

THE COMPOSITIONAL LEGACY

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Volume 1 of 2 volumes

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THE COMPOSITIONAL LEGACY:
Significant, contemporary, compositional
techniques as lateral drivers to new
creativity, evidenced within a substantial
portfolio of original compositions.

Volume 1 of 2 volumes

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Declaration of Original Work

I hereby certify that the enclosed material is entirely my own work and has not been taken from the work of others; save to the extent that such work has been cited and duly acknowledged.

Signed:  _____

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Abstract

Title: The Compositional Legacy: Significant, contemporary, compositional techniques as lateral drivers to new creativity, evidenced within a substantial portfolio of original compositions. (David G. Scanlon).

The thesis cites the identification of significant, contemporary, compositional techniques and their use as lateral drivers in developing new creativity. The process involves the preliminary definition of a position of contributory perspective and thus, of a standpoint and outlook which guides the subsequent re-interpretations, transformations, fusions and manipulations of the selected techniques.

The consequent explorations, shaped by new developments, current context, practical insights and fusions of disparate influences, results in the production of results, which, by their very nature, contain new elements of contemporary creativity. The procedure, of informed, academically referenced research, supported by practical experience and a re-evaluation of certain performance conventions, when expressed within an innovative response, promotes the inclusion of such techniques as components of further creative advancement. It also provides renewed insight and increased functionality of the original methodologies.

Each of the ensuing, accompanying compositions seeks to demonstrate, reinvigorate and extend such creative development across a range of genres and instrumental ensembles.

The work produced is therefore subject to practical referencing, re-envisioned methodologies, creative applications, experimental fusions, pragmatic design and innovative combination. The propositions advanced are addressed primarily within the accompanying portfolio of compositions, (Vol. 2), with supporting analyses and further relevant data contained within the enclosed commentaries.

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Finally, I wish to acknowledge and thank the many, wonderful, current and past performers, who, having spent years in dedicated refinement of their craft, have graced our stages and concert halls, generously sharing their talents with us and providing us with the inspiration of the finished, magical, live performance which goes to the very heart of the craft of composition.

Overview

Effective research should always be approached without preconditions, however, in this particular field, populated as it is with many specialist skill-sets, each individual's starting point governs their point of reference. Consequently, the nature and extent of individual experiences within the field must inevitably engender the formation of a personal philosophy. Therefore, in order to provide a valid context for the subsequent research, both the starting point and that philosophy require definition.

Background

The general, professional background activities to this research project are parallel careers in education and musical participation at an advanced level. A primary degree, majoring in music, coupled with further studies in voice and brass playing, have facilitated a career of musical involvement which has ranged from orchestral, concert and theatrical performance, to a wide range of conducting engagements, up to and including, professional level. Engagements have been fulfilled in Ireland, Northern Ireland, England and Rome. Thirty years of experience in those activities, achieving conducting and performance awards in the process, has provided a wealth of musical involvement which has contributed technical, practical, performance and musical insight to the practice of composition and consequently to the works contained in this portfolio.

Research context

The nature of the personal philosophies surrounding the practice of composition, which have been influenced by the above history of practical experience and therefore inform the thesis, extend through a number of areas detailed below. The first of these is a calculated pragmatism in design.

Thirty years of performance involvement has allowed close working relationships and continued interaction with professional performers. Their expertise and insights are a valuable resource in guiding contemporary composition, in terms of constructing work which is both challenging and practicable. Such insights help to imbue the resultant compositions with core attributes, which provide confidence to the performers and consequently generate performances of conviction. This practical standpoint can usefully influence the approach to a new composition. A case in point being an earlier choral commission (*The Blackbird*, 2003), for an adult choir, which had reached a reasonable level of proficiency, but which had little

experience or confidence in tackling contemporary composition. The solution employed was to provide some enriched modal harmonies in a strophic setting for the central choir, thereby gaining and building their confidence by repetition. Solo and small ensemble layers were then written over the core structure, adding a rhythmic and harmonic complexity to the finished product, which the choir may never have achieved as an entire unit. The standard rehearsal procedure is such, that the soloist is usually included very close to performance time and so, the effect of this additional layer to the work, introduced at this later stage, re-invigorated the choir and allowed a very convincing first performance. It has been very interesting to note that Arvo Pärt adopted a similar approach in his recent, Irish, choral commission, '*The Deer's Cry*', which was intended for performance by a community choir in combination with a professional choir. His solution also was to provide a solid, repeating framework, over which the professional choir could add their layers of complexity.

A further element of personal philosophy which has emerged within composition is the presence of a subconscious logic or a framework of reference for performers and audience alike. Taking choral composition as a prime example provides a wealth of high profile composers, such as Arvo Pärt (with his 'tintinnabuli' system and Russian Orthodox influences), John Taverner (Greek Orthodox and eastern influences), David Childs, NZ. (Gregorian chant influences), and the current rising star, Eric Whitacre, USA., (with his folk song/medieval influences and vertical, chordal compositional style), all employing this method of referenced structure within their work. Aaron Copland had earlier adopted a similar strategy of educating his audience to grow with him, through his use of folk themes and recognisable melodic material, in his earlier work.

