

PORTFOLIO OF COMPOSITIONS

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**THESIS CONTAINS
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ABSTRACT OF THESIS

As we begin a new century we find ourselves at a crossroads. It is a time to reappraise earlier achievements whilst continuing the quest for new forms of expression. In an analysis of seven of my own compositions it can be seen that it is possible to venture down more than one path and to explore a range of methods whilst still working within the same aesthetic boundaries. In emphasising the overriding significance of the vertical plane I propose a system of broadly non-functional harmony which provides a framework for developing musical ideas. To create a sense of harmonic progression the composer must find new ways of enabling the listener and performer to understand the time-dimension. Using techniques of transformation both within ordered systems of note cells and within a freer approach to harmonic structure it is possible to organise the overall structure of a work and to establish a consistent and personal harmonic idiom.

The portfolio of compositions includes scores of the following works together with recordings:

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| 1. A STREET UNDER SIEGE, for symphony orchestra | 17' |
| 2. MAGNIFICAT AND NUNC DIMITTIS, for <i>a capella</i> eight part choir | 14' |
| 3. STRING QUARTET NO 6 | 9' |
| 4. CLOSED CIRCUIT, for clarinet, piano and live electronics | 9' |
| 5. TURNING TABLES, for viola and harp | 9' |
| 6. ARIA - COMMEMORATION, for bassoon and piano | 8' |

PORTFOLIO OF ORIGINAL COMPOSITIONS
AND ACCOMPANYING COMMENTARY

TABLE OF CONTENTS

Vol. I

Abstract of thesis.....	2
Compositional procedures used in recent works.....	6
Bibliography.....	49

Portfolio of Compositions:

A STREET UNDER SIEGE, for symphony orchestra	Vol. II
MAGNIFICAT AND NUNC DIMITTIS, for <i>a capella</i> eight part choir	Vol. III
STRING QUARTET NO 6	Vol. IV
CLOSED CIRCUIT, for clarinet, piano and live electronics	Vol. V
TURNING TABLES, for viola and harp	Vol. VI
ARIA - COMMEMORATION, for bassoon and piano	Vol. VII

The above works on compact discs are attached to the inside front cover.

For table of recordings see page 4.

TABLE OF RECORDINGS

Compact Disc One

CLOSED CIRCUIT, for clarinet, piano and live electronics 9'
(Commercial recording of various works by composers based in North West England)

Compact Disc Two

A STREET UNDER SIEGE, for symphony orchestra 17'
MAGNIFICAT, for *a capella* eight part choir 9'
ARIA - COMMEMORATION, for bassoon and piano 8'

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COMPOSITIONAL PROCEDURES USED IN RECENT WORKS

“An instant has no time. Time is made of movement of the instant, and instants are the boundaries of time” (Leonardo da Vinci 1980: 65). Music is made of sounds which occur in instants, and the relationship of one sound to the previous and following sounds gives music its sense of movement. It is the concept of an instant which is important to me, the vertical dimensions which are harmony and timbre. Melody, rhythm and counterpoint do not exist within an instant, and are therefore reliant on our memories - maybe they are even illusory. To understand musical movement one has to be a time traveller, to be able to foretell the future as well as relive the past, and it is the task of the composer to facilitate the listener’s ability to grasp the movement of instants by devising forms and progressions which transcend the moment. As the Time Traveller points out: “We are always getting away from the present moment. Our mental existences, which are immaterial and have no dimensions, are passing along the Time-Dimension with a uniform velocity” (H.G. Wells 1953: 8). By analysing the compositional procedures which govern my work I shall focus on the primary importance of pitch combinations which create harmony and texture whilst also discussing the elements which determine the movement of the vertical instant - in particular the formal procedures employed and the way in which material is sculpted and developed.

As we embark on a journey into a new century one is drawn instinctively into a reappraisal of one’s achievements. For me this comes at a critical time in my musical journey, the new millennium arrives at a point where two distinctly different avenues stretch ahead of me. Probably most composers are faced with this dilemma at the mid-point of their career. One route leads along a tortuous path in which one aims to develop one’s style

further and rethink compositional techniques. The other route is an easier path to follow, in which consolidation and even retreat along passages explored earlier appear attractive options.

Inevitably an appraisal of my work at this moment of transition from one century to another leads me to compare my situation with that faced by composers at the end of the nineteenth century. Indeed, in some way I feel an affinity with the composers of that period who were struggling to find a new way of structuring harmony. This, for me, has been one of the most significant areas of my own efforts to discover an identity, as I find harmony the most enticing aspect of music and the one in which I feel I have the most to offer as a composer. Having been born with perfect pitch and the ability to dissect complex chords aurally I consider harmony to be my greatest strength. However, the beauty of harmony can be employed in two ways, the static moment, or perhaps combination of moments, in which a vertical plane is held in suspension, as in the opening of my *Magnificat*, or the progression of one vertical plane to the next. It is this movement which demands the greatest aural sensitivity from composer, performer and listener. It is the “freeing of the new chord from the ‘quasi-perceived’ sound of the preceding one [which] lends chords their beauty, gloss and character” (Vogel 1981: 162).

The works included in my portfolio illustrate the significance of this turning point in my career. One of the principal aims of this commentary is to reveal how works as apparently dissimilar as *Turning Tables* and *Magnificat* are not written in deliberately different styles. For me both are in the same idiom, they present me with similar choices and challenges not only in structure but in melodic and harmonic development as well.

The chronology of these pieces is reasonably straightforward. *Closed Circuit* was composed in 1996 for performance by Roger Heaton and Stephen Pruslin at a North West Composers' Association Concert. This has been commercially recorded and released on CD. *A Street under Siege* was composed during 1997 and won the Goldsmiths College Postgraduate Composers' Competition, resulting in a performance by Goldsmiths Sinfonia. In 1998 I was commissioned to write a setting of the *Magnificat* and *Nunc Dimittis* for the Ribchester Camerata, who performed it in Norwich Cathedral later in the year. *Turning Tables* was composed in 1999 along with *Aria - Commemoration*, which is a reworking of the first movement of my earlier *Bassoon Concerto*. The first movement of the *String Quartet No 6* was begun in the latter part of 1999 and completed in 2000, although progress on this was interrupted for the composition of a piece for young string players as the result of a National Lottery funded commission. I have placed the compositions in an order which reflects the scale of each work.

I have always argued strongly for the importance of compositional processes combining inspiration and the application of logical means as inseparable elements. The principal element which has governed the structure of my work is a system of non-functional harmony, generally built around cells of a few notes. I have continued to work with broadly similar methods, but have sought to move forward by finding ways of creating a more dynamic harmonic style and allowing myself greater freedom within the schemes I have devised. Tonality, in various forms, remains a crucial element in all my work, and in this portfolio I have used tonality in very diverse ways, ranging from diatonic or modal harmony through the use of tonal centres to a general interpretation of tonality as "the organisation of pitch material whereby more or less important elements allow music to be articulated in time" (Dunsby 1983: 1831). Nevertheless, the sound of some of the music

is distinctly atonal, and tonality inasmuch as it consists of the greater or lesser significance of certain pitch classes and the varying gravitational pull of particular intervals is used here as a discipline rather than for purely aesthetic reasons.

Closed Circuit and *Turning Tables* take their names from a combination of the compositional schemes I have employed and the emotional nature of the music. In both pieces the system of constantly changing sets of pitch classes define and are defined by the main structural determinant, creating shifting harmonic planes in which the two instruments move along separate linear strands. These two pieces, along with the *String Quartet No 6* are the most rigorously organised works within the portfolio, although I have not extended the use of any systems to musical elements other than pitch except at one point in the quartet (the 'quasi fugue' in bars 111 ff). The material for *Closed Circuit* is derived from two similar five note pitch-class sets, which I shall refer to as 'cells'. These are constantly transposed through a cycle of fifths, with each instrument going in opposite directions around what is effectively a closed loop. The two cells may be considered as major and minor chords of G with certain added notes, and the starting point for the composition of the piece was the progression from the first chord to the second. Reduced to 'normal order' it can be seen that the first cell becomes a simple pentatonic chord, but the character of the cell is determined to a significant extent by the two minor third intervals that are created by the order I have used (see Forte 1977: 3).

