who 'suggests that woodwind players may exhibit as little as 10 dB difference between their loudest and softest playing' (quoted in Hall 1990, 77).

In conclusion, I have compiled a chart (Fig. 2.1) giving an overview of the issues raised in this chapter in relation to the five selected pieces. They are presented in the order in which they appear in the text.

Issues	Crossley-	Tsoupaki	Bousted	Braun	Ishii
155465	Holland	Charavgi	Piece No. 1	3 Albumblätter	east•green•spring
	Invocation	0.000.00780	from Five		cust 8. cen sp. mg
	at		Quarter-Tone		
	Midsummer		Pieces		
Collage				•	•
Modernism	•	•	•	•	•
Postmodernism	•	•	•	•	•
Deconstruction	•	•	•	•	•
Différance	•	•	•	•	•
Globalization	•	•	•	•	•
Gagaku					•
Minimalism					
Tonality			•	•	•
Folk Song	•	•			•
Modality	•	•			•
Microtonality	•		•	•	•
Wabi sabi					•
Sonata Form	•		•	•	
Serialism				•	•
Humour	•		•	•	
Mathematical	•			•	
Models					
Jo ha kyū					•
Pitch Range	•	•	•	•	•
Portato			•		
Physical				•	
Movement					
Extreme		•	•	•	•
Dynamics					
Notation	•	•	•	•	•
Flutter-tongue				•	
Sputato				•	•
Percussive				•	•
Sounds					
Rustle-tones				•	
Harmonics				•	
Use of voice		•		•	
Multiphonics				•	
Graphic				•	
Notation					

Fig. 2.1 Chart giving an overview of the issues raised in Chapter 2 in relation to the five selected pieces

In the following chapter I will outline the purpose of analysis from the performer's perspective, and explain the various types of analysis that I have worked with for the selected repertoire.

Chapter 3

Methodologies

3.1 Introduction

The initial inspiration for my work came from David Lasocki's (b. 1947) identification of two areas of research, regarding the recorder repertoire as a whole that needed to be addressed at the time. The first was to create a catalogue of existing repertoire, with work first undertaken by Walter van Hauwe in 1988, which resulted in the establishment of the Catalogue of Recorder Music, now known as the *Catalogue of Contemporary Blockflute Music* (CCBM). Although this is regularly updated, it is also dependent on composers and performers submitting their own entries to the Catalogue, and therefore unlikely to become a fully comprehensive list of works. It was this realization that led to the compilation of my own Catalogue dedicated to the solo recorder repertoire of the 1990s, and as of June 2016, this comprised 326 works (Appendix 1, see p. 184). The second area identified as being deficient led to a demand for 'more first-class analyses [of the repertoire] or commentary on it' (Griscom and Lasocki 2003, 646).

In order to contextualise the chosen repertoire, my first research aim was to identify the significant musical trends of the twentieth century, and to gain an understanding of the various influences relevant to the 1990s. I then compiled my catalogue of solo works by initially searching the CCBM online, publishers' catalogues and websites, as well as websites of recorder performers and composers. In 2013, I visited the Contemporary Blockflute [Recorder] Music Library (CCBM) held at Amsterdam University, where it was possible to view and study many of the scores.

From my catalogue it can be seen that the principal instrument that composers have written for is the alto recorder, and that many of the titles refer to pastoral themes, particularly to birds, reflecting the instrument's traditional symbolic associations. I selected five pieces for analysis and performance that I considered to be representative of the main trends of the decade as outlined in Chapter Two. I was particularly interested to support English

composers despite the prevalent conservative attitude in the UK towards the instrument. I also selected substantial pieces, either in terms of duration or for the technical skill they demanded, such that they could be accessible to Conservatoire students and competition participants. Many of the pieces in the Catalogue are very short, are handwritten and/or have been self-published and are therefore not readily available. Consequently, I have selected pieces that are available either from established publishers, or can be found online.

In preparation for undertaking a detailed analysis of the five selected pieces, I undertook some research relating to structural analysis and discussions of formal procedures adopted in twentieth-century composition, which showed that a wide range of models were used, including historical models of the seventeenth and eighteenth centuries. This is also evident from my analyses of the selected pieces, although the composers may have been influenced by the fact that the recorder had continued to be seen as an historical instrument. However, this does not explain the prevalence of classical sonata form, apart from it being an intrinsically versatile and much used model. The recorder maintained its important instrumental role throughout the seventeenth and eighteenth centuries and elements of rhetorical ideas are evident in several pieces, notably by Braun and Tsoupaki. I also looked at articles that the composers themselves, or commentators of their work, had written, particularly regarding Ishii, in order to gain an understanding of Japanese cultural traditions.

I then looked at some commentators' views on the purpose of analysis, and considered what type of analysis might be relevant to a performer in preparing an interpretation. Kofi Agawu wrote that:

analysis sharpens the listener's ear, enhances perception and, in the best of cases, deepens appreciation. Detailed and intensive scrutiny of a work brings one into close contact with the musical material, leaving the analyst permanently transformed by the experience. No subsequent hearing of the work can fail to reflect this new, heightened awareness of its elements (Agawu 2004, 270).

As Agawu implies, a heightened awareness of the musical material is critical for the performer in order to explore interpretive possibilities, and to fully comprehend the structure as, according to Scruton, 'analysis attempts to build a bridge from the sound structure to the aesthetic experience' (Scruton 1999, 396). However, piano accompanist

and theorist Heinrich Schenker, placing more emphasis on content, considered that 'once the content of the piece is clearly understood, **performance** [sic] poses no problems' (Schenker 1994, 37). Understanding the structure therefore, is not sufficient for the realization of a piece. The myriad of detail, in its many layers, also needs to be acknowledged. In the *Art of Performance* Schenker further explains that the notational detail 'does not indicate ... directions for performance but, in a far more profound sense, represents the effect [the composer] wishes to attain' (Schenker 2000, 5). For the performer, therefore, it is clear that every detail of the score has significance and the task is to interpret the information with clarity of thought and technical assurance.

The performer's role, as an intermediary between the composer and the audience, is to express the structure of music in sound for 'it is a Schoenbergian assumption that a thorough conceptual understanding of the score is the prerequisite of adequate performance' (Dunsby 1989, 6). However, 'understanding and trying to explain musical structures is not the same kind of activity as understanding and communicating music' (Dunsby 1989, 7). To perform the structure of a work could lead to an arid experience of imbalance, lacking dynamic nuance and subtle, malleable timing that is the essence of an expressive performance. A lack of physical gesture can also inhibit the communication process as discussed in the work of Shove and Repp (1995, 79). Rink considers that an analysis, appropriate to an ensuing performance, will also show the 'importance of "shape" rather than structure, in the performer's conceptualisation of [the] music' (Rink 2002, 36) and acknowledges what he refers to as "informed intuition" which recognises the importance of intuition in the interpretative process [with the understanding] that considerable knowledge and experience generally lie behind it' (Rink 2002, 36). Peter Hill also confirms that 'mental study ... is designed to put instinct to the best use ... to liberate our musicality, [and] to make sure that the musical goals come first' (Hill 2002, 143). The 'mental study', as I understand it, refers to the intellectual engagement with a work, through analysis and background information, in as much detail as possible. Yet an element of intuition also comes with playing this instrument, as the recorder responds to the subtlest nuances of breath, tonguing, and fingering, with the consequence that the player needs to have an intimate knowledge of their instrument.

However, Whittall concludes that:

the ultimate purpose of analysis is to construct interpretations which make it possible for the musical work to be aesthetically, as well as intellectually, appreciated to a greater extent - or at least in different ways - than had been the case before the analysis was considered (Whittall 2013).

The aim of the analysis, as the above implies, is to shed light on the work from different angles, from a historical or cultural perspective, focusing on particular elements of melody, harmony, rhythm, and texture, an understanding of which is considered essential for creating an interpretation prior to giving a compelling performance. The challenge for a performer, as I see it, is to be able to bring the two elements together: the stuctural approach and the practicality of negotiating an understanding of the piece in an aural sense for performance. The one should inform the other in a holistic cycle, and yet they tend to be treated as very different areas of research.

3.2 Analytical Methods

From the above, I conclude that the performer must be able to identify and clarify the salient features of a composition. Rink suggests a list of techniques which can help the performer to develop an 'informed intuition', and these include a basic structural analysis, creating graphs to help identify changes in tempo and dynamics, outlining the melodic shape and motivic ideas and in some cases preparing rhythmic reductions or renotating the music (Rink 2002, 41). He emphasises that these are 'a means of heightening one's sense of musical process' and that aural 'shape' and musical gesture are fundamental to an understanding of the whole piece (Rink 2002, 41).

I have selected three analytical methods for the repertoire in focus: structural, paradigmatic, and parametric, which I consider will offer insights into both the macro and micro levels of the compositional process.

Structural Analysis

The structural analyses presented in Chapters 4-8 aim to show the overall shape of the piece, identify the salient features and contextualise the pieces, in order to offer a conceptual understanding of the scores. In each case I will identify the various sections and the tonal scheme of the composition.

Paradigmatic Analysis

Paradigmatic analysis is undertaken by musicologists to identify motivic units, their role and the extent of their occurrence within a piece, either as repetition or variation. This type of analysis represents a more systematic approach to evaluating and calculating the distribution of the various elements of a piece, and the correlation of the small-scale motif with the large-scale structure in the search for overall unity. It may not tell us very much about how to perform the piece of music, but the insight gained will help the performer to develop a sense of authority and ownership, simply by having such an intimate knowledge of the score. The paradigms themselves, however, can be very useful to a performer.

Paradigms are generally exampled as being small units: single notes; a rhythm; an interval, or a motif, and in chart form they can be used for detailed technical practice in the initial stages of assimilating the material. However, if the segmentation comprises phrases or sections, the analysis can be used more purposefully as an aid to facilitate the later stages of performance preparation. Being able to identify the repetitions within a piece, and isolating technical challenges can considerably reduce the time spent learning complete sections. Charts can be created with vertically aligned phrases, from which the repeated sections and their variation through, for example, transposition, augmentation, and diminution can be readily identified. Specific technical issues can then be further isolated for more detailed attention, for example motifs containing ornamental features and graces. This has also proved to be a good way of identifying score-based errors and details of articulation and dynamic which are not feasible for the instrument. Likewise, passages of varying tempos can be segmented so that passages at one speed can be practised separately and internalised before being reinserted into the flow of a passage that requires several changes of speed.

This style of analysis has been a particularly useful tool for generating practice material, and in working through this process I have sustained a considerable focus on the detail of each of the scores, which as Agawu suggested, quoted above, is a prerequisite for gaining an important and heightened awareness of the music.

Parametric Analysis

A parametric analysis will identify the pitch range of each work, and then focus on areas relevant to each piece, including articulation, dynamics, and textures. I will offer

suggestions for fingerings where necessary, to show how various elements can be achieved, particularly for dynamic changes and the more unusual effects. As Rowland-Jones has pointed out, fingering has become 'so central to recorder-playing that it dominates discussion of interpretation' (Rowland-Jones 1992, 118). This is not to say that the interpretation is governed by the possibilities of fingering, but rather the creative use of fingerings coupled with nuanced breath pressure and an awareness of the changing tone-colours that non-standard fingerings offer, is such a fundamentally important technique for projecting the dynamic and expressive ideas of the music. To clarify this aspect of interpretation I have included a chart outlining the four registers of the recorder, with suggestions for creating fingerings. This can be found in Appendix 2, page 192. I have compiled fingering charts, (Appendices 3, 4 and 5) for alto and tenor recorders, and examples of further alternative fingerings are given in the individual analyses to demonstrate various qualities that can be chosen for particular contexts.

The performance of a piece of music is considered to be just one realization of a score which Lester likens to 'a map of the piece or a recipe for producing it' (Lester 1995, 199), indicating 'that a musical work exists beyond its score' (Lester 1995, 199). At one and the same time a performance both enriches and limits the work: enriches with the 'myriad nuances of articulation, timbre, dynamics, vibrato, pitch, duration and ... yet each nuance limits the piece by excluding other options for that element' (Lester 1995, 199). The performance of a musical structure may appeal to, and satisfy, the intellect, but it is the moment-by-moment detail that conjures the various emotions. The aim of my analytical work, and my subsequent performance, is to 'inspire the magic' (Rothstein 1995, 238), and to contribute to the understanding and accessibility of this repertoire. As Sandor Vegh reminds us 'learning a work and reproducing it the same way every evening is not a productive interpretation, it is a reproduction. You must always make it new and have the courage to follow that inspiration' (quoted in Lawson and Stowell 2012, 832). 'Musical interpretation consists of deviations from the strict regularity or equality in timing, dynamics, and articulation that a literal rendition of a score would provide' (Chaffin, Lemieux and Chen 2007, 456), indicating that there are many opportunities to create a variety of nuanced performances. First of all the size, acoustic and temperature of the performance space will necessitate adjustments to the articulation, dynamic, and gesture of the performer. In general this could be described as the larger the space the broader the gesture, and the bigger the acoustic the shorter the articulation. The receptivity of the

audience can also affect the performer's sense of communication. Having gained an intimate awareness of the score through detailed analysis, it is possible in performance to highlight different aspects of the work, be it a melodic thread or a rhythmic motif, giving the piece a different complexion. Within a single performance it is not possible to display a complete understanding of a piece, and decisions have to be made as to which elements to prioritise. This particular area will be discussed in Crosslev-Holland's *Invocation at Midsummer* where phrase lengths, governed by a predetermined mathematical calculation, are not quite long enough and can be lengthened in performance by slowing down or by adding a fermata to the final note of the phrase (see pp. 54-55). Dynamics and tempi are also infinitely variable in subtle ways and unlikely to be replicated exactly each time. Tsoupaki, in *Charavgi*, has marked sudden dynamic changes in the score, which are all dependent on alternative fingerings, creating a fragile tone. This instability can be used to create a different tonal landscape, to highlight and contrast with the main tones of the melody and will be subtly different at each hearing. Just as the breath is exhaled at different speeds, and the heart beats at varying rates, so the details of a piece will be slightly altered at each performance. Although these may seem to be slight variations, they can affect the intensity of the overall performance. However, essentially 'the performer's task is to provide the listener with a vivid experience of the work, not an analytical understanding' (Rothstein 1995, 238) and all of these nuanced adjustments contribute to making the music both enriched and vital at each hearing.

In the following chapters I will undertake an analysis of each score and then consider the technical and aesthetic challenges of interpreting this, as a preparation for performance. I will discuss the feasibility of the composer's demands in relation to pitch and intonation, phrasing and articulation, dynamics and general performance issues of stagecraft where relevant to the particular piece.

Chapter 4

Invocation at Midsummer (1993)

for Tenor Recorder

by

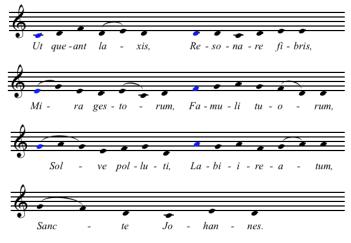
Peter Crossley-Holland

4.1 Introduction

Invocation at Midsummer is a conventional piece in a lyrical style, utilising the standard pitch range of the tenor recorder from c¹ to d³. It requires a modest instrumental technique, yet demands a high level of musicianship to articulate the subtle changes of mood and character of the numerous sections. This work has been described as an 'extended and very beautiful piece for solo tenor recorder' (Turner 2001, 91), reflecting [the composer's] 'deep religiosity ... [for which he was] motivated more by the spiritual content of the music he heard than by the sounds alone' (Simon). Crossley-Holland also explained how he 'had pondered the old Celtic belief that midsummer was a time when the veil between this world and that of the spirits was lifted and that it was, so-to-say, a time of the influx of "supernatural" influences on human affairs' (Crossley-Holland 2002, 55).

In the northern hemisphere the celebration of Midsummer takes place between the 20th and 24th June and is associated with traditions of collecting flowers and herbs, such as St. John's wort to decorate the home, and the lighting of bonfires (Roud 2006, 301). Midsummer encompasses the summer solstice that occurs between 20th and the 22nd of June and the Feast of the Nativity of St. John the Baptist on 24th June. In the Roman Catholic breviary the appointed hymn for June 24th is *Ut queant laxis*, the first verse of which is traditionally sung at Vespers, the service of Evening Prayer. Associated with Vespers is the ceremony of lights at which torches and candles would be lit to create 'an infinite light' (Cabrol 1912), as a possible reference to both the light of the sun and to the light of God. The first note of each phrase of the hymn forms the hexachord on C, *Ut re mi fa sol la*, known as the *hexachordum naturale*, or the 'natural scale on C' to which Crossley-Holland refers in his writings on *Invocation at Midsummer*. The Vesper hymn,

Ut queant laxis, is shown in Ex. 4.1 below, with the first note of each phrase coloured blue to identify the *hexachordum naturale*.



Ex. 4.1 *Ut queant laxis* (Hiley)

Crossley-Holland explained that the opening theme of *Invocation at Midsummer* came to him as he was 'waiting for a train to Carmarthen on Paddington station!' and later whilst walking in the country near his home he:

heard the harmonic seventh (flatter than the minor interval and nearer to the augmented sixth) in the sound of the wind, and wanted that to be part of the piece, much of which is, in effect, written in the natural scale on C (with the 7th and 11th partials, B Flat \(\) and F Sharp \(\) (Crossley-Holland 2002, 55).

The key signature, mentioned in Chapter 2, calls for a lowered B-flat (as the seventh partial of the harmonic series) and the suggested fingering given in the score is 012346. This fingering on a tenor recorder, however, produces a slightly high f¹ (natural). The 7th partial (969 cents) is 31 cents lower than an equal tempered B flat (1000 cents) (Baines and Borwick), and appropriate fingerings for the correct pitch can be found based on 013456 or 013467 for the first register, and 012567 for the second register. The lowering of the pitch, slightly more than an eighth-tone, also changes the quality of the tone and is clearly audible in performance as in Audio Example: CD Track 1, in which the first note played is b¹ flat, and the second is the harmonic seventh, b¹ flat lowered by 31 cents, and then played an octave higher. Bars 30-31 (Ex. 4.2), place the harmonic seventh in the context of a phrase.



Ex. 4.2 Bars 30-31 from *Invocation at Midsummer* Audio Example: CD Track 2

4.2 Structural Analysis

The opening note of *Invocation at Midsummer*, g¹, *sol* meaning sun, is followed by the musical-rhetorical figure *circulo mezzo* (Ex. 4.3, see p. 46), used for the expression of circular concepts, (Bartel, 1997, 216), and the three sections of the form, ABA, outlined below (Fig. 4.1, see p. 45) can also be understood as being symbolic of cyclical movement, further referencing the earth's movement around the sun.

Invocation at Midsummer recalls the celebrations of Midsummer through a collage of songs and dances, interspersed with moments of calm reflection. In his writings, Crossley-Holland explained that *Invocation at Midsummer* was composed using first-movement form, barred according to:

the proportions of the Golden Section, and the groupings of its 233 bars fall very closely into the Fibonacci series, such that its phrases, periods, and other structural units ultimately analyse throughout into two- and three-bar units (and their multiples) (Crossley-Holland 2002, 55).

The purpose of this, he considered, was to 'mysteriously link the music with structures found deep in the cosmos' (Crossley-Holland 2002, 55). The mathematical proportion referred to as the Golden Section occurs at bar 144 (233 x 0.618 = 144) with the pitch c^2 , again identified as a reference to the 'natural' scale that underpins this composition.

The two outer sections have been constructed using the Lydian mode with the central section formed from transpositions of the Dorian mode, both of which can be identified as emanating from the *hexachordum naturale*. A notable feature of the modes is the tritone, inherent to the medieval hexachord and referred to as the *diabolus in musica*, which 'in 19th-century Romantic opera ... regularly portrays that which is ominous or evil'

(Drabkin). This will be discussed later in relation to the use of vibrato (see page 55). This piece references the past by the use of modal harmony, discussed earlier in Chapter 2, and reflects the conservative attitudes of composers who had rejected the mechanistic processes of modernism in favour of the renewal of the spirit.

The chart (Fig. 4.1 below), shows my analysis of *Invocation at Midsummer*, detailing the rigorous application of the Fibonacci series embedded within sonata form, together with the section descriptors, details of the modes that are used, and the subdivision of the phrases according to the bar lengths. I have also highlighted in bold the bar numbers that correspond to the numbers in the Fibonacci sequence. From this chart it is possible to identify the sections as being marked by either a transposition of mode, or by descriptors. These do not always coincide, but the material changes in character from one to the other, sometimes in a particularly marked way, for example at bar 118, *Resolutely*, and at others more imperceptibly, for example at bar 124, *Pleasingly*. The phrases comprising eight and thirteen bars are accumulations of two and three bar groups, reflecting a natural process of growth, ¹⁰ organically creating longer phrases. This, however, also creates an unevenness to the phrasing, as the expectation is for multiples of four-bar groups.

_

⁹ It is interesting to note that the tritone found in the opening melody of *Invocation at Midsummer*, Ex. 4.3, lies between C and F sharp and is possibly a reference to Stravinsky's use of the triads on these same pitches in *Petrushka*, a work which also reflects the song and dance rituals of earlier traditions.

¹⁰ As Crossley-Holland explained 'certain creatures grew in the proportions of this [Fibonacci] series' (1979, 93) and using this as a compositional device linked his work to the natural world.

Fibonacci Numbers	Bar Numbers	Sonata Form	Section descriptors	Mode	Phrase subdiv	
1, 2, 3, 5, 8	1-13	Exposition (A) First group of themes	Joyously and flexibly	C Lydian	in bar leng 3+2+3+2+3	= 13
13	13- 21	That group of themes	With energy (triplet figure)		3+5	= 8
21	21- 42		More solemnly		2+1+2; 3+2+3 1+2+5	= 13 = 8
34	42-55		mp (triplet figure)Joyously but gently		1+2; 2+3 3+2+1+2+2+3	= 8
55	55- 63	Second group of themes	With decision	E Dorian	3+5	
	63-68		Dance-like		3+2	= 13
	68-76			A Dorian	3+5	= 8
	76-87		With decision	E Dorian	1+2+8+	1.0
89	87-89 89 -97	Development (B)	More gently Mysteriously and flexibly	C Dorian	2 1+3+3+	= 13
	97-102	(B)	пельну	G Dorian	1+2+1+2	= 13
	102-110		Well-marked without vibrato	E Dorian	2+3+3	= 8
	110-118		Pleasingly and dance- like	G Dorian	8	= 8
	118-136		Resolutely	B flat Dorian	2+2+2	
	(124)		Pleasingly		2+2+3	= 13
	(131)		With decision		1+2+	
	(135)		Mysteriously and flexibly	D.D. da	2+1-	
	136-139 139-144		Well-marked, without vibrato	B Dorian F Dorian	2+1+ 2+3	= 13
144 Golden	139-144 144-157	Recapitulation (A ¹)	Freely Joyously and flexibly	C Lydian	3+2+3+2+3	= 13
Section		(A)				
	157-170		More solemnly		2+3+2+1+2+3	
	170-178		Joyously but gently	4 D .	1+2+2+3	= 8
	178-186 186-194		With decision Dance-like	A Dorian	3+5 3+5	= 8 = 8
	194-199		With decision		1+2+2	= 5
	199-207		Joyously and lightly	D Dorian	3+2+3	= 8
	207-215		With energy	G Dorian	3+2+3+	
	215-221			F Dorian	2+3	= 13
	221-228	Coda	Calm but ecstatic	C Lydian	2+3+3+	
	228-230		Mysteriously		2+	
233	230 -233		Joyously and with decision		3	= 13

Fig. 4.1 Analysis of *Invocation at Midsummer*

Collating the structural elements of the Fibonacci series, sonata form and the use of modes.

4.3 Paradigmatic Analysis

From a performance perspective, the focus of this piece is the long phrases. However, the opening phrase of thirteen bars, (Ex. 4.3), is clearly segmented by the composer, using phrase marks, and details both the fragmented nature and the unevenness of the internal structure of the phrase.

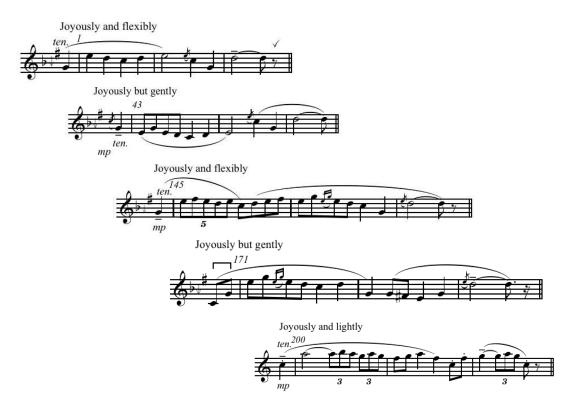


Ex. 4.3 Opening theme of *Invocation at Midsummer* showing the *circulo mezzo* and tritone

As can be seen in the example above (Ex. 4.3), the ornaments serve to highlight and decorate the important notes: the pitch c^2 , the tonality of the hexachord, and e^2 (bar 5), the pitch of mutation to the hexachord on G.

This ornamentation is developed in the ensuing sections and moves from the addition of grace notes, to a division style of decoration. Taking the first segment of the first phrase as an example, (bars 1-3), the following syntagm shows how the ornamentation is developed (Ex. 4.4).

I	II	III	IV	V	
Crotchets	Quavers	Quintuplet	Quavers	Triplets	
		and quavers			



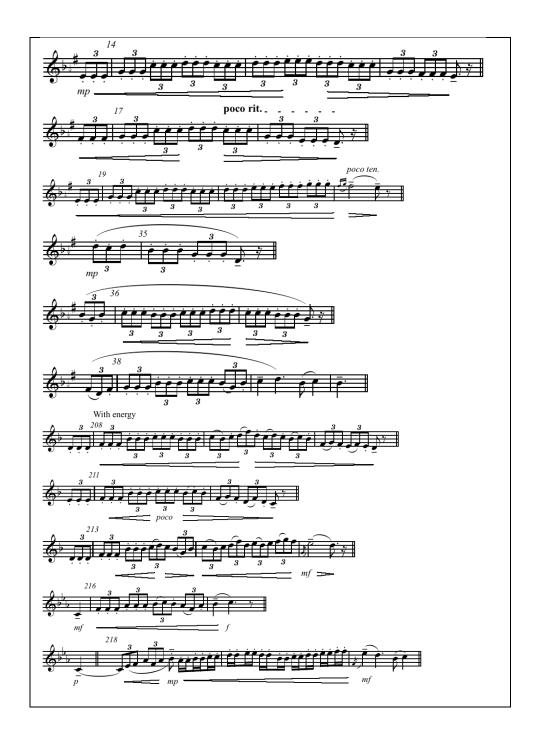
Ex. 4.4 Syntagm of opening phase, bars 1-3

The rise and fall of the melodic contour is a particular feature of the piece, found also in the rhythmic passages. Further links to the Fibonacci series can be found by simply counting the notes of a phrase, one example of which is the triplet section starting at bar 13, containing 34 notes (34 being a Fibonacci number), and Ex. 4.5 examples both of these features.



Ex. 4.5 With energy: a 34-note phrase in bars 13.4 - 16

The following paradigm chart of the passages in triplets (Ex. 4.6 below) can be used to practise the gradual changes in dynamics and the flexibility of the tempo.



Ex. 4.6 Paradigm chart of passages in triplets that can be used as practice material for *Invocation at Midsummer*

4.4 Parametric Analysis

Pitch range

The pitch range of *Invocation at Midsummer* lies comfortably within the traditional range of the tenor recorder, extending over two octaves and one note, from the lowest note, c^1 to d^3 as shown in Ex. 4.7 below.



Ex. 4.7 Pitch range used in *Invocation at Midsummer*

Phrasing

The score gives no time signature and although it is notated in 4/4 throughout, there are many instances of a fluid approach to the melodies, reminiscent of the works of Vaughan Williams, with changes from four to three beat patterns which help to maintain a forward momentum (Ottaway and Frogley). The opening phrase, (Ex. 4.3, see p. 46) has been subdivided by the composer into groups of three and two bars following the numbers of the Fibonacci series, and as Fig. 4.1 (see p. 45) details, this is maintained throughout the piece. Ex. 4.8 below, shows a sequence in which groups of three beats are phrased independently of the bar line within a passage of 4/4. The first note of each group has an added ornament further highlighting the changing stress within the bar, ornaments which the composer indicated should be played before the beat (Crossley-Holland 1996).



Ex. 4.8 Bars 123 - 126, showing groups of three beats within a 4/4 passage

The pastoral character of the piece is also supported by unstressed cadences as shown in the following examples, Ex. 4.9, and Ex. 4.10.



Ex. 4.9 Bars 19 - 21 with unstressed cadence



Ex. 4.10 Bar 93 with unstressed cadence

Dynamics

The notated dynamic range is modest: p-f, and well within the range of possibilities for the instrument. In general, these follow the natural contour of the instrument i.e. quiet for the low notes and loud for the high notes. The number of dynamic markings also corresponds to the Fibonacci series. In the Exposition, section A, there are twenty-one dynamic instructions which I have formed into two charts of thirteen and eight markings each (thirteen and eight also being Fibonacci numbers). Chart Fig. 4.2 below, shows the dynamic range of the Exposition. The signs '<', and '>' represent *crescendo* and *diminuendo*.

Bar Number	1	13.4	15	16.4	17.4	18.4	21	21.4	34.4	36	37	37.4	39.3
Dynamic	mf	mp <	>	<	>	<	>	mf	mp	<	>	<	mf

Bar	42.4	50.4	63.4	66.4	83.4	84.4	86.3	88.3
Number								
Dynamic	mp	mf	f	mf	<	f	>	mp

Fig. 4.2 Chart showing the dynamic range of the Exposition in *Invocation at Midsummer*

From the chart Fig. 4.2 it can be seen that there are two *f* markings. The first, at bar 63.4, corresponds to the section marked 'Dance-like' and the change of character is further emphasized by additional articulation signs of accent and *staccato*, as can be seen in Ex. 4.11.



Ex. 4.11 Bars 63.4 – 65 showing the articulation and dynamic emphasizing the dance-like character of his passage

Audio Example CD Track 5 at 2'20"

The second f, at bar 84.4, corresponds to a passage in the range b^2 - d^3 in which the b^2 s are each ornamented with acciaccaturas. Ex. 4.12 shows the detailed articulation and ornaments for this passage.



Ex. 4.12 Bars 84.4 – 87 showing the f dynamic and its correspondence to the higher pitch level

Audio Example CD Track 5 at 3'03"

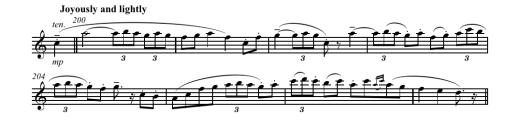
The Development section, bars 89-144, can be charted in a similar way. The dynamic here ranges from p - mf, which suggests a much more subdued central section. The chart, Fig. 4.3, details the dynamics of this section.

Bar	89.4	97.2	98	98.2	100	101.2	102.4	106.4	118.3	123.4	128.4
Number											
Dynamic	(mp)	<	mf	mp	< mf	mp	mf	mf	mf	mp	mf
D M			125		26.4	120.2	1.41	1.	12.2	1.42.2	144

Bar Number	132.2	135.2	136.4	138.3	141	142.3	143.2	144
Dynamic	тр	p	mf	p	poco < mp	p	<i>mp</i> <	> p

Fig. 4.3 Chart showing the distribution of dynamics used in the Development section, bars 89-144

The dynamics generally follow the natural contour of the pitch, although at bar 119.4 (Ex. 4.13) the high passage is marked *mp* in contradiction to this general observation, but it can be achieved by using a gentle articulation. This section marks the point at which the piece begins to relax, and marked *at pleasure*, the expressive and lyrical quality of the melody is heightened by a sense of reverie. Interestingly there are only natural pitches, this being the only section with neither key signature nor accidentals.



Ex. 4.13 Joyously and lightly bars 119.4 - 207

The *p* dynamic has been reserved for the end of this section and, together with *mp*, is associated with the trills as can be seen in Ex. 4.14 below.



Ex. 4.14 Bars 141.4 -144 showing the use of quiet trills

The chart, Fig. 4.4, shows the (21) dynamics for the Recapitulation, bars 144-220, and although these range from p to f, this section is centred around the mf level.