There are further, more finely detailed philosophical influences, shaped by a substantial, personal, professional experience, concerning choral or vocal composition, or involving instances of composition which employ text or text-setting. Taking such personal, practical experience into consideration brings certain practices to the fore, which affect sound, structure, texture and frequently influence the performance impact of new compositions. Vowel placement, vowel shape, careful voicing, consonant blends and diphthongs can all have significant impact on intonation, timbre, atmospheric colour and therefore on conviction of performance. Syllabic patterning, rhythmic compatibility, internal word stresses and conventionality of inflection, can have similar influence on diction and momentum and consequently on coherent delivery of the material.

An extension of this considered approach to word-setting is the inclusion of a new dimension, which seeks to expand the impact of word-setting techniques by simultaneous consideration of both music and lyrics. Although it is not always within the composer's remit to supply the text, the concept of the onomatopoeic use of words, or the structuring of a composition through use of compatible sonic phrasing, similar to the poetry of Gerard Manley Hopkins, rather than in the manner of a continuous narrative, opens new possibilities. In this way, the text itself becomes a more prominent sonic component.

Much of the above is offered as a practical direction, aimed at enhancing the convincing performance of contemporary choral composition, through informed technical construction. However, there are also aspects of traditional instrumental technique, which can still make valid contributions to contemporary composition. Works which include established conventions of instrumental technique (especially strings) and which engage with the centuries of ensemble practices, can still provide subtle, but important nuances of response, performance, atmosphere, clarity and an increased sonority within new compositions. Bowing techniques, rhythmic ensemble, homophonic syncopation and compatible articulation can all feature strongly as scoring devices, which can provide sonorities of greater resonance, richer textures and significant added momentum.

Although perhaps not universally perceived as vitally significant, demands made on instrumentalists to accommodate unconventional playing instructions can not only affect the sound and cohesiveness of the ensemble, but can also have physical repercussions in terms of fluency of technique and/or possible injury. There is therefore a responsibility on composers to recognise these implications and accommodate where possible, the validity of such established playing methodologies.

The final, but by no means the least significant of the personal philosophies promoted within the thesis, is the exploration of an equality of status between the performers in certain genres of ensemble. This manifests in compatible, but independent instrumental interaction which reduces the possibility of soloist and accompanists, but provides a linear flow of overlapping, interrelated complexity. All of the participants have equal presence within the sonic drama. Each of the contributions can be voiced clearly enough to have noteworthy impact, as all of the interactions are developed from the same source. Despite the material being arranged differently, it is compatible, even in opposition, as the governing logic is common to all.

Within the scores contained in this portfolio there are some deviations from conventional notation. This manifests as episodes of alternate harmonic spelling within some of the compositions. The changes have almost invariably been made for practical reasons. The clearest example is within the solo clarinet work '*Manoeuvres*', where the musical line has been approached as individual phrases and therefore, either phrase direction, or particular fingerings, were allowed to influence the harmonic spelling. In general, the accidentals were guided by direction and those used in downward passages were spelled as flat, whereas upward movement employed more sharpened accidentals. The same pitch can therefore appear in its equivalent sharp, or flattened presentation, within a few bars of one another. Although not strictly harmonically conventional, it proved advantageous to and was in fact guided by the performer.

A similar approach is used in scores which operate outside a defined tonality. In these instances the logic of a particular phrase is again given precedence, sometimes suggesting a temporary migration to a particular key. Within the piano work '*Shattered Crystal*', pairs of notes are partnered within the opening chord and despite subsequent harmonic developments, or implications, the initial harmonic spelling is maintained throughout the work to highlight the continuing relationship.

In a very few instances, a particular spelling of a melodic leap was requested by performers, as it was easier to read and pitch, from cues which had gone before. Within the song cycle this sometimes appears as if the members of the ensemble have strayed into different interpretations of the relevant tonality, which really only becomes logical when each line is read in linear fashion, rather than being tied to an underlying harmonic framework.

The very obvious contradictions in harmonic spelling contained in the chamber work '*And on the Seventh ...*', are made to clearly reference the quoted phrase from Messiaen's original '*Intermede*', from which the work takes its inspiration.

A minor, but related breach of convention sometimes appears in rhythmic notation. This involves a small number of instances where a slightly more complicated version of a rhythm value is presented to illustrate a link to a previous rhythmic phrase. For instance, tied quavers may appear instead of expected crotchets within some phrases, to reflect an earlier, quaver-led figure. This practice has been used wherever certain, significant, rhythmic connections might otherwise be disguised by standard notation. In at least one instance where an important pause occurs on a particular beat of a measure, the instruments which are not

playing at this juncture and which would normally show a complete bar's rest on that same measure, are here also given multiple rests within the bar, in order to synchronise the pause. This change is informed by conducting experience.

Within the portfolio, the compositions are presented, as far as possible, in chronological order. The deviation from a perfect chronology occurs where a particular performance opportunity, or the unavailability of required players, necessitated a temporary change of direction to concentrate on a new score (*'Shattered Crystal'*). Therefore, techniques being primarily explored within a particular work may also appear, to a lesser extent, in an associated piece.