Example 1.

Closed Circuit, Pitch-Class Sets



However, this progression is not actually stated until the close, where the two chords are outlined in the piano (bars 105 to 109). The journey round the 'circuit' results in a gradual intensification of harmony until both instruments have reached the furthest point in the cycle, a transposition of a tritone in bar 77 ff. This structural device is the principal source for the work's title, but the listener may interpret the notion of a 'closed circuit' in his or her own way. During the work's composition I had in mind images of an individual seeking to escape from within a circle, as well as the electrical connotations of the word 'circuit'.

The live electronics part in this work modifies the clarinet sound whilst affecting the piano as little as is practicable. This necessitates the placing of a microphone close to the clarinet and as far away from the piano as possible. The reason for this is that I considered the piano sonorities to be rich enough without adding any effects, whereas the tone quality of the clarinet seems to blend more easily with the piano when treatment is applied to the clarinet alone. It also enabled me to write extended passages for clarinet and electronics only, and to use the piano rather sparingly and with mostly sparse textures. The effects can all be obtained from a standard digital delay line, and include Pitch Shift, Echo and Reverberation algorithms.

The principal theme is stated in the opening eight bars and comprises two distinct elements, sustained notes on the clarinet sounded against a gradual bending of the pitch down and up, and the two chords from the five note cells. I have explored several contrasting harmonic patterns which were suggested to me by inversions and transformations of these cells. After the bleak opening, which just hints at the major/minor character of the two cells, a strong jazz influence is discernible, not only from

the harmonic and rhythmic material in bar 31 ff. but also in the use of the clarinet tessitura - the instrument being used more like a saxophone. After a return to the desolate mood of the opening, in which the pitch bend effect is enhanced by slow portamento in the untreated clarinet sound, the use of parallel three-part chords generated by the original clarinet melody and two transposed pitches takes this excursion into a jazz environment a stage further. In addition I have exploited syncopated rhythms in the piano, albeit rather abruptly, as for example in bar 53 ff.

For live performance a number of digital delay lines were used to enable echo, pitch shift and reverberation to be employed simultaneously. As the work builds to a succession of climaxes the use of pitch shift becomes more extreme and hence more dissonant, with three delayed transpositions required. After the main climax in bar 80 there is a marked change to a more tonal atmosphere, with the clarinet part sounding open spaced first inversion minor triads. The use of pitch transposition of such a wide interval results in some unpredictable beating effects caused by the inevitable glitches in the signal processing. This adds another interesting dimension to the sound world of the piece, although for the CD recording I improved the quality of the sound by multi-track recording. This enabled me to use the higher quality mono pitch shift twice, rather than the coarser simultaneous dual pitch shift. This passage explores the implicit romantic harmony contained within the cells, notable the occurrence of minor seventh chords, and utilises the clarinet's exceptional ability to play softly in all registers.

The application of live electronics in this piece marks a further phase in my exploration of electro-acoustic techniques, following on from the largely sample-based tape parts which accompanied two of my previous works, the *Sonata for Piano and Tape* and *In the*

Darkness of a Shadow for viola, small ensemble and electronics. Working with live signal processing “allows for the real-time augmentation of the timbral capabilities of acoustic instruments without some of the characteristics of working with a pre-recorded tape” (Schrader 1992: 55). Following work on these three electro-acoustic compositions I was encouraged to apply for a Winston Churchill Travelling Fellowship. I was awarded a Fellowship in the category of ‘The Application of New Technology to the Arts’, enabling me to visit major institutions in the United States and France during 1998. My project on ‘The Benefits of New Technology to Musical Creativity’ took me on a journey to key establishments across the United States, including the Massachusetts Institute of Technology, The University of Michigan, Stanford University and the Eastman School of Music. In addition I spent a week at the IRCAM research institute in Paris. As a result of these travels I have been able to review my use of electro-acoustic techniques and sketch initial ideas for future works using computer software, rather than MIDI hardware, for signal processing. Although I have not yet completed any further compositions within this field the experience I gained abroad was crucial in engendering a more analytical approach to the exploration of the sound quality of certain instruments. This led to the composition of *Turning Tables* in 1999.

To a certain extent *Turning Tables* is a sister work to *Closed Circuit*, especially in the use of schemes which form loops for determining the development of pitch-class sets. Both are scored for duos with an additional sonic dimension - electronic sound processing in the earlier work and the use of detuned harp strings in *Turning Tables*.

In *Turning Tables* I have attempted to explore two particular features of the harp whilst writing what is essentially an extended monologue for the viola. I wished to use the fact

that the harp is usually limited to being able to sound only seven pitch-classes simultaneously as a harmonic structure for the whole composition. The seven pedals are altered gradually, one by one, as the work unfolds. The C string, for example, is initially tuned to C sharp, and then to C and C flat before returning back by step to C sharp. At the other end of the scale the B string begins on B flat, and is tuned subsequently to B natural, B sharp, B natural again and back to B flat. This revolving pattern of notes forms a table in the mathematical sense, a table which gradually turns. Each harp pedal diagram is used to create a different pitch-class set. These contain a varying number of pitches, according to whether a particular harp pedal diagram contains enharmonic equivalents or not. In common with *Closed Circuit* the two instruments follow different paths. The viola part is initially derived from note cells which comprise pitch-classes that fall outside the harp pedal diagrams. The two instruments follow their respective pitch schemes at independent rates, but sometimes cross into each other's territory. This creates more harmonic movement and variety, and also increases the complexity of the harp pedal changes.

The second feature of the harp writing is the use of pairs of strings set to enharmonically equivalent notes but tuned several cents apart to create a richer texture. This is first heard with the F and E sharp accelerando figure in bar 11, and as it is the E string which is slightly detuned a similar effect is subsequently created when the pedal is set to E flat and the string is sounded alongside the D sharp as in bar 63. The inspiration for this idea came from my study of computer processed sound effects. I had also heard a new work for viola d'amore by Olga Neuwirth whilst I was visiting IRCAM, entitled *Risonanze?*, in which the combination of the bowed strings and resonating strings beneath suggested to me the sonorities of viola and harp.

Although it is not intended that the listener should be aware of any difference in the tonal language, the opening viola material is in fact freely composed. However, as the ideas unfold the music becomes drawn into the cell scheme. Both instruments derive their opening material from cell 1a, this is the initial setting for the seven harp strings (see Example 2), but the viola part is considerably faster moving and therefore proceeds more quickly from one cell to the next. By the time we have reached the seventh cell all the notes have been altered by one semitone, and thus the C major tonality of the close is already foreshadowed in bars 28-31. From here the viola turns to the complementary sequence of cells, beginning with cell 1b, which comprises all the pitch classes not contained in cell 1a.

Example 2.

Turning Tables, Cell 1a



Cell 1b



In recent works I have gradually become more attracted to the method frequently adopted by Sibelius of stating the principal theme in full at the close and working gradually towards the resolution of thematic material. Nowhere have I adopted this formal device more rigorously than in *Turning Tables*, in which the whole structure is derived from a gradual transformation of the opening idea into the final theme (bar 116). The C major flavour of this theme is a direct result of the table finally turning full circle, and the pitches of the last cells from which the viola derives its melodic material eventually returning to the six notes of the complementary cell 1b. Against this the harp, still deriving its harmony from the contrasting pitches of the main cell system, here sounds distant rather

than dissonant as the music winds down to the last dying strands of the F/E sharp rhythmic figure.