Bar Number	144.4	157.4	159.3	165.4	170.4	178.4	186.4	199.4	208	209	211
Dynamic	mp	mf	тр	mf	p	тр	mf	тр	<	<>	<poco< td=""></poco<>

Bar	212	213	214	215	215.4	216	217	217.4	218	220
Number										
Dynamic	>	< >	'	<i>mf</i> >	mf	٧	f	p	< mp <	mf

Fig. 4.4 Chart of dynamics in the Recapitulation

The Coda, bars 221-233, contains eight dynamic markings, and as can be seen in the chart below, Fig. 4.5, they are subdued levels, brightening up only at the end with f.

Bar	221	223.2	225.4	227.7- 228.2	230.4
Number					
Dynamic	mf	mp	mf	> mp	f

Fig. 4.5 Chart of dynamics in the Coda, bars 221-233

These charts show that an overall dynamic template can be proposed for this piece as: mf - mp - mf, mirroring the three sections of sonata form.

Articulation

The simplicity and transparency of this piece is dependent on the clarity of articulation and the characterisation of each of the sections. Articulation following Staeps' precepts, outlined in Chapter 2, (p. 25), clarify the distinction between slurs and phrase marks to indicate a group of notes. I would suggest a gently tongued legato throughout with a varying degree of detachment for notes not under a phrase mark, and to restrict any slurring (no tonguing) to more local situations where two notes, or groups of three notes are specifically marked to be slurred, as in bars 39 and 125. This piece requires a lyrical style of playing and offers an opportunity to focus on a centred tone throughout the long phrases, using legato tonguing. This is contrasted with staccato triplets at bar 13.4 (Ex. 4.5, see p. 47), which need to be tongued lightly, gradually becoming variously more and less broad, to imply the dynamic gradation. The composer has structured the phrasing to be played within comfortable breath lengths and although breath marks are given in the score, others can be taken at rests as required.

Tempo

The piece is marked *Joyously and flexibly* at the beginning, and it is a flexibility of tempo that is needed to fully characterise the many sections of this piece. Two metronome marks are given in the score: sections A and A^1 are marked crotchet = ca. 112 and the central section, B (bar 89), with crotchet = ca. 84. The first I consider to be too slow to express the joyous characterization of this piece and would revise this up to crotchet = ca. 126. This melodic writing was conceived in a more romantic manner than most contemporary music, as was related on page 42, and it is the idea of walking in the country, engaged in listening to the surrounding sounds that has guided my interpretation. Although absorbing the atmosphere of nature may be a romantic notion, I consider that the characterisation of the melody requires a little more animation. Today we hear this music in a different way, and play it faster in order not to become too indulgent. The effect of this increase in speed means that each section, thereafter, needs an adjustment tailored to the descriptive text, for example With energy at bar 13.4 will sound more energetic at crotchet = 134 and more solemnly, bar 21.4 at crotchet = 112. However at bar 34.4 the triplets return and the tempo needs to move on, relaxing again at the melodic passage of bars 39 – 42. Fig. 4.6 charts the changing crotchet speed of the Exposition, and Fig. 4.7 the development section. In the recapitulation crotchet = ca. 112 is again revised up to crotchet = ca. 126 and crotchet = ca. 84 for the sections marked *mysteriously* remains the same. These metronome markings are

based on my recording on CD Track 5.

Bar	1	13.4	21.4	42.4	55.4	63.4	76.4	87.4
Numbers								
Descriptor	Joyously and flexibly	With energy	More solemnly	Joyously but gently	With decision	Dance- like	With decision	More gently Rit
Score	J = ca. 112							
Performance	126	134	112	126	116	126	120	

Fig. 4.6 Chart showing the changing crotchet speed of the Exposition

Bar Numbers	89.4	110.3	118.2	124.4	135.2	139.4
Descriptor	Mysteriously and flexibly	Pleasingly and dance-like	Resolutely	Pleasingly	Mysteriously and flexibly	Freely
Score	J = ca. 84	J = ca. 112				
Performance	84	126	126	112	84	Freely c. 84

Fig. 4.7 Chart showing the changing crotchet speed of the Development section

The charts represent a particularly prescriptive approach, considering the references to playing flexibly within the score, and the *ritardando* markings at the ends of phrases, but this can help to clarify the boundaries within which the various moods can be expressed. Crotchet = 126 is a more accurate reflection of the overall speed for my performance.

Rubato

Phrases in triplet rhythm are generally marked with *crescendo* and *diminuendo* signs, as can be seen from Ex. 4.6, (p. 49 above), carefully following the pitch contour so that the loudest part of the phrase coincides with the highest pitch. This is a curious detail, which simply supports the natural result of playing this phrase. It must be noted, however, that *crescendo* markings are not given in bars 40-42 or 205-206 where the pitch rises much higher and which need to be played more strongly to support the pitch on the instrument so that it speaks clearly. As a point of interpretation, Schenker explains in *The Art of Performance*, that when introducing new time values, 'it is necessary to play the very first notes of the new rhythmic pattern a little slower than the absolute strictness of the metronome would demand' (Schenker 2000, 57-59). The first passage in triplets follows

the opening section, which ends with crotchets, and introducing the new rhythm gradually helps to smooth the transition between the two time-values. The dynamic markings attached to the triplets could therefore be interpreted to mean not just a change of dynamic, but also a slight adjustment to the tempo in the manner of a *rubato*, where the *crescendo* implies a gradual increase of speed and the *diminuendo* a slight slowing down. As can be seen from Ex. 4.5 (p. 47), this phrase is just three bars in length and the use of *rubato* can be used to redress the balance a little by adding length to the end of the phrase. *Rubato* can be used to help to make this phrase sound more even, however, many phrases carry no dynamic marking. This offers the potential to interpret these phrases by either, playing straight through to highlight the unevenness, or by slowing down at the end of the phrase. I have used, as an example, bars 37.4 – 42 (Ex. 4.15) where the first phrase of 10.5 beats is answered by a phrase containing 8.5 beats, and the not-quite-long-enough wistful ending is better served by lingering at the high point. Two audio examples, CD Tracks 3 and 4, offer a comparison.



Ex. 4.15 Bars 37.4 – 42, showing the uneven phrase lengths Audio Examples: CD Track 3 is played in time; CD Track 4 is played more flexibly and a little slower at the end.

Vibrato

The score calls for vibrato to be used at four specific places within the central section: at bars 89.3-102.4; 109.3-104.2; 135.2-136, and 139.4-144.3. According to 17th- and 18th-century sources, 'vibrato was associated with fear, cold, death, sleep and mourning ... before being superseded by the more modern idea of using vibrato to embellish the tone' (Moens-Haenen). The association with fear could refer back to the use of the tritone and its portrayal of evil, and it is interesting to see that the use of vibrato first appears at the beginning of the Development section (bar 89), marked 'Mysteriously and flexibly' in the score, then at subsequent appearances of this descriptor. These sections feature the tritone as both part of the melody, and the ornamentation, as the interval is created between the grace note and the upper note of the trill. Examples 4.16a, b, and c demonstrate this

feature. The tremulous effect of the vibrato may be a reference to the flicker of candlelight traditionally used at Vespers, or even the light of the bonfire.



Ex. 4.16a Bars 89-93 showing the use of the tritone highlighted by a trill



Ex. 4.16b Bars 135-136



Ex. 4.16c Bars 228-230

At bars 135-136, (Ex. 4.16b), however, there is little opportunity for vibrato except as an addition to the trill, suggesting a yet more tremulous sound, enhanced by a breath vibrato. For the longer passages and long notes, finger vibrato (*flattement*) can be used, which will create lowered pitch inflections, with the effect of subduing the mood and enhancing the air of mystery. Bania, as a result of her research has concluded that '*flattement* technique was the dominating vibrato technique during the eighteenth century, and coexisted with the chest vibrato during the first half of the 19th century at least in England and Germany' (Bania 2008, 5), and is particularly appropriate to this piece in helping to convey the flickering images and nostalgia of times past.

A performer is often required to offer advice to a composer about the various idiosynchrasies of their instrument, but the performer's role is generally understood as being 'confined to the discovery of practical "solutions" to musical ideas ("problems") that have already been posed by the composer' (Fitch and Heyde 2007, 72). *Invocation at Midsummer* contains one such detail that suggests the dedicatee, John Turner, has offered advice to Crossley-Holland, as a non-recorder player would not be aware of this specific

practical option. The ornament in bar 86, with a c^3 - sharp, usually involves closing the bell hole. However, b^2 - c^3 -sharp- b^2 can be easily played slurred by lifting left-hand fingers 1 and 2 while maintaining a steady breath pressure. The full fingering is given in Ex. 4.17.



Ex. 4.17 Fingering for c³ sharp in bar 86

Other ornaments in this piece also need some consideration. The ornament in bar 85 (Ex. 4.18) is slow to change to b^2 and may need to be tongued very gently to secure this without the sound splitting.



Ex. 4.18 Bar 85, with ornament that is slow to speak ornament

The ornament in bar 177, attached to the third beat e^2 , should probably be an interval of a third between e^2 and g^2 , as in Ex. 4.19b below, rather than the f^2 sharp to g^2 in the score, Ex. 4.19a below. This would imitate the ornamentation pattern of the exposition at bars 51 and 54.



Ex. 4.19a and 4.19b Bar 177, showing alternative pitch of ornament

The piece comes to an end with a more clearly articulated phrase, echoing the end of the opening section, (bars 11-13), with the addition of a final written out ornament (Ex. 4.20).



Ex. 4.20 The final decorated cadence, bar 233

4.5 Conclusion

This piece references the pastoral style of composition favoured by many English composers and can be understood as an expression of both sacred and secular references to the rituals associated with Midsummer. The nostalgia for past traditions is suggested in its engagement with tonality, the influence of folk song, and a dynamic contradiction between the Fibonacci series and sonata form. It presents the performer with an interesting choice: to privilege the Fibonacci series and express the uneven phrase lengths, giving a post-modern interpretation, or to make use of the flexibility that comes with the use of *rubato*, reflecting a neo-romantic stance, based on a classical sense of balance. This is supported by the following extract, taken from *Speaking of my Life*, in which Crossley-Holland writes:

of the composer's quest for something new, it is certain to fail if he continues to put primary emphasis on techniques. Would he but turn to the spirit, he would find the spirit ever new and would see progress no longer as mere change but as the constant seeking out of materials and techniques which can clothe the spirit ever more nearly (Crossley-Holland 1979, 94).

My performance of *Invocation at Midsummer* can be heard on CD Track 5.

Chapter 5

XAPAYIH Charavgi (1994) by Calliope Tsoupaki for renaissance alto recorder

5.1 Introduction

Charavgi was commissioned, by the recorder manufacturer and publisher Moeck, as a test piece for the competition held as part of the 1995 Recorder Symposium in Calw, Germany. The review in *American Recorder* described it as

a long and difficult solo work ...[and as a] rather haunting romantic piece in which a slow, sustained, folk music influenced melody is embellished by rapid and complicated ornamental gestures [of which] the most difficult aspect ... is its enormous dynamic range; it requires a state-of-the-art command of dynamic and coloration techniques – nothing less will do (Rose 1997, 32).

In 1999 it was again described as a slow melody 'enhanced by color/dynamic changes ... highly ornamented [in which] the ornamentation is virtually inseparable from the melody' (Rose 1999, 31) and, as discussed in Chapter 2, (p. 19), colouristic tuning will be apparent here, particularly in the numerous scale passages.

Tsoupaki describes her music as having a 'mood of timelessness' with the aim of expressing 'the essence as simply and clearly as possible' (Tsoupaki 2016). The title, *Charavgi*, is a Greek word that indicates the 'very beginning of the dawn' (Tsoupaki 1995) or 'early dawn'. Tsoupaki explains that she did not 'only want to give a simple *feeling* of dawn in a romantic sense, but [I] tried to deal with a musical material that undergoes a transformation and ends exactly at the point of its full flourishing, just as the dawn ends at the moment of sunrise' (Tsoupaki 1995). Performer Julia Whybrow explained that the composer 'was imagining a lonely shepherd in an intimate and meditative dialogue with nature' (Whybrow 1996).

The published score of *Charavgi* is a printed copy of the beautifully handwritten original, comprising 67 lines of unbarred music. ¹¹ The detailed rhythmic writing serves to conceal a regular pulse, supporting the fluid and improvisatory nature of this piece, while the melodic writing alludes to the intricate ornamentation found in Greek traditional music and arabesques of Middle-Eastern art.

5.2 Structural Analysis

Tsoupaki has written that her compositions utilize elements of early and contemporary music, as well as the music of Greece and the Middle East (Tsoupaki 2016). My analysis seeks to identify these various influences and show how they have been incorporated into this work. The influence of early music is reflected not just in the choice of instrument, but also in the abundant use of baroque rhetorical figures such as tirata, circulo and groppo (trills) 'which are compounded in a *phantasia*' (Bartel 1997, 383). The word fantasia is derived from the Greek word 'phantasia' meaning imagination, or product of the imagination (Field, Helm and Drabkin). C. P. E. Bach explained that 'a fantasia is said to be free when it is unmeasured and moves through more keys than is customary in other pieces, which are composed or improvised in meter' (Bach 1974, 430), and employs an 'unfettered exploitation of instrumental virtuosity' (Field, Helm and Drabkin). This also reflects the Turkish/Arabic instrumental improvisation called *tagsīm*, which 'demonstrates divisions between magams' (Reinhard, Stokes and Reinhard), or modes. This division refers to the many sections that characterize the form of a tagsīm ... and the sections almost always proceed in an ascending direction (Shiloah 1995, 127). Charavgi can be divided into sixteen short sections, each section being separated by rests, but these can be grouped together to form a structure of three sections A, B, and C, based on the three distinct categories of material used to identify each section. These are the long notes and acciaccaturas of section A, two-part writing involving humming and playing simultaneously in section B, described as drones and discussed further on pages 69-71, and the upward striving *tirata* figure of section C.

-

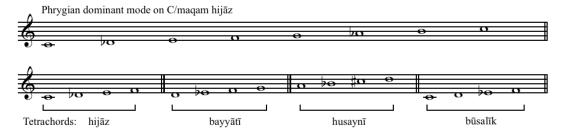
¹¹ There are three small errors in the score for each line to have full crotchet beats: 1. At the end of line 9, the dotted d³ and c³ are semiquavers; 2. In line 18 the tied f² beginning the second beat should be a semiquaver for the line to total eight crotchets; 3. In line 61, the last group of demi-semi quavers should be written as hemi-demi-semi quavers in keeping with the surrounding material.

Line	Section	Mode	Feature
1-16	A	C Phrygian dominant	Long notes, acciaccaturas
16-42	В		Drones
43-49	Transition	F Phrygian dominant	Acciaccaturas, long notes, trills
49-67	С	F Dorian/Phrygian -	Tiratas
		D Dorian	

Fig. 5.1 below, gives an overview of the structure.

Fig. 5.1 Chart showing the structure of *Charavgi*

Charavgi is composed in the Phrygian dominant mode, which corresponds to the maqām hijāz used both in flamenco, and Arabic music (Katz). A maqām, or mode, is defined by the addition of tetrachords which are 'a feature of art music, and [are] not found in popular or rural music, which remains within a narrow ambitus ... and maqām hijāz consists of the following tetrachords: the hijāz, bayyātī, husaynī, hijāz and būsalīk' (Blum), husaynī being a bayyatī tetrachord on A (Parfitt). Ex. 5.1 shows the Phrygian dominant mode and the tetrachords of the maqam hijāz used for modulation.



Ex. 5.1 Phrygian dominant mode and the four tetrachords of the maqam hijāz

The enormous variety of scalic material used throughout the piece comprises natural minor scales, the Dorian and Phrygian modes, and ends with D Dorian. The writing reflects the ornamentation of a melody as in seventeenth century diminutions or *passaggi*, comprising rhetorical figures and ornamental flourishes, which serve to support the concept of the rising sun at dawn. Bartel explains that 'by 1600 a systematic use of rhetorical principles and terminology, including the concept of musical rhetorical figures had been established in the *musica poetica* discipline through the writings of Joachim Burmeister' (Bartel 1997, 20). *Musica poetica* was one of two new disciplines of persuasive communication

developed from *musica practica*, and dealt with text-expressive composition, the other being *ars cantus*, which focused on the execution of a composition (Bartel 1997, 20). The aim of *musica poetica* was to balance the 'mathematical explanation of music with the empirical realm of natural experience' (Bartel 1997, 27), discussed in the previous chapter in relation to the Fibonacci series used in Crossley-Holland's work and the pitch of the harmonic seventh. This natural experience was codified as the concept of the affections, and the portrayal and arousal [of the affections] became 'the very essence of all Baroque music' (Bartel 1997, 29). The descriptive writing in *Charavgi* comprises many *figurae simplice*, or ornamental figures such as the *circulo mezzo*, mentioned earlier in relation to Crossley-Holland's *Invocation at Midsummer*, identified in more detail below. In a similar way, the *taqsīm* is not improvised '*ex nihilo*, [but rather] incorporates the cumulative vocabulary of generations of musicians, a tradition that favours recomposition rather than original development' (Shiloah 1995,128).

5.3 Paradigmatic Analysis

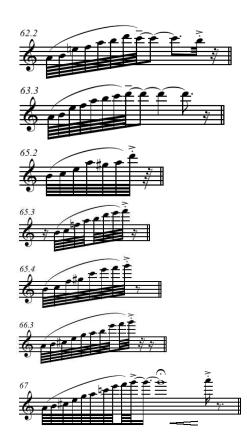
In this section I have identified the rhetorical figures that are found in *Charavgi* and, using these as paradigms, I created charts that can be used to practice this piece. The most useful charts were those for the *tirata* as each appearance of this figure is subtly different. Below I have given examples of my working models.

Mattheson referred to the *tirata* as a tirade 'vigorously "bolting upwards or downwards" like a spear throw or bow-shot (Bartel 1997, 409) and although they were described as moving by step, Tsoupaki imbues this figure with the modal patterns of Middle Eastern music in which each group of four notes changes, such that the lower four are not repeated at the higher level. In lines 51-52 (Ex. 5.2) the final high notes of each *tirata*, marked with accents, staccato, *tenuto* and trill signs, form a fragment of a descending melody and create a counterpoint to the rising *tirata*.

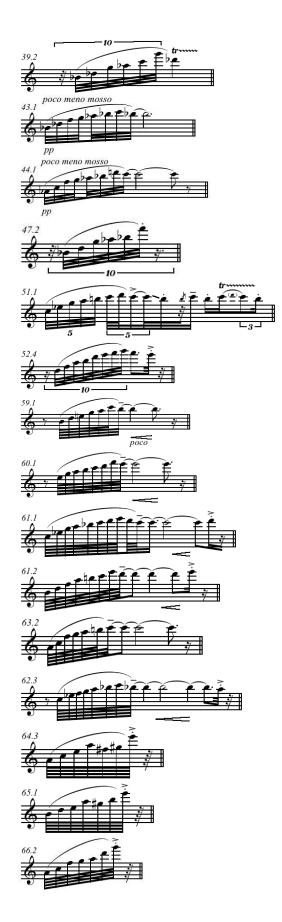


Ex. 5.2 Counterpoint to the rising *tirata*, formed by the final notes of each group

As can be seen in Ex 5.2 above, each *tirata* begins with an interval of a fourth or fifth. Other *tirata*s begin with the interval of a second or third, and I found when working at speed, it was difficult to discern which interval had been played at the beginning of each group. To aid my practice I created charts for these figures according to the initial interval but because the *tirata*s are all different, placing them into context within the piece meant they had to be internalized individually. The paradigms are listed below, by the interval with which they start: Ex. 5.3 shows the *tirata*s with an initial interval of a second; Ex. 5.4 beginning with a third; Ex. 5.5 beginning with a fourth, and Ex. 5.6 beginning with a fifth.



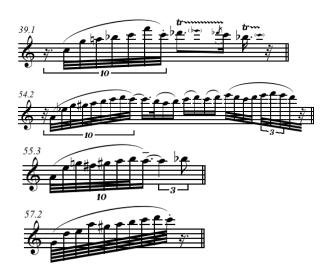
Ex. 5.3 Paradigm of *tirata* beginning with the interval of a rising second



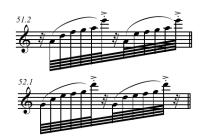
Ex. 5.4 Paradigm of tirata beginning with the interval of a rising third



Ex. 5.5 Paradigm of tirata beginning with the interval of a rising fourth



Ex. 5.6 Paradigm of figures beginning with the interval of a rising fifth



Ex. 5.7 Consecutive *tiratas* beginning with fourths and fifths

Circulatio or Circulo is 'a series of usually eight notes in a circular or sine wave formation ... [and was used to express] not only circular concepts, but also the eternal, infinite, and complete, ultimately symbolizing God' (Bartel 1997, 216). A more contemporary expression of this is found in lines 15 and 16 as groups of ten notes (Ex. 5.8). This figure is repeated three times, reinforcing the notion of completeness.



Ex. 5.8 Circulo in lines 15 and 16

The four-note *circulo mezzo* (Ex. 5.9) and marked with a slur in the example, visually represents the form of a half-circle and is particularly distinguished by having the same pitch for the second and fourth notes of the group (Bartel 1997, 218).



Ex. 5.9 Circulo mezzo in line 13

Charavgi concludes with an anabasis or ascensus (Ex. 5.10), 'an ascending musical passage which expresses ascending or exalted images or affections' (Bartel 1997, 179). More than word painting, it is 'used to musically recreate the effect of an ascending image or thought ... [and as such] can be both image and source of the affection' (Bartel 1997, 179). For this piece, this figure marks the end of the dawn and the beginning of the sunrise.



Ex. 5.10 Anabasis forming the conclusion to Charavgi

5.4 Parametric Analysis

Pitch range

Charavgi was written for a renaissance-style alto recorder with a pitch range of two octaves and one note, $g^1 - a^3$ (Ex. 5.11). This corresponds to the range of the 'Ganassi' style instrument, discussed in Chapter 1, fingerings for which were published by Ganassi in his treatise *La Fontegara* of 1535 (Ganassi 1956, 105). On some models covering the bell hole is required, but with some careful fingering it is possible to play all the high notes with the bell hole open, although f^3 can be as much as a quarter-tone flat.



Ex. 5.11 Pitch range of *Charavgi* extending from $g^1 - a^3$

Tsoupaki has very carefully crafted the phrasing of this piece and has helpfully identified breathing places with a comma, where no rest is marked. The improvisatory style is enhanced by the rhythmic flexibility, written using triplets, quintuplets and sextuplets as well as phrases that start on, or after, the beat.

Charavgi opens with an intoning on G, in the manner of a *messa di voce* (Ex. 5.12 below). The *messa di voce* is a technique used to give shape to long notes by creating a *crescendo* and *diminuendo*. In this case, the pitch is also decorated with acciaccaturas. This quiet beginning is descriptive of a slow awakening to the day, and to the dawn chorus, with acciaccaturas, and later, trills, in imitation of birds (Ex. 5.13). This piece upholds the

traditional pastoral associations of the instrument, with links back to the conservative trends discussed in Chapter 2.



Ex. 5.12 Opening of Charavgi and messa di voce



Ex. 5.13 Acciaccaturas and trills in imitation of birdsong

Charavgi exhibits a wide range of textural devices: of acciaccaturas, trills, glissandos and two-part writing. Acciaccaturas form part of the cadential figure, *Epistrophe*, which occurs repeatedly at the ends of phrases, as in lines 3, 5, 14, 16, 42, and 60 (Ex. 5.14).



Ex. 5.14 Cadential figure: Epistrophe

Trills

Thirteen trills are used, and Tsoupaki has carefully notated the pitches between which to trill (Ex. 5.15). In addition to the usual trills between tones and semitones there is one trill between notes a third apart (e^1 flat to g^1). Ex. 5.15 shows the trills in ascending pitch order.



Ex. 5.15 Trills used in Charavgi

Glissandos

Thirteen glissandos can be extracted for practice purposes. Ex. 5.16 identifies these glissandos, which are arranged in pitch order, with ascending glissandos first, followed, on the second line, by the descending examples.



Ex. 5.16 Glissandos used in *Charavgi*

Two-part writing

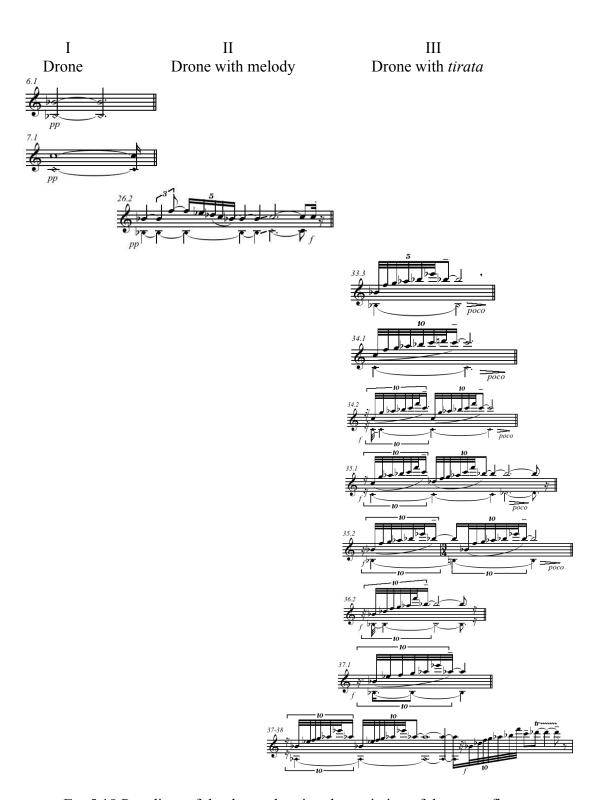
Charavgi also displays historical techniques for creating texture in monophonic music, by using two further types of two-part writing: instrumental sound plus voice, and *tiratas* with accented notes to finish, which themselves create an independent melodic line (see Ex. 5.2 on p. 62). Mersenne, in his *Harmonie Universelle* (Paris 1636), wrote that 'it is possible to sound a tune or a song on the recorder and at the same time to sing the bass line ... in such a way that a person can play a duet on his own' (Mersenne quoted in Griscom and Lasocki 2012, 361). As discussed in Chapter 2, Tsoupaki uses diamond-head notes to indicate humming, where the lower note is to be hummed while simultaneously playing the upper melody, as in line 26 (Ex. 5.17). Tsoupaki explains in the score to 'play the upper line articulated', but this also has to relate to the lower part, as it is not possible to tongue the lines independently.



Ex. 5.17 Hummed drone with independent melody, line 26 (Audio Example: CD Track 6).

This becomes more extensive from line 33 where the voice part maintains a drone, and the instrumental part continues in a mellifluous variation. The drone recalls the *Ison* of Byzantine chant as sung in the Eastern Orthodox Church, 'evidence [of which] can be traced back to about 1400, although the practice probably existed throughout the Middle

Ages' (Levy and Troelsgård). The drone serves to accompany and enrich the sound of the singing (Levy and Troelsgård) and for this piece, creates a meditative focus to the instrumental sound. The intention is not to create polyphony through the addition of the *Ison*, or even the concept of two parts, but a textural variation to the melody. The chart below, Ex. 5.18, details the paradigm of the drone, and the variation of the *tirata* figure, discussed below. Isolating the drone in this way enables us to identify the four pitches that are to be sung, (a flat, b flat, c¹, and d¹ flat), and the chart can be used for focused practice on this specific figure.



Ex. 5.18 Paradigm of the drone showing the variation of the tirata figure

Dynamics

The dynamic levels in this piece range from p-ff, but this belies an important challenge of *Charavgi*, which is the dynamic variety, requiring considerable breath control allied to appropriate alternative fingerings to accommodate the sudden changes in dynamics. Ex. 5.19a, and Ex. 5.19b are two examples of the use of dynamic, which suggest distant sounds, or echoes, adding to the textural variety found in this piece.



Ex. 5.19a Sudden contrast of dynamic in Line 4



Ex. 5.19b Sudden change in dynamic in Lines 4-5

5.5 Conclusion

Charavgi reaches beyond a traditional technique in its requirement for extreme agility in playing the upper register of the instrument, and in the control of sudden changes in dynamics. It is a typical postmodern work in its fusion of Western, and Middle Eastern melodic formulae: in the use of Western baroque rhetorical figures and Arabic tetrachordal techniques. The use of the voice evokes memories of both traditional Greek music and the *Ison* of Byzantine ritual, while the theme of the dawn reminds us of connections to the cycle of nature, and the pastoral associations of the recorder. In relation to Derrida, discussed in Chapter 2, *différance* is apparent between these sacred and secular ideas, between the concept of the fantasia and that of the *taqsīm*, between the notated improvisatory styles, and the idiomatic writing of two cultures brought together in this expression of daybreak. Depth of meaning is displayed here in the intertextuality evident in both form and detail, for the ideas are not simply juxtaposed, but rather entwined, and interleaved, creating a delicate fusion of styles.

Chapter 6

Piece No. 1 from Five Quarter-Tone Pieces for Solo Recorder (1997)

by

Donald Bousted

6.1 Introduction

The *Five Quarter-Tone Pieces for Solo Recorder* (1997a) 'were written with the specific intention to provide solo concert pieces which exploit the full quarter-tone range of the recorder ... are abstract in conception and arose out of technical interests with tessitura-shape, configurations of scales and motivic transformations by rhythm' (Bousted 2001a, 79). They are 'aimed at the most adventurous soloist' (Bousted 2002b, 102), and were considered by Bousted to be 'among [his] most ingenious creations!' (Bousted 1997b, personal communication).

Bousted's music is noteworthy for its use of quarter-tones, irregular time signatures, the use of the complete pitch range of the instrument, and its humour. *Piece No. 1* can be interpreted as an ironic look at a classical sonata, which conveys a sense of familiarity that results from balanced phrasing and hints of traditional tonality. The microtonality serves to heighten the humorous elements without obscuring the harmonic logic, although the humour is dependent on the accuracy of the quarter-tone pitches. At the lower pitch end of the instrument this can create a delicate and fragile sound environment, with a sense of playing 'on the edge' of what is physically possible. *Piece No. 1* is written for the alto recorder and I have chosen to use a Yamaha alto, which is the instrument I used for performances of Bousted's music throughout the 1990s, as it is the only instrument I have that speaks reliably across the full range. More specifically, it is the only instrument that will play d⁴ quarter-flat and d⁴ flat.

This piece, constructed from two whole-range scales (Bousted 2001a, 79) is, in essence, a dialogue between two contrasting elements: a four-note intervallic motif, functioning as an

indicator of melodic movement and direction, alternating with the tremolo, creating moments of stasis. The juxtaposition of these two elements was possibly inspired by the 'time-shifting' structural device of Jeanette Winterson's novel *Sexing the Cherry*, which Bousted explained he had used in his earlier work *This is Hell* (Bousted 2001a, 74) and links in to the theme of unevenness. This is a technically challenging piece to play because it is critical to have accurate tuning of the quarter-tones coupled with the fast tempo. Also the expression of the four-note motif, marked *portato* throughout, requires a considerably more varied approach to articulation than the score prescribes.

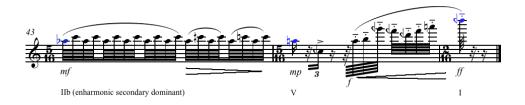
6.2 Structural Analysis

Piece No. 1 can be divided into five sections, A to E, and can be interpreted as a type of sonata form. The chart below (Fig. 6.1) clarifies the form, identifying the tonality in terms of a traditional harmonic scheme, with the identifying features of each section.