To assist with clarity of presentation, musical examples contained within the ensuing chapters are, when necessary, sparingly edited from the complete scores. Thus, instrumental lines which are *tacet* or which are not immediately relevant to the particular musical example, are occasionally omitted. Similarly, fragments of unimportant notation, or articulation spilling over from previous bars or which overlaps with the opening or closing bars of the chosen selections, have been removed. All such edits constitute very minor and essentially irrelevant deviations from the full scores.

The direction of the implicit research therefore, when guided by the referenced experience and opening standpoint, results in a number of important by-products. It offers a re-evaluation, (an assessment of the flexibility), of established techniques, by their inclusion in a particular, individual soundscape.

It extends or re-casts certain techniques by their fusion with other methodologies or by their reinterpretation within new contexts.

It fosters new, creative applications of some of these techniques for reasons beyond their preliminary design – eg. the added functionality of serialism as an atmospheric contributor to a sonic landscape, used for architectural contrast within a tonal journey.

Areas of new creativity such as melodic displacement, textural layering (in the equality of ensemble participants), choral development through sympathetic lyric/sound structuring, are explored and, by extension, new scoring combinations are investigated.

The realisation of the thesis also considers the presence, or development, of universal logics within contemporary composition. It champions certain conventions, as still capable of adding value to the craft of composition and seeks to present valid contemporary work in an

individual voice, shaped by informed research, personal experience, musical continuity and truthful expression.

Introduction

In every sphere of artistic endeavour there are outstanding proponents, whose elevation to the apex of that form of expression, often have the effect of providing a dominant direction on the development of the art, in that era. Historically, there are many socio-cultural influences, historical perceptions, revolutions, commercial inventions and strategic selections which can have a bearing on the fame and therefore on the influences of particular artists. Despite such eventualities, it is still evident that certain artistic movements, which achieve prominent status, become recognised for their significance. However it is often in the individuality of response, or rejection, of such significance, by the creative people who follow these important 'stars of a previous era', that the next significant developments occur.

The question of whether the subsequent artistic reaction is a direct response (positive or negative), a further development of the original methodology, a lateral response, a fusion of a group of techniques, or such fusions influenced by current interpretations, all provide the possibility of impetus for new developments and therefore, purpose to the direction of this research. In so far as the exploration deals with techniques or developments, assembled from a variety of sources and therefore, most likely stylistically varied, the research could be cast as an investigation of Schnittke's 'collage' technique, viewed in microcosm.

The initial thrust of the research question therefore, amounts to an examination of some of the leading compositional figures of recent times and of the more significant techniques which they have employed, with a view to establishing a general consensus of approach, amounting to dominant directions, or movements, within current contemporary composition.

Anticipating the unlikely event of a singular dominance, the research implies investigation into the insights provided by individuals, groups, schools of composition, or those practices indicated by strong performance trends and of their likely influence, or potential, to provide new direction within contemporary composition.

An early observation of just such a trend, which prompted further investigation and therefore contributed to the formulation of this thesis, was based on personal experiences in the realms of choral direction and, by extension, composition. The perceived trend was in composers constructing their new work over some elements of a pre-existing logic. The constant here was the use of a framework, skeleton or scaffolding, which often provided a subconscious

key reference to the audience, over which the layers of complexity, or the individual style of the composer, could then be overlaid. The contours of a familiar landscape clothed in the individual responses of the composers, so to speak. This presented the ambiguity of a 'type' of universal constant, which could be subject to endless change and originality, but which managed to involve the listener in its journey to new pastures, without fear of alienation.

The explorations of the thesis will therefore include an element of enquiry into the presence, or emergence, of such universal logics within contemporary composition, while, as previously stated, investigating the lateral extension of the more prominent compositional techniques into new creativity. The results of these, and other researches referenced earlier, are explored and developed in the accompanying portfolio of compositions and collectively analysed and detailed under the general headings below.

Chapter 1: Compositional Approaches and Formal Structure

In any analysis of contemporary compositional approaches, the use of formal structure features strongly as one of the standard devices.

Messiaen's meticulous organisation of his materials in both the melodic, pitch sense, through his modes of limited transposition and in the rhythmic sense, involving his mathematical use of number and/or interpolation of eastern rhythm patterns as a methodology of rhythmic invention, attests strongly to his valuing the use of structure. The distribution of those organised elements throughout the duration of the work then further emphasises the validity of a structured approach.

Arvo Pärt's tintinnabuli system similarly utilises patterns of selected notes (triads), which largely govern his melodic and harmonic progressions. These patterns serve as building blocks within each piece and in so doing offer a structured framework within the overall architecture of his work.

The minimalism of Philip Glass, and phasing of Steve Reich both operate on the basis of repeated patterns of notes. Such patterns, even within the polyrhythms of Reich's music, present natural cycles of rhythmic or harmonic coalescence within the evolution of the patterning, which act as staging points, or naturally underlying formality of structure, to the evolution of the music.