In earlier works I frequently made use of cell structures which were constantly transposed but not transformed, leading to tight pitch and interval organisation and a particular harmonic flavour for each composition. I tended to use five notes in each cell, and compose figures around these five notes for a significant period before employing the next, transposed cell. The transpositions were all derived from the intervals within the cell itself, enabling me to create an open ended structure of constantly changing tonal centres. This technique has served me well for over twenty years, my earliest use of it being in my *Intermezzo I* for piano, composed in 1974. Increasingly, however, I have felt the need to organise my pitch material with a system which would be harmonically more dynamic. The organisation of material by the use of tonal centres and the frequent recurrence of certain intervals and chords remains an important method by which musical elements can assume a distinctive character, but when employed within a broadly non-functional harmonic language the harmony may tend to become rather static. Therefore my aim in recent work has been to discover ways in which greater transformation of interval relationships can take place as the music develops. My first attempt at this can be seen in the *Clarinet Quartet* of 1995, where cells are reformed in different ways with the compression and expansion of the intervals within a cell. In *Turning Tables* I have endeavoured to take my enthusiasm for composing with cells of a few notes to a new, more progressive system, in which adherence to the constant reiteration of similar intervals becomes less important, and as the cells are gradually transformed by the harp's pedal changes so the musical material is allowed to take new directions.

Nevertheless, one should be reminded of the words of Schoenberg, who, “despite the formal intricacies of his method....maintained again and again that the prime function of a composer was to move the listener. ‘I write what I feel in my heart - and what finally comes on paper is what first coursed through every fibre of my body’” (Machlis 1980: 439).

Turning Tables treats the relationship between the viola and harp in a rather enigmatic way for much of the time, with both frequently competing for the main material, especially in the intensification which begins in the *agitato* section from bar 83. Even as the intensity is reduced in the closing section the two instruments are to a certain extent proceeding along different paths, not only melodically but also in their feeling of phrase lengths and even tempo. There is plenty of exchange of material, but each instrument presents its version of an idea independently, as imitation in a more conventional sense is avoided. The viola, as the work reaches its climax, rather mockingly copies the harp’s *accelerando* figure with microtonal detuning of its own in bar 113, but a few bars later the same idea has become part of the final melody, and in a version of the same figure the quarter-tones die away in a mood of resignation.

In both these works the concept of following two paths simultaneously is important. Yet this is primarily a structural device, and the application of the system for generating pitch classes is certainly not intended to be heard by the listener. It serves to enrich the harmonic and motivic relationships between the two instruments and within the work as a whole. It is this end result which the listener may appreciate, even if only on a subconscious level. I return therefore to the need I have as a composer to progress along two routes whilst working within what I believe is one style, and in particular my propensity for combining harmonic systems which may seem irreconcilable. Before

discussing in detail the works in which the tensions, created by the pulling in two directions of these opposite harmonic forces, are most apparent, it is necessary to outline the methods used in the writing of the more overtly tonal compositions in this portfolio.

The *Magnificat and Nunc Dimittis* is the result of a commission specifically requesting a work for a *capella* eight part choir with counter-tenor solo. It was composed with the resonant acoustic of Norwich Cathedral in mind as well as being written for liturgical use rather than concert performance. The thematic relationships between the two parts are such that the two pieces are ideally separated by spoken parts of the service. In many ways it is quite different from my *Missa Brevis*, composed some fifteen years previously, which had explored aleatory choral writing and demanded a degree of technical virtuosity from the singers. With its piano accompaniment it had been written for concert performance, but the influence of the Italian polyphonic era and, even more importantly, the way in which Bruckner had brought new life to nineteenth century sacred choral composition, had been crucial to the compositional process (see Schönzeler 1978: 142-145). Having a duration of only fifteen minutes it is very intense, and whilst I have always regarded it as one of my most successful works I have remained tempted to rewrite it for chorus and orchestra, thereby allowing time for the ideas to unfold at a more measured pace. Similar influences are revealed in the *Magnificat and Nunc Dimittis*, but I have worked here towards achieving more of a timeless quality, and explored ways of using repetition of melodic motives within a carefully structured and gradually developing harmonic framework. Here one might also note the influence of Górecki, whose ability to compose in a long time span with repetitive thematic material in works like *Totus Tuus* has always impressed me, whilst not being a technique I had hitherto employed.

The entire *Magnificat*, and indeed much of the *Nunc Dimittis*, is derived from the opening two chord figure. If I had to select a few bars from all my music which are most representative of my philosophy as a composer I might cite this opening, as I have found in this idea a synthesis of old and new, a sense of movement and yet a feeling of standing still, a vision of the future which nevertheless looks back to the past.

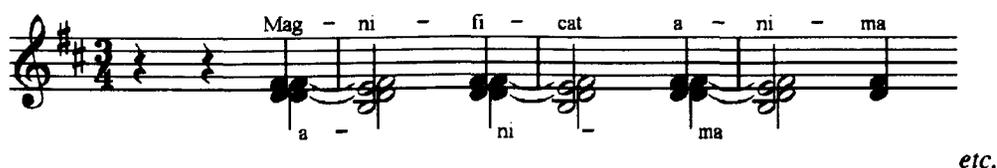
The significance of working with carefully thought out ideas has become increasingly important to me - I will usually spend as much time perfecting a single motive as I will composing an entire work. The process of development and the ideas themselves should not, in my view, be separated in the composer's mind. Subsequent analysis will of course look at all the ways in which themes are exploited, but during the process of composition one must have an overall vision, a canvas perhaps, in which themes and development are as one idea. The material must grow from this vision, and without inspiration a composition will merely be a technical exercise. In proceeding to discuss the procedures used in the *Magnificat and Nunc Dimittis* I must emphasise that for me the study of motivic development is crucial in the analytical process, but not in the compositional process, where development is entirely unselfconscious. In this respect there may seem to be a crucial difference between the processes used in this work and the use of a predetermined cell structure in other works. This is only evident on the surface, as the process of fashioning ideas and creating an overall concept for a piece remains the same. Whether or not I am working with any form of tone row, it is the same passion for exploring particular sounds which governs my choice of harmony.

The opening of the *Magnificat* is scored so as to create a bell-like sound, and every time this idea reappears the choice of words in the sustained parts (second soprano and alto in

the opening) was carefully considered to enhance the alternating two chord motive. No difference in dynamic is intended between the parts. I have therefore used the crucial words 'anima' in the opening, 'exsultavit' at the second occurrence of the idea in bar 9, 'humilitatem' in bar 17 and 'beatam' in bar 22.

Example 3.

Magnificat, bar 1



The first section from bar 1 to bar 30 follows two ways of rising an octave in two steps, firstly transposing up fifth then up a fourth, and then vice versa. This is achieved by altering the step in the melody in the fifth bar from a third to a second. A return to D major would be inappropriate at bar 29, however, especially as the opening could be either in D or in B minor. I expect listeners to hear this theme in different ways, my interpretation of the tonality of the opening is determined acoustically, as D seems a natural tonal centre for the opening, whereas when the material is transposed up a fifth for the second phrase in bar 9 we have actually moved to A although it now sounds in F sharp minor - our ear cannot perceive a jump up of a fifth in the tonal centre at this point. The open fifth F sharp chord which finishes the first phrase makes this effect certain in the mind of the listener. By returning to D major for the end of the second phrase we are in no doubt that bar 17 begins in that key, and not in B minor. Bar 26 further reinforces the major mode of this theme, where within C major the A is sounded as an added sixth. Throughout the rest of the piece a similar process is followed.