Bar Nos.	Section	Sonata Form	Hint of Traditional Tonality	Identifying Feature
1 - 14	A	Exposition	F/Dm ending with tremolo on A	Intervallic (four note) motifs and tremolos Two 4 + 2 + 1 bar phrases
15 -22	В	Exposition variation	G	Intervallic motifs ending at the comma 8 bar phrase
23 -25	С	Transition	Am – D	Tremolo 3 bar phrase
26 - 33	D	Development	С	Intervallic motifs and tremolos, both with extended intervals 4+2+2 bar phrases
34		Transition	C - A	Intervallic motifs followed by written out tremolo on A
35 - 45	Е	Recapitulation	Dm	An abundance of intervallic motifs Interrupted cadence at bars 39 - 40 2 + 1 + 4 + 1 bars Rising flourish to end

Fig. 6.1 Sectionalisation of *Piece No. 1*

Bousted has explained that there is rarely a sense of a tonic in his music, as it is 'much more intervallic, with an emphasis on evolving motivic shapes. This does not rule out a certain tonic-like magnetism in some cases ... it does generally refute the concept of secondary tonalities which exist in contrast to true tonics in tonal music' (Bousted 2001a, 13). However, I consider that it is possible to understand this piece in terms of conventional tonality: at the beginning there is an underlying suggestion of a sequence of fifths: F - C - G - D, albeit microtonally inflected to create the impression of a new sound world; the Exposition begins on F, the Development on C quarter-flat hinting at a dominant relationship, and the Recapitulation reflects the opening sequence with microtonal inflections of F, C, and G. The final cadence is an inflected traditional V-I cadence preceded by a secondary dominant: the A flat (enharmonic G sharp) moves through A to finish on D quarter-flat, as shown in blue (Ex. 6.1). The c^1 quarter-flat bar 44, also offers a surreptitious hint of modality: the pitch is strengthened rhythmically by being accented and placed off the beat, and serves as a leading note. The piece ends with a humorous and spirited flourish.

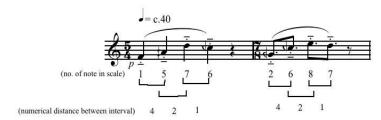


Ex. 6.1 The blue-coloured notes highlight the harmonic notes of the final 'perfect' cadence

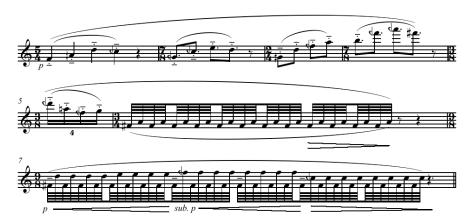
Although Bousted considers this piece to be an 'example of fully structured quarter-tone writing for the recorder' (Bousted 2016), it is my aural perception that this piece exploits tonal-based harmony, enriched by quarter-tone inflections. The fragmentary nature of the material, the use of microtonality, and the humour all serve to identify this piece as an example of postmodernist thinking, discussed in Chapter 2, although Bousted, at the time, considered himself to be working within a modernist framework (personal conservation).

6.3 Paradigmatic Analysis

The four-note motif announced at the beginning, and which underpins *Piece No. 1*, exhibits a wide variety of intervallic transformations. These 'occur by effecting permutations of the numerical distances between the intervals' (Bousted 2001a, 79), as shown in Ex. 6.2. The whole-range scales used in this piece have not been disclosed by Bousted, but from the example below we can see that a simple subtraction of the numbers allocated to the position of the note in the scale e.g. 1, 2, 3, etc. is used to determine the interval. In the opening bar the first two pitches are numbered 1 and 5 from the scale, and the numerical distance between them is 4 (5 minus 1). The numerical distance between the opening intervals, 4-2-1, is also reflected in the number of bars per phrase in section A, (Ex. 6.3). This suggests that the phrases become shorter, and yet as can be seen in Ex. 6.3, the single bar, bar 7, contains a lengthy tremolo. In performance however, bars 1-4 take the same length of time to be played as bars 5-7, approximately 22 seconds each, (CD Track 12, 1" - 44"), ensuring a sense of balance is maintained.



Ex. 6.2 Bars 1-2, Numerical Transpositions of Piece No. 1 from *Five Quarter-Tone Pieces*



Ex. 6.3 Bars 1-7, showing the phrasing of section A in the 4-2-1 grouping of bars

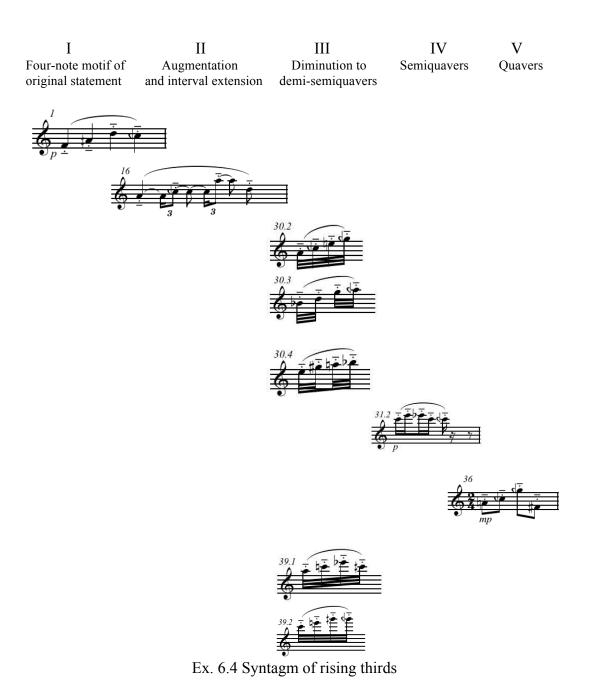
Referring to the numerical transposition as an 'approximate' transposition, Bousted explains that the supporting influential concept is 'a feature of the music of Bali where well-known phrases are transferred between, not only the different modes (called patets), but between the differently tuned scalic systems of *Slendro* and *Pelog*' ¹² (Bousted 2001a, 79). This refers to the two tuning systems of the Javanese gamelan (also used in Bali): *Slendro* has five almost equal steps to the octave, used 'to express deep happiness or deep sadness' whereas *Pelog* has seven unequal steps to the octave, ranging from a semitone to 'almost a minor third', ... and is 'more majestic, ... noble and calm, ... conveying the feeling of detachment necessary for meditation' (Powers and Wiering; Lindsay 1979, 24-25). *Pelog* is thought to derive from the Javanese word *Pelag* meaning fine or beautiful (Lindsay 1979, 24). 'These [scales] are each subdivided into three *patet* ... [which] in Javanese means "to restrain" (Lindsay 1979, 25) and this refers to

a limitation on the player's choice of variation so that while in one *patet* a certain note may be prominent, in another *patet* it may be avoided, or used for special effect. Through the awareness of this limitation, the musician similarly can restrain and refine his own feelings and emotions, which is the highest aim of playing gamelan music (Lindsay 1979, 25).

The four-note motifs may also reflect the use of four-beat phrases or *gatra* of gamelan music, which are 'essentially a metric unit, usually, though not invariably, coextensive with melodic phrases' (Powers and Weiring). The transformation of the four-note motif, by interval extension, rhythmic augmentation and diminution, can be clearly identified in the syntagm of motifs beginning with rising thirds given below (Ex. 6.4), selected for being the first interval of the first four-note motif in bar 1.

_

¹² Bousted refers here to Bali but the literature discusses *slendro* and *pelog* in relation to Java.



The first motif, in bar 1, follows traditional principles of melodic writing in which the two rising intervals are followed by a pitch that falls within the already expressed interval range. The motivic patterns occurring within the four-note motifs correspond to six of the possible eight permutations. Fig. 6.2 shows the distribution of the patterns, and identifies the predominant pattern as up-up-down, with two patterns, the down-down-down, and the down-up-up not used in the four note motifs. These are each found once, however, within

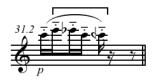
the five note figures of bars 21 and 31, shown in Examples 6.5 and 6.6 respectively.

Pattern	Exposition	Development	Recapitulation	Totals
Up-up-up	1	3	1	5
Up-up-down	10	3	14	27
Up-down-down			1	1
Up-down-up	1		1	2
Down-down-down				0
Down-down-up	10			10
Down-up-up				0
Down-up-down		6	2	8

Fig. 6.2 Interval direction of the four-note motifs



Ex. 6.5 Down-up-up pattern in bar 21



Ex. 6.6 Down-down-down pattern found in bar 31

The most extreme transformations of the motif are found in bars 30-31, where the initial interval is stretched to a descending two octaves and a major second (bar 30), and a descending two octaves and a diminished sixth (which looks complex on the page but sounds as an interval of two octaves and a perfect fifth) in bar 31, (Ex. 6.7). The increased angular profile created by the widening intervals, signifies 'a point of emotional intensity' for the composer (Bousted 2002, 10), bar 31 being the loudest, and most forceful declaration of the motif.

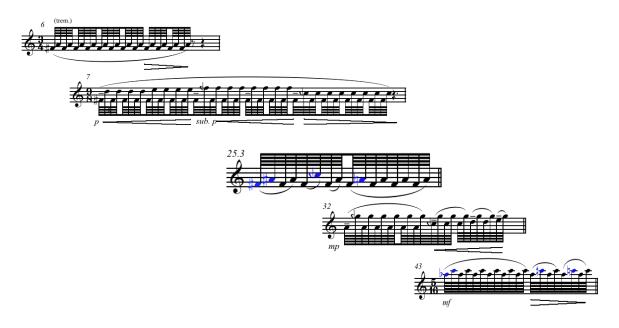


Ex. 6.7 Extreme interval transformations in bars 30 and 31

The chart Fig. 6.2 above, highlights the use of the melodic shape announced in bar 1, which is prevalent throughout the Exposition and the Recapitulation. It also shows that the Development section uses less variety of shape, but as Ex. 6.7 above shows, the variety is found in the use of the motif through the enlargement of the intervals, rather than the interval direction. An awareness of the lengthening of the note values and the interval structure is an important part of understanding the internal rhythmic drive of the motif.

The second element of this piece, a tremolo figure, is used in two forms: as an alternation of notes a third apart, (the opening interval of the work), and as a more expressive gesture which creates a two-part texture, in which the upper notes form a four-note motif against a fixed lower note. In Ex. 6.8 below, the first tremolo is given at I; at II the tremolo is inverted, the upper notes describing a four note motif; at III, the motif is concealed within the upper notes (coloured blue); at IV, it returns to the lower notes marked with a *tenuto*, and at V it is once again concealed (and coloured blue).

I	II	III	IV	V
Tremolo	Inverted Tremolo with upper notes forming a four-note motif	Concealed four-note motif	Four-note motif marked <i>tenuto</i>	Concealed four-note motif
	iour-note motif			



Ex. 6.8 Syntagm of the tremolo

This may be understood as a varied ornamentation of the tremolo, however, through the syntagmatic chain of meaning, the four-note motif can be identified as a unifying element throughout the piece, a technique observed by Rosen in classical music whereby 'decoration articulates structure' (Rosen 1976a, 108). The changing pitches, identified as being decorative, can also be viewed as an integral part of the structure.

6.4 Parametric Analysis

Pitch Range

The pitch range of *Piece No.1* extends from f^1 to d^4 quarter-flat (Ex. 6.9), utilising pitches a quarter-flat perfect fifth beyond the standard range of f^1 to g^3 . A fingering chart for the alto recorder is given in Appendix 4.



Ex. 6.9 Pitch Range of No. 1 from Five Quarter-Tone Pieces

Rhythmic Analaysis

In his PhD thesis, Bousted gave a demonstration of rhythmic analysis following the principles outlined in the work of Cooper and Meyer's *The Rhythmic Structure of Music*. I have undertaken a similar analysis of *Piece No. 1*, to clarify the structural relationships, and to show how they operate over three levels: level 1 deals with the relationship between individual notes; level 2, the relationship between bars, and level 3 between phrases, where "U' refers to an upbeat (weak) and "—" as a downbeat (strong) (Cooper and Meyer 1966, 6), referred to as simply up and down. I have interpreted the four-note motif principally as an up, and the tremolo as a down. Although there is local variation within the motifs, this simple approach also helps to identify the sections in relation to each other according to the material contained within them. I have interpreted: section A as a down, due to the numerous tremolos and the falling pitch of the motifs from bar 10; B as an up, due to the rising pitch of the motifs finishing on the minim b³, and the increased speed of the motifs; C, comprising an extended and varied tremolo, as a stand-alone section, a down. Section D is rhythmically active and intensely emotional, using the most extreme intervals, and serves as an up, to section E, a down, in which all the material is propelled forward to the final, quarter-tonally inflected, 'perfect' cadence, (Fig. 6.3). I have interpreted *Piece No. 1* as a '∪' in relation to *Piece No. 2*, (a '—'), as the

I have interpreted *Piece No. 1* as a '∪' in relation to *Piece No. 2*, (a '—'), as the predominant figure is a rising motif and the piece ends with a bold, dramatic rising flourish. *Piece No. 2* starts at a high pitch level and descends to the lowest notes of the instrument. An analysis of *Piece No. 2* can be found in Bowman 2014, 204-249.

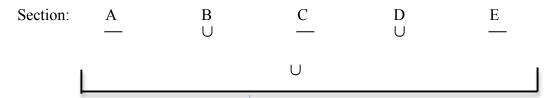
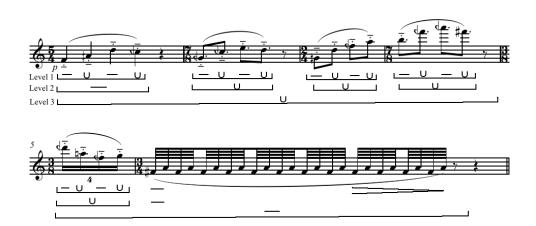


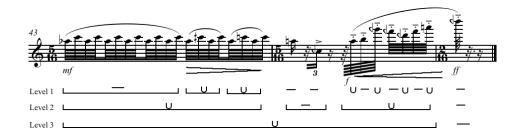
Fig. 6.3 The rhythmic relationship of the five sections of *Piece No. 1*

At the local level, level 1, the rhythmic relationships of bars 1-6 are organised as alternating strong and weak beats (Ex. 6.10). At level 2 the function of the motif changes from being static in bar 1, to active in bars 2-5 creating forward motion, returning to static in bar 6.



Ex. 6.10 Rhythmic relationships in bars 1-6

The rhythmic analysis identifies the iambic stress, and supports the change in function of the tremolo through bar 43, from down, to up. At level 2 this changes to up (the ab^2 acting as an enharmonic secondary dominant) as it moves to the dominant a^2 at the beginning of bar 44. Ex. 6.11 shows the three levels of rhythmic analysis of bars 43-45.



Ex. 6.11 Bars 43-45

These examples demonstrate that the overall meter of this piece can be interpreted as an iamb, traditionally associated with humour, after the 'extravagant hilarity displayed at the festivals of Demeter in Attica' were traced to the Greek goddess *Iambe* (Smith 1870, 548). This is an indication of the character of this piece, which is cast in a traditional sonata form, and yet the pitches are manipulated in a humorous way to suggest an underlying traditional tonality. Expectation of change is created by the ubiquitous use of the four-note motif, while the tremolo provides an unexpected change of texture.

Articulation

Bousted's interest in the equality of the quarter-tone pitches can be said to be mirrored in the articulation of the four-note motifs, as all are marked *portato*. However, a variety of

articulation is essential to support both pitch and dynamic in creating an effective interpretation, and for simply obtaining the highest notes, which require a clean articulation coupled with a fast air stream. The opening four-bar phrase contains an important feature that is critical to the understanding of this piece. The relative length of the notes is gradually shortened in bars 1-3 and lengthened in bar 4, which suggests a speeding up at the beginning, then a relaxation at the end of the phrase and is, in effect, a written out *rubato*. The score also carries instructions for the tremolos to be played 'fluid and unaccented'. Indeed, and as an example, the first tremolo (bar 6) brings the first statement to an ironic, unaccented conclusion being pitched at the low end of the instrument. The score instruction suggests a flexibility that also supports the use of *rubato*, and although it is possible to create some dynamic variation by using alternative fingerings, *rubato* can be used more effectively to enhance the integrated melodic shapes within the tremolos.

The opening phrase has three elements that require particular attention: the tuning of the quarter-tone pitches; the dynamic, p, which cannot be maintained realistically over the range of two octaves and a quarter-flat third, and the unevenness of tone that occurs between the diatonic and the microtonal pitches, for which fingerings need to be selected to correspond with the rhythmic stress detailed in Ex. 6.10, (see p. 83 above). It is not unreasonable to expect each note to have an equal quality of tone and yet, inherent within the instrument, there is a distinct unevenness. Do we then celebrate this unevenness of tone? This presents a challenge for the performer, and as the examples below will demonstrate, there are alternative ways of approaching this. It is possible to allow the instrument to take the lead and follow the line of unevenness, linking this to the Japanese idea of *wabi sabi*, discussed in Chapter 2 (p. 19), or alternatively, a technical solution with selected fingerings is found to create a more modern style of playing, by smoothing out the discrepancies of both tone colour and dynamic, such that the instrument follows the demands of the music.

Dynamics

The internal dynamic of each gesture within the gradual pitch-oriented crescendo of bars 1-4 is shown in Ex. 6.12 below. Notes that can be played full length to create an expressive melody over the four-bar phrase are coloured blue and also support the rhythmic stress, apart from bar 3, where the a² is lengthened to highlight and create forward movement, to

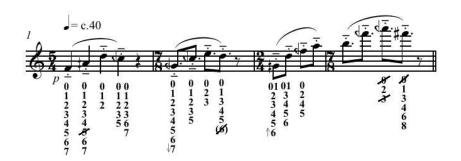
connect to the next motif. As the pitch rises, the dynamic can be enhanced with a stronger articulation, for example, across the eight notes of bars 3 and 4, the articulation d, d, D, D, D, T, T, D, can be used to create a faster airstream for the higher notes, (d refers to a gentle tonguing, D normal strength, and T, strong).



Ex. 6.12 Bars 1–4, showing the dynamic microstructure and articulation of the opening four bar phrase

The control of melodic and colouristic tuning is critical to Bousted's music, and in the rising four-note motifs it will become evident that 'brightening up', discussed in Chapter 2, is an important element of the interpretation.

Looking in more detail at the opening motifs, it will be recognised that the first two notes will be naturally quiet: the f^1 , the lowest note on the alto recorder, is produced by closing all the finger-holes, while the a^1 quarter-sharp involves a slight opening of finger-hole 5, producing a particularly fragile sound. The third pitch, d^2 , played with the standard fingering 012, will produce a strong sound, as will the ensuing c^2 quarter-flat (Ex. 6.13). This selection of fingerings will support the rhythmic stress and the unevenness of tone created by the juxtaposition of diatonic and microtonal pitches.



Ex. 6.13 Bars 1-4, Fingerings that support the rhythmic stress of the motif, and the unevenness of tone (Audio Example: CD Track 7)

However, alternative fingerings for d^2 and c^2 quarter-flat can be used to maintain both the p dynamic and the quality of the tone within the contour of the motif (Ex. 6.14).

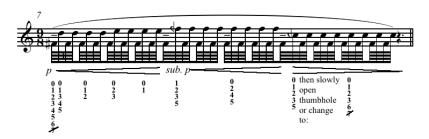


Ex. 6.14 Bars 1-4, non-standard fingerings to adjust the tone colour (Audio Example: CD Track 8)

Where no fingerings are shown, standard fingerings will apply. Further unevenness is apparent here, as the articulation for the high pitches in bar 4, needs to be active, yet the end of the phrase is rhythmically holding back. Playing on the back of the beat will enhance the rhythmic effect and ensure the tension is maintained to the end of the bar.

As can be seen in the above examples, two different fingerings can be used for c^2 quarter-flat, reflecting the changing function of this pitch in bars one and two: the first is for a descending interval and calls for a quiet sound to end the motif, while in bar two the c^2 quarter-flat is part of a rising figure, during which the dynamic will increase slightly. The stronger tone of this pitch in bar two means that a standard fingering can be used. Likewise in bar three, an alternative for d^2 is required to match the surrounding tone colour, accommodating both the fragile tone of the g^1 quarter-sharp and the veiled sound of the following f^2 quarter-flat. The d^2 played with a standard fingering of 012 will sound too strong on the weak part of the beat, creating an uneven curve to the motif and a sudden change of tone. By bar 4 the dynamic will have increased to at least an mf, yet will be tempered by the veiled sound, resulting from covering holes necessary to produce the correct pitches.

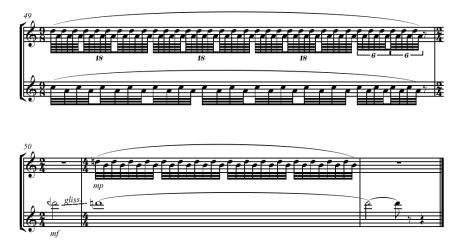
In bar 7, the use of *rubato* to support dynamic gradation in the tremolo is essential as little can be realistically created to move away from p when playing f^1 sharp. Changing from non-standard to standard fingerings can be used to enhance the dynamic, (Ex. 6.15) although this is extremely complex at the required speed.



Ex. 6.15 Bar 7, fingerings to support the dynamic changes (Audio Example: CD Track 9)

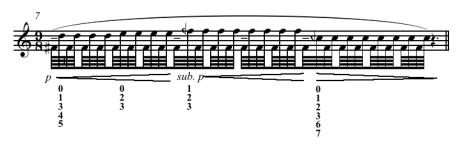
In 'Still' from *Journey Among Travellers* Bousted requested that the tremolos in bars 49-52, (Ex. 6.16), should stop abruptly, but in *Piece No. 1*, all but two of the tremolos are marked to finish with a *diminuendo* suggesting that a slight *ritardando* would be appropriate to soften the ending of each. As discussed in Chapter 4, (see pp. 54-55) some flexibility to the timing is necessary when new note lengths are first introduced for the auditor to assimilate the change. Here, this can also be applied to the end of the phrase to give the tremolo a balanced, arched shape.

In this case the dynamic markings indicate the subtle changes to the internal energy implied by the widening intervals within the tremolo. The dynamic possibility here is strictly negligible, but by using flexible timing it is possible to convey the fluidity of the tremolo, the increase and decrease in activity implied by the various intervals, and particularly by holding back a little in recognition of the *subito p*.



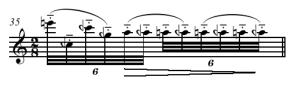
Ex. 6.16 Bars 49-52 of 'Still' from Journey Among Travellers

A more practical compromise is the use of *rubato*, employed with some non-standard fingerings (Ex. 6.17), and with a slight lengthening of the lower notes marked *tenuto*, which also serve to support the dynamic intention.



Ex. 6.17 Bar 7 using *rubato* to express the dynamics (Audio Example: CD Track 10)

In bar 35 (Ex. 6.18), the four-note motif is transformed into a tremolo and signals the beginning of the recapitulation. Marked with a *diminuendo* this can also be played with a *ritardando* to lead into the next section.



Ex. 6.18 Bar 35

This piece requires a wide range of dynamic exampled by bars 30–31 (Ex. 6.19 below), which serve to exacerbate the unevenness of tone, and pose a challenge for the performer to maintain the *f* and *ff* that is marked in the score. The highest notes, b³ and d⁴ flat, will undoubtedly be perceived as loud notes, but matching the dynamic of a¹ and f¹ sharp, in bars 30 and 31 respectively, will need a strong articulation to strengthen the tone across such a wide interval. Moving the instrument, up and down, to describe the intervals in the air, as Stockhausen prescribed for *In Freundschaft*, can be another way of conveying the extreme angularity of these motifs. Colouristic tuning, discussed in Chapter 2, will be in evidence here as the low notes, a¹ and f¹ sharp, are usually a little flat on most instruments, thereby stretching the interval a little. CD Track 11 demonstrates this, where indeed the a¹ starts almost a quartertone flat and then moves up to pitch. Following the three groups of four notes, the d⁴ is eleven cents sharp yet the f¹ sharp begins in tune and moves higher by

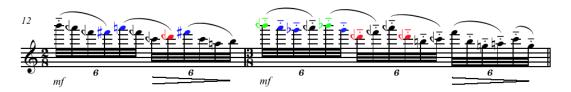
20 cents (less than a quartertone). Over such large intervals as well as being on the outer limits of the pitch range for the instrument, total accuracy is elusive.



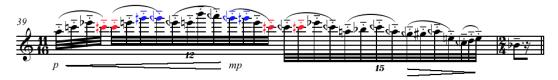
Ex. 6.19 Bars 30 - 31, wide range of dynamic (Audio Example: CD Track 11 demonstrates the colouristic tuning over the wide intervals)

Tempo

The suggested metronome speed is a challenge for the instrument, particularly in bars 12-13, and bar 39 where specific pitches are slow to speak as they cross a register break and the node changes position within the barrel. The highest notes also require considerable control in terms of air pressure and speed, to ensure the clarity of the sound. Other notes are susceptible to splitting, despite accurate coordination of fingering and breath pressure, and others require moving from open to closed bell hole positions. In the following examples of bars 12-13, (Ex. 6.20) and bar 39, (Ex. 6.21), the notes that are slow to speak are coloured red, the notes using the closed bell hole are coloured blue, and those that are both slow to speak and use the closed bell hole are coloured green. From these examples we can see that d³ quarter-flat and c³ quarter-sharp are particularly troublesome. This is because d³ quarter-flat is preceded by c³ quarter-flat, which is very close to the register break, and g³ flat, which lies in the fourth register. From Ex. 6.21 it can be seen that c³ quarter-sharp, which lies in the second register and is preceded by e³ flat and e³ natural, both of which lie in the third register.



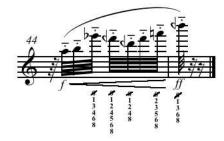
Ex. 6.20 Bars 12-13, identifying pitches that are slow to speak, coloured red, those using a closed bell hole, coloured blue, and where both apply the notes are coloured green



Ex. 6.21 Bar 39 showing the position of C quarter-sharp pitches, which are slow to speak, and notes using the closed bell hole, (coloured as in Ex. 6.20 above)

The second group of bar 39 has two issues that demand an accuracy of coordination: c³ quarter-sharp is particularly unstable and can squeak when played at speed and is very dependent on accurate finger placement, correct breath pressure, and accurate thumb venting, which needs to be particularly small for that one note. E³ and b³ share the same fingering and change from one to the other by means of only a small alteration of the breath pressure, in order to change register. These quirks of the instrument, with regard to changing register, entail considerable sensitivity to the particular instrument selected for performance and, as a consequence, a more flexible approach to the tempo is necessary to give the instrument time to speak clearly. With regard to the dynamics, the mf at the beginning of bars 12 and 13 is unrealistic, this being more relevant to pitches in the middle of the range. I would revise these to f or ff as this reflects the physicality of playing these notes, especially for the d⁴ quarter-flat, at the beginning of bar 13, which needs a particularly strong articulation for the note to speak. Likewise, the gradation of dyamic in bar 39 is not possible, as the b³ will be more prominent than the surrounding pitches, and occurs before the highest point of the crescendo. This could more appropriately be marked mf to f, and articulated gently to realise the lower dynamic level in comparison with bars 12-13.

This piece has a wonderfully humorous ending, which creates the expectation of a brilliant and dramatic finish suggested by the rising pitch, and a moment when the instrument could be raised high in the air (Ex. 6.22).



Ex. 6.22 The final flourish, bars 44-45, with fingerings

However, this dramatic effect is completely contradicted, and the movement of bravura thwarted, as the performer's head will be bowed while the instrument is pushed down firmly against the leg to close hole 8, in order to secure the last note. Bousted would certainly have been aware of the fingerings required, (Ex. 6.22), and so this must be seen as a deliberate decision to subdue the effect of this flourish, referencing the restraint of *patet*, mentioned above, as being the aim of playing gamelan music.

6.5 Conclusion

Intertextuality is evident here between the Javanese scales and 24-tet writing and between the structural elements of the four-note motif and the tremolo. The unequal steps of the Javanese scales and the equal steps of quarter-tonality are fused together, such that it is not possible to distinguish one from the other. This links back to *différance* and the idea of 'contamination' that occurs when two ideas are 'infected' by each other, and in this piece it has been shown that the tremolo arises out of the first interval (a rising third) of the opening motif, and is then infused by the four-note motif. Layers of enrichment also abound with an eighteenth century form articulated by the expressive means of the nineteenth century, and microtonality of the twentieth century, identifying this piece as distinctly postmodern, drawing as it does on both historical and world culture. This juxtaposition of ideas incorporates the postmodernist technique of *collage*, giving a plurality of meaning associated with the aesthetic of the 1990s.

A performance of this piece is given on CD Track 12.

Chapter 7

Albumblätter (1997)

3 Stücke für Altblockflöte solo
Gerhard Braun

Album Leaves 3 Pieces for Alto Recorder Solo

7.1 Introduction

Albumblätter were composed for different private occasions, and are individually dedicated to students and colleagues of Gerhard Braun. Consequently, the composer suggests in the score that Albumblätter may be performed either as presented in the published order, or separately. Together the three pieces are reminiscent of the form of a baroque sonata da camera, with many instances of baroque-style writing, including a short generic figure marked in the score with 'vielleicht Telemann?' [perhaps Telemann?] (Braun 1997). Also employed is the baroque aesthetic of klangrede, or speech in sound, and in this case, the literal use of spoken syllables. On first encounter, these pieces have a particularly recorder-friendly feel, and bear witness to the composer as a specialist player. The pieces are atonal, formed by processes associated with serialism, and utilize an extensive array of modern techniques that includes: flutter-tonguing, multiphonics, sputato, adding air to the sound to create rustle-tones, harmonics, percussive effects with the fingers hitting the instrument, as well as vocal sounds of whispered and unvoiced consonants which suggest references to Japanese culture.

7.2 Structural Analysis of *Albumblatt I*

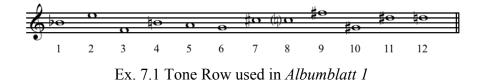
This piece comprises five sections of unbarred rhythmic passages (A), alternating with barred sections of irregular time signatures (B), comprising expressionist—style variations of a tone row. The sections are readily identified by descriptors and time changes in the score. Links between the sections are found at bars 10 and bar 21, smoothing the transition from one section to another. Each section is distinguished by particular techniques: section

A contains *sputato*, finger-tapping and vocal sounds and section B, flutter-tonguing and tremolos. The following chart details the structural analysis and instrumental techniques used in *Albumblatt I*, (Fig. 7.1).

Bar	Section	Descriptor	Technique
1	Α	Schnell und geheimnisvoll (fast and mysterious)	Sputato, finger-tapping
2	В	Wild und ungestüm	Flutter-tongue, tremolo
10	Transition		Flutter-tongue, sputato, finger-tapping
11	\mathbf{A}^1	Tempo primo	Sputato
12	B^1	Vorwärts drängend J = 112 (Pressing forward, urgent)	Tremolo, flutter-tongue
20	A^2	Tempo primo	Sputato
21	Transition	Einspielen (warm up)	
22	B^2	J = 112	Flutter-tongue, tremolo
29	A^3	Tempo primo	Sputato, finger-tapping
30	B^3	J = 112	Flutter-tongue, tremolo
32	A^4	ppp	Sputato, finger tapping, vocal sounds

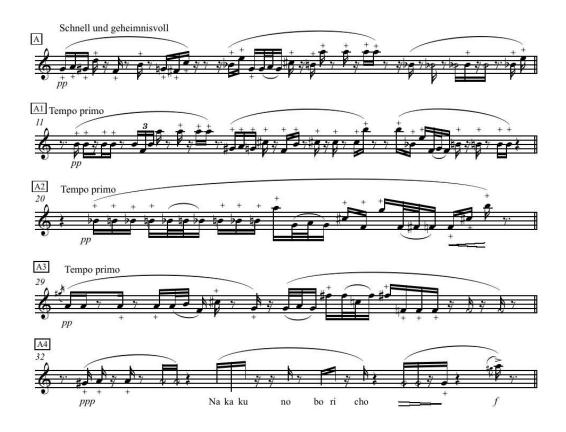
Fig. 7.1 Structural analysis and instrumental techniques used in *Albumblatt I*

The material is based on a tone row, (Ex. 7.1), which first appears in pitch order in bars 2-3. The row accommodates tritones, often highlighted by tremolos, and the intervals of major and minor sevenths, favoured by exponents of the Second Viennese School, and is manipulated by standard techniques of retrograde and inversion detailed below (Ex. 7.4).