Ligeti is known to have acknowledged a debt to the strictly formal structuring of serialism, in declaring that it (serialism), allowed him the discipline of organising his material appropriately. His subsequent development as a composer and his own originality of invention, further support the idea of taking what has been proven to be a useful device in its early interpretations and using, re-casting or fusing it with other methodologies to sustain new creativity.

The accompanying portfolio of compositions provides many examples of new, creative and extended use of formal structure and of its fusion with a variety of compositional approaches.

“*And on the Seventh...*”, the first composition of the portfolio, unusually, does not rely on standard thematic material for a significant part of its design inspiration, but instead uses the space between the notes, the rest, as a specific constructional device, which, in turn, brings about structural implications for the architecture of the entire work. Similarly, it is part of the premise of the composition that the solo woodwind instrument, (clarinet), only ever plays six notes consecutively within its contribution, always leaving a rest on the seventh note, thereby affecting and shaping the clarinet's contribution and providing a further layer of development of the original concept. This constant use of a rest on the seventh note, bar or beat, stems directly from Messiaen's deep religious conviction and from his belief that the day of rest, which occurs on the seventh day of the biblical creation story, contains for him the space for the succession of eternity.

Within the formal structure of this essentially, binary work, section A offers a rest on the seventh bar, following the opening statement of its initial melodic material. It further closes this section with a complete bar's rest, after six repeats, (i.e. in place of the seventh repeat), of a deconstructed dotted figure.

Example 1

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Clarinet in Bb

Violin I

Viola

Violoncello

mf

mp

pizz

p

G.P.

G.P.

G.P.

G.P.

This rest bar offers an important point of transition to the slower paced, differently characterized, section B, which again closes with a significant rest beat, placed after a chord which has been held for seven beats and occurring on bar 307.

The frequent use of the number seven, an important number to Messiaen in terms of religious symbolism as outlined above, is an obvious, further, structural element to this work.

The above structural design elements have been juxtaposed, with the original requirements of a commissioning brief, which was to compose a work as part of a coalition of compositions, each one based on a movement from Messiaen's "*Quartet for the End of Time*". As this particular work was based on the "*Intermede*" or scherzo from that quartet, a deliberate design was employed, to avoid the production of a nine minute scherzo, which might appear constantly busy, but of slight import, when viewed out of the context of the collective compositional brief. Instead, the *scherzetto* character is internalised and centralised within the work, with introductory and closing segments lending greater balance to the piece, to facilitate an independent performance. Thus two, significant, underlying structural designs which have been fused, constitute one of the several major elements which comprise this work.

The "*Song cycle*" also employs a fusion, or alternation, of a number of musical structural designs, to achieve its desired result, including some new interpretations of standard conventions. The first and most obvious of the standard design strategies used is in the order of performance, giving a slow-fast-slow sequence, through the entire cycle, which reflects the atmosphere of the poetry.

The second, which is more subtle, is that, given that Dickinson's words are already organised into lines and stanzas, which implies a given structure, the flow of meaning and/or atmosphere, as well as her peculiarity of dots or dashes at the end of some lines, imply a need for the use of an over-arching, musical, atmospheric structure, to be superimposed over the printed presentation.

Thirdly and carrying a new creative element into the realms of structure around a given text, is the particular use of the participating ensemble members to reflect more than the set text within the entire scene. This outlook implies that the singer is not presented as the sole proponent of the atmosphere which exists within the words being set, but is only one element of the sonic presentation of the complete scene. To this end and still guiding structure and compositional approach, the instrumentalists are never treated as accompanists, but as equal characters within the drama. They frequently make substantial entries without the singer, as they offer their contribution to the overall picture. (See Example 2)

Example 2

The musical score for Example 2 is presented in three staves. The top staff is for Mezzo-soprano, the middle for Viola, and the bottom for Piano. The piece begins at measure 40. The Mezzo-soprano part is mostly silent, with a few notes in the final measure. The Viola part starts with a triplet of eighth notes, followed by a series of eighth notes with slurs, and ends with a triplet of eighth notes. The Piano part starts with a few notes, followed by a series of chords and eighth notes, with a forte (f) dynamic marking. The score is in a key signature of two flats and a common time signature.

To further this important aspect of characterisation, two other, significant design elements, have been included. Firstly, the style of interaction of the ensemble, is of three, interlinking, weaving, compatible, though distinct, musical lines, rather than of melody and accompaniment, (which would otherwise imply the prominence of a particular ensemble member). Secondly, as a device to reinforce the above equality of status, the performers were all required to group in a semicircle or triangle, rather than in traditional format of singer in front of piano. Thus arranged, the work is delivered in an equality of participation, much like the theatrical technique of overtone used by actors, to temporarily pull the attention of the audience to each participant's dramatic offering.

This form of ensemble interaction and interplay extends to becoming a noted feature in later works within the portfolio ("*String Quartet No.2*", "*Beneath the Surface*" and to some extent "*Social Inclusion*") and therefore it becomes a varied and valuable constructional device, which has an important bearing on overall formality of structure. The concept of this individuality of contribution being accommodated within the larger ensemble actually grows to be one of the principal constructional design elements of both "*Confluence*" and "*Beneath the Surface*", which are discussed below.