The second section, 'Quia fecit', beginning in bar 31, is a quasi recitative passage for counter-tenor solo built over the 'Magnificat' theme. A new idea which springs from it lends significance to the words 'Et sanctum nomen eius'. The rather dissonant counter-tenor is in complete contrast to the mediaeval flavour of the choral parts, but its recitative style complements the surrounding modal harmony. The harmony becomes gradually richer until we reach a climax in a radiant B major. The hint of aleatory writing in bars 57 and 62 is as far as I have gone to re-enter a world which I inhabited some years ago, when I often made use of mobiles and non-barred passages. I have now found the frequent use of mobiles to create too static an effect, and I find increasingly that conventional barring can be more useful in maintaining flow both rhythmically and harmonically.

The two worlds of Renaissance modal writing and richer harmonies from later years are ultimately fused when the opening idea reappears for the 'Gloria' in bar 68. I have reintroduced it over a dissonant pedal B flat and E flat, and then allowed the pedal to creep up in pitch to B and E for the next phrase. The same concept is reworked in bar 81, where the dark F sharp and C sharp pedal slips up a semitone for 'et nunc et semper' in bar 86, at last taking the rest of the harmony with it. The importance I attach to careful and consistent word setting is shown by my use of the harmonic progression from the 'Et sanctum' in bar 34 to set the word 'saeculorum' in bar 90. Just before the close we are almost reassured of the D major tonality, but the use of the second inversion D major chord which fades before the end, and the final resting place on the second of the two alternating bell strokes leaves us in suspended time.

The main material for the *Nunc Dimittis* was conceived before that for the *Magnificat*. The need for some separation between the two movements in performance is reinforced

by the similar nature of much of the ideas. This the furthest I have travelled down a Góreckian road which ultimately leads to the eternal repetition of a single idea in a zone where time has ceased to exist. The repetition of the *Magnificat*'s opening theme leads after a few bars to harmonic movement. However, in the *Nunc Dimittis* I could willingly have repeated the principal idea, which begins in bar 8, indefinitely. The second part of this theme, the 'Quia viderunt' in bar 16, is used also as an introduction to the movement in the solo counter-tenor, echoing the words of the 'Gloria'. This idea is closely related to the *Magnificat*'s opening theme, most obviously when harmonised as in bar 21 with the same characteristic two chords. However, it is turned into a longer melodic phrase which gains great emotional significance as the movement unfolds.

Example 4.

Nunc Dimittis, bars 21-22



The most important similarity between the two movements lies in the harmonic device of writing tonally without being in a clearly defined key or mode. The opening counter-tenor phrase is in G minor, or perhaps the Aeolian mode on G, where this theme recurs in bar 21 the A flat in bar 25 lends a Neapolitan feel to the G minor harmony but could equally well be described as the Phrygian mode on G. The principal theme in bar 8 can also be described as being in various different tonalities, G minor, C minor or E flat major could all be argued to be the tonal centre, alternatively either the Aeolian mode on G or the Dorian mode on C are possible. I hear the sound as having a principal tonal centre of G

with a subsidiary tonal centre of E flat, and by closing the work with a suggestion of G major I have reinforced the G as a tonal centre. Furthermore I have used C minor with a distinctively subdominant flavour at crucial points, especially in the final, extended cadential section (bar 79). However, for the beginning of the 'Gloria' I have shifted the music up a semitone to lend an ethereal quality, here the counter-tenor melody which it accompanies suggests a tonality of E major rather than G sharp minor, although the counter-tenor melody itself is basically in the Lydian mode on E.

After the 'Gloria' I recall the 'Nunc Dimittis' material again, to create an arch form for this setting. Whilst the outer melodic line remains the same the inner part has changed from E flat to D. Against this the 'Amen' is tolled in the bell like motive derived from the *Magnificat*, and this creates a D and A fifth pedal to blur the precise harmonic nature of this passage. The final moments of the movement recall the opening of the *Magnificat* directly, although we now hear it in G major - despite the notes being identical to the opening when a D major/B minor uncertainty prevailed. Having heard the note G for so much of the *Nunc Dimittis* we may still continue to hear it in the final bars, even though the chord is a second inversion with added sixth and no tonic. For the last chord, however, I add the tonic G in the second tenor to fulfil our expectations.

I make little distinction between homophonic and contrapuntal writing in either the *Magnificat* or the *Nunc Dimittis*, as whilst most of the music is conceived vertically it is written in a more linear way. Most of the counterpoint is created from strands of different ideas running at the same time. For example, in the *Nunc Dimittis* the main theme runs almost as an ostinato, with other ideas appearing above or below it. In the 'Gloria' at bar 44 three themes are combined, the main two ideas from the opening as well as a counter-

tenor solo. Overlapping entries and imitation are contrapuntal devices that I have used more sparingly, but they feature as ways of increasing tension in the crescendo passages leading to the principal climaxes (bars 27 to 32 and bars 48 to 57). These are also the only passages in this movement where the harmony is more dynamic.

The use of eight-part choir has enabled me to explore a richer variety of choral textures not only harmonically but also in the timbral quality of different voices. Most notably I have used sustained sounds for the addition of an acoustic dimension to the choir, as in the opening idea which is a kind of built in reverberation effect, and in the long drones which seem to pre-exist within the walls of a cathedral (*Magnificat*, bar 67 ff, *Nunc Dimittis* bar 67 ff). The final message of the work is a plea for peace, the words ‘in pace’ are given particular significance by returning at the close, whilst the ‘Gloria’ is treated mystically in both movements. With the exception of the expansive chordal writing for the words ‘gloria et spiritui sancto’ (*Magnificat*, bars 78 to 81) greater importance in the ‘Gloria’ is given to the concept of eternity, here also as a plea rather than an affirmation.

The use of archaic form and harmony in this work may even prove to have greater longevity than the other methods of composition which I have employed elsewhere. As Shostakovich reminds us, quoting from one of the letters of Rimsky-Korsakov, “Many things have aged and faded before our eyes and much that seems obsolete I think will eventually seem fresh and strong and eternal, if anything can be” (Volkov 1979: 159).

The work within the portfolio which in many ways is most closely related to the *Magnificat* and *Nunc Dimittis* is the *Aria - Commemoration* for bassoon and piano. This is a reworking of the first movement of my *Concerto for Bassoon and Chamber*

Orchestra, originally composed in 1995. This was composed in response to a request for a work for performance by a duo based at the Royal Northern College of Music in Manchester, and it has been included in the syllabus for the new Associated Board Diploma examinations. Whilst the bassoon part remains unaltered from the original version the piano part is a radical reappraisal of the previous orchestral material. As in the *Magnificat* and *Nunc Dimittis* I have used archaic forms to achieve structural coherence. The five-note passacaglia theme passes through various registers and provides a framework in which the bassoon delivers a continuously evolving melodic development of a seven-note scale.

Example 5.

Aria - Commemoration, seven-note scale



This scale, essentially an octatonic scale with a missing B natural, is built around two intervals of a tritone, D to A flat and G flat to C. The third tritone, which is formed between the second and sixth notes of the scale, Eb and A, is a pivotal interval in the passacaglia theme, which only appears in the piano. As in the choral work strong tonal implications are blurred, G minor is not the key of this piece, it begins and ends with the passacaglia theme creating a pentatonic flavour. This is enhanced by the use of a tonal centre of D rather than G in both the passacaglia theme and the bassoon material. Throughout the piece the theme is placed alongside a number of contrasting pedal notes, for example C sharp in bars 18 to 21, F sharp in bars 22 to 24 and E in bars 32 to 33. In other places chromatically rising bass and inner parts are used to explore the progressive

implications of the theme rather than its more apparent static qualities, as in the passages from bar 34 to 37 and from bar 49 to 52. Here the harmony becomes more functional than elsewhere, as the upward chromatic movement creates tension which leads to resolution in the ensuing climaxes. Further contrasting material is provided by the use of a chorale type theme at focal points within the piece, first appearing in bars 15 to 18 this theme recalls the main idea from my earlier brass sextet, *VE Day, a Commemoration*. Its funereal nature is also enhanced by its use of tonal ambiguity which is a feature of much of my work - really it is in the Dorian mode on F sharp rather than the apparent C sharp minor, and its plaintive harmonic use of the major third and minor sixth intervals relates it closely to the *Nunc Dimittis*.