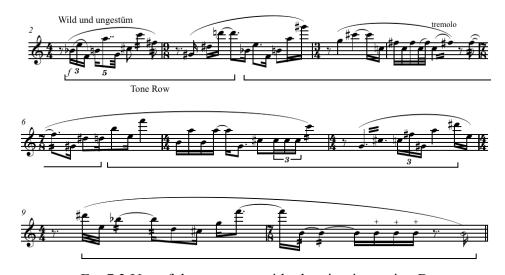
The use of pitch in the A sections is focused on the tritone and the textures of the *sputato* and finger-tapping techniques, whereas section A4 focuses on the semitone and introduces syllabic vocal sounds. Ex. 7.2 charts the unbarred sections of A1-A4, which can also be useful as a practice chart to focus on the extended techniques. I have phrased these fragmented sections to show groupings related to rhythmic balance in a pattern of question

and answer, in which the question rises with an interval of either a tritone or a minor seventh, and the answering phrase ends with repeated notes.



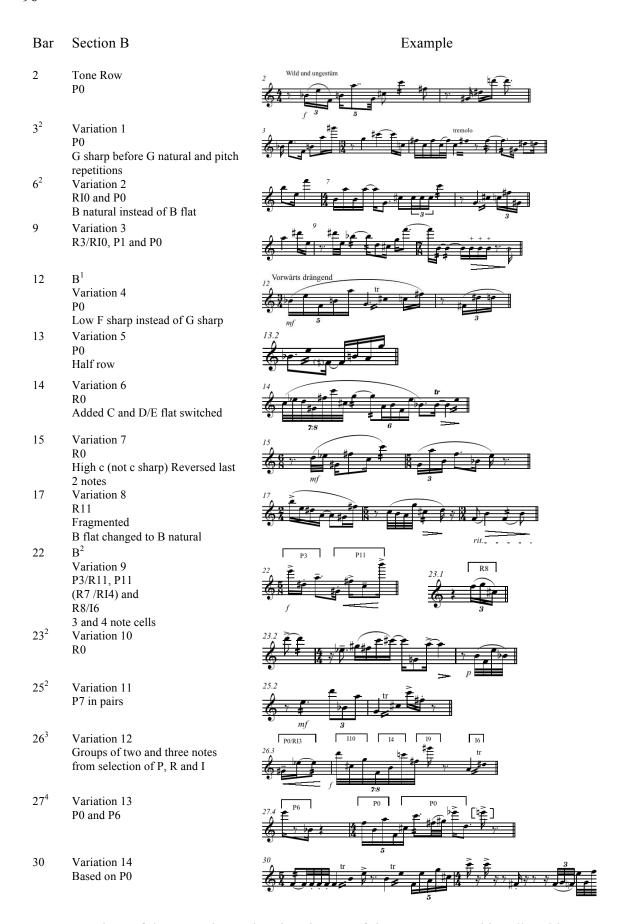
Ex. 7.2 Showing the phrasing of the unbarred A sections of *Albumblatt 1*

The phrases of section B, each separated by rests, do not, however, coincide with the tone row. Ex. 7.3 shows the overlap of the tone row with the phrasing in section B.



Ex. 7.3 Use of the tone row with phrasing in section B

The chart of the B sections (Ex. 7.4, p. 96 below), shows the complete row is used only at the first hearing, after which there are pitch changes (B natural instead of B flat at the beginning of variation 2), pitch repetitions, and sequences of pitches taken from retrograde and retrograde inversion forms. Gradually, the row is deconstructed, such that by Variation 12 short fragments occur from several row formats. Ex. 7.4, shows the variations of the tone row used in *Albumblatt 1*, in which the transpositions of the row are numbered 1-14, and R = Retrograde form; I = Inversion of the row, and RI = Retrograde Inversion.



Ex. 7.4 Chart of the B sections, showing the use of the tone row used in *Albumblatt 1*

Hints of tonality are evident in cadential features shown in (Ex. 7.5), in which the secondary dominant in bar 17, highlighted blue, moves the phrase forward, and strengthens the implied cadence at bar 18.

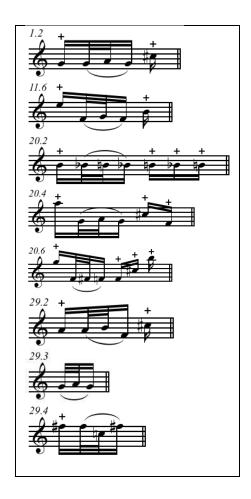


Ex. 7.5 Bars 17-18 Albumblatt I

This is a usual feature of common practice writing, yet here it serves to highlight the use of the tritone between the secondary dominant and the tonic, alluding to tonality within an atonal framework in which this interval becomes so prominent. The manipulation of the row also allows for tonal references to be made centred on the pitch A, which concludes the piece.

7.3 Paradigmatic Analysis

The charts above, Ex. 7.2 and Ex. 7.4, show the extent of the rhythmic variety contained in this piece and can be used, as they stand, as practice material for sections A and B. However, a particular feature can be selected and used for more specific work. As an example I have selected the rhythmic paradigm of the demi-semiquaver as the performance context utilizes the technique of opening and closing the glottis, explained below in Ex. 7.11 (see p. 100). This list of occurrences enables a concise and methodical way to practice this motif (Ex. 7.6).



Ex. 7.6 Paradigm of the rhythm with demi-semiquaver

7.4 Parametric Analysis

Pitch Range

The pitch range of *Albumblatt I* extends from f^1 to b^3 although only two pitches are used above f^3 and they are g^3 sharp and b^3 as shown in Ex. 7.7.



Ex. 7.7 Pitch range of *Albumblatt I*

Compound Melody

The composition reflects the rapid changes of character found in baroque writing as can be seen in bars 15 and 16 (Ex. 7.8). The syncopated, active rhythmic figure and rising pitch is

answered with the more relaxed rhythm of a triplet, a descending melodic line and an unaccented cadence, and is a stylist feature of the three pieces.



Ex. 7.8 Character changes in Albumblatt 1

Examples of two-part, or compound melodic writing abound, and in Ex. 7.9, it can be seen that the lower part rises by step, B-C sharp-D (tone followed by semitone), and the upper part rises by intervals of a third.



Ex. 7.9 Bar 28, Compound melodic writing in Albumblatt 1

This typically baroque style of writing includes the Telemann 'quote' in bar 25, shown below in brackets (Ex. 7.10).

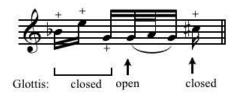


Ex. 7.10 Bars 24-26 Compound melodic writing in Albumblatt III

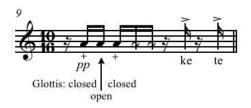
Instrumental Techniques

The use of flutter-tongue has become such a regular addition to the collection of techniques used by players of contemporary music that it is often overlooked just how much it enriches the pitch, in a similar way to *sputato*, and expands the texture of the sound. Although no microtones are notated here, some will be audible, if only momentarily. Ten pitches of the row are treated to flutter-tonguing, the two exceptions being g² sharp and a². Percussive effects are not so widely encountered, but are an effective part of the quiet palette of sounds, discussed further in Chapter 8 in relation to Ishii's *east•green•spring*. To ensure the audibility of finger-tapping, two, three or four fingers can be used simultaneously, depending on the notated pitch.

The opening section, to be played *sputato*, involves closing the glottis, so that only air from the mouth cavity is used. In bar 1, there is a rapid switch from *sputato* to standard playing, for which the glottis must be momentarily opened. In the example below (Ex. 7.11), I have indicated the points at which the glottis has to be opened and closed. The paradigm of the rhythmic figure can be used to practise this technique (see Ex.7.6 above, see p. 98). This technique is used again in bar 9 of *Albumblatt III* (Ex. 7.12).



Ex. 7.11 Bar 1, Example taken from *Albumblatt I*, identifying the points at which the glottis is opened and closed



Ex. 7.12 Bar 9 of *Albumblatt III* identifying the points at which the glottis is opened and closed

The speed of the B sections marked as crotchet = 112 is very fast considering the detail of intervallic size, and techniques such as tremolos and flutter-tongue to be negotiated, and I would suggest a tempo between crotchet = 90 and 96. This requirement for 'hypervirtuosity provoked by modernist developments' (Cottrell 2012, 744) is perhaps inspired by the serial nature of the piece, but I consider the high speed to be less important than the need to create the sense of impetuousness in performance, and Braun has notated this in the score through the fragmented material and wide intervals.

The final bar, bar 32, contains a fragment of text to be whispered emphatically: *Na ka ku no bo ri cho*, *Nobori-Cho* being the district within the prefecture of *Naka-ku*, Hiroshima, where the Hiroshima Peace Memorial Park in Japan is now situated. The fragmented text

is to be whispered syllabically, and the dynamic, *ppp*, suggests a moment of reflection. The peace, however, is soon shattered as the work comes to an abrupt end with a sudden loud gesture (Ex. 7.13). This can be enacted more theatrically by raising the instrument in the air, giving this gesture a greater element of surprise.



Ex. 7.13 Bar 32, and the conclusion of *Albumblatt I*

My performance of *Albumblatt I* is given on CD Track 13.

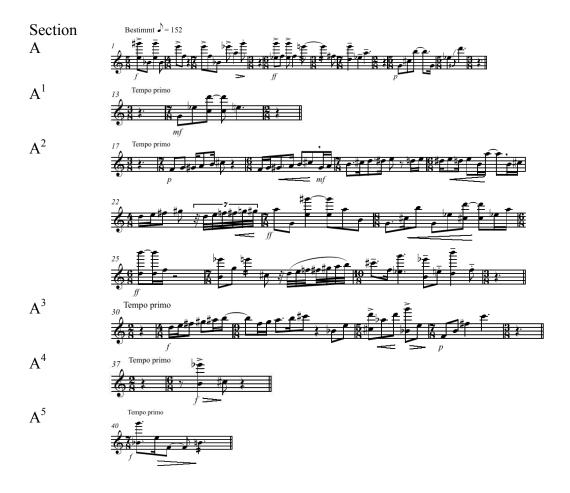
7.5 Structural Analysis of *Albumblatt II*

Albumblatt II is in twelve sections, six each of A and B in alternation, in which the A sections, marked bestimmt (precise), are measured in bars of varying lengths, with multiphonics set against more melodic, scalic material. The B sections, marked sehr schnell und nervös (very fast and jittery), provide a contrast by being rhythmic and unmeasured, comprising short groups of notes, played as quickly as possible, including groups of four notes with air added to the sound to create rustle tones. The sections contrast in their dynamics: section A ranges between p and ff and section B ranges between ppp and pp, except for the final multiphonic which is marked f, and relates back to section A, being a semitone lower than the opening chord. The chart below, Fig. 7.2, details the form and techniques of Albumblatt II.

Bar	Section	Subsection	Descriptor	Technique
1	1	A	Bestimmt	Multiphonics, flutter-tongue, silent bars
12		В	Sehr schnell und nervös	Rustle tones; short, staccato, rapid groups
13	2	A^1	Tempo primo	Multiphonic, silent bars
16		B^1	Sehr schnell und nervös	Rustle tones; short, staccato, rapid groups
17	3	A^2	Tempo primo	Conventional, scalic writing, multiphonics,
				flutter-tongue
29		B^2	schnell und nervös	Short, staccato, rapid groups
30	4	A^3	Tempo primo	Scalic writing, multiphonic
36		B^3	schnell und nervös	One short group of rapid notes
37	5	A^4	Tempo primo	Silent bar, multiphonic
39		B^4	schnell und nervös	Rustle tones; short, staccato, rapid groups
40	6	A^5	Tempo primo	Multiphonic, flutter-tongue
41		B^5	schnell und nervös	Fragmented groups of rapid, staccato notes,
				vocal sound and multiphonic

Fig. 7.2 Chart of form and techniques used in Albumblatt II

Both sections feature intervals of the tritone and major and minor sevenths within a fragmented compound melody. This piece makes a feature of the unevenness of the texture, exaggerated by the alternation of multiphonics and single pitches, which amplify the compound melody effect of the baroque tradition, as well as in the use of rustle tones and fast groups of staccato notes. I have compiled the A sections into chart form, (Ex. 7.14), from which can be identified the unevenness of the form: A¹, A⁴, and A⁵ being particularly short in comparison with A².



Ex. 7.14 The A sections of Albumblatt II

The same observation can be made in the following chart of the B sections, (Ex. 7.15), as section B³, a single group of rapidly played notes, is considerably shorter compared to the other phrases.



Ex. 7.15 The B sections of Albumblatt II

7.6 Paradigmatic Analysis

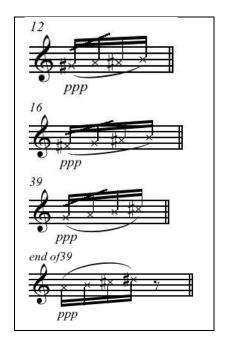
In compiling the charts to show a structural analysis, I realised that they could serve both as paradigmatic and practice charts. Elements of melody, rhythm and instrumental technique can be isolated but with such a high level of rhythmic variety in this piece, this style of analysis is not so fruitful for the performer. In creating a paradigmatic analysis of the multiphonics, first heard at the beginning of the piece, I found I was simply placing in a vertical mode what is readily seen in a horizontal mode from the chart of A sections in Ex. 7.14. Ex. 7.16 shows the paradigm of multiphonics, from which it can be seen that it is used in a different way within each bar. The only multiphonic present in the B sections is the final gesture at the end of bar 41.



Ex. 7.16 Paradigm of multiphonics in Albumblatt II

This paradigm also highlights the changing texture of the piece, between multiphonics and single notes. This aspect is evident in Braun's artwork, exampled on page 122, in which broad and narrow bands of dense and light texture alternate.

The paradigm of rustle tones are of which there are just four examples, becomes a useful practice chart for this motif, as shown in Ex. 7.17 below.

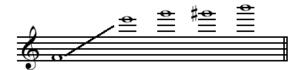


Ex. 7.17 Paradigm of rustle tones

7.7 Parametric Analysis

Pitch Range

The pitch range for *Albumblatt II* is the same as for *Albumblatt I* with the addition of b^3 , as shown in Ex. 7.18.



Ex. 7.18 Pitch range of Albumblatt II

It is possible to identify three styles of writing within the overall pointillist style: at section A there are techniques of multiphonics and flutter-tonguing, although flutter-tonguing

occurs on just two pitches: e^3 and b^1 ; at A^2 , scalic melodic writing, and throughout the B sections there are short, fast interjections, providing a rich and changing texture. In addition to this, sections B, B^1 and B^4 contain groups of four rising notes with air mixed in, described earlier in Chapter 2 (Ex. 2.6, p. 28), creating an unstable and very quiet sound, depending on how much air is added (Ex. 7.19 below).

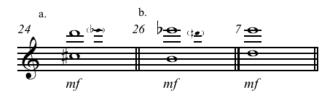


Ex. 7.19 Bar 12, rustle tones in *Albumblatt II* (Audio Example: CD Track 14)

Isolating the motif in this way can help us to make the decision as to how much air to add to the sound. Each of the rustle tone groups are marked with the same dynamic, *ppp*, but it is possible to create some variety by adding more or less air as the pitch rises.

Multiphonics

The published score gives a fingering chart for the multiphonics and the resulting pitches have proven to be reliable, with two exceptions, shown in Ex. 7.20 at 'a' and 'b', where c^2 sharp/ d^3 produces a slightly high $e^3 \, b$ (bar 24), and $b^1/e^3 \, b$ (bar 26) produces a d^3 quarter-sharp. Example 7.20 below, also identifies the three multiphonics that need an adjustment to mf, within their respective ff passages indicated in the score, as ff results in the production of the higher note only. The result will still be perceived as loud due to the change of texture and the high pitch of the upper note in the context of the surrounding material. The dynamic can therefore be thought of as a gestural instruction rather than one that relates directly to a change of volume. It must be noted that the composer was a recorder player and would have been aware of the potential of this instruction, but I consider it unlikely that he intended just the single higher pitch to be heard.



Ex. 7.20 Pitch and dynamic adjustments in Albumblatt II

Fingerings for multiphonics offer little opportunity for adjustment and consequently the effect has to take priority over the precise pitches. In this case unintended microtones may also be heard, which can add to the textural complexity of the sound.

'H'

Albumblatt II ends with the vocalised consonant 'h' followed by a multiphonic (Ex. 7.21 below) and although the specific meaning of the 'h' is not explicit, I propose a few suggestions.



Ex. 7.21 the final sounds of *Albumblatt II* (end of bar 41)

Following the use of text relating to Hiroshima in *Albumblatt I*, it is possible that 'h' is another reference to this city. 'H' is the German name for the pitch B and could be a reference to Braun's surname, although it must be conceded that the actual pitch B is not used here. However, it could also refer to the way that traditional Japanese instruments are taught using a system of oral transmission called *shōga*. This teaching method involves singing the music using onomatopoetic phrases of consonants or vowels in which the consonant 't' is used to start a breath phrase and 'h' marks a re-articulation of the same pitch. The consonants also represent the articulation of an instrument, for instance 't' and 'k' refer to the pluck of a string instrument (Kishibe *et al*). The Japanese flute used in *Noh*, and the *Ryūteki* of *Gagaku* used the *shōga* 'ho-u-ho-u-hi' (Clayton 2008, 47-50), and this aligns with Quantz's eighteenth century western description of playing repeated notes, marked with a slur, which 'must be expressed by exhalation, with chest action' (Quantz 1966, 75). This is often described as 'h', 'he' or 'hi', as in panting gently. Ex. 7.22a is Quantz's notated example to describe this technique, and Ex. 7.22b shows how this would be played with the use of 'he' to articulate the repeated notes.



Ex. 7.22a Quantz's example of chest articulation



Ex 7.22b the use of 'he' to articulate the repeated notes

The use of 't' or 'd' ('ti' or 'di') is interchangeable and depends on the strength required to start a phrase.

In 1998 Braun composed *Something about 'H'* dedicated to Han (recorder player Han Tol) which is principally a study on the pitch class B. The piece makes considerable use of the repeated consonants 'H' and 'T', and as an example, I have used bar 43 to show the use of 'H', which Braun notates as H(a), (Ex. 7.23).



Ex. 7.23 Bar 43 from Braun's Something about 'H' showing the use of 'H'

A performance of *Albumblatt II* can be found on CD Track 15.

7.8 Structural Analysis of Albumblatt III

This piece is in six sections, clearly marked by the composer by changing tempo indications and changes of material, and can be understood as a type of sonata form. The sections are also introduced by instructions in each of the preceding bars: to 'lead up to' (bar 10), 'press forward, urgent' (bar 15), and in bar 28 a *rit*. and a fermata over the last beat. At bar 41, there is a traditional cadential trill, followed by a *ritenuto* leading into the Coda. The Coda, bars 43-49, makes more use of *sputato*, finger tapping, vocal sounds, flutter-tonguing and non-standard fingerings for changes of tone-colour. The selected pitch of A has a flexible array of alternative fingerings, and subtle shades can be created by minutely adjusting the fingering, particularly those using hole 0 or 7. The chart below

shows structural divisions, tempo markings, and the contemporary techniques used in *Albumblatt III*, (Fig. 7.3).

Section	Bar	Tempo	Techniques
A	1-8	♪ . = 108	Accents and staccato
Exposition			
Theme 1			
Transition	8/II-10		Finger-tapping; sputato; notes mixed with air;
			whispered consonants; noisy flutter-tongue
В	11-15	J = 56	Tone-colour changes; harmonics; multiphonics
Theme 2			
A^1	16-28	Tempo	e ¹ ; accents and staccato;
Development		primo	
\mathbf{B}^1	29-35	J = 56	Multiphonics; Tone-colour changes; harmonics; e ¹ and
			b flat
A^2	36-42	Tempo	Sputato; Finger-tapping; vocal sounds; tone-colour
Recapitulation		primo	changes
B^2	43-49	J = 84	Tone-colour changes; sputato; finger-tapping; flutter-
Coda			tongue; notes mixed with air; vocal sounds;
			Dynamics: ppp; pppp

Fig. 7.3 Structural divisions, tempos, and contemporary techniques used in Albumblatt III

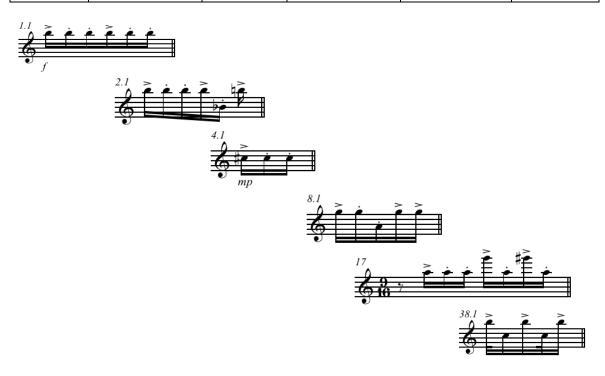
Consistent with a traditional sonata form, the exposition themes contrast with each other, the first being loud, energetic and conventionally written in an expressionist style, the second being at a quiet dynamic level, with the use of contemporary techniques.

7.9 Paradigmatic Analysis

I initially segmented *Albumblatt III* by using the rhythmic features of the first bar and then created two lists: one starting with accented groups of three notes, and another of accented groups of two notes, as featured in the two groups that comprise bar 1.

Ex. 7.24 shows the syntagm of the first group in bar 1.

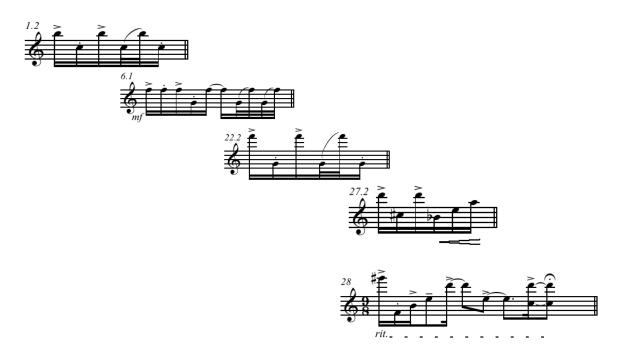
I	II	III	IV	V	VI
Repeated	Accented Stress:	Truncated	Accented Stress:	Accented	Diminution
Notes	3+2	Group	3+2+1+1	Stress: 3+2+2	
		_			



Ex. 7.24 Syntagm of the first group of bar 1 in Albumblatt III

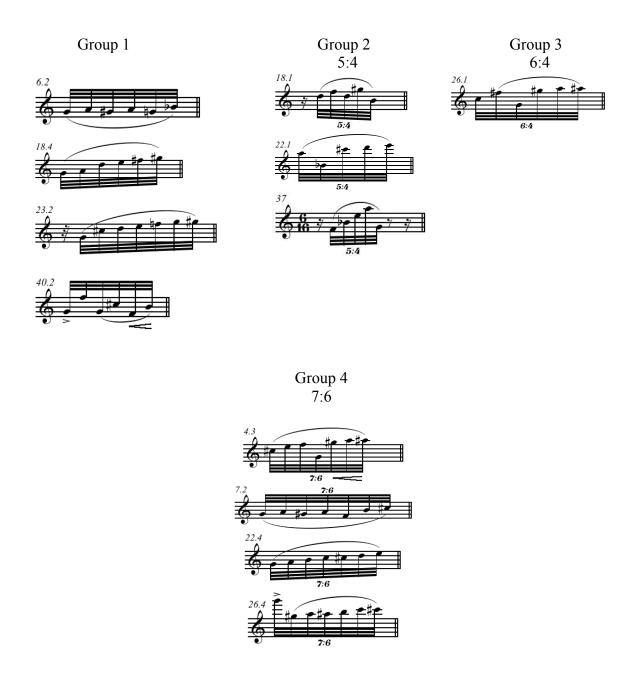
Ex. 7.25 shows the syntagm of the second group in bar 1 from which it can be observed that the accented groups of two notes are usually followed by a group of three, and they also feature the demi-semiquaver rhythm used in *Albumblatt I*.

Accented	Accented Stress:	Extended	Altered pitch of	Augmentation
Stress: 2+3	2+2+2+1+1	Interval	lower note	



Ex. 7.25 Syntagm of the second group of bar 1 in Albumblatt III

These changing rhythmic elements are interspersed with a chromatic figure, which displays subtle variations of both speed and pitch. Ex. 7.26 is a table of this feature, arranged into four groups according to their relative speed within the tempo of dotted quaver = 108. This table can also serve as a practice chart, to internalise both the rhythmic relationships and the varying intervals of each group.



Ex. 7.26 Chromatic figure arranged by the relative speed of the group

Of the contemporary techniques used in *Albumblatt III* and identified in Fig. 7.3 (see p. 110), the specific use of tone-colour changes and harmonics is the most unusual. In the next section, I explain how to play these by inhaling, by using alternative fingerings, and by closing the bell hole. I have created a paradigm chart (Appendix 6), which can also serve to aid the practice of the harmonics and tone-colour pitches.

7.10 Parametric Analysis

Pitch range

The pitch range of *Albumblatt III* utilises the standard range of two octaves between f^1 and f^3 with a few extra notes at either end as shown in Ex. 7.27 below. This is the only piece of the three *Albumblätter* that requires the bell hole to be closed: fully closed for b flat, half closed for e^1 , and fully closed again for a^3 .



Ex. 7.27 Pitch range of Albumblatt III

Texture

As discussed earlier, the use of the major seventh was an interval emphasised in the atonal music of Schoenberg, and when played consecutively the pitches 'cause a sensation of "roughness" (Lehrdahl quoted in Ross 2012, 61). This roughness is apparent in the opening bars in which the b² and c² alternate, exacerbated by the changing accent of the rhythm from groups of three to groups of two, (Ex. 7.28).



Ex. 7.28 'roughness' at the opening of Albumblatt III

This opening has the energy of a dance and is reminiscent of a gigue, or jig, often found as the last movement of a baroque sonata, with the added fiery excitement reminiscent of Bartok's use of Bulgarian rhythm (3+3+2) in his Mikrokosmos Book 6, No. 6 (Six Dances in Bulgarian Rhythm). In a more pitch-extreme example, bars 22-24, (Ex. 7.29) colouristic tuning can be discerned, similar to the Bousted example in the previous chapter, in which the high notes are slightly sharp.



Ex. 7.29 Bars 22-24

(Audio Example: CD Track 16)

Tone Colour

As discussed in Chapter 2, Braun uses a variety of signs to distinguish changes in tone colour and 'harmonics', or flageolet tones, are colourful additions to this palette of sound. There are two methods available to the recorder player for the production of harmonics: one is comparable to the harmonics on a stringed instrument and possible on the recorder over the range of a sixth, $c^2 - a^2$, using standard fingerings and a very low breath pressure (Ex. 7.30), creating a particularly delicate sound. An extremely steady breath pressure is essential, as the slightest deviation results in the sound disappearing! The fragility, or wispiness, of the sound is reflected in some of Braun's artwork in which lines and textures, fluctuating in intensity, dissipate at the edges, rather like a whispered breath, as can be seen on p. 122.



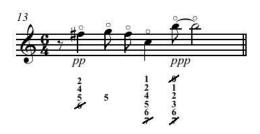
Ex. 7.30 Range of harmonics used in *Albumblatt III* (Audio Example: CD Track 17)

Bar 13, a bar comprising entirely of harmonics, (Ex. 7.31) poses a real challenge as it includes the pitch b¹, which is not available using the under-blowing technique suggested above. To serve as a comparison, bar 13 is exampled without the final note!



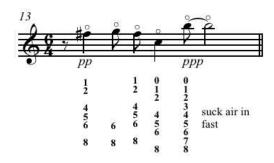
Ex. 7.31 Bar 13 Harmonics (Audio Example: CD Track 18)

A more practical solution is to use non-standard fingerings (Ex. 7.32) that can be played both smoothly and quietly. This is not ideal as it is difficult to lower the dynamic for the last note to *ppp*.



Ex. 7.32 Bar 13 using non-standard fingerings (Audio Example: CD Track 19)

However, fingerings in the covered register, (Ex. 7.33), offer a more stable sound and consistent tone-colour, and yet the only way I know to produce such a quiet sound on b² is to suck the air into the instrument¹³. Therefore, in the rest at the beginning of bar 13, it is imperative not to inhale, but to deliberately exhale, so that the harmonic on b² can be held for its full length. This is a rarely encountered situation (apart from during circular breathing), when inhalation takes place whilst playing, and exhalation takes place during a rest.



Ex. 7.33 Bar 13 using fingerings in the covered register (Audio Example: CD Track 20)

The sucking technique for b^2 is required again in bar 31, (Ex. 7.34).

-

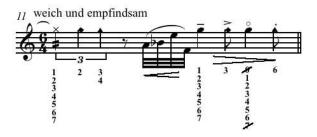
¹³ Walter van Hauwe and Johannes Fischer both included this in their respective publications.



Ex. 7.34 Bar 31

(Audio Example: CD Track 21)

Ideally, when interpreting the tone colour changes, each core fingering will be assigned to a particular sign to be used consistently, and adjusted where necessary, according to the dynamic level. However, in bar 11, the decrescendo affecting the last three notes means that the last note is to be played quieter than its predecessor, which is a harmonic. Fingerings for this are exampled below, (Ex. 7.35).



Ex. 7.35 Bar 11 showing the fingerings for the tone colour changes

In bar 18 there is an e^1 , created by half closing the bell hole on the knee. This is placed within a fast passage marked f, and is difficult to execute with a secure sound, as covering the bell hole even a little more than is necessary can result in no sound at all! Playing this note loud is simply not possible. However, it is possible to secure the e^1 by half covering the bell hole whilst playing the preceding notes, as they are not affected by this partial closure. Ex. 7.36 indicates the notes to be played on the knee.



Ex. 7.36 Bar 18

The player will need to be seated for this piece in order to use the covered register, and bar 32, (Ex. 7.37 below) examples a situation that is unique to each instrument. Closing all the finger holes and the bell hole is expected to produce a b flat, yet on many instruments an

'a' will sound. On my Coolsma instrument, the b flat sounds a quarter-tone flat, and when blown more strongly in an attempt to blow it up to pitch, the note splits into a multiphonic.



Ex. 7.37 Bar 32 with covered register fingerings (Audio Example: CD Track 22, with b flat sounding a quarter-tone flat); (Audio Example: CD Track 23, with b flat changing to multiphonic).

The quiet ending, marked *ppp*, begins with a series of repeated a²s to be played with changing fingerings. This results in a slight change of pitch, perceived more as a change of tone colour, which then changes to rustle tones with air added to the sound, marked *pppp*, as the performer walks off stage while continuing to play. To this theatrical element is added a humorous touch as the *toka*, the etcetera, suggests the continuation of what has already been heard. The text used in this piece appears at first to be a set of nonsense syllables, but there are clear connections to both recorder technique and the Japanese onomatopoetic oral transmission techniques mentioned earlier in relation to *Albumblatt III*. The chart below offers some possible explanations for the vocal sounds found in *Albumblatt III* (Fig. 7.4).

Bar	Text	Explanation
9	Ke te	Standard articulation syllables found in recorder treatises of Ganassi and Quantz Syllables used as part of the teaching method, <i>Shōga</i> : onomatopoetic consonants used in the teaching of traditional Japanese flutes (see p. 108)
10	pf	Labiodental consonant: upper teeth against lower lip producing an airy sound
39	Ba ku ts	Baku: Japanese for explosion; a Japanese mythological beast resembling an elephant said to devour dreams and nightmares (Reese); Capital of Azerbaijan possibly referring to a visit by the dedicatee;
	ts	A sibilant, hissing sound
44	Te ke te;	Articulation syllables; $Sh\bar{o}ga$ method discussed in relation to <i>Albumblatt II</i> (see p. 108)
	Ft	Airy sound that stops suddenly;
	Bo ka tsch	Bokatsch: German surname
49	To ka	Toka: Japanese for etcetera; such as; or.

Fig. 7.4 Chart of syllables used in *Albumblatt III*

7.11 Conclusion

Albumblätter are three highly refined miniatures of the recorder repertoire, which have been unequivocally composed for the recorder, rather than the 'recorder or flute' style of many contemporary works. The pieces make full use of the sound potential of this instrument and challenge the performer to explore a wide range of dynamic, especially in the control of the very quiet sounds. Although technically demanding, Braun displays in these pieces an intimate understanding of the instrument's capabilities and the subtleties that can be coaxed from it, evidenced in the use of tone-colour, dynamic, and intervallic note patterns that use simple, but non-standard fingerings. They display 'state of the art' recorder knowledge, reflecting a modernist approach both in the compositional techniques and contemporary instrumental techniques. Albumblätter also fall within the framework of postmodernism in the use of serialism and ideas inspired by another culture, in this case blowing techniques of Shakuhachi, and Noh flute playing through the mnemonics used in Shōga, as well as references to Hiroshima in the whispered text.