Within "*String Quartet No.2*" there is another variation on the creative and lateral use of formal structure within contemporary composition. It demands a double function of structural design, achieving both a micro and macro architectural effect, which is also musically viable. It is designed to provide the subtle logic, referenced in the thesis, which subconsciously assists the audience with its involvement in the music.

The quartet is presented in three linked movements, each one of which is worked in a slightly different style in terms of complexity and tonality. The opening movement is delivered

through the unique soundworld of serialism, while the middle movement, using related melodic material derived from the first four notes of the final lullaby to ensure continuity, is presented in gradually coalescing fragmented interaction. The final movement then grows into a tonal lullaby. Given that the quartet uses war, or war incidents, to lead through the despair of great loss, to finally arrive at a lullaby of consolation, the various treatments used in each movement, mentioned above, bring the listeners on a gradually less dissonant, tonal journey, enabling them to feel reassured by the closing lullaby. This strategy not only offers a new perspective on the structural use of serialism as a component of such a stylistic metaphor, but also justifies the unusual treatment, of ending a string quartet slowly and quietly. Thus three independently functioning constructional methodologies are accommodated within the overall design of a tonal journey.

Within the orchestral works there are particular approaches used, which, by their natures, would appear to make difficulties for any formality of structural design. The full orchestral work, “*Evening Light*” embarks on the use of heterophony to facilitate its impressionist atmosphere. Such a technique, by virtue of the fact that it tends to blur, extend or re-direct phrase endings, would seem to create difficulties of organisation to enable such open-ended phrases to lead to a fluid, episodic, though formal structure. However, careful use and representation of the deconstructed chord, which serves as the main thematic material, along with its later inversion, its partial rhythmic fragmentation and its clear recapitulation, provide points of reference, which amount to a contemporary ‘*ritornello*’ structure. In the final return of the opening material the work achieves a cyclical unity, creating further architectural pattern, in what could initially be perceived as superficially unstructured.

With the string orchestral/ percussion work, “*Confluence*” there is a deliberate design of rhythmic ambiguity, which would appear to cause similar disruption to any regularity of patterning, which is normally required for formal structure. Although, given its pentatonic constructional element, there are less extended harmonic difficulties to work with here than in “*Evening Light*” above, the persistent and changing nature of the constantly juxtaposing rhythmic stresses, along with the redistribution of beat patterning, and thematic repositioning, all conspire to contradict any sense of underlying structure. But again, a clear, though truncated and varied restatement of the opening rhythmic exchanges, provides the veiled cyclical unity. There is also a sub-current of momentum, operating through and within the individual rhythmic interjections, which provides a further structural element. As referenced earlier, this final device of an understated, barely perceptible but palpable undercurrent of

deep rolling momentum also becomes a more prominent constructional device within two of the four movements of the final work in the portfolio. In both “*Sargasso Sea*” and “*Great Barrier Reef*” the individual, fragmented, randomly interjecting voices of the upper ensemble members, ultimately align themselves, either in unified opposition or in eventual rhythmic coalition, with this gradually developing, slower paced momentum, which most often emerges from within the piano part. It is important to note the piano’s particular structural role within these movements, as, by doubling other instrumental contributions, it can provide both emphases of particular rhythmic patterns or melodic figures, but also, by using its depth and particular sonorities, it provides the above mentioned, steady, rolling momentum of the body of the sea. Within some segments of the work, especially and most obviously in the final stages of movement four, the piano actually represents the unifying power and motion of the sea.

Within the percussion/piano work, “*Social Inclusion*”, the clearest example of formal construction can be found, in that the overall design is in three larger segments, comprising virtually repeated sequences of rhythms and polyrhythms, to follow one another without interruption. Segment A delivers its material using rhythmic effects only. Segment B allows pitch elements from the piano to integrate, but only within the confines of the original rhythmic values. Segment C presents the piano as the ensemble leader, interpolating linear melodic flow and stylistically varied episodes over the original rhythmic framework.

Delving beneath this clear three sectioned construction reveals a further constructional device employed within the sections, producing an effect not unlike the ‘phasing’ of Steve Reich. The use of African drum loop technique allows for set phrases of rhythmic patterning to become gradually varied, decorated, or extended in rhythmic complexity, by the subsequent participation of other ensemble members. The polyrhythms achieved belie the simplicity of concept, but can be endlessly varied by changing the duration, or the pattern of inclusion, of each of the participants’ ‘loops’. This direct, formality of construction, ambiguously provides a surprising complexity of rhythms. This complexity is further developed when, as in this case, the initial rhythmic patterning is interchangeably offered over both 2/4 and 3/4 time signatures. Thus, though outwardly simply and rigidly constructed, the inner layers of structure contain constantly changing texture and varying episodes of rhythmic complexity.