The bassoon is required to play virtually without a break in the entire piece. There is only one significant interlude for the piano, this occurs from bars 58 to 61, and it was the challenge of creating an almost unbroken line for the bassoon which was an important starting point for the structural plan of the piece. I wished to reveal the full timbral range of the instrument, and present the bassoon as a medium for powerful melodic expression. In developing its lyrical potential I have made exceptional demands on the player's stamina and breath control, and the difficulty of realising the long phrases is further increased by the need to use certain alternative fingerings, which enable repeated notes to be articulated without re-tonguing. This effect is first used in bar 42. The melodic line itself never refers directly to the passacaglia theme, although the binding of the bassoon and piano parts together is much closer than the relationship between viola and harp in *Turning Tables*, despite the use of different thematic material in the two instruments. Only in the closing bars is the relationship between the seven-note scale and the pentatonic scale realised, when the A, C, D and E flat in the bassoon scale are clearly

heard as the notes of the passacaglia theme without the G, and bassoon's G flat is effectively resolved on to a G in the final bar.

Rhythmically the piano is given the task of maintaining a sense of pulse, whereas an important feature of the bassoon part is its frequent use of syncopation. In the entire opening phrase, a long melodic sweep exploring triplets, semiquavers and quintuplets, only a handful of notes appear on the beat itself. Despite this the effect of flow remains intact.

The piano part does not contain all the contrapuntal detail of the original orchestral score. I have attempted to ensure that it does not sound merely like an orchestral reduction, even though for musical reasons the layout is at times quite complex. In a few places I have added rather than removed material, especially where the original score comprised sustained string textures. The inappropriateness of the piano to the rapid reiteration of chords in a soft dynamic led to the creation of a new motive in the left hand in bar 15. The woodwind figures which frequently passed from one instrument to another are now reconceived as single flourishes in the right hand, as for example in bars 23 to 24. What had originally been composed as imitative passages combine to form longer sweeps of melody, especially the piano solo passage from bar 58, which has quite a different flavour from the orchestral original. After careful consideration I have retained some quite awkward cross rhythms - as for example in the build up to the main climax, bars 67 to 69 - where a sense of freedom to move away from the relentless crotchet pulse of the passacaglia is essential.

In both *Aria - Commemoration* and the choral work I have used modal and diatonic elements and various scales to unite the structure and provide me with a framework for composition. In neither case, however, would I consider this process to be particularly different from using the kind of cell structure which forms the basis of the other two duo works in the portfolio. Whilst the more schematically constructed works may assume a different stylistic flavour I have used both systems to write in a harmonic idiom which is fundamentally similar. *Closed Circuit* and *Turning Tables* take time to resolve initial harmonic conflict, a conflict which seems not to exist in the choral work or the *Aria*. Nevertheless, the *Aria* uses the allocation of different pitch material to the two instruments in a manner not far removed from that used in the other duos, and despite the differences in method it becomes apparent in the closing moments of all four works that ultimately they belong to the same sound world.

The use of ambiguous modes is not a particularly conscious method of composition in these pieces, and only occasionally have I directly set out to incorporate folk melodies into my music. Whilst working on the *String Quartet No 6* I received a commission to compose a work for a children's string group entitled *Three Lancashire Ballads*, which was to have a strong emphasis on local history, in particular the traditions of the cotton mills and of witchcraft. The writing of a work like this provided a break from the greater intensity of the works in the portfolio, but nevertheless influenced my writing of the quartet in a subtle but important way. Both works were written for my ten year old daughter, one with a solo violin part for her to perform whilst the other is based on a poem which she had written recently. The overtly tonal, rather than obliquely tonal style of the string orchestra piece is nevertheless not only equally carefully disciplined but also becomes an important medium in which I can indulge my passion for more traditional

melody and harmony. The chance to fulfil this passion more directly enabled me to work on the quartet without feeling any temptation to relax the uncompromising dissonant harmonic style of certain sections of this piece, whilst conversely the more radiant outer sections of the quartet owe a considerable debt to the tonal idiom of *Three Lancashire Ballads*. The requirement for the latter to include folk melodies at first filled me with apprehension, as I have never been a great enthusiast of the English folk-influenced music of the Vaughan Williams era, and I have always preferred working with original material. In addition I enjoy writing melodies myself - sometimes one of the most challenging of all compositional tasks - and I did not feel the need to 'borrow' tunes from anywhere else. The folk-influenced scales and rhythms of Eastern European composers are altogether more akin to my way of working, as the character of Eastern European folk music seems to create opportunities for working with smaller rhythmic and melodic cells, whereas English folk music is simpler, basically modal and has a straightforward phrase structure which does not easily allow for rigorous development. I therefore decided to compose entirely original melodies for the principal themes, albeit with a modal, folk-influenced flavour, and use Lancashire melodies more subtly within inner harmonies. Most of the compositional processes and structural devices used are much more clearly self-evident in this work than in most of my compositions, but perhaps all composers should from time to time write a piece which, on first hearing, sends the audience away whistling and humming the main melodies! Despite the simpler compositional processes used in this work I attach importance to it as another facet of my style, not least because of the carefully planned contrapuntal and harmonic framework in the first two movements, and as a means of bringing new life to folk melodies and new music to younger children. Along with the bassoon part in *Aria - Commemoration* the solo violin part provided me with the chance to write with specific performing skills in mind. As composers we are often prone to

forget the importance of the technical aspects of performance, and the need to include works in our output which do not only serve as expressive vehicles for ourselves but also a means of stretching the technical and musical capabilities of the performer in a way which allows them a fair share of the credit for the performance.

Having examined these two differing routes in which I find myself travelling I now turn to the most substantial work in my portfolio, and the one which combines all the various aspects of my compositional technique. *A Street under Siege* is a single movement orchestral work which I expect to form the first in a set, perhaps a trilogy, of related orchestral pieces. The inspiration to compose this piece has come from the appalling consequences of recent conflicts, in particular the Balkans war. However, there is no programmatic element here, and a more direct reference to the conflict may emerge in another part of the set of pieces. The title is taken from a series of television programmes broadcast at the time showing grim two-minute snapshots of life in various parts of the war-torn territory. Here, as in most of my music, the emphasis is on using external stimulæ to facilitate the search for a coherent overall structure and to determine the emotional direction of the work.

As in most of my work there is a strong tonal centre, in this case D, or rather the open fifth D and A, which is firmly stated in the opening section and reappears at the recurrence of the principal theme at the climax (b. 208). The structure which eventually emerged bears a distinct resemblance to binary form, and I have emphasised this connection by using related tonal centres at the two major structural points (the midpoint and the end) which is a typical feature of this form. The most important determining factor for the

form of the piece, however, was the idea for two ostinati sections as culminating passages to end the two main sections.

Example 6.

A Street under Siege, Bar 92 ff



A Street under Siege, Bar 230 ff

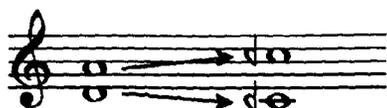


The first ostinato section beginning in bar 92 is built around an F tonality (this would be the relative major if we consider the opening to be in D minor), reaching upwards as if striving to reach somewhere, whereas the second, beginning in bar 230, is based around a D tonality (the tonic major with a strong subdominant flavour), inverting this figure to a downward phrase of resignation.