A performance of Albumblatt III can be heard on CD Track 24.

Albumblätter

Translation of German performance directions given in the score¹⁴

Albumblatt I

Schnell und geheimnisvoll fast and mysterious
Wild und ungestüm wild and impetuous

Vorwärts drängend pressing forward, urgent

Einspielen to warm up – in music and sport

To play in – an instrument

Albumblatt II

Bestimmt Precise, definite

sehr schnell und nervös very fast and nervous (jittery, on edge)

kaum noch hörbar scarcely audible

Albumblatt III

Schnell und bestimmt fast and precise überleiten zu leading up to

weich und empfindsamsoft and sensitive, sentimentalvorwärts drängendpressing forward, urgent

ständig wechselnde Griffe continually changing fingering

1) vielleicht Telemann? Perhaps Telemann?

2) eventuell von der Bühne abgehen

und hinter der Bühne aufhören. If possible leave the stage and

finish/come to an end behind the

stage.

-

¹⁴ Translated by Kathryn Bennetts

Klanglandschaften

During the period 1992-1993 Braun produced a set of twelve artworks:

Klanglandschaften: Musikalishe Grafiken (Soundscapes: musical graphics). I have selected one dated '5/x/93', shown below as Fig. 7.5, as an example of his interest and work with unevenness in another medium that I consider to be relevant to *Albumblätter*. It particularly reflects the unevenness of *Albumblatt II*, of the alternation between multiphonics and single notes, and the unevenness and fragility of the harmonic tones in *Albumblatt III*.

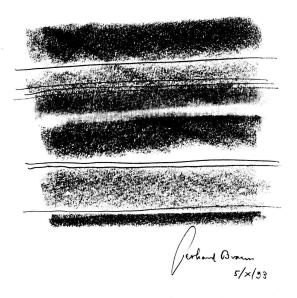


Fig. 7.5 Musical Graphic by Gerhard Braun

Chapter 8

East•green•spring op. 94 (1991)
by
Maki Ishii

8.1 Introduction

The music publisher Moeck commissioned *east•green•spring* for the 1992 Solo Recorder Competition held in Calw, Germany. It is considered to be 'one of the most important works of [the] contemporary recorder literature' (Rosa 2007), and is in the repertoire of many of today's leading performers. It brings together many elements of contemporary Western techniques of form, motif, and ornamentation with traditional Japanese music, and in my analysis, I will identify the aspects of *Gagaku* that have been influential to this composition.

As a performer I believe it is important to understand something of the Japanese aesthetic in order to find meaning within this piece, as there is a real possibility of what Tagg describes as 'codal incompetence' (Tagg 2008, 135) when creating an interpretation of a work of another culture.

While it is not possible to fully explore every aspect of another culture and its varied performance traditions, I consider it to be a responsibility of the performer to have some knowledge of the basic underlying concepts that inform that culture. We can argue that Western notation of a work destined for a Western audience should be sufficient instruction for the performer, and perhaps with considerable experience this is enough to form a thoughtful interpretation. Yet the notation of music is a very imprecise art. It is possible to have 'codal incompetence' even within one's own culture. The rhythmic variants of the Viennese Waltz, and the *Siciliano* are examples within Western culture, which are governed by a specific performance practice not detailed in the notation. When these elements are added to a performance it is enlivened, and without, there is less chance

_

¹⁵ Dan Laurin, Gudula Rosa, Tosio Suzuki

of creating the magic, or 'tingle factor'. They become distinguishing features such that the performance can be identified as being specifically in the style of a Viennese Waltz, or in this case a Japanese melody, in which it is possible to discern historical melodic and rhythmic motifs.

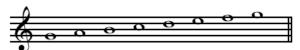
The opening melody of Ishii's *east•green•spring* is a case in point, as the first note can be played straight, as in a western style, or it can start with a *portamento*, Japanese style. Likewise with the ensuing acciaccaturas, which can be played quickly and discretely, or slowly, to give them more prominence, discussed further on page 130. As part of my preparation I considered it important to explore the traditional Japanese style, and it was this that informed my performance. It enhanced my appreciation of the exotic nature of the work and helped me to understand the depth of the historical and cultural layers to which Ishii alluded in his writings.

The cultural references embedded in this music are derived from, and connote, an East Asian tradition and are therefore distanced from the late twentieth century Western tradition, by both the time and meaning, in which this work was conceived. The descriptions that Ishii offers of his experiences allow the interpreter an opportunity to glimpse this 'other' world, to imagine and recreate the sounds. Tagg, however, cautions that 'verbal descriptions of musical meaning must ... be treated as very approximate verbal connotations of musically precise messages' (Tagg 2008, 136). Yet what are the precise messages that music can convey, for they are bound up in cultural understanding and emotion, such that each individual may respond in a different manner? Schubert identifies the functions of music as being to communicate, to give pleasure and to take us out of ourselves, removing us from the reality of day-to-day life, but argues that 'the fundamental (main) function of music is that of producing dissociation (e.g. induction of pleasure)' (Schubert 2009, 75). If music is about efficient communication, 'the transmission of a message must be received by one or more recipients' and the message is the emotion that is communicated (Schubert 2009, 67). If, on the other hand, the function of music is to provide an opportunity for 'the removal from reality' or 'dissociation' (Schubert 2009, 73) then this extra layer of cultural understanding may not be necessary. As Schubert argues, both 'non-Western and non-traditional forms [of music] are identifiable with this definition' (Schubert 2009, 75) but it is dissociation that is a 'necessary function required for auditory signals to be considered musical' (Schubert

2009, 76). This suggests that codal competence is irrelevant and that making the performance a pleasure for the audience must take priority. However, living in a globalised society, we are increasingly assimilating information of other cultures. By presenting a Japanese-oriented interpretation, there is, clearly, a risk of not creating the necessary 'dissociation' for a Western-oriented audience, but I would argue that the pleasure is enhanced for anyone who does understand the cultural associations.

The title of Ishii's east•green•spring gives the first indication of the historical traditions embedded within this composition. In a treatise dating from 1185, Kangen ongi or Principles of Instrumental Performance, Ryokin outlined the musical philosophy and system of metaphysics for Gagaku, in which each season and point of the compass is allied to one of the five natural elements, a colour, and a specific musical mode. East 'corresponds to the point from which the sun rises, to the morning, and to the spring. Due to its association with natural growth, east corresponds on the level of matter to wood and bamboo. On the level of sound, east is associated with the Sojo mode because of this particular mode's association with the sound of wood, and on the level of colour the association is with green as symbolic of nature' (Kido 1997, 217-219). The Sojo mode in its original Chinese form corresponds to the Mixolydian scale on G (Ex.

8.1).



Ex. 8.1 Sojo mode or Mixolydian scale

Compositions based on this mode have a strong pentatonic character and contain fewer ornamental figures than are found in other modes, allowing the basic melody to be heard more clearly (Garfias 1975, 129). The mode comprises fixed consonant and dissonant pitches, the two dissonant pitches being the fourth and raised seventh degrees (C and Fsharp) (Garfias 1975, 67). A particular feature of the Sojo mode is the use of microtonal inflections, which are evident in the opening melody (Ex. 8.6, see p. 129 below).

The instrumental combination used in performances of *Gagaku* comprised eight instruments, three of which were wind instruments: a transverse bamboo flute, the ryūteki; an end-blown double reed pipe, the *hichiriki*; and the $sh\bar{o}$, a small mouth-organ made up of seventeen bamboo pipes. According to Garfias the *hichiriki* and the *ryūteki* together are the 'most important instruments of the *Tōgaku* ensemble' as they 'most clearly articulate the melody and...give the best definition to the structure of the [mode]' (Garfias 1975, 47). Both are constructed in such a way that 'they can easily produce the microtonal embellishments that are characteristic of *Tōgaku*¹⁶ (Garfias 1975, 47). Robert Garfias in *Music of a Thousand Autumns* gives a clear analysis of the traditional instrumental writing used in *Tōgaku*. Important for this study is his delineation of the figures and motifs used for compositions in the *Sojo* mode and particularly those articulated by the *ryūteki* and *hichiriki*. Using this information it is possible to surmise that Ishii not only had these instruments in mind when composing *east•green•spring*, but also the melodic and structural formulae of the whole *Tōgaku* tradition.

8.2 Structural Analysis

My study of this piece has led to an understanding of the formal structure as being a fusion of both Japanese and European common practice models. As a Western form it can be understood as A, A^1 , A^2 , B, B^1 , B^2 and C, C^1 , C^2 , the sections being identified by distinct changes of character in the musical material at bars 1 (A), 57 (B) and 58 (C). As a traditional Japanese form the sections can be categorized according to the principles of *Jo*, *ha*, $ky\bar{u}$ discussed earlier in Chapter 2. The chart below (Fig. 8.1) correlates the two interpretations of the form and the techniques of each section.

_

¹⁶ $Togak\bar{u}$ is the Chinese repertoire of Gagaku.

Bar Numbers	Western Form	Japanese Form	Dan	Tonality	Technique
1 - 9	A	Jo (Jo of Jo)	1	Sojo mode	Melody with microtonal inflection and glissandi
10 - 27	A^1 A^2	(Ha of Jo)			Flexible timing
28 - 56		$(Ky\bar{u} \text{ of } Jo)$			
57 lines 1-4	В	Ha (Jo of Ha)	2	Atonal	Finger tapping; glissandi
57 lines 5-8	B^1				Finger tapping and glissandi
57 lines 9-14	B^2				Glissandi
58 - 75	С	(Ha of Ha)	3	Tonal centre G	Graphic notation: random finger movements and breath pressure; extreme
76 - 80	C^1	$(Ky\bar{u} \text{ of } Ha)$	4		dynamics Microtonal inflections
81 - 84	C^2	$Kyar{u}$	5		Extreme dynamics

Fig. 8.1 Correlation of the form of east•green•spring

As can be seen from Fig. 8.1, the lengths of the sections analysed in this way show considerable variety. The Western approach offers symmetry and balance with three sections of similar length while the Japanese model appears unbalanced, since the third section, $Ky\bar{u}$, is so short. Yet this is consistent with the Japanese aesthetic, and as Kishibe has commented, 'multiplicity, rather than symmetry and unity, might be regarded as the basic feature of the style and form of Japanese music' (Kishibe). The $ky\bar{u}$ section, although short, also comprises three distinct gestures creating a further jo, ha, and $ky\bar{u}$ as shown in Ex. 8.2.

Bar	Kyū (fifth dan)	Technique
81	Jo of Kyū	Trills
82-83	Ha of Kyū	Random fingering and breath;
		Long high A
83	Kyū of Kyū	Final g ¹

Fig. 8.2 Division of the final section the final section $Ky\bar{u}$ into three parts

As we look at the piece in more detail we discover melodic units, motifs and techniques associated with traditional Japanese music alongside examples of western avant-garde techniques, which together form a particularly representative work of the 1990s.

Tonally, the entire piece is structured around G, and, as discussed in Chapters 4 and 5 in relation to the works by Crossley-Holland and Tsoupaki, this is again used as a reference to the sun. The Japanese name for Japan is *Nihon* or *Nippon* (日本), literally meaning 'sun origin', and is usually translated as 'the land of the rising sun', referring to the sun rising in the east i.e. over Japan, as seen from China, and this association with the east is referenced in the title of the piece. The rising pitch of the tonal scheme (Ex. 8.2) can be seen to represent both the passage of the rising sun and, in the return to low G, the cyclic nature of the sun, which in performance is used to develop tension as the pitch and dynamic rise, relaxing at the end as the sun sets.



Ex. 8.2 Tonal scheme of east • green • spring

8.3 Paradigmatic and Parametric Analysis

For this analysis I have discussed each section, A, B, and C in turn, as the parametric analyses are closely allied to the paradigmatic charts.

Pitch Range

The standard pitch range for the tenor recorder, marked in Ex. 8.3, is extended in this piece to two octaves and a seventh.



Ex. 8.3 Extended pitch range used in east-green-spring

Fingerings for the full range of the tenor recorder, including quarter-tones used in this piece, and for tremolos and glissandos can be found in Appendix 5.

Section A/Jo, first dan bars 1-56

East•green•spring opens with a haunting and unmistakeably Asian melody, typically 'characterised by intricate melodic formulae and frequent octave leaps' (Marett 2013) and, as mentioned above, is typical of $Togak\bar{u}$ melodies with its decoration of microtonal ornaments and glissandos. The opening long G announces both the Sojo mode and the traditional nature of the material. Ex. 8.4 shows the opening of the Netori, or Prelude, for the Sojo mode (Garfias 1975, 224), which can be seen as the model for the beginning of east•green•spring, (Ex. 8.5).



Ex. 8.4 Opening motif of the Sojo Netori for Ryūteki



Ex. 8.5 Ishii, east•green•spring, opening motif for recorder

Garfias writes 'all *Tōgaku* compositions begin in this slow, amorphous tempo that gradually becomes stabilized, then slowly and very steadily accelerate until the end' (1975, 74). The first three one-bar phrases each contain a specific number of main pitches, reflecting the number of syllables used in traditional art forms: for the chant at the beginning of *Noh* and also in *Renga* where the syllabic pattern is 5-7-5-7- 5-7-7. In this case the bars contain each of five, seven and seven main pitches respectively as can be seen in Ex. 8.6.



Ex. 8.6 Bars 1-3 showing the number of pitches in each bar, reflecting the number of syllables used in traditional art forms

The complete melody comprises ten notated segments each separated by rests. These rests are particularly significant as 'one of the most carefully preserved aspects of the $Togak\bar{u}$ tradition is the adding of extra breathing places...than are indicated in the notation. These most often occur after the fourth beat of one measure and before the first beat of the next' (Garfias 1975, 127). Ishii has notated the rests in the score at the end of each melodic segment in accordance with this ancient tradition (Ex. 8.7 below), discussed above in Chapter 2, p. 22, in relation to blowing zen.

The monophonic nature of traditional Japanese music and the simplicity of this opening melody demand a precision of fingers and breath control to create a smooth line, from which the microtonal beginnings of the glissandos can be clearly heard. The octave g^1 - g^2 lies in the middle of the range and has a clear open sound on the tenor. This is a flexible area of the instrument for dynamic nuance and tonal change with the selection of appropriate fingerings. In the first bar for example, the glissando between c² and d² involves sliding the left thumb across its hole, a technique that is particularly easy and effective. The microtonal inflection is also easy to accomplish when the fingers can simply glide across the holes and the changing dynamic on d² can be played by, again, sliding away finger 2, and simultaneously diminishing the breath. The short phrase lengths give ample time to physically breathe and also reflect on the sound just heard. Traditionally, this 'stress on the horizontal, ... also brings the ornamentation to the fore' (Tokita and Hughes 2008, 24). I have recorded two demonstrations of this melody: the first conceived from a Western stance, focusing on the melody itself and treating the ornaments as superficial decoration; the second from a Japanese perspective, in which the ornamentation is particularly prominent, and examples the traditional technique of the first note being approached from below.



Ex. 8.7 Bars 1-9
(Audio Example: CD Track 25 favouring the melody)
(Audio Example: CD Track 26 favouring the ornamentation)

This melody also examples other typical features of the *Tōgaku* style: the 6/4 time signature is indicative of the duple meter of Japanese music (Garfias 1975, 82); the rhythmic motif of the semiquaver, dotted quaver rhythm is found in *Shoko* gong parts (Garfias 1975, 83), as well as the microtonal inflection on the fourth degree (C sharp) of the mode (Garfias 1975, 54-55).

The end of the melody at bar 9, is an ornamented form of the traditional cadential figure for *Sojo* as played on both the *hichiriki* and *ryuteki* (Ex. 8.8) (Garfias 1975, 134).



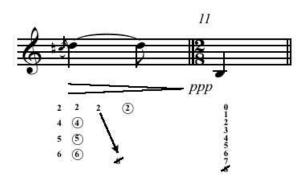
Ex. 8.8 Cadential figure for recorder at bar 9 and the traditional cadential figures for *hichiriki* and *ryūteki*.

From bar 10 (A¹) a variation begins which gradually transforms the melody through a process of subtraction and addition of pitches, a process analogous to the *Metamorphoses* of the artist M. Escher (1898-1972) (CCBM; Escher). The ten opening segments are individually repeated, shortened and interspersed with single notes at first, which then gradually accumulate to full bars of quavers with each note having an attached

acciaccatura. Only segment seven (bar 7) is presented exactly as at the first appearance. Initially marked *ppp*, the dynamic of these low interjections rises to *mp*. Ex. 8.9 shows the first interjections at bars 11 and 13.



The low b, used only once at bar 11, involving the half-closure of the bell hole, can be prepared by positioning the instrument on the leg or calf during the previous note. As the dynamic decreases, and just before the second finger slides away from the hole for the glissando, there is a moment to check the angle of the instrument to ensure an accurate position to secure the low b, which is much easier to control when seated. The fingerings for the low b and its preparation are shown in Ex. 8.10.



Ex. 8.10 Bars 10-11 showing fingerings to secure the low b

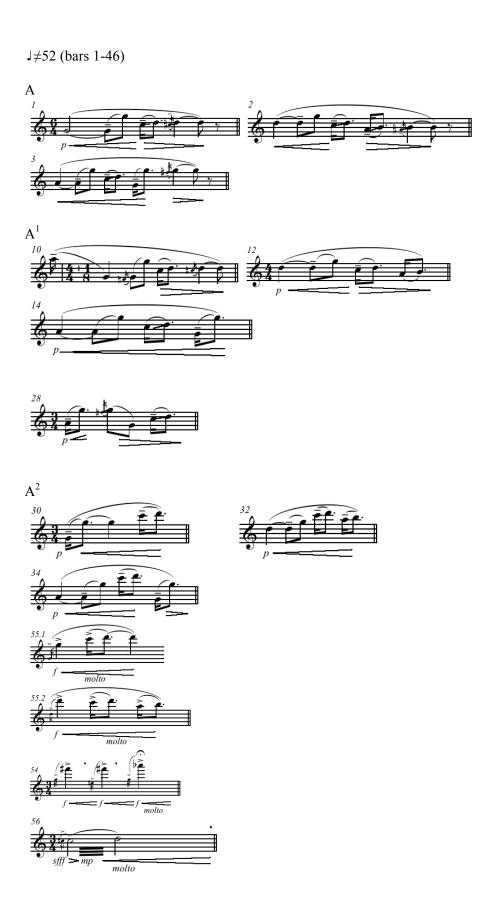
(A²) During this second variation the quiet interruptions gradually increase in length and speed (each is marked *accelerando*) and each note has an acciaccatura attached as in bar 45, (Ex. 8.11) until the melody is reduced to single notes (bars 48, 50, 52).



Ex. 8.11 Bars 44-45

This example also demonstrates how the acciaccaturas rise in the melody but fall in the interjections, creating balance and symmetry within this section. Ex. 8.12 below, details the variation of the first three sub-phrases of Section A, from which it can be seen that bar 28 stands alone, showing the only descending octave g^2 to g^1 . This represents a significant point in the score, positioned at the halfway point of this section, and is the second of only three ornamented G's. (The first is the last note of bar 3, and the third is in bar 75). Placing the G on the second beat suggests that nothing extra is expected from the performer, as the composer has defined the function by the addition of the ornament to give this pitch sufficient prominence.

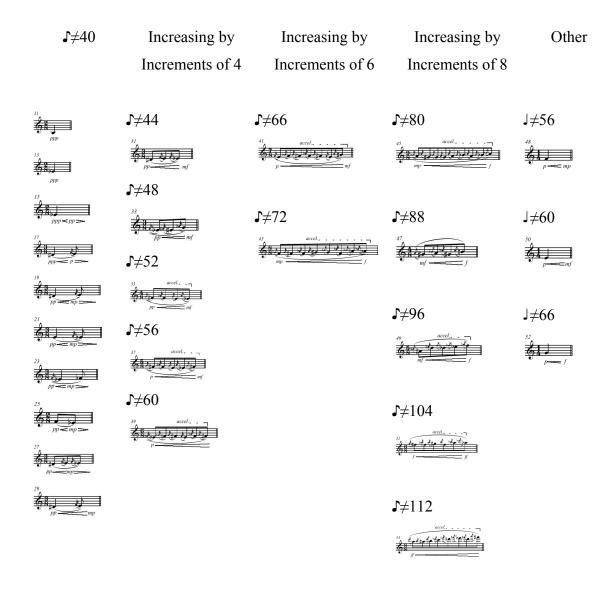
The opening melody, bars 1-46, and the ensuing fragments of melody, are to be played at approximately $J \neq 52$. (The sign used in the score is = with a backward slash superimposed and I have replaced this with \neq in the text and charts).



Ex. 8.12 Chart of the beginning of Section A detailing the variation of phrases 1-3

The chart of section A (Ex. 8.12 above) can serve as a practice chart for melodic motifs as it stands. The interjections, however, start at $J \neq 40$ and increase in speed until $J \neq 112$ but are not stable as some also involve an accelerando towards the end of the bar. This flexible timing, switching between the stable speed of the melody and the gradually increasing speed of the interjections, creates a tension between the two parts, which is dramatically enhanced by the rising dynamic level. For practice purposes I have regrouped the interjections by tempo, and with the help of a metronome, the tempo of each bar can then be internalised. However, the success of this, section A^1 through to the end of A^2 , depends on maintaining the momentum and tension throughout.

Alternating with these melodic phrases are interjections, interspersed to effect the transformation. Ex. 8.13, below, shows the paradigmatic analysis of these interjections grouped according to tempo.



Ex. 8.13 Regrouping of the interjections by tempo in Section A

As can be seen from Ex. 8.13, the number of notes comprising these interjections, increases from one to nine quavers incrementally, and is reminiscent of the accumulative rhythm of the $T\bar{o}gaku$ percussion parts. (Garfias 1975, 83) The increased rhythmic development is supported and reinforced by the rising pitch and dynamic as the piece accelerates towards three high pitch gestures (bar 54), the third of which is surmounted by a fermata, suggesting some further structural significance (Ex. 8.14). The pitches f^3 sharp and a^3 flat, reinforced by the f dynamic and accent, create a moment of powerful tension hinting at G as a dominant, and creating the expectation of a cadence, yet serving to reinforce the tonic G an octave lower. Bar 54 may also be significant as an expression of Ishii's name, since Ishii in *gematria* totals 54 (I = 9, S = 19, H = 8).



Ex. 8.14 Bar 54

The timing of this bar is critical to creating the increased dynamic. If the acciaccaturas and the commas, indicating a short break between each gesture, are each given a slightly increased length the third gesture will sound stronger. If vibrato is added to the front of each note a bell-like sound can be created and vibrato added to the longer third note, marked with a fermata, can suggest the crescendo.

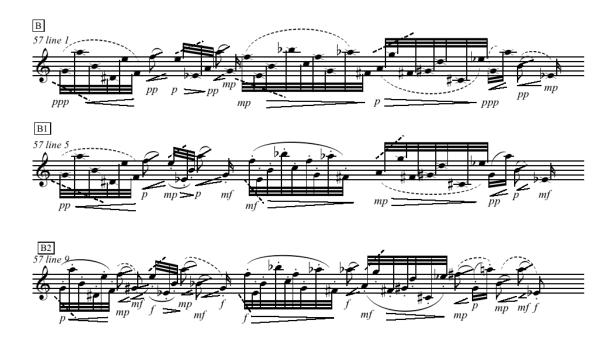
A second attempt at a cadence focuses on a c² sharp/d² trill, resolved at bar 57 by g¹. The melody, with its two variations, reflects the repetitions used in the *Gagaku* performance style called *Nokori-gaku* in which the musical material is repeated three times. Ishii explains that the 'wind instrument players who perform the main melody gradually drop out, resulting in a progressive decrease in the number and type of instruments left playing' and finally being left 'with a single *hichiriki* playing mere fragments of the melodic material' (Kido 1997, 205). I think Ishii has interpreted this to mean the amount of opening material gradually decreases as the intervening material becomes lengthier. The aim was to 'stimulate the listener by urging him to listen to the music compensating in his own aural imagination for the increasing absence of melodic material' (Kido 1997, 205). Kido explains this further. He writes that the aim of repetition is to 'create an increased accumulation of phrasal density; constant repetition of the same melody fosters increased density and a continuous build-up of tension' (Kido 1997, 191). This 'phrasal density' becomes more apparent in the next section when percussive fingertapping is introduced, adding a further layer of texture to the fragmented sounds.

Section B/Ha, second dan, bar 57

The second section, B/Ha, second dan, (bar 57: 13 lines) is unbarred and comprises long groups of rapidly played notes separated by glissandos, single notes, and short groups of notes. It contains examples of serial techniques: palindromes, motifs in retrograde, and

octave displacements of individual notes, creating a two-part effect to the writing, which together create a 'breaking' both of the material of this section and of the original calm set at the opening of the piece. The material for this section is announced in the first group of rapid notes comprising six pitch classes: G-A-B, D sharp/E -E-F. Arranged as two groups of three pitches, the first three G, A, and B are a tone apart, followed by D sharp, E and F, each a semitone apart. Pitches are then added, utilising the full chromatic range, contrasting with the myxolidian mode of section A and creating longer interjections through an increase in glissandos between the groups of notes.

For the first part (B, four lines) the player is expected to tap 'the finger on the particular hole while abruptly blowing in air' (instruction in the score) for the groups of pitches to be played 'very fast' (Score) whilst employing a dynamic range from *ppp* to *mf* changing rapidly from group to group and from note to note. Finger tapping was a technique used on both the *hichiriki* and the *ryūteki* to give accent to the main notes. This, together with the slap-tongue technique, is used as a textural effect, lending a mysterious and enigmatic quality to the *ppp* dynamic of this section. The finger tapping is gradually phased out through B¹ as the staccato articulation becomes more prominent and disappears completely by B². Ex. 8.15 below, shows the beginning of each section and the change of articulation from finger tapping at B, a mixture of finger tapping and staccato at B¹ to all groups played staccato at B².

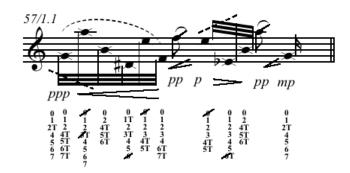


Ex. 8.15 The beginning of the variations in Section B (Audio Example: CD Track 27 examples the beginning of bar 57, line 1); (Audio Example: CD Track 28 examples the beginning of bar 57, line 5), and (Audio Example: CD Track 29 examples the beginning of bar 57, line 9).

This timbral change depicts the transition away from the past (finger tapping technique) and into the present (all notes tongued staccato), yet also demonstrates that an ancient technique retains its validity today. This transition is also mirrored in the dynamics: as the finger tapping decreases, the dynamic of each section increases in a crescendo from ppp through pp, p, f and finally fff. Ishii has given a fascinating insight into this delicate and percussive sound world. Recalling a visit to the *Shunie* ceremony held at the *Todaiji* temple in Nara, he related 'the aspects that left the most lasting impression on me were the sound of clogs worn by the monks as they entered the temple building and the part of the ceremony performed by novice monks who have undergone rigorous austerities' which involved 'throwing five parts of the body [knees, elbows, and forehead] to the ground ... in an act of supreme respect and worship' (Ishii 1997, 23). He continues 'the clacking of the clogs echoes gently through the temple, giving rise to a sound of ineffable exquisiteness. In contrast, the sound of each monk falling to the ground has a profundity and loudness which suggest the intermingling of heaven and earth, the exchange between time and space' (Ishii 1997, 23). This suggests to me a possible connection here with the finger-tapping required in this section. To create this 'clog-like' or tapping sound on the recorder it is necessary to, in effect, throw the fingers at the instrument – a technique that involves the opposite of good practice, which is to let the fingers fall effortlessly to cover

the holes. This section ends with four glissandos and a rapid rising statement of the mixolydian scale to lead directly into section *C/Ha* of *Ha*.

This second section, B, is a challenge of speed, dynamics and tapping fingers onto the holes. The audibility of the finger tapping is dependent on maintaining the low dynamic. At the beginning of bar 57 the groups of notes need to be tongued very gently and the amount of air carefully aligned to the dynamic level, as each one is marked with a crescendo or decrescendo. The finger tapping will take precedence over the pitch at the beginning, but as the dynamic increases the pitch will become more prominent. Ex. 8.16 shows a set of fingerings that give a free finger to tap on a hole. Tapping fingers are marked with a 'T'.



Ex. 8.16 Fingerings for tapping at the beginning of bar 57

The 'T' 'K' articulation can also be used to create a variety of internal rhythmic groupings as well as effecting the dynamic. This idea accepts that, in general, 'K' is a little softer than 'T', although theoretically, they could be of similar strength. The example below, (Ex. 8.17), taken from bar 57 line 2, is an example of the tonguing pattern used to execute the diminishing sound of the high pitches.



Ex. 8.17 An articulation pattern to support the diminuendo

Glissandi are relatively easy to negotiate on the recorder, as the holes are open, unencumbered by keys, with the possible exception of hole 7, which on some models has a

key to aid the reach of the little finger. The fine control of the fingers as they open or close the finger holes can create an extremely smooth glide between two pitches. In this case, due to the speed at which the fingers must move, the fingers have to be actively mobile, sliding away from the hole, then rapidly changing to the next fingering, and ready to slide again. The number of glissandi required to play this piece challenges a traditional playing technique based on lifting and falling fingers, and this piece has been instrumental to the development of recorder technique in this area. ¹⁷ How is a glissando achieved? Walter van Hauwe details five methods for producing a glissando: 1. turning the wrist; 2. lifting the fingers; 3. turning the instrument; 4. moving the hand, and 5. using the thumb-hole' (Hauwe 1992, 11). All the glissandi in east • green • spring rise in pitch, and in section B are intermixed with both groups and single notes of standard production. As this section progresses, the glissandi proceed consecutively, and all five methods will need to be employed. The glissandi can vary in length depending on the specific fingering. Pitches close to a 'break' will be shorter in length and may not extend beyond a tone, while other mid-range glissandi may extend to an interval of a third or fourth. However, Ishii does not expect the performer to play a glissando across the break. The glissandi found in sections B and B¹ are the same, and for practice purposes, we can eliminate any repetitions of the pitches, reducing these to just nine gestures, as shown in Ex. 8.18.

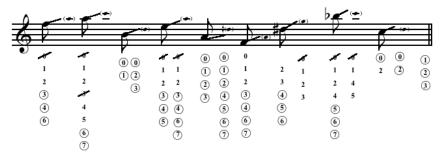


Ex. 8.18 Glissandi required for B and B¹

As mentioned earlier, the glissandi have an indeterminate pitch range and, at the speed required for this section, the full interval distance may not be fully utilised, but is potentially available to the performer. Each of these glissandi is played with a crescendo, which also impacts on the choice of fingering i.e. non-standard to standard. Ex. 8.19 shows the possible pitch range for the glissandi in B and B¹ with fingerings for each. The encircled numbers indicate the fingers to slide away from their respective holes.

¹⁷ Vitor Rua's *Duplicator II* (1999) uses long glissandi, which extend across the breaks of the whole range. (OTR CD06-03)

-



Ex. 8.19 Pitch range and fingering of glissandi in B and B¹

In B^2 the glissandi appear more extensively with fourteen additional glissandi for this section, and Ex. 8.20 shows the possible pitch range of each of these glissandi, to the small note in brackets.



Ex. 8.20 showing possible extent of glissandi in B²

The glissandi are each associated with various dynamic levels, but these only initiate the glissandi, as all are marked with a crescendo. As a general rule, the dynamics follow the pitch contour, and further nuanced dynamics can be created by altering the articulation: f will be tongued strongly and ff even more strongly.

Other fragments in section B also derive from the opening six-note motif: single notes, as shown in Ex. 8.21, are restricted to five pitches and are played using both the percussive sound of finger tapping and staccato, with dynamics of *mp*, *mf*, and *f*.