An integral part of the structural design of any work is an understanding of the particular compositional approach which has been selected. The general compositional approaches used throughout the portfolio have largely been under two headings. They have either been specifically tailored to the genre of a particular composition, or they have been adapted versions of established methodologies. Among the clearest examples of the latter are the movements of manipulated serialism used in both “*String Quartet No. 2*” (already referenced) and in “*Beneath the Surface*”. In both instances, a process of composition, using serialism, has been employed, but has subsequently been expanded or extended, to provide more than just a singular result. The particular soundscape of serialism conveys a different timbre and atmosphere and can therefore, also be employed as a constructional element within the composition, providing a unique stylistic contrast within a group of movements. Its connection with a previous era allows its use as a historically referenced episode within a piece (similar to Schnittke’s collage technique), but it is essentially its structure of patterning, which creates melodic, harmonic, rhythmic and textural differences to neighbouring material. In the case of the “*String Quartet*”, it enables it to feature as an important opening component within the varied group of movements, which in turn, offers a structured tonal journey for the audience. Within the quartet, the constancy of patterning, coupled with angular melodic steps and dissonant harmony, allowed a representation of war in its relentless, persistent, organised, though seemingly chaotic progress. The varied uses of the series represent layers of changing, repeating, renewing or coalescing onslaught, while the interrupted row, most often used in the cello part, keeps returning to the opening notes, with its rhythmic approximations of pulsing tank engines. The angular, semitone relationships between components of the row are also employed to create strident moments of stasis within constant implications of activity, resulting in a final chord representing an anguished scream, to close this opening movement.

Within “*Beneath the Surface*”, the third movement “*Noctiluca Bloom*” also employs a type of manipulated serialism in a similar multidimensional manner, though here, through pitch, dynamics and delivery, it is used to generate less negatively associated sounds than the quartet’s reflections of war. The selected row has been subdivided into blocks of four semiquavers which have been randomly substituted for one another at varied intervals throughout the series. The starting group is always the same, to provide some point of reference for the aural phrasing, but while the row is familiar through its use of the same pool of notes, there is frequent surprise with the reorganised sequencing. This manipulation can be viewed as another manifestation of one of the aforementioned underlying philosophies of this

thesis, whereby a framework of some logic is provided to the listeners which helps guide them through unknown complexities.

In this particular movement the chosen note groups are placed high in the register of the piano and played at a gentle dynamic without much variety or sudden change. The effect is hypnotic, of other-worldliness and of a timbre calculated to represent moonlight on water. The fact that the woodwind gradually join with the pattern in their own versions of the series allows the listener to process their (woodwinds) participation, as a gradual surfacing to join in the moonlight. Thus, an extension beyond its original organisational conception is achieved, in the addition of, sonic, atmospheric, constructional and textural applications, in its (serialism's) deployment.

The technique of heterophony, that of layering and therefore varying melodic contributions over, through and under, several instrumental contributions has been referenced earlier as a structural device. Works by Messiaen (*Sept Haikai* 1962), Britten (*War Requiem* 1961) and Birtwistle (*White Light* 1989) had established patterns for its use. Its inclusion here is to detail its interpretation as a compositional technique, re-employed in a creative manner, which is designed to further its lateral development as a compositional methodology.

The particular approach adopted, is to limit the melodic material included in the heterophony, to elements which will ultimately achieve a layered, variable, extended chord. Extracting the heterophonic process from essentially horizontal progressions, (therefore from complex harmonic and rhythmic implications), reveals it in a new light. By use of a carefully considered thematic note group, the heterophony then becomes a useful device for the deliberate assembly of interesting vertical chord clusters, which extends its use, especially within impressionistic composition. The further superimposition of specifically related note pairings, at strategic dynamics, or on carefully chosen instrumental timbres, also allows it to function as a scoring device and simultaneously, isolates certain notes from within the veiled layer, which can provide a tonal re-centring of the original melodic grouping. In this manner the veiled layering of the original sequence of notes becomes vertically re-cast as they become perceived as elements of each new tonal relationship. The implication, for the underlying harmony, is that it is subtly redirected throughout each exposition, as a consequence of exposing such chosen notes. (A lateral adaptation of Messiaen's 'chords of particular resonance', which themselves are based on key relationships existing between notes of the chords).

“*Evening Light*” employs such a vertical re-casting of heterophony as one of its core elements. Apart from the opening sequences of chords which are revealed as described above, the work also applies this technique in retrograde, which then allows the most prominent note of the chord (in this segment, usually the highest, most exposed note), to act as a pivot to new harmonic implications. The same method of overtoning is used in the significant, *tremolando* string climax where the subsequent notes, as they arrive across the lines of the string ensemble, act almost as delayed suspensions of an expected harmony and extend the use of this device further, in terms of emotionally influencing the listener’s expectations.

Rhythmic implications of heterophony are also developed, as certain figures, whose initial presentation served to provide the expected variation in phrase ending which the process usually demands, have subsequently been chosen as motifs within the transitions, which are then treated similarly to the vertical reconstruction already detailed.

As referenced earlier, subtle and precise orchestration is a vital component of this technique, with instruments being chosen for a particular timbre within an essentially continuous flow of merging sound. Therefore, certain of the instruments, particularly brass and percussion, make selected, limited contributions of quality rather than quantity. The subject matter, concerning “*Evening Light*”, would further support such selective orchestration, though the technique itself can accommodate many permutations of orchestration, depending on other portrayals.