The developmental processes evolve around two essential elements. Firstly the overall harmonic shape is derived from a gradual expansion of the interval of a fifth (D and A) moving in outward contrary motion in quarter-tone steps towards the first octave, which falls on C flattened by a quarter-tone. This process unfolds gradually throughout the work, and will be continued and reversed in the following movements of the trilogy.

Example 7.

A Street under Siege, underlying progression



The significance given to quarter-tones in *A Street under Siege* marks a new departure in my composition. Although I have used them in previous works their use has been to create clusters rather than form part of the harmonic argument. Even though their use is limited in *A Street under Siege*, both structurally and harmonically they have a vital significance. They frequently appear in pairs to create 'traditional' intervals - as in bar 2, where the combination of C three-quarters sharp and D quarter-flat actually sounds as a minor second.

The harmonic and motivic content is derived from the following five-note cell and its inversion:

Example 8.

A Street under Siege, initial five note cell



This cell contains elements which I have used in many of my most personal works. The tonal centre of D with a strong emphasis on the note C sharp in particular recurs throughout my work, and the D/E flat and D/B flat axes provide important interval material in several other pieces. My early Second Piano Concerto, composed at the age of seventeen, begins on a chord of D and E flat, and my *Separations* for piano, composed in 1976, uses the D/C sharp/E flat axis as a starting point for a work also using contrary motion outwardly expanding from D. My *Missa Brevis* is also based on a tonal centre of D, here without the E flat but with crucial importance to the notes C sharp and B flat.

as the music unfolds so more freedom is introduced in the application of this scheme. It is the discipline of working within a tightly controlled scheme throughout most of the first section that enables all the material to be closely related and a cohesive structure to be formed. This becomes sufficiently strong for the schemes to be followed less rigidly as material is developed further in the second section.

The principal melodic idea that first appears in the harp and tuned percussion uses one cycle of transpositions of the five-note cell (see example 10). This melodic figure alternates with an accelerating rhythmic idea which begins the contrary motion process in the first bar.

Example 11.

A Street under Siege, bars 2-7

original on D Transposed to C sharp Transposed to E flat Transposed to A etc.

In bar 25 this theme is reappears in a transformed version for woodwind, but while the pitches are derived from the inversion of the original row (see example 12) its overall shape and character are retained.

Example 12.

A Street under Siege, initial cell structure inverted

A subsidiary theme appears in bar 8 played by the cor anglais, originally this was extended into a complete section, but I later decided to remodel the first section by alternating this idea with the opening harp motive. A second principal theme is first heard in bar 49, which is derived from a sequence of notes created through the use of every second note from the original row (see example 13).

Example 13.

A Street under Siege, pitches used in bar 49 ff.



into unison violins can only be achieved by compressing the intervals until the quarter-tone reappears, quite naturally, in bar 79. A re-orchestrated echo of this passage in the woodwind and brass leads to the first of the two ostinato sections which, emotionally, forms the pinnacle of the first half of the binary structure.

As I have moved from using the combined note series described above to the next phase of expanding the cell - by using every third note from the original theme - unexpectedly I was presented with the seven natural notes in succession, with the D/A fifth prominent as well as the thirds F/A and G/B. This led me to create an almost Brucknerian climax over a pedal F and was to provide me with the idea of working on a large-scale binary structure - a form whose two-part journey seemed to capture the essence of the struggle I was trying to portray.

The ideas within this climax are echoed softly at the start of the second main section of the piece, beginning after a clearly defined pause at bar 125. Originally this was to have been an exact halfway stage in the work (excluding the coda), but later revisions resulted in a reordering and condensing of the opening material, whilst I considerably expanded the main climax in the second, added silence between the two main sections and improved various links. The first section is thus 124 bars long, the second 139 bars long and the coda, which starts in bar 265, is just 25 bars long.

This second section combines in essence a development of ideas heard in the preceding section. Fragmentation of the opening theme, which is scattered around the woodwind instruments like debris from an explosion, are combined with the accelerando idea while the echoes of the preceding climax turn into slowly spreading tremolando chords in the

muted strings. A shaft of light bursts through in bar 154, before material taken from bar 9 leads to a menacing call to arms in the trumpet in bar 159. This is a mocking version of the motive from bar 9, and it is echoed brutally in partial inversion by the horns in bar 163. From this point I have created the most extended climax in any of my major compositions. The sweeping string phrase originally heard in bar 69 is transformed into an impassioned outburst, with horns added in augmentation, in a briefly radiant but soon to be distorted C major tonality (bar 170). The ensuing intense two part string counterpoint is derived from the cell structure of every fourth note from the original series, each part using alternate cells from the resulting new row:

Example 15.

A Street under Siege, cell structure for bar 176 ff.



The section from bar 187 to bar 200 was added after completion of the first draft, and serves to bring yet more intensity to this climactic section. The radiant passage recurs a minor third higher, now with the trumpets in augmentation (bar 187), and the intense string passage, now inverted, is complemented by statements of the augmented theme in chorale-like fashion, first in the trombones and subsequently in the middle woodwind. Disguised underneath is the second principal theme in the low brass. The return of the opening in bar 208 certainly owes a debt to the powerful equivalent points in a Mahler or Shostakovich symphony, but this is not a recapitulation, rather it is the continuation of a reordering of material that occurs throughout the second section. Nevertheless, it represents the first climax of the section, and certainly has some of the characteristics of a sonata form type recapitulation. Here the principal quintuplet theme is not only

hammered out in trumpets and upper wind, it is also used in diminution in a relentless, demonic, swirling string accompaniment which is transferred to the woodwind as the strings recall the sweeping melody from bar 69 for the last time. This is heard against the principal theme, which is now split between trombones and horns. The subsidiary motive from bar 9 appears as well, and as intensity increases the intervals in the string line expand to reach ever higher.

At the end of bar 222 we reach the second main climax in this section, and the dénouement of the entire work. The contrary motion accelerando theme, initially built on quarter-tones, is transformed into a version almost entirely within the scale of D major although with sharpened fourth in the trumpets, a favoured Lydian mode device, leading from the open fifth D/A through two octaves. This is played triple *fortissimo* by the brass, while underneath is a version of the work's principal theme constructed using the inversion of the five note cell. This had first been heard in bar 40 but not given particular prominence, here it is transformed into D major and passed through the strings. The second ostinato passage which follows I have referred to earlier, it is an expanded version of the ending of the first half over a pedal D, and in reaching the apotheosis of the work it returns to a mood of resignation and tragedy before the desolate coda. These final bars recall wisps of material from earlier, in particular from the second principal theme, but most importantly the accelerando figure is now reversed to become a decelerando rhythm, as in the closing stages of *Turning Tables*. We arrive at the octave C quarter-flats in the trombones and a slow disintegration of the principal theme in bar 278. The final chord picks out the notes from the first cell with the open fifth D and A removed, to leave the listener in a world where not even foundations remain.

The first movement of the *String Quartet No 6* is also a work which bridges the gap between the two paths of experimentation and consolidation. The initial ideas for this quartet have been in my mind for a considerable period of time, and the long gestation period has enabled me to redraft the ideas before committing them to manuscript. Originally I had intended to complete this work in time for the QuartetFest 2000 festival of string quartets held at the Royal Northern College of Music in January, 2000. However, work on other projects prevented me from realising this ambition, but nevertheless I was pleased that my *String Quartet No 5*, composed in 1984 and a work I have always considered to be one of my best, opened the whole festival instead. This gave me the opportunity to reappraise my earlier style and retrace the elements which I consider bring this work such profundity, whilst re-examining ways of adding greater dynamism and impetus to my current work. The *String Quartet No 5* was successful on account of its powerful emotional content, its spaciousness, its predominant use of non-barred music with long repeating mobiles and the rhythmic freedom it allowed the performers, who follow cues in each other's parts. It has a rigorously organised structure based on cells of pitch classes, with a strong sense of tonality on E. Having received an honorary mention in a major international composers' competition I have felt in some way reluctant to commence a new quartet, not least because it has always been my aim to improve on previous methods of composition. The Fifth Quartet was therefore a hard work to follow, but I already had the confidence of the Clarinet Quartet, composed in 1995 and the result of a very long gestation period stretching over a number of years. This work had for me been a further step forward, with its disciplined approach and faster moving harmonic basis. It made extensive use of aleatory techniques in its second movement without compromising on harmonic progression, and I achieved an overall sense of shape and form comparable in stature to the Quartet.