Ex. 8.21 Single notes in Section B

Motifs of two notes, creating intervals of either a major or minor ninth (Ex. 8.20) and of three notes, (Ex. 8.22), are played both with finger tapping and staccato, with a dynamic range between *ppp* and *ff*.



Ex. 8.22 Two-note motifs in Section B

The three-note motifs, following their first appearance, are repeated with enharmonic changes for E flat/D sharp and/or in retrograde, shown below (Ex. 8.23).

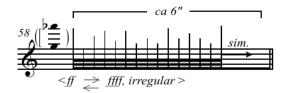


Ex. 8.23 Three-note motifs of Section B

The segmentation of section B moved through several stages before I settled on the chart in Appendix 7 as being the most helpful to my practice. First of all I set out to clarify the structure in terms of the articulation as shown earlier in Ex. 8.15 (p. 139). I then focused on all the material in between the longer rapidly played groups of notes: the glissandi, Ex. 8.16-8.18 (pp. 140-141) and the examples of single notes, and groups of two and three notes on pages 142-143. However, I was looking to combine both the variation-type information and the detail of articulation, and realized that by using the long rapid groups as the beginning of a paradigm it was easy to see both the variation and the elongation process of the intervening pitches and articulations. This, I felt, both simplified and clarified the process, and offered a more realistic starting point for my practice.

Section C/Ha of Ha, third dan, bars 58-84

Sections C begins with a rapid anacrusis of the *Sojo* mode followed by whole bars timed in seconds of 'very quick, irregular changing of tone levels and volume by very quick finger movements, independent of each other. Blowing force changing at same speed' (Ishii 1992) marked 'ff to fff, irregular'. This appears as graphic notation, (bar 58), already seen in Chapter 2, (p. 31), and I have recorded two versions of this to demonstrate the pitch variety that can be achieved in these passages (Ex. 8.24 below).



Ex. 8.24 Graphic notation at bar 58

Audio Examples: CD Track 30 is an example favouring the high notes, and CD Track 31 mixes high and low notes creating a more uneven texture.

At first these appear to be passages of random sounds similar to those found in the avant-garde repertoire of the 1960s and 1970s, creating an element of chance within a composition. This chance element, however, is something that Ishii again recalls from the *Shōmyō* ceremony, in which novice monks would be 'throwing flowers to attain enlightenment' (Ishii 1997, 25) onto the *mandala* where, according to ancient Indian cosmology 'the sacred powers of the buddhas and bodhisattavas are relayed' (Ishii 1997, 25). 'Having thrown a flower each novice has to sing a *Shōmyō* piece in praise of the buddha or bodhisattava on which his flower has landed' (Ishii 1997, 25). The random element here is seen as a choice and 'is in fact a product of the powers of the buddhas and bodhisattavas, and exceeds the bounds of human comprehension. Such structural principles and concepts cannot be understood employing western methods of musical analysis' (Ishii 1997, 25).

The suggested pitch range is between g² and a³ flat, and at such a strong dynamic level it is easy to lock into the highest pitches without any gradation. However, the passages are marked 'irregular', and by closing the thumb-hole, lower sounds can be more easily intermingled. These bars require a high level of controlled energy to create an interesting texture of high and low sounds and will result in a different outcome at each performance.

The length of each passage of random pitches is timed in seconds and these diminish by one second at each hearing (6", 5", 5", 5", 4", 4", 3", 2", 1"). Interspersed are semitone trills, which gradually become longer and the main pitches of these support a tonal centre of G. Ex. 8.25 shows the fingerings for these trills. This has a calming effect as the music returns to the melodic style of the opening.



Ex. 8.25 Fingerings for trills in Section C

This constantly interrupted 'random' passage creates a period of great tension and instability until nine bars before the end (C^1 , jo of ha, fourth dan, bar 76), where there is a reintroduction of melodic material, with tension being sustained by the high pitch and ff dynamic. Each of the ensuing three phrases descend by the interval of a fifth. The second of these is an ornamental figure called Yuru or 'waver' and exhibits a particular technique used on the fue or $ry\bar{u}teki$, which involves the lowering of the pitch twice; the first 'waver' (Ex. 8.26, $Ry\bar{u}teki$ at 1) lowers the pitch only slightly 'but at the second "waver" [at 2] the fue player bends his head forward and thereby lowers the pitch almost to Ichikotsu' [a tone below the given pitch] (Garfias 1975, 140). As can be seen from Ex. 8.26, (bar 79) Ishii lowers the recorder pitch twice, and on the third 'waver' he lowers it a full tone to D.



Ex. 8.26 Bar 79 Ornamental figure Yuru.

The final section $C^2/ky\bar{u}$, fifth dan, bar 81, comprises three further figures: a rising tremolo, a flurry of fingers marked fff, and a screaming high A, marked sffff, followed by a piano G with a messa di voce reminiscent of the opening note bringing the piece to an end with the sense of accomplishment that occurs when the process of jo, ha, $ky\bar{u}$ has been completed (Ishii 1997, 61). Tonally, the pitches of the final line move from c^2 through c^2 sharp to the dominant d^2 , albeit blurred by the microtonal tremolo. The high a^3 , implying a secondary dominant, creates an increase of tension, released by the descent to the final

note (g^1) marked p, creating 'precisely the moment that the audience will feel the highest degree of artistic satisfaction' (Zeami, quoted in Ishii 1997, 61).

8.4 Conclusion

East•green•spring can be understood as an historical narrative moving from the traditional to the contemporary musical palette in a gradual transformation from folk-style melody to twentieth-century avant-garde instrumental techniques, suggesting, as in Noh plays, that the past and the present can be one (Tyler 1978). It displays a cultural fusion in the use of both Western and Japanese structural and instrumental techniques, enhanced by the aesthetic concept of wabi sabi. This fusion of old and new can be identified in the use of microtones, which were an essential element of Gagaku melodies and are now widely used in contemporary music as an expressive device. This piece also engages in a dialogue between the sacred and the secular through the evocation of Ishii's memories. The priests at Nara engaged in their religious rituals, with 'clacking clogs' recalled in the finger-tapping passages, remain bound by the underpinning use of the Sojo mode, with its allusion to the natural elements of the earth, the seasons and the rising sun. This relates both to Derrida's discussion of différance and the Zen Buddhist concept of fosuku-furi, as neither element is necessarily connected, nor are they separate, rather each is infused with the other. This creative synthesis is the hallmark of a postmodern work.

Chapter 9

Summary and Conclusion

This thesis represents a contribution to the knowledge of the solo recorder repertoire of the 1990s, through the analysis, contextualization, and performance of five selected compositions, which I consider to be representative of the decade. This is the first time that the five selected pieces have been subjected to rigorous analysis, and three are recorded here for the first time. They are *Invocation at Midsummer* by Peter Crossley-Holland (CD Track 5), Piece No. 1 from *Five Quarter-Tone Pieces for Solo Recorder* by Donald Bousted (CD Track 12), and *3 Albumblätter* by Gerhard Braun (CD Tracks 13, 15, and 24). This study demonstrates that the recorder repertoire can support critical scrutiny in order to advance a deeper understanding with which to develop interpretations, leading to compelling performances. It is aimed at students, professional performers, and audience members alike, to guide their understanding and appreciation of the recorder repertoire. An additional contribution to this work is the inclusion of a catalogue of solo recorder music composed during the 1990s.

In Chapter 1, I discussed the range of recorders available to a performer in the 1990s. These ranged from copies of historical models to the newly designed Helder instrument, and the recreated renaissance Ganassi-style instrument. I also outlined the pedagogic material by Hauwe, Fischer, and Bennetts, Bousted, and Bowman, with reference to instrumental techniques. In Chapter 2, I explored the important trends of the twentieth century, such as modernism and postmodernism, globalisation and the resulting pluralism that embraced both historical and world cultures (Kramer 1995, 6) in order to be able to contextualise each of the analyses. The developing interest in early music throughout the century had been an enormous influence for composers and the idea of writing for a historical instrument encouraged them to focus on the more traditional approaches to the recorder, especially in the UK. Crossley-Holland's piece serves as a good example of this more conservative approach. In Europe, however, there had been a willingness to investigate more experimental possibilities, witnessed by Braun's *Albumblätter* and Ishii's *east•green•spring*. The return of tonality, aligned with, amongst others, the folk song revival and the development of minimalism, had been juxtaposed with an increasing use of

microtonality, emanating from both historical models of keyboard tunings and the intonations of other cultures. Microtonality is an ever-present thread of the selected repertoire: while it is not overtly present in, for instance, the Braun pieces, it could be argued that it is discretely present in the myriad sounds of microtonal indeterminacy inherent in finger-tapping, whispering, and sucking air into the instrument. The chapter concluded with discussions relating to structure and the notational issues arising in the scores. It was observed that although many of the instrumental techniques had their origins in historical treatises, and had been in use since the 1960s, the notation of several of the sounds had not been standardized, leaving composers to create their own symbols. This in turn created a further interpretive role for the performer, which I have researched for my performance. This was followed in Chapter 3, by a description of the various methodologies used in my analyses of the selected pieces. Focusing on the process of preparation for performance, I undertook structural, paradigmatic, and parametric analyses, developing for myself a deep understanding of each of the scores. The ensuing Chapters 4 to 8 detailed the analyses individually, with both cultural and technical information relevant to each work. As a result, I have gained a greater awareness of the importance of using a variety of analytical methods in order to gain a detailed understanding of a work. Knowledge of the background and cultural context of a piece offered further inspiration for interpretation, and allowed me to make informed choices about the various elements and nuances to be employed in performance. For example, knowing that Bousted had made use of Indonesian scales, inspired me to think of the ringing sounds of the gamelan, and how I could emulate that with the use of vibrato to give a lingering vibrancy to the tone. I have also become increasingly aware of the compromises that are necessary to interpret a score especially with regard to dynamics, which I have explored more purposefully, and with tone colours that can be controlled sensitively by carefully selected fingerings. I have aimed to exploit the changing of the tone and the widest dynamic range, on both the alto and tenor recorders, to give as much variety and contrast in my performance as possible.

The recorder's role had been, admittedly, a peripheral one on the professional stage and yet, as this work shows, it was an instrument capable of being a conduit for the culture and aesthetics of the decade. Whilst the recorder may not have attracted many of the leading composers, the selected works clearly show that the recorder was engaged with the ideals and techniques of the period, and these had been fully assimilated into the repertoire. This

was a period of emancipation from its role as a heritage instrument, of collaboration between composers and performers in the creation of new repertoire, and in the consolidation of playing techniques.

The effect of globalization has meant that Western composers could regale their work with many influences from other cultures, and throughout the 1990s, especially with the proliferation of technology, they could rapidly access vast quantities of information. What is of particular interest here is that the selected works for analysis have revealed a penetrating knowledge of the composer's own culture: Crossley-Holland for the tradition of Latin solmisation and folk song; Tsoupaki for infusing her work with *ison* from Byzantine chant and influences of Greek folk melodies; Braun for continuing the Germanic tradition with both sonata form and serialism, and Ishii for taking inspiration from *Gagaku*. However, Bousted has looked elsewhere for his inspiration: from the Javanese *gamelan* and to the wider microtonal heritage. As the analyses have shown, the five pieces can each be understood in relation to the respective composers' assimilation, or borrowing, of ideas from another cultural heritage.

In Chapter 1, I quoted Hauwe's comment that recorder players identified with either early music or with contemporary music, yet my research shows that it is imperative to have an understanding of early music in order to understand contemporary music. The engagement with pluralism comprised both conservative and progressive attitudes, modernist and postmodernist ideals, as well as the process of globalization, encapsulating a broad range of techniques and aesthetic stances of the 1990s. The decade portrayed an inclusive world, one in which the composer could reflect a rich world heritage infused with contemporary instrumental techniques, to secure the recorder's position on the concert platform, in a professional arena.

I have shown that the recorder, as a historic instrument, creates a vital link from the past to the present. Furthermore, the rising inflections that conclude the works by Bousted, Braun and Tsoupaki, all placed in the high and strong part of the instrument's register, would indicate that a positive outlook for the future of the recorder is assured. Following a prodigious amount of work with the instrument during the 1990s, Bousted was able to assert that 'in a profound way the recorder speaks of renewal' (Bousted 2001b, 141). Whittall affirmed, and as my work has demonstrated, the compositions of the 1990s

represented a 'terrain of immense diversity and complexity' (Whittall 1999, 346): diversity identified in the embrace of historical and world cultures, and complexity arising from the intertextuality of conflating ideas. Together, these elements informed a decade of pluralism at the end of the twentieth century.

Reference List

Agawu, K. (2004) 'How We Got Out of Analysis, and How to Get Back In Again'. *Music Analysis*, 23:ii-iii, 267-286. Oxford: Blackwell Publishing Ltd.

Bach, C. P. E. (1974) *Essay on the True Art of Playing Keyboard Instruments*. (trans. and ed.) W. J. Mitchell. London: Ernst Eulenburg Ltd.

Baines, A. and Borwick, J. 'Harmonic Series' *The Oxford Companion to Music. Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/opr/t114/e3137 (Accessed 18 April 2014).

Bania, M. (2008) 'Sweetenings' and 'Babylonish Gabble': Flute Vibrato and Articulation of Fast Passages in the 18th and 19th centuries. PhD dissertation. Gothenburg: Johan Öberg.

Bartel, D. (1997) *Musica Poetica: Musical-Rhetorical Figures in German Baroque Music.*London: University of Nebraska Press.

Bennetts, K., Bousted, D., and Bowman, P. (1998) *The Quarter-Tone Recorder Manual*. Celle: Moeck.

Bennetts, K. (2012) 'Recorders in Education over the past 75 years' in *The Recorder Magazine*, 32/2: 55-56.

Blum, S. 'Composition' *Grove Music Online*. *Oxford Music Online*: Oxford University Press. http://www.oxfordmusiconline.com/subscriber/article/grove/music/06216 (Accessed 30 May 2016).

Bortslap, J. (2001) 'Recreating the Classical Tradition' in Davison, P. (ed.) *Reviving the Muse: Essays on Music after Modernism*. Brinkworth: Claridge Press Ltd., 149-198.

Botstein, L. 'Modernism' *Grove Music Online*. *Oxford Music Online*: Oxford University Press. http://www.oxfordmusiconline.com/subscriber/article/grove/music/40625 (Accessed 11 June 2015).

Bousted, D. (1997a) *Five Quarter-Tone Pieces for Solo Recorder*. Composer Press [online]. Available from: https://www.tutti.co.uk/sheet-music/five-quarter-tone-pieces-DOBOD-DBMD13-D11>

Bousted, D. (1997b) personal communication: handwritten note.

Bousted, D. (2001a) *Rhythmic, Diatonic and Microtonal Structures in Musical Composition: Method and Notation (Compositions 1993-1998)*. PhD dissertation. University of Huddersfield.

Bousted, D. (2001b) 'An Instrument for the 21st Century?', *The Recorder Magazine* 21:4, 141-145.

Bousted, D. (2002a) 'Musical Elements Coming Together', *The Recorder Magazine*, 22:1, 9-11.

Bousted, D. (2002b) 'Microtonality, the Recorder, and The Quarter-Tone Recorder Manual'. *The Recorder Magazine* 22:3, 99-102.

Bousted, D. 'Biography' [online]. Available at: http://www.donaldbousted.co.uk (Accessed 30 May 2016).

Bowman, P. (2014) *Microtonality and the Recorder 1961-2013: Repertoire, Tone Colour, and Performance*. PhD dissertation. Canterbury Christ Church University.

Boym, S. *Nostalgia*. [online]. Available at:

http://monumenttotransformation.org/atlas-of-transformation/html/n/nostalgia/nostalgia-svetlana-boym.html (Accessed 27 June 2016).

Braun, G. (1993) *Klanglandschaften: Musikalischen grafiken*. Karlsruhe: Flautando Edition.

Braun, G. (1997a) Albumblätter: 3 Stücke für Altblockflöte solo. Moeck 1584.

Braun, G, (1998a) 'New Generation: Gerhard Braun: Bemerkungen zur modernen Altblockflöte von Nik Tarasov'. *Windkanal*, 1, 22-23.

Braun, G. (1998b) Something about 'H'. Flautando Edition FE-A-028.

Bristow, W, (2011) 'Enlightenment', *The Stanford Encyclopedia of Philosophy*. E. N. Zalta (ed.) [online]. Available at:

http://plato.stanford.edu/archives/sum2011/entries/enlightenment/ (Accessed 30 May 2016).

Brown, A. (2006) 'The Ganassi Recorder: Separating Fact from Fiction', *American Recorder* 66:5, 15-22.

Bürger, P. (1984) *The Theory of the Avant-Garde* (trans.) M. Shaw [online]. Available at: http://monoskop.org/images/d/d0/Buerger_Peter_The_Theory_of_the_Avant-Garde.pdf (Accessed 22 December 2015).

Burt, P. (2001) The Music of Toru Takemitsu. Cambridge: Cambridge University Press.

Burton, A. 'Takemitsu, Tōru' *The Oxford Companion to Music. Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/opr/t114/e6633 (Accessed 5 October 2013).

Cabrol, F. (1912). 'Vespers' *The Catholic Encyclopedia* Vol. 15. New York: Robert Appleton Company. http://www.newadvent.org/cathen/15381a.htm [Accessed 4 May 2014]

Cage, J. (2001) 'Radio interview with Charles Amirkhanian (1992)' in D. W. Bernstein, and C. Hatch, (eds.), *Writings through John Cage's Music, Poetry, and Art.* Chicago: University of Chicago. 1.

Catalogue of Contemporary Blockflute Music (CCBM) [online]. Available at: www.blokfluit.org/ (Accessed 20 January 2016).

Chaffin, R., Lemieux, A. F., and Chen, C. (2007) "It is Different Each Time I Play": Variability in Highly Prepared Musical Performance'. *Music Perception: An Interdisciplinary Journal*, 24:5, 455-472.

Clayton, M. (ed.) (2008) *Music, Words and Voice: A Reader*. Manchester: Manchester University Press.

Cohen, N. 'Folk music' *Grove Music Online*. *Oxford Music Online*: Oxford University Press. http://www.oxfordmusiconline.com/subscriber/article/grove/music/A2241135 (Accessed 10 January 2016).

Cooper, G. and Meyer, L. B. (1960) *The Rhythmic Structure of Music*. London: The University of Chicago Press.

Cottrell, S. (2012) 'The Twentieth Century and Beyond: An Overview', in C. Lawson and R. Stowell (eds), *The Cambridge History of Musical Performance*. Cambridge: Cambridge University Press. 744-777.

Crossley-Holland, P. (1979) 'Peter Crossley-Holland' in J. Needleman (ed.), *Speaking of my Life: The Art of Living in the Cultural Revolution*. San Francisco: Harper and Row. 70-94.

Crossley-Holland, P. (1996) 'Invocation at Midsummer' in *Pieces for Solo Recorder* Volume 3. Forsyth.

Crossley-Holland, P. (2002) 'Sounds from the Wood'. *The Recorder Magazine*, 22:2, 53-56.

Davidson, J. W. (2012) Bodily movement and facial actions in expressive musical performance by solo and duo instrumentalists: Two distinctive case studies. *Psychology of Music* 40:5, 595-633.

Davison, P. (ed.) (2001) *Reviving the Muse: Essays on Music after Modernism*. Brinkworth: Claridge Press Ltd.

Devroop, C. (1992b) 'Monologe eines Blockflötenspielers. Anmerkungen zu den Komposition für Blockflöte solo von Gerhard Braun – Zum 60. Geburtstag des Komponisten' (trans.) S. Corbett. *Tibia* 17:2, 108-109.

Drabkin, W. 'Tritone' *Grove Music Online*. *Oxford Music Online*: Oxford University Press. http://www.oxfordmusiconline.com/subscriber/article/grove/music/28403 (Accessed 13 May 2014).

Dunsby, J. (1989) 'Guest Editorial: Performance and Analysis of Music'. *Music Analysis* 8:1/2, 5-20. Blackwell Publishing.

Eishi, K. (1997) 'The Musical Sense of the Japanese'. *Contemporary Music Review* 1:2, 85-94.

Escher, M. C. *Metamorphosis I* [online]. Available at:

http://www.mcescher.com/gallery/switzerland-belgium/metamorphosis-i/ (Accessed 27 February 2016).

Field, C. D., S. Helm, E. E., and Drabkin, W. 'Fantasia' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/40048 (Accessed 27 October 2015).

Fink, R. (2004) '(Post-) minimalisms 1970-2000' in N. Cook, and A. Pople (eds), *Twentieth Century Music*. Cambridge: Cambridge University Press.

Fischer, J. (1990) Die Dynamische Blockflöte. Celle: Moeck.

Fischer, J. (1996) 'Die Blockflöte in der modernen Musik', *Internationales Blockflöten-Symposion: ERTA - Kongress 96, Programm*.

Fitch, F. J. and Heyde, N. (2007) "Recercar": the collaborative process as invention in Twentieth-century Music 4/1, 71-95.

Frere, W. H., Jander, O., and Cooke, P. 'Inflection' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/13789 (Accessed 8 January 2016).

Ganassi, S. (1956) *Opera Intitulata Fontegara Venice 1535* (trans.) D. Swainson, H. Peter (ed.). Berlin-Lichterfelde: Robert Lienau.

Garfias, R. (1975) *Music of a Thousand Autumns: The Tōgaku Style of Japanese Court Music.* Berkeley: University of California Press.

Griffiths, P. (2010) Modern Music and After. Oxford: Oxford University Press.

Griscom, R. and Lasocki, D. (2003 and 2012) *The Recorder: A Research and Information Guide*. London: Routledge.

Hall, D. E. (1990) Musical Acoustics. Pacific Grove: Brooks/Cole Publishing.

Harper, J. (2002) 'Peter Crossley-Holland and early Welsh music studies'. *Welsh Music History*. Aberystwyth: The National Library of Wales. 5, 1-10.

Hauwe, W. van (1984) The Modern Recorder Player, 1. London: Schott and Co. Ltd.

Hauwe, W. van (1987) The Modern Recorder Player, 2. London: Schott and Co. Ltd.

Hauwe, W. van (1990) 'Towards a Modern Recorder Technique', *The Recorder: Journal of the Victorian Recorder Guild Inc.* 12, 20-22.

Hauwe, W. van (1992) The Modern Recorder Player, 3. London: Schott and Co. Ltd.

Heaton, R. (2012) 'Instrumental Performance in the Twentieth Century and Beyond', in C. Lawson and Stowell, R. (eds), *The Cambridge History of Musical Performance*.

Cambridge: Cambridge University Press. 778 - 797.

Helder, M. (1996) 'The Harmonic Recorder' in Recorder Education Journal, 3, 27-29.

Heyghen. P. van (1995) 'The Recorder in Italian Music, 1600-1670', in D. Lasocki (ed.), *The Recorder in the Seventeenth Century: Proceedings of the International Recorder Symposium, Utrecht 1993*. Utrecht: STIMU, (Foundation for Historical Performance Practice). 3-74.

Hideki, T. (1999) 'Gagaku's Pleasures and Possibilities'. Japan Quarterly, 46:3, 30-39.

Hiley, D. 'Solmization' *The Oxford Companion to Music. Oxford Music Online*: Oxford University Press. http://www.oxfordmusiconline.com/subscriber/article/opr/t114/e6302 (Accessed 26 June 2016).

Hill, P. (2002) 'From Score to Sound', in J. Rink, (ed.) *Musical Performance: A Guide to Understanding*. Cambridge: Cambridge University Press. 129-143.

Horan, P. *Shakuhachi Zen* [online]. Available at: http://www.shakuhachizen.com/ma.html (Accessed 5 January 2016).

Ishii, M. (1991) Tenor-recorder-piece east-green-spring op. 94. Moeck 1551.

Ishii, M. (1997) 'Sounds of East – Sounds of West' in C. Ishii-Meinecke (ed.), *Sounds of West – Sounds of East. Maki Ishii's Music: Striding Two Musical Worlds*. Celle: Moeck Verlag 4056. 13-70.

Juniper, A. (2003). *Wabi Sabi: The Japanese Art of Impermanence*. Tokyo: Tuttle Publishing.

Kanno, M. (2003) 'Thoughts on how to play in tune: pitch and intonation', *Contemporary Music Review*, 22:1-2, 35-52.

Katz, I. J. 'Flamenco' *Grove Music Online*. *Oxford Music Online*: Oxford University Press. http://www.oxfordmusiconline.com/subscriber/article/grove/music/09780 (Accessed 29 May 2016).

Keller, H. (1973) *Phrasing and Articulation: A Contribution to a Rhetoric of Music*, (trans.) L. Gerdine. New York: W. W. Norton and Company Inc.

Kido, T. (1997) 'The Iconology of Sounds', in C. Ishii-Meinecke (ed.), *Sounds of West – Sounds of East. Maki Ishii's Music: Striding Two Musical Worlds*. Celle: Moeck Verlag 4056. 181-226.

Kishibe, S. et al. 'Japan' *Grove Music Online*. *Oxford Music Online*: Oxford University Press. http://www.oxfordmusiconline.com/subscriber/article/grove/music/43335pg1 (Accessed 27 February 2015).

Kivy, Peter. 2003. 'Jokes Are a Laughing Matter.' *The Journal of Aesthetics and Art Criticism* 61:1, 5–15.

Kramer, L. (1995) *Classical Music and Postmodern Knowledge*. London: University of California Press, Ltd.

Kramer, L. (2011) *Interpreting Music*. London: University of California Press, Ltd.

Lawlor, L. 'Jacques Derrida', *The Stanford Encyclopedia of Philosophy*. E. N. Zalta (ed.) [online]. Available at: http://plato.stanford.edu/archives/spr2014/entries/derrida/ (Accessed 5 January 2016).

Lawson, C. and Stowell, R. (eds) (2012) *The Cambridge History of Musical Performance*. Cambridge: Cambridge University Press.

Lester, J. (1995) 'Performance and Analysis: Interaction and Interpretation' in J. Rink (ed.) *The Practice of Performance: Studies in Musical Interpretation*. Cambridge: Cambridge University Press. 197-216.

Levy, K. and Troelsgård, C. 'Byzantine Chant' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/04494 (Accessed 11 August 2015).

Linde, H-M. (1991) *The Recorder Player's Handbook* (trans.) R. Deveson. London: Schott.

Lindsay, J. (1979) *Javanese Gamelan: Traditional Orchestra of Indonesia*. Oxford: Oxford University Press.

Locke, R. P. (2009) *Musical Exoticism: Images and Reflections*. Cambridge: Cambridge University Press.

Marett, A. 'Japan V: Court Music' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/43335pg5 (Accessed 4 October 2013).

Mayer Brown, H. (1995) 'The Recorder in the Middle Ages and the Renaissance', in (ed.) J. M. Thomson, *The Cambridge Companion to the Recorder*. Cambridge: Cambridge University Press. 1-25.

Mayes, A. (2003) *Carl Dolmetsch and the Recorder Repertoire of the 20th Century*. Aldershot: Ashgate Publishing Limited.

Metzer, D. (2009) *Musical Modernism at the Turn of the Twenty-First Century*. Cambridge: Cambridge University Press.

Meyer, L. B. (1994) *Music, The Arts, and Ideas: Patterns and Predictions in Twentieth-Century Culture.* Chicago: University of Chicago Press.

Miller, C. A. (1971) 'Jerome Cardan on the Recorder' American Recorder, 12:4, 123-125.

Moens-Haenen, G. 'Vibrato' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/29287 (Accessed 21 September 2015).

Norris, C. 'Deconstruction' *Grove Music Online*. *Oxford Music Online*: Oxford University Press. http://www.oxfordmusiconline.com/subscriber/article/grove/music/44653 (Accessed 14 September 2015).

O'Kelly, E. (1990) The Recorder Today. Cambridge: Cambridge University Press.

O'Kelly, E. (1995) 'The Recorder Revival ii: the Twentieth Century and its Repertoire', in J. M. Thompson (ed.), *The Cambridge Companion to the Recorder*. Cambridge: Cambridge University Press. 152-166.

Ottaway, H. and Frogley, A. 'Vaughan Williams, Ralph' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/42507 (Accessed 25 May 2016).

Parfitt, D. *The Oud* [online]. Available at:

(Accessed 24 March 2016).

Porter, J. (2002) 'The Distant Isle: The Scholarship and Music of Peter Crossley-Holland (1916-2001)', *Ethnomusicology*, 46:2, 323-329.

Powers, H. S. and Wiering, F. 'Mode' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/43718pg5 (Accessed 26 August 2015).

Quantz, J. J. (1966) *On Playing the Flute* (trans.) E. R. Reilly. New York: Faber and Faber, Ltd.

Quinn, S. F. (1993) How to Write a Noh Play: Zeami's *Sandō*. *Monumenta Nipponica* 48:1, 53-88.

Reinhard, K., Stokes, M. and Reinhard, U. 'Turkey' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/44912 (Accessed 10 June 2016).

Rink, J. (ed.) (2002) *Musical Performance: A Guide to Understanding*. Cambridge: Cambridge University Press.

Rosa, G. and Fujii, H. Ko Kû: Contemporary Japanese and Chinese Music for Recorder and Percussion. 2007. CD. Dreyer. Gaido CD 21005.

Rose, P. (1995b) 'Recorders of the Future', American Recorder, 36:5, 4.

Rose, P. (1996) 'A New Recorder for New Music', American Recorder, 37:4, 18-20.

Rose, P. (1997) 'Music Reviews', American Recorder, 38:3, 24-32.

Rose, P. (1999) 'On the Cutting Edge', American Recorder, 40:5, 30-32.

Rosen, C. (1976a) *The Classical Style: Haydn, Mozart, Beethoven*. London: Faber and Faber Limited.

Ross, A. (2012) *The Rest is Noise: Listening to the Twentieth Century*. London: Fourth Estate.

Rothstein, W. (1995) 'Analysis and the Act of Performance', in J. Rink, (ed.), *The Practice of Performance: Studies in Musical Interpretation*. Cambridge: Cambridge University Press. 217-240.

Roud, S. (2006) The English Year. London: Penguin Books.

Rowland-Jones, A. (1992) *Playing Recorder Sonatas: Interpretation and Technique*. Oxford: Clarendon Press.

Rowland-Jones, A. (2005) 'The Iconographic Background to the Seventeenth Century Recorder', in J. Wainwright and Holman, P. (eds.), *From Renaissance to Baroque: Change in Instruments and Instrumental Music in the Seventeenth Century*. Aldershot: Ashgate. 87-112.

Schenker, H. (1994) The Masterwork in Music – A Yearbook, Vol. I. in W. Drabkin (ed.), *Cambridge Studies in Music Theory and Analysis*. Cambridge: Cambridge University Press.

Schenker, H. (2000) *The Art of Performance* (ed.) H. Esser, (trans.) I. S. Scott. Oxford: Oxford University Press.

Schoenberg, A. (1967) *Fundamentals of Musical Composition* (ed.) G. Strang. London: Faber and Faber Limited.

Schubert, E. (2009) 'The Fundamental Function of Music'. *Musicae Scientiae*, 13(2 suppl.), 63-81.

Scruton, R. (1997) The Aesthetics of Music. Oxford: Oxford University Press.

Shiloah, A. (1995) *Music in the World of Islam: A Socio-Cultural Study*. Aldershot: Scholar Press.

Shove, P. and Repp, B. H. (1995) Musical Motion and Performance: Theoretical and Empirical Perspectives in J. Rink (ed.), *The Practice of Performance: studies in musical interpretation*. Cambridge: Cambridge University Press.

Simon, R. L. *In Memoriam: Peter Crossley-Holland* [online]. Available at: http://senate.universityofcalifornia.edu/inmemoriam/PeterCrossley-Holland.htm (Accessed 10 April 2014).

Singh, P. (1985) 'So-called Fibonacci Numbers in Ancient and Medieval India', *Historia Mathematica* 12:3, 229-244.

Smith, W. (ed.) (1870) 'Iambe' *A Dictionary of Greek and Roman biography and mythology* [online]. Available at:

http://quod.lib.umich.edu/m/moa/ACL3129.0002.001/558?rgn=full+text;view=image;q1 = Iambe> (Accessed 6 May 2015).