Brief reference must also be made to particular compositional approaches used with “*Social Inclusion*” and “*Of Earth and Sky*”. The references are brief only in so far as much of the techniques employed have already been covered in earlier treatments concerning structure, but the additional information of a particular compositional approach is both relevant and valid.

The gradual ‘inclusion’ of the piano in the former is not only musically, but is also programmatically considered. Its subsequent, stylistically varied, melodic contributions, within the third segment of the work are part of a purposeful approach to illustrate cultural variety and/or potential compatibility. The pacing of the piano’s involvement that of its gradual inclusion, is further calculated to allow a theatrical staging or interpretation of the work. The pianist may not even be on stage at the beginning of the performance, but can enter appropriately, to begin his/her stages of participation.

The “*Song Cycle*” has a number of layers of deliberate construction within its particular approach to the text. Firstly, concerning the personal philosophy of careful word setting, where unusual syllabic juxtapositions or unexpected stress patterns are avoided, the text is simultaneously presented within a context of deliberately varying rhythm patterns and time signatures, to emphasise the implied, extended phrase structure within the poetic text. Secondly, the fact that each of the three poems is insect-charactered, and in view of the wish to give each ensemble member equal participation, as already discussed, gives rise to each of the ensemble members providing some insect derived, musical characterisations. These individual contributions, following their own developmental, programmatic or expressive logic, become a relevant design contribution.

“*Shattered Crystal*” brings with it, its own, crystal inspired, compositional approaches, which can best be summarised in crystal’s physical properties of reflection and refraction. With the underlying plot of the shattering of such crystal, the dominant of these two properties becomes refraction, resulting in the concept of jagged, broken and interrupted approaches being introduced across the melodic, harmonic, rhythmic and structural elements of the composition. Momentum is interrupted and redirected, chord constructions are asymmetrically completed, motivic presentation is rhythmically ‘off set’ and a general sense of brittle, episodic, fragmented instability is created.

Example 3

The musical score for Example 3 is a piano piece in 3/4 time, starting at measure 125. It consists of two staves: a treble clef staff for the right hand and a bass clef staff for the left hand. The right hand features a complex, fragmented melodic line with many accidentals and ties, while the left hand provides a more rhythmic accompaniment with chords and moving lines. The piece is marked 'Piano' and includes dynamic markings such as 'p' and 'f'. There are also performance instructions like 'Ped.' and an asterisk '*'.

Broad register placings, interrupted rhythm patterns, a repeated, sporadic, slow, nostalgic 3/4 segment, all contribute to a characterisation of an unsettled mood, which in turn leads to an inevitable ambiguous conclusion which is never completely resolved. The work is, in part, a figurative manifestation of the socio-economic difficulties being experienced by the world famous *Waterford Crystal* factory at the time of composition and of the company’s unlikely survival in its then existing format, which accounts for the pessimistic undertone.

“*And on the Seventh...*”, being as it was conceived as part of a collaborative composition project to commemorate the centenary of Messiaen, required a very particular compositional

response. Its presence, as part of a collaboration and the effects on its consequent structural design has been noted earlier, as has the concept of including rests as significant elements in the overall construction and in the clarinet's contribution. However reference must be made to the other Messiaen-inspired inclusions within the work. Specifically they are rhythm, numerical relationships within his modes, birdsong, colour, general instrumentation and the original Messiaen quartet source. Numerical relationships generated within Messiaen's modes were accommodated into the original melodic material (i.e. semitone intervals and designated melodic leaps.) Further numerically-derived leaps are then included as the work develops. As the relationships between the chosen notes were frequently measured in terms of harmony, decisions were repeatedly governed by consideration of particular colour. In general a rich interplay of lower sonorities, using clarinet mingling into and alternating above a tight homophonic string trio, permeates the introduction and *scherzetto*, whereas lighter, brighter colours are created in the closing, 'eternity' segment of the work. These colour differences are achieved by pitch, timbre and the spacing of chordal elements. String techniques such as harmonics are used to further the above final movement's concept, whereas trills are used to suggest birdsong. The clarinet's timbre is an important element in achieving the variety of sonorities and its structurally limited interjections highlight its important contribution.

The instruments chosen for this work were a further decision of a particular approach and are a reflection of the original quartet, with the string trio designed to replace the piano in a less percussive, more cohesive and consequentially compatibly, more sonorous manner. The sympathetic interaction of the strings, with their similar playing conventions and cohesive phrasings, further emphasise the clarinet's tailored responses, and their homophonic, driving rhythmic pulse, provides contrast to the clarinet's engineered cross rhythms and tied syncopations.