The inspiration behind the Sixth Quartet originates once again from my younger daughter's work, but this time not from her skill as a violinist but a from delightful poem she wrote that was published in the 1999 Chetham's School magazine.

Example 16.

Jennifer Pike, *Blue*

**A brilliant burst of light
A bewildering fall of dizziness
Brave heroes,
Forgotten by a wave of breathless dreams.
Crystal frost spreads itself across a carpet of delicate grass
A mind of happiness and memories
And true feelings
Passage of life
Promising air that's always there.**

I decided to set each line as a separate section within the quartet, and divide the work into two distinct movements which nevertheless share the principal material. The first is predominantly in a hurried tempo, with the 'brilliant burst of light' always in my mind. The second will be more contemplative, holding the promise of eternal beauty in an appreciation of the wonders that mankind has not yet destroyed.

The structure of this work marks another attempt to organise my material in a dynamic scheme, a structure which this time evolves through the use of certain mathematical formulae. It is important to note, however, that this ordered system is derived from the opening idea, and does not dictate its course. After completion of the opening material I set about analysing it in detail in order to find ways of developing the ideas and transforming them into new material. This represents a new departure from techniques used in my work since the finale of my *Chamber Symphony* and *Intermezzo No 1* for piano, both written in 1974, set me along the path of ordered cell structures which was to serve me in most of my compositions for the next quarter of a century. With the *String*

Quartet No 6 I have analysed the interval classes rather than the pitch classes themselves. Here I am primarily concerned with the “interaction of components of a set in terms of the intervals.....which they define” (Forte 1977: 13). I have then separated the two elements of the opening chordal idea, the vertical structure of each chord based on the interval classes between each pair of instruments, and similarly noted the interval classes which occur in each instrument’s individual line, ignoring any repetitions of chords. This leaves me with two sets of numbers, essentially the vertical and horizontal components of this opening theme.

To develop the material I have used a kind of variation structure, which is not a form I am often tempted to use in the classical sense. However, each variation is composed by deriving pitches from tables of intervals created by performing a mathematical function using the two components. These variations, it is important to note, do not conform exactly to the division of the music into clearly defined sections based on the poem, although there is a broad correlation that is deliberately blurred.

To derive new interval-class sets I have laid out the twelve vertical and twelve linear components in tables. The first table uses multiplication, for the complex concepts of ‘A brilliant burst of light’ and ‘A bewildering fall of dizziness’. The resulting new sets of intervals are often repeated, as I am using only the limited range of numbers from one to seven (I have differentiated between the perfect fourth and perfect fifth). Multiplying the chord intervals by the linear intervals results in many numbers larger than twelve, so the final table shows the remainder when divided by twelve (see Example 17).

Example 17.

Multiplication of horizontal and vertical interval classes

Horizontal Interval Classes

	3	6	9	1	4	5	1	3	4	1	3	4
7	9	6	3	7	4	11	7	9	4	7	9	4
3	9	6	3	3	0	3	3	9	0	3	9	0
5	3	6	9	5	8	1	5	3	8	5	3	8
5	3	6	9	5	8	1	5	3	8	5	3	8
3	9	6	3	3	0	3	3	9	0	3	9	0
5	3	6	9	5	8	1	5	3	8	5	3	8
7	9	6	3	7	4	11	7	9	4	7	9	4
4	0	0	0	4	4	8	4	0	4	4	0	4
5	3	6	9	5	8	1	5	3	8	5	3	8
3	9	6	3	3	0	3	3	9	0	3	9	0
3	9	6	3	3	0	3	3	9	0	3	9	0
5	3	6	9	5	8	1	5	3	8	5	3	8

The new sequence of intervals is thus created with the each row of the table as follows:

Example 18.

String Quartet No 6, pitch classes derived from first row of above table

9 6 3 7 4 11 7 9 4 7 9 4

The second section, for example, which portrays the second line of the poem, begins with the eighth row of the table. This has a very marked characteristic, as all the intervals define a single augmented triad and there is a significant degree of repetition. This harmonic world is ideally suited to the feeling of dizziness, an image further captured by the staggered timing and use of simultaneous different tempi. I was surprised to find when working through the interval classes in the table that rows 9, 10 and 12, which have the same pattern of intervals, turn out to be identical in pitch to rows 4, 5 and 6 rather than transpositions of them. I have used this feature as a means of generating repetition, but as I have structured the quartet on intervals rather than pitch cells certain transpositions have been necessary to enable me to make use of open string sonorities and

create the relevant contrast. In addition through imitation I have added further transposed statements of interval class sets. At a few points I have departed from the system entirely.

The opening section is a sustained burst of energy, and is built around an optimistic first inversion added sixth chord of C. This marks a departure from the meditative, often tragic mood of many of the openings to my works, and indeed this is an unusually optimistic piece within my quite considerable output. Despite the optimism it is a deeply serious piece, which is one reason that I have decided to construct it in a particularly disciplined way. The flourishes which approach the chords are also derived from either the vertical or horizontal components, but selected almost random for a varied harmonic texture.

Within the first set of interval classes certain characteristics are important. Vertically the only intervals are the minor third, major third, perfect fourth and perfect fifth, (classes 3, 4, 5 and 7). Within the linear components I have classified the one interval greater than a fifth independently, without using its inversion as would be the norm when referring to interval classes. This makes results in the tables more interesting. The linear components include the minor second, minor and major thirds, perfect fourth, diminished fifth and major sixth. Note that in calculating the linear intervals I do not count the interval between the last note of the first violin set and the first note of second violin set, or between the other two pairs of instruments, as these numbers have already been included as vertical intervals. In the tables it can be seen that the linear component derived from interval class 9 when multiplied by various vertical components results in intervals that are simply the inversion of those for its own inversion, interval class 3. However, for the addition and subtraction tables the results are totally different, which explains why I have

retained the use of class 9. For example, $9 + 5 = 14$, interval class 2, resulting in a major second, whereas $3 + 5 = 8$, interval class 4, resulting in a major third. Another important characteristic of the opening section is that the note F is the only pitch not contained within the four principal chords. I have therefore given this note particular prominence in the high cello part towards the end of the first section.

The second variation begins with the line ‘Brave heroes’, and here I have added the vertical and horizontal intervals to symbolise a positive image (see example 19). Perhaps the heroes are leaving loved ones behind to fight for their country, so I have cast this section as a kind of march, with the spread chords giving the impression of heavy boots crunching along a road.

Example 19.

Addition of horizontal and vertical interval classes

Horizontal Interval Classes

		3	6	9	1	4	5	1	3	4	1	3	4
	7	10	1	4	8	11	0	8	10	11	8	10	11
	3	6	9	0	4	7	8	4	6	7	4	6	7
	5	8	11	2	6	9	10	6	8	9	6	8	9
	5	8	11	2	6	9	10	6	8	9	6	8	9
	3	6	9	0	4	7	8	4	6	7	4	6	7
	7	10	1	4	8	11	0	8	10	11	8	10	11
	4	7	10	1	5	8	9	5	7	8	5	7	8
	5	8	11	2	6	9	10	6	8	9	6	8	9
	3	6	9	0	4	7	8	4	6	7	4	6	7
	3	6	9	0	4	7	8	4	6	7	4	6	7
	5	8	11	2	6	9	10	6	8	9	6	8	9
Vertical Interval Classes													

Rather unusually for me I have included references to another composer’s work at this point, as here it seemed appropriate to incorporate material from Richard Strauss’s *Ein Heldenleben*, as well as the familiar dotted rhythm from the slow movement of

Beethoven's *Eroica* symphony which Strauss transforms so powerfully in his *Metamorphosen* for twenty three solo strings:

Example 20.