Staeps, H. U. (1957) Sonata in E flat. Vienna: Universal Edition. UE 12603a.

Straus, J. N. (1991) 'The "Anxiety of Influence" in Twentieth-Century Music'. *The Journal of Musicology* 9:4, 430-447.

Tagg, P. (2008) 'Meaning' and 'Communication' [online]. Available at: http://projects.chass.utoronto.ca/semiotics/cyber/tagg5.pdf (Accessed 6 May 2015).

Takemitsu, T, (1995) *Confronting Silence: Selected Writings* (trans. and ed.) Kakudo, Y. and Glasow, G. Berkeley: Fallen Leaf Press.

Tate. 'Cubism' [online]. Available at:

http://www.tate.org.uk/learn/online-resources/glossary/c/cubism (Accessed 20 November 2015).

Tatlow, R. 'Fibonacci series' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/49578 (Accessed 25 March 2014).

Tatlow, R. and Griffiths, P. 'Numbers and Music' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/44483 (Accessed 22 May 2016).

Tokita, A. M. and Hughes, D. (eds) (2008) The Ashgate Research Companion to Japanese Music. Burlington, VT: Ashgate.

Toop, R. (2004) 'Expanding horizons: the international avant-garde, 1962-1975' in Cook, N. and Pople, A. (eds.). *The Cambridge History of Twentieth-Century Music*. Cambridge: Cambridge University Press. 453-477.

Tsoupaki, C. (1995) Charavgi. Moeck 1567.

Tsoupaki, C. [online]. Available at: http://www.calliopetsoupaki.com/ (Accessed 17 June 2016).

Turner, J. (2001) Obituaries: Peter Crossley-Holland. *The Recorder Magazine* Vol. 21a: 3, 91-93.

Walls, P. (2012) 'Instrumental Performance in the "long eighteenth century", in C. Lawson and R. Stowell (eds) *The Cambridge History of Musical Performance*. Cambridge: Cambridge University Press, 527-51.

Waters, S. 'Modernism' [online]. Available at: https://www.architecture.com/Explore/ArchitecturalStyles/Modernism.aspx (Accessed 10 September 2015).

Watkins, G. (1994) *Pyramids at the Louvre*. London: The Belnap Press of Harvard University Press.

Whittall, A. (1999) *Musical Composition in the Twentieth Century*. Oxford: Oxford University Press.

Whittall, A. (2013) 'Analysis' *Oxford Companion to Music Online* http://www.oxfordmusiconline.com/subscriber/article/opr/t114/e257?q (Accessed 5 February 2013).

Whybrow, J. Neue Musik für Blockflöte. Vol. 3. 1996. CD. CAD 800911.

Williams, A. (1997) New Music and the Claims of Modernity. Aldershot: Ashgate.

Young, R. (2011) *Electric Eden: Unearthing Britain's Visionary Music*. London: Faber and Faber.

Zahnhausen, M. (1992) Jahreszeichen. Wolfenbüttel: Möseler Verlag. M 22.442.

Bibliography

Akiyama, K. (1997) 'Monochrome – The Emotional Aesthetic of Japanese Drums and Maki Ishii's "Non-Musical Time" in C. Ishii-Meinecke (ed.), *Sounds of West – Sounds of East. Maki Ishii's Music: Striding Two Musical Worlds*. Celle: Moeck Verlag 4056. 165-177.

Arabic Magam World. [online]. Available at:

http://www.maqamworld.com/maqamat/hijaz.html (Accessed 20 February 2016).

Arran, R. (1981) 'Muziek voor Altblokfluit – Rob du Bois', *Recorder and Music*, 7:4, 91-94.

Ayrey, C. and Everest, M. (eds.) (1996) *Analytical Strategies and Musical Interpretation: Essays on Nineteenth- and Twentieth-Century Music.* Cambridge: Cambridge University Press.

Bent, I. (1994) *Music Analysis in the Nineteenth Century. Volume I. Fugue, Form Style.* Cambridge: Cambridge University Press.

Billington, S. (2008) 'The Midsummer Solstice As It Was, Or Was Not, Observed in Pagan Germany, Scandinavia and Anglo-Saxon England'. *Folklore*: 119/1, 41-57.

Bolton, P. *The Electroacoustic Recorders* [online]. Available at: http://www.flute-a-bec.com/electrgb/html (Accessed 30 April 2016).

Bousted, D. (2004) 'An Empirical Study of Quarter-Tone Intonation' in N. McGowan (ed.), *Thirty-One: A Microtonal Series*. Amsterdam: Huygens-Fokker Foundation, Centre for Microtonality, 1-35.

Braun, G. (1994) 'Im Grenzbereich. Einige Anmerkungen zu Mathias Spahlinger's "nah, getrennt" für Altblockflöte solo'. *Tibia*, 19:4, 294-98.

Braun, G. (1997b) 'Einige Gedanken zur Äesthetik der Blockflöte und des Blockfloetenspiels im 20. Jahrhundert' in N. Delius (ed.) *Sine musica nulla vita*. Celle: Moeck. 91-107.

Braun, G. (2006) 'Blockflötentage Moessingen'. [online]. Available at: http://www.blockfloetenfestival.de/leitung.html (Accessed 31 January 2016)

Brown, M. J. E. and Hamilton, K. L. 'Albumleaf.' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/00483 (Accessed 5 June 2015).

Burkholder, J. P. 'Collage.' *Grove Music Online*. *Oxford Music Online*: Oxford University Press. http://www.oxfordmusiconline.com/subscriber/article/grove/music/53083

(Accessed 10 June 2015).

Burkholder, J. P. 'Borrowing.' *Grove Music Online. Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/52918pg13 (Accessed 10 June 2015).

s.v. 'Nihon' and 'Nippon' (1986) Collins English Dictionary. London: Collins.

s.v. 'Solstice' (1986) Collins English Dictionary. London: Collins.

Cook, N. (1987) A Guide to Musical Analysis. Oxford: Oxford University Press.

Cope, D. (1997) Techniques of the Contemporary Composer. New York: Schirmer Books.

Crispin, D. and Gilmore, B. (eds) (2014) *Artistic Experimentation in Music: An Anthology*. Leuven: Leuven University Press.

Crossley-Holland, P. (1964) 'Preservation and Renewal of Traditional Music'. *Journal of the International Folk Music Council*, 16, 15-18.

Crossley-Holland, P. (1969) 'On William P. Malm's, "On the Nature and Function of Symbolism in Western and Oriental Music"'. *Philosophy East and West*, 19:3, 253–257.

Dale, C. (2003) Music Analysis in Britain in the Nineteenth and Early Twentieth Centuries. Aldershot: Ashgate.

Davis, A. (1989) 'Commissioned works for the Recorder', *Recorder and Music Magazine* 9:10, 278-81.

Devroop, C. (1992a) 'Monologe eines Blockflötenspielers. Anmerkungen zu den Komposition für Blockflöte solo von Gerhard Braun – Zum 60. Geburtstag des Komponisten'. *Tibia*, 17:2, 85-90.

Dunsby, J. (2002) 'Performers on Performance', in J. Rink, (ed.) *Musical Performance: A Guide to Understanding*. Cambridge: Cambridge University Press. 225-236.

Ferneyhough, B. (1993) 'Form-Figure-Style: An Intermediate Assessment.' *Perspectives of New Music* 31:1, 32-40.

Ford, A. (2011) *Illegal Harmonies: Music in the Twentieth Century*. Alexandria: Hale and Iremonger Pty. Ltd.

Fox, C. (1993) 'British Music at Darmstadt 1982-92', Tempo New Series. 186, 21-25.

Fröhlich, S. *Introducing the Helder Tenor*. Available at:

https://susannefroehlichrecorder.wordpress.com/2016/01/03/introducing-the-helder-tenor/ (Accessed 19 March 2016).

Gagaku Project [online]. Available at: https://ccrma.stanford.edu/groups/gagaku/ (Accessed 16 December 2015).

Gann, K. (a) *An Introduction to Historical Tunings*. [online]. Available at: http://www.kylegann.com/histune.html (Accessed 12 February 2016).

Gann, K. (b) *Just Intonation Explained*. [online]. Available at: http://www.kylegann.com/tuning.html (Accessed 12 February 2016).

Gann, K. (2001) *Minimal Music, Maximal Impact*. [online]. Available at: http://www.newmusicbox.org/articles/minimal-music-maximal-impact/2/ (Accessed 12 February 2016).

Griscom, R. and D. Lasocki (2003) *The Recorder: A Research and Information Guide*. London: Routledge.

Grover, R. S. (1993) The Music of Edmund Rubbra. Aldershot: Scholar Press. 355–361.

Halfyard, J. K. (ed.) (2007) *Berio's Sequenzas: Essays on Performance, Composition and Analysis*. Aldershot: Ashgate Publishing Limited.

Hellaby, J. (2006) *Musical Performance: A Framework for Analysis*. PhD Dissertation. Birmingham Conservatoire, University of Central England.

Henseler, E. and Tokimitsu, T. (1996) 'Neue Blockflötenmusik in Japan'. *Tibia*, 21:2, 96-105.

Hoffmann, P. 'Xenakis, Iannis' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/30654 (Accessed 11 August 2015).

Holloway, R. (2003) *On Music: Essays and Diversions 1963-2003*. Brinkworth: Claridge Press Ltd.

Horan, P. Shakuhachi History [online]. Available at:

http://www.shakuhachizen.com/shakuhachi_history.html (Accessed 22 September 2013).

Hughes, A. and Gerson-Kiwi, E. 'Solmization' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/26154 (Accessed 28 April 2014).

Hursey, J. (1946/2015) Hiroshima [online]. Available at:

http://www.newyorker.com/magazine/1946/08/31/hiroshima (Accessed 12 January 2016).

Isaac. J. (2015) 'On the Cutting Edge: The Recorder in Contemporary Music'. *American Recorder* Vol. 56:2, 17-21.

Izquierdo, J. (1996) M. Ishii's 'East-Green-Spring'. *Revista de flauta de pico*, 5, [online]. Available at: http://www.joanizquierdo.com/wp-content/uploads/2012/06/Maki-Ishii.pdf (Accessed 21 June 2016).

Johnson, P. (1995) 'Play School' Music Times 136:1828, 275-277.

Johnstone, T. F. (1995) 'The Social Context of Irish Folk Instruments.' *International Review of the Aesthetics and Sociology of Music*. Croatian Musicological Society, 26:1, 35-59.

Kamisangô, Y. *The Shakuhachi: History and Development*. (trans. Blasdel C. Y.) [online]. Available at:

http://komuso.ch/wp-content/uploads/2010/09/History_and_Development.pdf (Accessed 11 February 2014).

Kishibe, S. (2013) *The International Shakuhachi Society* [online]. Available at: http://www.komuso.com/pieces/index.pl (Accessed 27 February 2015).

Koren, L. (2008) *Wabi-sabi for Artists, Designers, Poets & Philosophers*. California: Imperfect Publishing.

Kostelanetz, R. (2003) Conversing with Cage. London: Routledge.

Kramer, L. (2002) *Musical Meaning: Toward a Critical History*. London: University of California Press, Ltd.

Lander, N.S. (2016) 'Extended Technique' [online]. Available at: http://www.recorderhomepage.net/technique/extended-technique/ (Accessed 15 March 2016).

Lancashire, T. (2003) 'World Music or Japanese - The Gagaku of Tôgi Hideki', *Popular Music*, 22:1, 21-39.

Leedy, D and B. Haynes. 'Intonation (ii)' *Grove Music Online*. Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/53762 (Accessed 5 January 2016).

Lester. J. (1989) *Analytic Approaches to Twentieth-Century Music*. London: W. W. Norton and Company.

Lünenbürger, G. (1996) 'Zur Rolle der Blockflöte in der zeitgenössischen Musik'. *Tibia* 21:3, 182-190.

MacCulloch, J. A. (1911) *The Religion of the Ancient Celts* [online]. Available at: http://www.gutenberg.org/files/14672/14672-h/14672-h.htm (Accessed 18 April 2014)

March, D. (1997) *Beyond Simplicity: Analytical Strategies for Contemporary Music.* PhD Dissertation. University of York.

Mark, T. C. (2012) *Motion, Emotion, Love: The Nature of Artistic Performance*. Chicago: GIA Publications Inc.

Marvin, E. W. (1991) The Perception of Rhythm in Non-Tonal Music: Rhythmic Contours in the Music of Edgard Varese, *Music Theory Spectrum* 13:1, 61-78.

Marx, A. B. (1997) *Musical Form in the Age of Beethoven* (trans. and ed.) S. Burnham. Cambridge: Cambridge University Press.

Mayes, A. (1998) Aspects of performance practice in works for recorder composed for Carl Dolmetsch between 1939 and 1989. PhD Dissertation. Birmingham City University.

Mayes, A. (2005) 'Interview with Markus Zahnhausen', *Recorder Magazine*, 15:1, 3-6. Hebden Bridge: Peacock Press.

Mollenhauer, B. *1995 Partnership with Recorder Maker Maarten Helder* [online]. Available at: http://www.mollenhauer.com/en/useful-information#acc9 (Accessed 26 June 2016).

Morgan, R. P. (1991) *Twentieth-Century Music: A History of Musical Style in Modern Europe and America*. London: W. W. Norton & Company, Inc.

Morgan, P. 'Peter Crossley-Holland', *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/06880 (Accessed 25 March 2014).

Mozart, L. A. (1756) *A Treatise on the Fundamental Principles of Violin Playing* (trans.) E. Knocker. London: Oxford University Press.

Narazaki, Y. and Kanazawa, M. 'Takemitsu, Tōru.' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/27403 (Accessed 3 October 2013).

Nattiez, J-J. (1990) *Music and Discourse: Toward a Semiology of Music* (trans.) C. Abbate. Princeton: Princeton University Press.

Nelson, P. and Osborne, N. (eds.) (1998) 'Gagaku and Serialism: A Portrait of Matsudaira Yoritsune'. *Contemporary Music Review* 17:4, 1-100.

Nidel, R. O. (2005) World Music: the Basics. Abingdon: Routledge.

Ochs, B. (2005) The Clarke Tin Whistle. New York: The Pennywhistler's Press.

O' Hagan, P. (ed.) (2003) Aspects of British Music of the 1990s. Aldershot: Ashgate Publishing Limited.

Paddison, M. and Deliège, I. (eds). (2010) *Contemporary Music: Theoretical and Philosophical Perspectives*. Farnham: Ashgate Publishing Limited.

Palisca, C. V. and Pesce, D. 'Guido of Arezzo' *Grove Music Online*. *Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/grove/music/11968 (Accessed 30 April 2014).

Parkes, G. (2011) (ed.) Zalta, E. N. 'Japanese Aesthetics', *The Stanford Encyclopedia of Philosophy* [online]. Available at:

http://plato.stanford.edu/archives/win2011/entries/japanese-aesthetics (Accessed 29 November 2015).

Potter, K. 'Minimalism' *Grove Music Online*. *Oxford Music Online*: Oxford University Press. http://www.oxfordmusiconline.com/subscriber/article/grove/music/40603 (Accessed 22 January 2014).

Rauschenberg, R. [online]. Available at:

http://mediation.centrepompidou.fr/education/ressources/ENS-Rauschenberg-EN/ENS-rauschenberg-EN.htm (Accessed 20 November 2015).

Redgate, C. (2007) 'A Discussion of Practices used in Learning Complex Music with Specific Reference to Roger Redgate's *Ausgangspunkte'*, *Contemporary Music Review*, 26:2, 141-149.

Reese, M. R. 'Baku' [online]. Available at:

http://www.ancient-origins.net/myths-legends-asia/baku-legend-dream-eater-002383 (Accessed 20 February 2016).

Rink, J. (ed.) (1995) *The Practice of Performance: Studies in Musical Interpretation.*Cambridge: Cambridge University Press.

Rose, P. (1995a) 'On the Cutting Edge', American Recorder, 36:4, 32-33.

Rose, P. (1995c) 'On the Cutting Edge', American Recorder, 36:5, 30-32.

Rosen, C. (1976b) Schoenberg. Glasgow: William Collins and Co Ltd. (Fontana).

Routh, F. (1972) *Contemporary British Music: the twenty-five years from 1945 to 1970.* London: Macdonald and Company.

Sano, K. (1997) Maki Ishii: The Synthesis of Layered Time in C. Ishii-Meinecke (ed.), Sounds of West – Sounds of East. Maki Ishii's Music: Striding Two Musical Worlds. Celle: Moeck Verlag. 71-94.

Schleich, U. (2013) Kirschblüte, Bambus, Wind. *Windkanal: Das Forum für die Blockflöte*. September 2013. Fulda: Conrad Mollenhauer GmbH. 8-13.

Scruton, R. (2001) *Reviving the Muse: Essays on Music after Modernism* in P. Davison, (ed.), Brinkworth: Claridge Press Ltd. 7-30.

Schwartz, E. and Childs, B. (eds), (1998) *Contemporary Composers on Contemporary Music*. New York: Da Capo Press.

Shakuhachi History [online]. Available at:

http://www.shakuhachizen.com/shakuhachi_history.html (Accessed 23 September 2013).

Stillman, F. (1991) *The Poet's Manual and Rhyming Dictionary*. London: Thames and Hudson.

Stravinsky, I. (1947) *The Poetics of Music* (trans.) A. Knodel and Dahl I. Cambridge: Harvard University Press.

Taruskin, R. (2010) *Music in the Late Twentieth Century*. Oxford: Oxford University Press.

Thalheimer, P. (2012) *Erinnerung an Joachim Paetzold (1921 -2012)*. Tibia 37:4, 268-274.

Thomas, W. (ed.) (1998) *Composition – Performance – Reception: Studies in the Creative Process in Music.* Aldershot: Ashgate.

Toka [online]. Available at: https://www.youtube.com/watch?v=KH_IazuHYog (Accessed 14 March 2016).

Treitler, L. (1982) "To Worship the Celestial Sound": Motives for Analysis', *Journal of Musicology*, 1:153-170.

Tsukitani, T. (2008) The Shakuhachi and its Music in A. M. Tokita and D. Hughes (eds), *The Ashgate Research Companion to Japanese Music*. Burlington, VT: Ashgate. 145-168.

Tyler, R. (1978) Takasago [online]. Available at:

(Accessed 18 April 2015).

Tymoczko, D. (2011) *A Geometry of Music: Harmony and Counterpoint in the Extended Common Practice*. Oxford: Oxford University Press.

Whiting, B. C. (1977) 'The Recorder Music of Arnold Cooke', *Recorder and Music* 5:10, 318-22, and 5:11, 355-58.

Wilson, C. (2013) Defining the 20th-century. *The Oxford Companion to Music, Oxford Music Online*: Oxford University Press.

http://www.oxfordmusiconline.com/subscriber/article/opr/t114/e6997 (Accessed 29 September 2013).

Williams, A. (2004) 'Ageing of the New: the Museum of Musical Modernism' in *Twentieth Century Music.* 506-538.

Winterson, J. (1989) Sexing the Cherry. London: Bloomsbury Publishing Ltd.

Wood, J. (1986) Microtonality: Aesthetics and Practicality. *The Musical Times* 127:1719, 328-330.

Online Resources for the Catalogue of Solo Recorder Music

Arter, M., [online]. Available at: http://www.marterart.ch/en/kompositionen.html (Accessed 18 June 2016).

Australian Music Centre [online]. Available at:

 (Accessed 18 June 2016).

AvA Musical Editions [online]. Available at:

http://www.editions-ava.com/store/category/122 (Accessed 18 June 2016).

Bedford, D. [online]. Available at:

http://www.davidbedfordmusic.co.uk/listofworks.php (Accessed 18 June 2016).

Belgian Centre for Music Documentation, The, [online]. Available at:

http://www.cebedem.be/en/works/search?title=&composer_id=&q_en=recorder+solo&lg =en> (Accessed 18 June 2016).

Birmingham City University Library at Birmingham Conservatoire [online]. Available at: http://capitadiscovery.co.uk/bcu/items?query=recorder (Accessed 18 June 2016).

Bochmann, C. [online]. Available at:

http://www.christopherbochmann.com/eng/page8/page1/styled-9/index.html (Accessed 18 June 2016).

Boosey and Hawkes (Bote & Bock) [online]. Available at:

 (Accessed 18 June 2016).">http://www.boosey.com/shop/powersearch/powersearch_results.asp?search=recorder&x=0&y=0> (Accessed 18 June 2016).

Braun, G. [online]. Available at: http://www.schunder.de/sites/braun/braun_werkverzeichnis.htm (Accessed 18 June 2016).

Brings, A. [online]. Available at: http://library.newmusicusa.org/library/search.aspx (Accessed 27 June 2016).

British Music Collection [online]. Available at:

http://britishmusiccollection.org.uk/search/node/recorder%20solo (Accessed 27 June 2016).

Bröndum, L. [online]. Available at:

http://www.mic.stim.se/avd/mic/prod/micv6.nsf/docsbycodename/soekresultat?opendocument&fraga=recorder (Accessed 17 June 2016).

Catalogue of CDMC [online]. Available at:

http://catalogue.cdmc.asso.fr/EXPLOITATION/search.aspx?instance=EXPLOITATION &SC=DEFAULT&QUERY=flute+a+bec#/Search/(query:(ForceSearch:!f,Page:3,QuerySt ring:%27flute%20a%20bec%27,ResultSize:10,ScenarioCode:DEFAULT,SearchLabel:%2 7%27,SortField:!n,SortOrder:0,TemplateParams:(Scenario:%27%27,Scope:%27%27,Size:!n,Source:%27%27,Support:%27%27)))> (Accessed 27 June 2016).

Currency Press. [online]. Available at:

(Accessed 27 June 2016).

Davis, A. [online]. Available at: http://www.alan-davis.co.uk/?page=compositions (Accessed 27 June 2016).

Denhof, R. [online]. Available at:

http://www.verlag-denhof.de/wp-content/uploads/2012/10/op.109-1.pdf (Accessed 27 June 2016).

Dirie, G. [online]. Available at: http://gerardodirie.net/gdcatalog.html (Accessed 27 June 2016).

Donemus [online]. Available at: https://webshop.donemus.com (Accessed 27 June 2016).

Editions Delatour [online]. Available at:

http://www.editions-delatour.com/fr/368-flute-a-bec-seule (Accessed 27 June 2016).

Edition Gamma [online]. Available at: http://www.editiongamma-ega.de/40575.html (Accessed 27 June 2016).

Editions Lemoine [online]. Available at:

(Accesed 27 June 2016).

Edition Tre Fontane [online]. Available at: http://www.edition-tre-fontane.de/20.html (Accessed 27 June 2016).

Estonian Music Information Centre [online]. Available at: http://www.emic.ee/ (Accessed 27 June 2016).

Flanders Music Centre [online]. Available at:

http://www.flandersmusic.be/search_index.php?Search=recorder&submit.x=0&submit.y=0> (Accessed 18 June 2016).

Forsyths [online]. Available at:

(Accessed 27 June 2016).

Furore Verlag [online]. Available at:

http://furore-verlag.de/shop/noten/blockfloete/ (Accessed 27 June 2016).

Harris, R. L. [online]. Available at: http://www.richardleighharris.com/recorder.html (Accessed 27 June 2016).

Hug Musik [online]. Available at:

http://shop.hugmusikverlage.ch/WebPortal/showpage.asp?id=6D6EE8C53B56465B874E 20195A7A8D197B1F35124D3A4860AF2DBB2906546262> (Accessed 27 June 2016).

Iceland Information Music Centre [online]. Available at:

http://shop.mic.is/WorkDetail/105086 (Accessed 27 June 2016).

International Association of Music Information Centres [online]. Available at: www.iamic.net (Accessed 27 June 2016).

Ishii, M. [online]. Available at: http://ishii.de/maki/en/works/ (Accessed 27 June 2016).

Israel Music Institute [online]. Available at: http://www.imi.org.il/index_en.php (Accessed 27 June 2016).

Japanese Music for Recorder [online]. Available at:

http://minoruyoshizawa.sakura.ne.jp/ejapcompslist.html (Accessed 27 June 2016).

Kurz, I. [online]. Available at:

http://www.musicbase.cz/compositions/4191-hratky-s-fletnou/ (Accessed 27 June 2016).

Latvia Music Information Centre [online]. Available at:

http://www.lmic.lv/core.php?pageId=778&l=A&name=&afftor=&autors=&zanrs=0&Sas tavs=recorder&year=> (Accessed 27 June 2016).

Laurin, D. [online]. Available at: http://www.danlaurin.com/biography/ (Accessed 27 June 2016).

Linde, H-M. [online]. Available at: http://www.hansmartinlinde.ch/?id=2 (Accessed 27 June 2016).

Matrix New Music Centre [online]. Available at:

<http://limo.libis.be/primo_library/libweb/action/search.do;jsessionid=3A2568015D45E8</p>
AF2C985B56D3B30813?fn=search&ct=search&initialSearch=true&mode=Basic&tab=all
_content_tab&indx=1&dum=true&srt=rank&vid=KULEUVEN_MUSIC&frbg=&vl%28fr
eeText0%29=recorder&scp.scps=%28scope%3A%28KUL_LBIB_LIB%29+AND+lsr04
%3A%28CollectionLBIBLMUZ%29%29%2Cscope%3A%28LUCA_LEMM_LIB%29%2
Cscope%3A%28KUL_LMAT_LIB%29> (Accessed 18 June 2016).

Maute, M. [online]. Available at:

http://www.matthiasmaute.com/MM/comp en.php> [online]. (Accessed 27 June 2016).

Mieroprint [online]. Available at: http://mieroprint.de/produkt-kategorie/neue-musik/blockfloete-solo/ (Accessed 27 July 2016).

Moeck [online]. Available at: http://www.moeck.com/en/publishing/sheet-music.html> (Accessed 27 June 2016).

Österreichische Nationalbibliothek (ONB) [online]. Available at:

http://search.obvsg.at/primo_library/libweb/action/search.do?vid=ONB&con_lng=de_DE &reset_config=true&backFromPreferences=true (Accessed 18 June 2016).

Recorder Home Page [online]. Available at:

http://www.recorderhomepage.net/repertoire/modern-repertoire/ (Accessed 27 June 2016).

REX [online]. Available at: http://www.kb.dk/en/kb/nb/mta/dcm/ (Accessed 27 June 2016).

Rosa, G. [online]. Available at: http://www.gudularosa.de/musik.php?lang=1 (Accessed 27 June 2016).

Schott and Co. Ltd. [online]. Available at:

http://www.schottmusic.com/shop/products/search/quick/result.html?searchMode=SM_Q UICK&Quick=recorder%20solo> (Accessed 27 June 2016).

Schwarzer, J. [online]. Available at: http://www.recorderprojects.de/en/ (Accessed 27 June 2016).

Society of Recorder Players [online]. Available at: http://www.srp.org.uk/moecksrp-competition/?srp_menu_title=Recorder%20Performance (Accessed 27 June 2016).

Stäbler, G. [online]. Available at: http://gerhard-staebler.de/pages/en/works.php (Accessed 27 June 2016).

Suzuki, T. [online]. Available at: http://www.tosiyasuzuki.com/ (Accessed 17 June 2016).

Swedish Music. [online]. Available at:

http://www.mic.se/avd/mic/prod/micv6eng.nsf/AllDocuments/C9EDBC3D5F7738DDC1 2572280058CF74> (Accessed 17 June 2016).

Switzerland. [online]. Available at: http://www.suisa.ch/en/services/works-database/ (Accessed 17 June 2016).

Tedde, G. http://www.tedde.net/tedde/giorgio/ (Accessed 17 June 2016).

Universal Edition. [online]. Available at:

http://www.universaledition.com/search/?query=recorder+solo (Accessed 27 June 2016).

Weller, W. [online]. Available at:

http://www.wellermusik.de/Komponist/Werke_mit_Opus/werke_mit_opus.html (Accessed 27 June 2016).

Zahnhausen, M. [online]. Available at: http://www.zahnhausen.com/Noten.html (Accessed 27 June 2016).

CDs

Bartholomé, M. Horns of Elfland. 2000. CD. Cadenza-Records. CAD 800923.

Bennetts, K. and Bowman, P. play Vitor Rua's *Duplicator II* (1999) on *Flights of Fancy*. 2003. CD. QTR CD06-03.

Braun, G. Blockflöte Modern II. 1995. CD. Flautando Records. FR–D–002.

Braun, G. Komponistenporträt IV: Monologe eines Blockflötenspielers. 2011. CD.

Flautando Records. 007.

Clarke, Z. Dreams inside the Air Tunnel. 1998. CD. OM 301.

Fischer, J. Blockflöte Modern I. 1995. CD. Flautando Records. FR-D-001.

Geysen, F. Flemish Contemporary Recorder Music Vol. II 1996. CD. Rene Gailly. 92031.

Hauwe, W. van. Ladder of Escape 3. 1990. CD. Attacca Babel. 8847-5.

Heller, B. *Hundertmelodienbuch für Blockflöte Solo*. Johannes Fischer. 2006. CD. Wergo. ALC 5108 2.

Kristensen, H. Nocturnal Birds (Vögel der Nacht). 1997. CD. Paula Records. PACD97.

Lacey, G. Phoenix Songs. 1995. CD. Move Records. MD 3165.

Laurin, D. The Japanese Recorder. 1994. CD. BIS. CD-655.

Laurin, S. Lyrische Szenen. 1999. CD. BIS. CD-1013.

Oberlinger, D. *Peripheries: Contemporary and Medieval Music for Recorder* 2004. CD. Marc Aurel.

Pollmann, U. Different Density. (No date). CD.

Schwarzer, J. (nah getrennt 21' 05") Weeds in Ophelia's Hair excerpt on website and on

'The Modern Recorder' VALVE 5086 CD. http://www.recorderprojects.de/en/

Suzuki, T. Recorder Recital. 2002. CD. Music Shape. MSCD-0006.

The Music of Ian Parrott. Y Tabernacl, Machynlleth. CD. Forsyth. TABIP1.

Zahnhausen, M. Lyrische Szenen. 1999. CD. Cavalli Records. CCD 326.

Scores

Bousted, D. (1998) Study in Transforming Curves in *The Quarter-Tone Recorder Manual*. Moeck 2084.

Braun, G. (1992) Sulamith IV. Edition Gamma EGA 248.

Braun, G. (1999) *Tempi passati. Acht letzte Stücke für Blockflöte solo*. Heinrichshofen N 2473. (0).

Haydn, J. Trio in D, Hob. XV: 7. Peters 7456.

Eggert, M. (1994) Ausser Atem. Schott OFB 192.

Heppener, R. (1991) Toonladder. Donemus.

Hisatome, T. (1994) Song of a Hunchbacked Piper. Mieroprint EM 1101.

LeFanu, N. (1994) Dawn's Dove. Novello.

Nieuwkerk, W. W. van (1994) Voci, voci. Ascolta Music Publishing.

Riehm, R. (1991) Weeds in Ophelia's Hair. UMP Ltd. UMP 62382.

Spahlinger, M. (1992) Nah, getrennt. Universal Edition UE 30111.

Stockhausen (1984) In Freundschaft für Blockflöte. Kürten, Stockhausen Verlag.

Thorn, B. (1996) Songs for my Father's Wedding for Bass Recorder Player. Carus 11.603.

Yun, I. (1993) Chinese Pictures. Boosey and Hawkes.

Zahnhausen, M. (1992) Lyrische Szenen. Drei Phantasien für Altblockflöte solo.

Wolfenbüttel: Möseler Verlag. M 22.601.

Zahnhausen, M. (1999) Horns of Elfland. Schott OFB 198.

Catalogue of Solo Recorder Music composed during the 1990s (326 items)

Key of abbreviations: S'ino= Sopranino; S= Soprano (Descant) Recorder; A= Alto (Treble) Recorder; T=Tenor Recorder; B=Bass Recorder; DB=Double Bass; 'Unspecified' means that neither the composer nor the publisher has indicated the instrumentation.