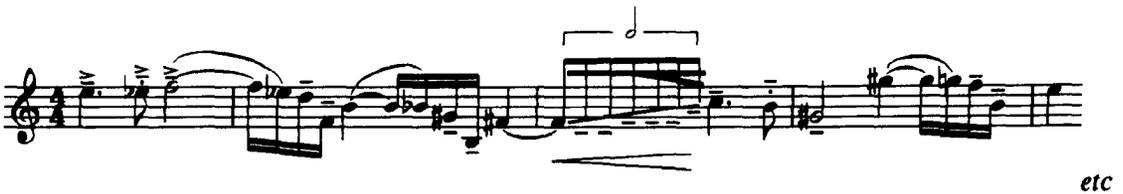
String Quartet No 6, bars 69-72



The third entry of this idea is transformed into a reference to the opening of *Ein Heldenleben*:

Example 21.

String Quartet No 6, bars 78-82



As in the first table the recurrences of identical interval sequences mostly start on the same note, enabling greater consistency to be achieved and certain phrases to be repeated (see example 22).

The march becomes increasingly frantic, and the 'heroes' are eventually 'Forgotten by a wave of breathless dreams', for which I introduce a kind of negative symbolism, interval classes obtained by subtracting the vertical element from the linear components. Although the heroes are forgotten the sadness is transitory, as the dreams are energetic and forward- looking. In this section, which begins in bar 111, I use the numbers within the

Example 22.

Addition of horizontal and vertical interval classes

Horizontal Interval Classes

	3	6	9	1	4	5	1	3	4	1	3	4
7	10	1	4	8	11	0	8	10	11	8	10	11
3	6	9	0	4	7	8	4	6	7	4	6	7
5	8	11	2	6	9	10	6	8	9	6	8	9
5	8	11	2	6	9	10	6	8	9	6	8	9
3	6	9	0	4	7	8	4	6	7	4	6	7
5	8	11	2	6	9	10	6	8	9	6	8	9
7	10	1	4	8	11	0	8	10	11	8	10	11
4	7	10	1	5	8	9	5	7	8	5	7	8
5	8	11	2	6	9	10	6	8	9	6	8	9
3	6	9	0	4	7	8	4	6	7	4	6	7
3	6	9	0	4	7	8	4	6	7	4	6	7
5	8	11	2	6	9	10	6	8	9	6	8	9

table not only to organise pitches but also to derive the duration of notes and rests to create a fugue theme. This is used in two expositions, the second of which begins in bar 132. The stuttering rhythms which originate from the row of numbers enable me to give the music something of the unreal nature of dreams. The passage from the 'fall of dizziness' is recalled with its inversion, bar 129, and reminiscences of the march appear in pizzicato chords. Finally the brilliant burst of light returns with added density to end the movement in a wave of breathless optimism.

This is the only work within the portfolio to make significant use of aleatory techniques, but unlike in my preceding quartet I have only used mobiles and unbarred sections where I have felt the use of conventional time signatures would be inappropriate. I particularly felt the need to use a freer form of vertical organisation to create a sense of dizziness in bar 35 ff. and of overpowering force at the climax of the march section in bar 101.

In working on the compositions submitted I have been influenced by many varied sources.

My music has been described as fundamentally in the English tradition but with strong

Polish elements. Formally the influence of Polish music remains strong, with the music of Lutoslawski being an overriding influence, but I now increasingly turn to the work of Górecki to find new ways of understanding the progression of time and of imbuing music with greater mysticism. Large time scales have always appealed to me, although paradoxically most of my output comprises shorter works or movements. The influence of Bruckner remains fundamental, especially at this time of reappraisal. The essence of his music is a combination of old and new, and the importance he attached to harmony and the voicing of harmony is closely akin to my philosophy. The influence is to be found not only within *A Street under Siege*, in particular the use of pedal notes and successive climaxes, but also in the shorter works - notably in the choral writing of the *Magnificat* and *Nunc Dimittis*. I have concentrated on the significance of the vertical plane for the reason that my style is governed by fundamentally harmonic principles. As can be seen by the works in the portfolio in no sense does this mean that I attach less importance to other musical elements, but merely that melody, form, timbre and even rhythm are largely determined by the harmonic argument of each piece. Indeed, it is in the writing of melodies that I consider my work owes something to both the English and Polish traditions. Furthermore, there is plenty of evidence of my enthusiasm for linear techniques, especially in the manner in which the pitch material for the two instruments in *Closed Circuit* and *Turning Tables* is separately organised. Nevertheless, the two sets of pitches derived from the two simultaneous systems of cell structures are still primarily explored for their combined harmonic implications.

I have used fugue and other contrapuntal devices in many recent works, although the only example in this portfolio is in *String Quartet No 6*, where the fugal exposition from bar 111 is composed with equal regard for both the linear and vertical dimension. As can be

seen by comparing each of the four entries the pitches conform to a general shape but are not transposed versions of the subject. Here I have continued to derive my pitch material from successive lines in the table of pitches, using them in reverse order for the fourth entry in order to retain the essential nature of the subject.

With the String Quartet I have travelled the full distance of the two paths, and each route has led me to the same point. Whichever system I have adopted, whether a strict or free interpretation of pitch-class sets or interval-class sets, or whether I have worked within more traditional tonal systems, I have arrived at a similar conclusion. Every vertical moment must have meaning for a work to have validity, and the significance of experimenting with new methods of composition is not only revealed in the end result but also in the rewards of the process itself. I have used certain schemes as a framework - providing me both with a discipline and a resource of material. But where I have not used such schemes I have nevertheless retained a strict discipline for the development of harmonic material. The use of various schemes provides a valuable resource for enabling new ideas to develop naturally from existing material, and my earlier pre-occupation with unvarying pitch class sets and transposition cycles certainly helped me to establish a consistent and cohesive style, whilst enabling the listener to recognise particular intervals and tonal relationships as of special importance. Combined with a frequent use of aleatory passages, however, as Lutoslawski found in his later work, I have “felt the need to re-examine ways of avoiding the problem of harmonic stasis and of achieving a faster pace” in my music (Rae 1999: 262).

In this portfolio I have attempted to address these earlier problems by using more dynamic schemes, including cells which constantly mutate and transform to create ever changing

intensity without losing a sense of coherence. The use of formulae, however, to modify interval relationships is only one solution, however, and in developing my style further I do not envisage using such techniques frequently. The use of numbers must be handled with great care, such methods introduced for their own sake “represent a safe refuge from the undependable, incalculable imagination and provide a form of rational reassurance, a cloak....for the lack of self-confidence in the much more demanding field of pure invention” (Boulez 1985: 73).

I may discover what for me are new ways of creating musical forms and structures, new ways of employing tonality and harmony, new ways of organising rhythmic and melodic material. I will continue to work for greater momentum, greater unity, greater formal cohesion. I shall explore further the possibilities offered by electronic manipulation of sound. Without a doubt the overriding importance of the quality of sound - especially harmony - will dictate the choices I make at every given instant in my music. The elements I hold as most important to me will remain the same, my style will evolve but it must remain personal. Standing at a crossroads as I do now, I realise that it does not matter after all in which direction I turn. All routes lead to the same, inevitable destination, where there will be another starting point, another choice of paths.

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