Composer	Instrument	Date	Title
Addison, John	A	1994	Spring Dances
Afifi, Mohammed	A	1996	Etude modern
Agudelo, Graciela	A, T, and A	1990	Arabesco a Horacio Franco
	(Ganassi-type)		
Akiva, Daniel	A	1998	Litanies for alto recorder
Alinder, Håkan	Recorder	1991	Due Canti
Allworth, Robert	T	1990	Meditation of St. Clare
Aoshima, Hiroshi	Unspecified	1995-1999	Suite Ongaku no Yakai
ApIvor, Denis	S and A (T)	1993	Melisma op. 80
Arnell, Richard	A	1991	Treble Music op. 169
Arter, Matthias	A in G	1993	Solo 1993 (revised 2009)
Augé, M.C.	A	1995	2 Temas y 7 Variaciones
Borup-Jörgensen, Axel	A	1990	Nachtklänge op. 91.8
Borup-Jörgensen, Axel	A	1990	Op. 91.7: 1, 2 or 3 fragmentary pieces
			op. start in agreement process
Ayres, Richard	A	1991	Three Times (like Dutch) Waiting
Azevedo, Sérgio	Recorder or flute	1999	Flair
Ball, Michael	S	1993	The Fall of the Leaf
Ball, Michael	A	1994	Saudade
Bandt, Ros	S and A	1991	Variazione Zeffirelli
Bartosch Edström, Carin	A	1995	Claudia goes shopping
Bedford, David	Sopranino	1995	Piers de Resistance
Beilharz, Kirsty	T and B	1991	Gecko on Desert Sand
Bennetts, Bousted,	A	1998	The Quarter-Tone Recorder Manual
Bowman			
Berenguer, Josep	T	1993	Var
Manuel			
Blanc, Patrick	S	1998	Quatre Jouets Mécaniques
Bochmann, Christopher	A	1993	Essay X
Bofill, Anna	T and B	1997	Alternanze, Barbara Strozzi Omaggio
Bofill, Anna	T and B	1997	Alternanze
Bombardelli, Umberto	A	1991	Tricks
Bousted, Donald	A and T	1997	12 Short Quarter-and Eighth-Tone
,			Pieces
Bousted, Donald	T	1998	Two Responses to Silence
Bousted, Donald	A	1996/97	Study in Transforming Curves
Bousted, Donald	A and T	1997	Five Quarter-Tone Pieces
Bousted, Donald	T	1997	Evolution of Line
Bradley, Robin	G Ganassi		Introduction and Passacaglia for G
D 11 D 11		1996	Ganassi Recorder
Bradley, Robin	A	1997	Prelude and Tarantella

Braun, G. & Fischer, J.	S	1998	Spielbuch 2 and 3
Braun, Gerhard	A, T, B	1993	Four Interludes
Braun, Gerhard	A	1995	Nachtlied
Braun, Gerhard	S	1996	Arkadische Tänze
Braun, Gerhard	Т	1997	pKdTs - oder die Einsamkeit des
,			Flötenspielers
Braun, Gerhard	A	1997	3 Albumblätter
Braun, Gerhard	Ganassi (in G) or S	1998	Something about 'H'
Braun, Gerhard	B, T, A, and S.	1999	Tempi passati
Braun, Gerhard	S	1996/97	flauto aperto
Braun, Gerhard	S'ino, S, A, T, B	1996	Das Möhringer Flötenbuch
Braun, Gerhard	В	1994	Rememberas time goes by.
Braun, Gerhard	Greatbass- recorder	1992	Sulamith IV
Braun, Gerhard	T	1990	Five Meditations
Bright, Greg	T, voice and feet	1993	The Greatest Weight
Brings, Allen	S and A	1991	Sonata for Solo Recorders
Bröndum, Lars	A	1990	Eclipse
Brown, Chris Cree	В	1992	Kite Flying at Doctor's Point
Buchholz, Thomas	Garklein, S'ino, S, A, T, B, Great- Bass	1990	9 Solos for 7 different recorders
Buchholz, Thomas	S and A	1995-97	Miniaturen
Bullard, Alan	A	1992	Winter Landscape
Cale, Bruce	A (with tape)	1992	Spirals/tunnels
Catán, Daniel	2 x A	1992	Encantamiento a song without words
			with rhythmic variations
Christensen, Mogens	S	1993	Birds of a Spring Night (Varnatsfugle)
Christensen, Mogens	Unspecified	1998	Birds of an Autumn Night (Høstnatfugle)
Clarke, Rhona	S	1999	For Ide (revised 2002)
Clarke, Zana	A 415, A Ganassi 466, and voice	1996	Behind my Right Shoulder
Clarke, Zana	Recorder and voice	1996	Aerial View of the Border Bridge
Clarke, Zana	Voice flute or T	1997	Cold Honey
Clarke, Zana	T and voice	1998	Gentle Walker
Clarke, Zana	A and voice	1999	Swamp
Clarke, Zana	Any recorder	1996	Fragment Longing and Solace for Ganassi
Clarke, Zana	B and Voice	1996	Hymn
Clarke, Zana	Ganassi (in G) or A	1997	Shadow Dancer
Clarke, Zana	В	1998	Thought
Clarke, Zana	Voice flute	1998	Whistle may Hide
Cooke, Mervyn	S	1995	Suling: A Balinese Fantasy
Corbett, Sidney	S or T	1990	Songs and Melismas for recorder
Cori, Luca	S'ino. S, A, T, B	1993	Cage d'Escalier
Cori, Luca	Greatbass- recorder	1995/96	Locus Solus
Cori, Luca	T	1997	Djunli's Rondeau
Creaghen, J. A.	Unspecified	1996	Largo for recorder

Creaghen, J. A.	Unspecified	1995	Variations on: when that I was and a little tiny boy for recorder
Crossley-Holland, Peter	T (or flute)	1993	Invocation at Midsummer
Crowl, Harry	A and T	1995	Revoada
,		1995	
Czsas, Miguel	A		2 Themas y 7 variezinme op. 87
Davis, Alan	A	1994	Sonata
Davis, Alan	A	1998	Partita
Davis, Alan	A	1994	15 Studies for Descant or Tenor Recorder
Denhof, Robert	C instrument	1997	Fünf Suiten fur Blockflöte solo op. 109
Deppert, Julia	T	1997	Stück
Derungs, Martin	S, A, B	1991/92	Cornice
Derungs, Martin	A	1991/92	Rosso-azzurro
Devoto, Alberto	A	1993	Auricula
Devoto, Alberto	Α	1994	Elegia
Devoto, Alberto	Unspecified	1992	Trio
Diederichs, Yann	Unspecified	1991	Flosolo
Dinescu, Violeta	Unspecified	1993	Immaginable
Dirié, Gerardo Enrique	S	1995	Blå, Gul, Rojo
Dirie, Gerardo Emique	S	1993	Bia, Gui, Kojo
Donaldson, David	A	1998	Rufous sided Towhee
Donatoni, Franco	T	1992	Nidi II
Donatoni, Franco	T	1992	Sweet
Dorwarth, Agnes	A	1996	Gespräch einer Hausschnecke mit sich selbst
Dorwarth, Agnes	S'ino, SAB	1996/99	Vogelbuch
Dorwarth, Agnes	T	1999	Galgenbruders Lied an Sophie
Durán, Juan Fernando	S'ino, A, T	1990	el resplendor de lo vacio
Edwards, Ross	S	1993	Ulpirra
Eggert, Moritz	S, A, and Ganassi	1994	Ausser Atem
Eisma, Will	A	1991	Hot Stones
Erber, James	A	1996	rara avis
Falk, Mats	S	1992	Baltic Light: Lyrical Phantasy
Farquhar, David	A	1997	Obsessions
Feiler, Dror	A	1996	Like tears in rain
Feiler, Dror	A	1996	Verk op. 4
1 01101, 2101	S	1981/1998	· · · · ·
Ferneyhough, B.		1701/1770	Superscriptio (Transcribed from flute)
Ferneyhough, B.	T	1986/1997	Carceri d'Inventione IIb (Transcribed from flute)
Flinn, Peter	A/T	1999	Lullaby and Dances
Fortin, Victor	S	1996	Acht Leichte Stücke
Francesconi, Luca	Unspecified	1988/1998	Tracci (Arranged from flute)
Fukui, Tomoko	S and A headjoints	1997	Head
Fumiharu, Yoshimine	В	1999	Solo I
Furrer-Münch, Franz	В	1993	Absence - présence
Garau, Lucio	S	1991	'Perke(s)?'
Gurau, Eucro			
	T or A	1991	Ikarus' Gesang über den Wassern
Gasser, Ulrich			
Gasser, Ulrich Genzmer, Harald	A or T	1998	Klänge der Nacht
Gasser, Ulrich			

Goorissen, Jan	A (or gamba)	1991	Zuletzt weiterweiter
Grandert, Jonny	A (or gamba)	1990	En sats f altblockflöjt
Guichelaar, Jan	T	1990	Haiku for Tenor Recorder
Guraieb, Rosa	A and T	1990	Impresiones
Hänschke, Bernd	B	1995	Bird of the night
Hansen, Jan	S	1993	Mass fragments Ia: Kyrie
			Two short Recorder Pieces – Encore
Harris, Richard Leigh	A and S (with	1997	
Hand Hainniah I	optional piano) T	1000	V (Hexadvention)
Hartl, Heinrich J.	_ _	1990	Melodie op. 50
Hashiramoto, Masaru	S'ino, S & A (or T)	1992	Krishna
Heider, Werner	A	1996/97	Drei Persönliche Empfehlungen
Heider, Werner	A	1997	Glüchsprung
Heller, Barbara	A	1994	Bourrasque Windstoss
Heller, Barbara	A	1994	Des Espaces
Heller, Barbara	A	1993	Etüde I 'heimatlos'
Heller, Barbara	A	1993	Etüde II 'frühlingsruf'
Heller, Barbara	C or F instrument	1998/2000	Hundertmelodienbuch
Heller, Barbara	A (solo & duet)	1996	Wenn Töne auf Bananenstauden
			wachsen würden (If tones grew on
			banana trees)
Heppener, Robert	A	1991	Toonladder
Hirose, Ryohei	В	1995	Lamenta of Inca
Hisatome, Tomayuki	A	1994	Song of a Hunchbacked Piper
Hoch, Peter	A	1992	Flötentöne 3 Sätze für Altblockflöte
Hoch, Peter	Unspecified	1991	Tableaus
Hoch, Peter	Unspecified	1992	Berührungen
Hoddinott, Alun	A	1998	Lizard: variants for solo treble
			recorder
Hodson, Maud	Sopranino	1999	RA
Holmboe, Vagn	S	1995	Springbuk/Scherzando for Recorder
			for Michala Petrie
Horie, Haruyo	T	1992	The Wind Pipe
Horie, Haruyo	S'ino or small S'ino	1992	My Little Reco
Horie, Haruyo	A, S, S'ino	1996	Hamelin
Tioric, riarayo	71, 5, 5 1110	1770	Tumem
Hosokawa, Toshio	Т	1995/96	Vertical Song 1b (Originally for flute)
Hosokawa, Toshio	В	1997	Atem-Lied
Hosokawa, Toshio	Recorder	1990-97	Birds Fragments IIIb
Inglis, Brian	Garklein, S'ino, S,	1991	Sailing to Byzantium
1116110, 1111111	A, T,	1771	Saming to Dyzumium
Ishii, Maki	T T	1991	Tenor-recorder piece
ISIIII, WAKI	1	1991	east•green•spring op. 94
Itoh, Hiroyuki	S	1995	Salamander II
Jacob, Tobias	T	1992	Ludus Nivis Trans: The play of the
Jacob, Tobias	1	1992	snow
Jagger, Bryony	A	1993	Epithalamium 1
Jagger, Bryony	Recorder	1992/94	Bandanna
Johnson, Liz	S, A, T	1999	Araneis
Johnston, Fergus	A	1992	Psyche
Juguet, Henri-Pierre	A	1994	Argiles
Kadar, Matthias	A (Ganassi)	1998	Soulagé a Marieke
Kadai, Wattilas Keller, Christoph J.		1998	Fünf Invention
Kener, Christoph J.	A	1774	Tull Hivehholl

Koch-Raphael, Erwin	Contrabass	1995	grenzZeit 1
Koolmees, Hans	Unspecified	1993	Unknown title
Kurz, Ivan	S or A	1772	Hratky s flétnou
Kurz, Karl Wieland	A	1997	Martian Time-Slip
Lämmer, Lothar	S	1997	Flautissimo
Lämmer, Lothar	S	1997	Sonata 98
Lara, Ana	A	1990	Ícaro
Lasagna, Marco	A	1991	Nervi
Lavoignat, Jean-Claude	A	1995	Fantaisies (3)
Law, Elizabeth	A	1998	Crustaceans
Leenhouts, Paul	A with optional DB/Bass Guitar.	1993	Daido
LeFanu, Nicola	A	1994	Dawn's Dove
Leitermayer, Fritz	S	1990	Monolog op. 79
Levitc, Lojze	Recorder and an assistant	1991	From near by far away
Linde, Hans-Martin	S, A, T, B	1995	Basel Recorder Book
Linde, Hans-Martin	T or S	1998	9 Studies
Lumsdaine, David	Sopranino	1994	Metamorphosis at Mullet Creek
Luna, Armando	Sopranino, A, T	1991	5 Caprichios
,	and B		
Man, Roderick de	A	1986	Séance
man, modernon de		Rev. 1997	Scance
Marcussen, Kjell	S'ino, S, A, T	1992	Norway's Herbarium
Martini, Christiane	A or Ganassi G	1995	La Luna
Maute, Matthias	S, A, T, B	1994	Turtle Tunes
Maute, Matthias	S or T	1996	More Turtle Tunes (8 Pieces)
Maute, Matthias	S	1998	Seven Songs for Recorder
	A	1998	
Mejer, Thomas K. J.	S and A		O rubor sanguinis
Mereaux, Max	S and A	1998	Atouts pour l'étude des
M + O 1 IM	T	1007	microintervalles à la flûte à bec.
Mestres-Quadreny, J. M.	T	1997	Sonades Entre Volves
Meyer, Rüdiger	A	1991	Altosolo
Meyer, Rüdiger	A	1995	Recorder
Meynaud, Michel	Unspecified	published 1997	Les Points d'Orgue de la Saint Jean
Michel, Winfried	S'ino, A,	1994	Trombetta sordina
, , , , , ,	metronome		
Michel, Winfried	A	1987/93	Gedämpfte Schwingung ein
,			physikalishes Experiment
Michel, Winfried	A	1994	Etude op. XIII
Moore, Timothy	S	1993	Mr Turner His Tootle
Mortensen, Jørgen	A	1998	Fantasi for recorder
Mossenmark, Staffan	T	1995	Extranummer
Mutzenberg, François	A or B	1993	Le départ
Nakamura, Hitoshi	Basset	1993	Movement
ŕ	(Contrabass)		
Nakamura, Hitoshi	В	1992	Drawing
Nakanishi, Akaneb	T	1994	Uguisu (Nightingale)
Nicholson, George	A	1991	Spring Songs
Nieukerk, W. W. von	S or T	1994	Voci, Voci
Norman, Anne	Unspecified	1993	Spaces
Nussbaumer, Georg	T	1996	Weisse Flugversuche
Oberg, Howard	A	1996	Twelve Studies for Treble Recorder.
<u> </u>			

Olive, Vivienne	A and T	1991/92	The Blacksmith
Olive, Vivienne	S	1990	Light-winged Dryad of the trees
Orr, Robin	T	1994	Rondeau des Oiseaux
Otterstedt, Carola	S		Flute emotion
Parades, Hilda	B, Voice Flute, Renaissance A	1991	Ikal
Parrott, Ian	A	1995	Awel Dyfi (Scherzino)
Partzsch. Jörg	A	1991	Symposion. Annäherung an Dionysos
Pico, J. R.	Flauta	1989-92	Tres Peces Breus
Pigott, Diarmuid	S	1996	Sonata for Solo Recorder
Polacci, Barbara	A	1991	Memoria
Pollmann, Ulrich	T	1990	Fantasia
Pontvik, Peter	S	1992	Malambarismo
Quadreny, J. M. Mestres	Т	1997	Sonades entre Volves
Ramirez, Rodolfo	A, A Ganassi, and B	1991	Estancias
Regner, Hermann	A	1994	Meditationen (3)
Reina, Rafael	T	1996	Liturgy of Darkness 5
Rek, Vitold	В	1992	Unknown title
Renken, Hans-Dieter	S	1999	Goccia di poggia
Rihm, Wolfgang	A	1991	Weeds in Ophelias Hair
Roberts-James, John	S, A, T	1999	Fiddlesticks op. 2
Rodriguez, Jesus	T	1992	Tres Peces Breus
Rodriguez, Marcela	S'ino, 2A, T, B	1991	Cuatro Miniaturas
Rodriguez, Salvador	T + voice	1996	Sin Titulo
Rojko, Uros	S'ino., S, B, Contrabass	1995	Calm Down
Rolin, Etienne	A and T	1998	Sept Ritornelli
Rolin, Etienne	Unspecified	1998	Flashbackbird
Rosa, Clotilda	A	1994	Le récit d'Orfeo
Rose, Pete	B, A + Tamtam	1994	Bass Burner
Rose, Pete	T	1998	Medieval Nights
Rose, Pete	S	1998	Three Etudes Before and After the Blues
Rose, Pete	A	1994	I'd Rather be in Philadelphia
Rossé, François	T	1993	Oranges Chromatique
Rossé, François	T or S	1993	Daphnoé
Rühling, Isa	S	1997	Chacönnchen
Ruoff, Axel	S and A	1990	Love Stories
Ruoff, Axel	A	1993	Concitato
Russinyol, Jordi	T	1998	Solo Sueño (Dream)
Scheffer, Rickard		1992	Recording
,	A	1992	Unknown title
Schillinger, Franz	Unspecified	1994	Bruchstück 14
Schmidt-Mechau, Friedemann	Onspecified	1774	DIUCIISTUCK 14
	T	1998	with aget iron diamonds
Schmidt, Colin	T		with cast iron diamonds
Schneid, Tobias P. M.		1996	Manchester metrics
Schneidel-Austin, Elizabeth	S	1990	Sonate (a caged bird)
Sciarrino, Salvatore	Unspecified	1996-2000	Immagine Fenicia (and 2000/2004) Arranged from flute
Sciarrino, Salvatore	Unspecified	1999-2006	L'orologio di Bergson. Arranged from flute
Sciarrino, Salvatore	Unspecified	1999-2006	Morte Tamburo. Arranged from flute

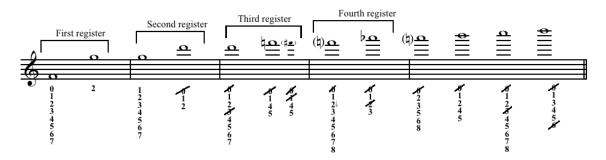
Shanahan, Ian	A (prepared)	1991	Lingua silens florum
Shanahan, Ian	A (prepared)	1991	Dysfunctional Habañera
Shanahan, Ian	A	1991	Graeme Petrie, scallywag
Shanahan, Ian		1991	Five Etudes
Shahahah, fali	S'ino, alto, prepared alto	1991	rive Etudes
Chamakan Ian	· · · · · · · · · · · · · · · · · · ·	1001	Helical Ribbon
Shanahan, Ian	S'ino, alto,	1991	Helical Ribbon
Cil and in Chal	prepared alto	1000	NI
Silverstein, Shel	SATB	1999	Narration and Picture
Sitsky, Larry	S	1991	Asymmetry
Sitsky, Larry	S or T	1991	Fantasia
Sjöberg, Johan-Magnus	S or T	1994	Va? liten konsert
Spahlinger, Mathias	A	1993	noh gotronnt
Spahn, Claudia	T	1998	nah, getrennt Schrijn
Stäbler, Gerhard	S'ino, SATB Contrabass	1995	Zeichnung
Staude, Christoph	Sub-bass	1992	Der Traum des Achill
Steenhoven, Karel von	A	1991	Siri
Steinmann, Conrad	A	1991	Diapasons
Steinmann, Conrad	T and B	1996	Je nach dem
Steinmann, Conrad	Renaissance T	1997	
,			remember Polymbonia
Steinmann, Conrad	Renaissance T	1990	Polyphonie
Sugiyama, Yoichi	Unspecified	1997	Noturno
Swiridoff, Susanne	Unspecified	1994	Rosenroman
Erding		40==/400=	
Taira, Yoshihasa	Unspecified	1972/1995	Maya
Tanaka, Noriyasu	A	1992	Twilight
Tarasov, Nikolai	Sopranino	1993	Kehlrot
Tedde, Giorgio	A (or A plus live electronics)	1991	Austro Op. 34
Tedde, Giorgio	A	1992/97	Ripartita Op. 44
Thoma, Pierre	A	1995	Solo
Thomas, Bernard	Unspecified	1992	Le Passage de Seuils
Thomas, Stefan	T	1997	Drei Bagatellen
Thordarson, Hilmar	Unspecified	1999	Sononymus for Recorders
Thorn, Ben	S and A	1998	Where's the Other One?
Thorn, Ben	В	1996	Songs for my Father's Wedding
Thorn, Ben	A	1997	Chocolate Bulbul
Thorn, Ben	A	1998	Croutons IIIa
Thorn, Ben	A	1991	Birdcall on one Fingering 0-234-6
Thorn, Ben	2 x S	1991	Duet for One
Thorn, Ben	S or A	1991	Echoes
Thorn, Ben	A	1991	Twinkling Variations
Thorn, Ben	В	1996	The Waters of Babylon and Forestry in New England
Tomotoni, Koji	A or B	1997	Atoll of the Wind
Torre, Salvador	A	1991	Arborescencia
Toth, P.	S and A	1991	Bird-trap for Recorder Solo
Traiger, Laurence	A A	1992	Unknown title
	+		
Tsoupaki, Calliope	A, renaissance	1994	Charavgi
Tučs, A.	Unspecified	1996	Six Etudes for solo recorder
Varela, Victor	A	1991	Oriente
Verbrugge, Marianne	T or S	1994	Kleur bekennen: voor blokfluit solo
Voegelin, Fritz	S	1997	8 Vierheiten
Vogler, Helmut	S	1997-98	Valtos Sonatinen (3 easy Sonatinen)
			, , , , , , , , , , , , , , , , , , ,

Walshe, Jennifer	S	1997	Retina
Weiss, Ferdinand	Unspecified	1992	Timbres
Weller, Wolfgang	C instrument	1998	Improvisation der Leimoniade op. 53
Westerlinck, Wlfried	T	1996	Intermezzi di Salvareggio
Wohlgenannte Zincke,			
Johannes	S	1993	Motions No. 6
Wolpe, Michael	A	1990	Music for alto recorder
Wooding, Kevin	Unspecified	1997	Elegie
Wooding, Kevin	Unspecified	1996	Mbuti
Yee, Adam	T	1997	Lev nishbar v'nidkeh (Psalm 51)
Yoshimine, Fumiharu	T	1999	Mudai
Yoshimine, Fumiharu	В	1999	Solo I
Yosihisa, Taira	В	1995	Maya
Yun, Isang	SATB	1993	Chinese Pictures for Recorder
Zahnhausen, Markus	A	1990	Musica Inquieta
Zahnhausen, Markus	A	1991	Jahreszeichen
Zahnhausen, Markus	S, A, T, and Voice flute	1992	Lyrische Szenen
Zahnhausen, Markus	A	1997	Russian Sketches
Zahnhausen, Markus	T	1999	Horns of Elfland
Zahnhausen, Markus	A	1988/90	Flauto Dolce Solo
Zahnhausen, Markus	A (T or Voice- flute)	1992/94	Lux Aeterna
Zebinger, Franz	Unspecified	1992	Blattfall: Eine Aktion für Blockflöte

Method for Determining Fingerings on the Recorder

Fingering on the recorder is based on the principle of gradually uncovering all the holes starting from a fully closed position. Once all the holes are open, start again by closing all the holes except the thumbhole, which is opened a little to access the second register. Using this 'glissando' technique it is possible to identify the register breaks of the instrument, as these correspond to the change over point where the holes are either all open, or all closed.

The recorder can be said to have four main registers with breaks occurring at g², d³, f³, and a³. However, notes above a³ have a limited flexibility with some requiring the bell hole to be closed, reducing the possibilities further. Ex. 1 identifies the four registers of the recorder and the subsequent higher notes, with both closed hole and open hole fingerings for the pitches at the register breaks.



Ex. 1 Recorder register breaks

Standard fingerings are well established and several charts are available with non-standard, or alternative fingerings (Hauwe 1984 and 1992; Fischer 1990; Bennetts, Bousted and Bowman 1998) but when considering subtle dynamic and tone-colour changes it becomes necessary to adapt these by small changes to the opening of one or more holes. Since instruments vary slightly one from another, the performer will always need to find a way to accommodate the idiosynchrasies of each model. In general the recorder is soft, with a veiled tone, when all the holes are closed, and louder and brighter, when the holes are open. In the mid range of the instrument there are numerous fingerings that can be found for each pitch, but at both extremes of the range there is very little flexibility.

Standard fingerings can be found simply by lifting a finger to open the next hole, for example $f^1 = 01234567$ to $g^1 = 0123456$ and $a^1 = 012345$. Due to the way in which the bore is constructed, at the point of the narrowing of the bore cross-fingerings are necessary to tune the note. For example, 01234 does not produce b^1 flat and therefore it is necessary to add fingers to lower the pitch with the fingering 0123467.

Once the standard fingerings are established, alternative fingerings can be found by lowering the pitch from the note above. E^2 , fingered 01, can be lowered by closing the next hole, 012, and if this is not secure enough, miss hole 2 and cover the next available hole i.e. 013. For e^2 flat this needs to be lowered further and tuned by adding fingers to give a secure pitch with 01356.

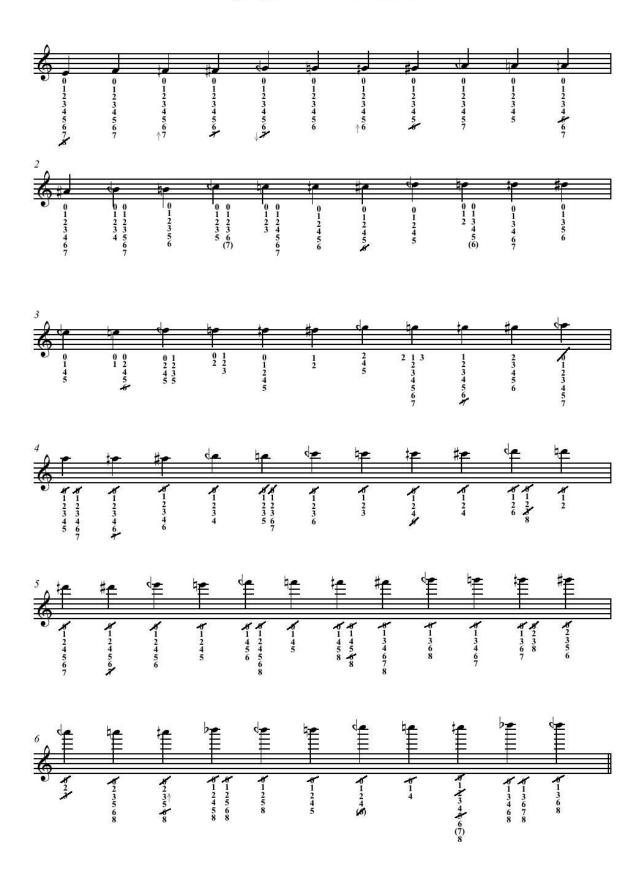
My approach to finding alternative fingerings, based on Hauwe's method (Hauwe 1992, 21-23), begins with a standard fingering for the note either above or below and to cover or uncover the next hole or holes until the required pitch is found. Ganassi explained in *Opera Intitulata Fontegara* of 1535, that to find out how to play any kind of recorder 'try opening or closing one or two holes a little more or a little less, and you should regulate the force of your breath' (Ganassi 1956, 12), and 'you can sound every note softly by slightly uncovering a finger hole and using less breath ... you should half-close the holes somewhat more or less as your ear requires and as you feel to be right' (Ganassi 1956, 89). As an example c² can be played 0123. If hole 3 is leaked a little it can be played softly, although a slight opening of the thumbhole is also possible. This is easy enough to do but is not likely to be accurate at speed and can result in a weak and muffled sound. It is much more secure to use an alternative fingering and to make the adjustment from there, for example for c²: 0124567 and tune to 0124567, or 012456, or even 01245 for *ppp* as the breath decreases.

The shading and leaking of holes for tuning purposes is the first step towards expressive and colouristic tuning leading to a more personalized approach in developing an interpretation, and as Hans-Martin Linde reminds us, 'intonation is a matter of individual judgement' (Linde 1991, 33).

Appendix 3
Fingering Chart for Renaissance Alto (Ganassi)

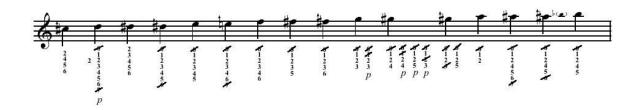


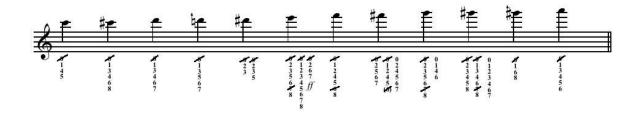
Appendix 4
Fingering Chart for Alto Recorder

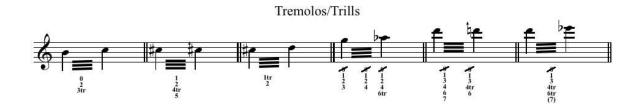


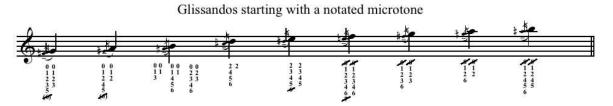
Fingering Chart for Ishii's East•green•spring











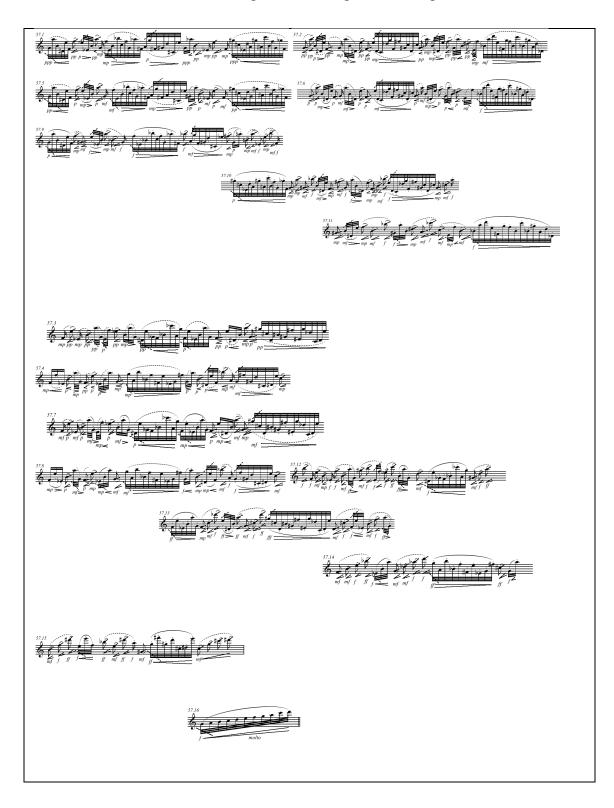


Appendix 6
Paradigm Chart of the Harmonics and Tone-Colour Pitches in Braun's *Albumblatt III*



Ishii Section B

Variations showing the increasing addition of glissandi



Scores

P. Crossley-Holland Invocation at Midsummer

C. Tsoupaki Charavgi

D. Bousted Piece No. 1 from Five Quarter-Tone Pieces for Solo Recorder

G. Braun 3 Albumblätter

M. Ishii East•green•spring

by

P. Crossley-Holland

by

P. Crossley-Holland

by

P. Crossley-Holland

by

P. Crossley-Holland

by

P. Crossley-Holland

by

P. Crossley-Holland

by

C. Tsoupaki

by

C. Tsoupaki

by

C. Tsoupaki

by

C. Tsoupaki

by

C. Tsoupaki

by

D. Bousted

by

D. Bousted

by

D. Bousted

by

D. Bousted

by

G. Braun

by

G. Braun

by

G. Braun

by

M. Ishii

by

M. Ishii