The choral work "*Dawn Calls*" also presents particular combinations of compositional approaches, some of which were brought about by its commissioning brief. The concept, that of the first emergence of light through the dawn, and the proposed location(s) for performance, an open air early morning recital or a performance within a cathedral, combined with a multi-choir design, brought about certain decisions around pace, *line-divisi*, textural expansion, voice timbre and a textural, colour-influenced, graduated growth within the music. The use of text or vocal sound, as well as musical consideration, impacts on the approaches used. Single vowels (of increasing penetration and warmth), leading to completely enunciated

text, were chosen to reflect the ‘evolving’ nature of the concept. In keeping with the idea of gradual growth, solo or limited voice entries are employed in the early stages, with their expected relegation to brief, textural, layerings, once the *tutti* of full light appears. The work is carefully constructed to illustrate the earlier referenced desire to provide choral music which contains subtle, but important, support for the choristers performance and the listeners subconscious guidance, namely, the careful matching of chord colour, vowel sound, voicing and textural sense, or the measured consideration of harmonic implication and melodic line, in conveying the meaning of text. Syllabic pulses and staggered entry are also used as subtle, rhythmic, progression.

Bartok’s subdivision of rhythms and in particular his ‘*Divertimento for Strings*’, provides much of the source inspiration for the particular compositional decisions concerning “*Confluence*”. Underpinned by the desire to retain existing string conventions as valid, worthwhile contributors to contemporary composition, the work proposes an extension of rhythmic displacement into a type of thematic displacement, which was explored in the earlier clarinet work “*Manoeuvres*”. Following opening *pizzicato* and *arco* exchanges of rhythmic direction, the work achieves a coherent, though multifaceted, forward momentum. Following the developments and rhythmic redirections of the first hundred or so bars, a clearer $\frac{3}{4}$ time time-signature appears to emerge. However, the most prominent, ensuing, thematic material, (in first violins), is initially placed in an unexpected position within the bar structure, (see example 4 below), which creates a deflection from the underlying pulse, as indicated by the contributions of the contrabass. This is quickly followed by a canonic imitation within the viola line which further extends the rhythmic ambiguity. The work also extends the concept of asymmetric, rhythmic cohesion among the ensemble participants, (explored earlier in the *Song Cycle*) and, by its inclusion in a subtle affinity to a pre-existing, though hidden dominant rhythmic pulse, it creates a first exploration of a theme to be developed in the later work “*Beneath the Surface*”. This string orchestral work, with its constant juxtaposition of rhythms and themes, combined with a redistribution of dominant beats and ambiguous canon, illustrates the organisation of all of these imbalanced elements into a rhythmically charged, ultimately balanced, composition. (See Example 4)

Example 4

Musical score for Example 4, measures 132-135. The score is in 3/4 time and features the following parts:

- Violin 1:** Treble clef, starting with a whole note G4, followed by quarter notes A4, B4, and C5.
- Violin 2:** Treble clef, playing a rhythmic pattern of eighth notes with accents. Dynamics include *f* and *mf*.
- Viola:** Alto clef, playing a melodic line with a slur over the first two measures.
- Violoncello:** Bass clef, playing a rhythmic pattern of eighth notes with accents. Dynamic is *mf*.
- Contrabass:** Bass clef, playing a rhythmic pattern of eighth notes with accents. Dynamic is *mf*.
- Timpani:** Bass clef, rests.
- Cymbals:** Treble clef, rests.

Musical score for Example 4, measures 136-139. The score is in 3/4 time and features the following parts:

- Vln. 1:** Treble clef, playing a melodic line with a slur over the first two measures.
- Vln. 2:** Treble clef, playing a rhythmic pattern of eighth notes with accents.
- Vla.:** Alto clef, playing a melodic line with a slur over the first two measures.
- Vc.:** Bass clef, playing a rhythmic pattern of eighth notes with accents.
- Cb.:** Bass clef, playing a rhythmic pattern of eighth notes with accents.
- Timp.:** Bass clef, rests.
- Perc.:** Treble clef, rests.

The final work of the portfolio, “*Beneath the Surface*”, presents a variety of compositional approaches across its four movements. The manipulated use of serialism in movement three has already been discussed, but there are also strong influences employed which have been derived from Ligeti’s stasis and techniques of micropolyphony, and also from the chaining of Lutoslawski. An element, previously referenced in the clarinet work ‘*Manoeuvres*’, that of

semitone steps having an inherent sense of momentum, is also re-visited, but, in this case, a rhythmic pattern is applied to the semitone fragments, which, when delivered on appropriate instruments, allows them to sound like a bubble. Lutoslawski's '*Chain 3*' had produced sections of semitone resolutions, which had suggested the bubbles, while an early segment of the same work, along with a movement from Ligeti's *Chamber Concerto*, involved close interweaving of woodwind to suggest the 'chaining'. The third movement of this same Ligeti work also produced sequences of repeated notes which become shifting tonal centres when interrupted by a heavily stressed note, which is then perceived as an anchor note to a resolving semitone step. All of the above produced inspiration for sonic characterisations of undersea life, providing some of the elements for this final work.

Reference must also be noted here to link with earlier works, most notably the '*Song Cycle*' and '*Confluence*', where numerous disparate fragments interweave according to their own rhythmic patterning, but eventually are perceived to fall into pattern with a broader, hitherto hidden, rhythmic pulse – in this case the ever-present momentum of the sea. As remarked earlier, it is the piano which has the breadth of compass to act in the dual role of both ensemble participant and to provide the starker, sonorous, slow moving contributions, which eventually reveal as the deep rolling momentum of the sea.

Chapter 2: Rhythmic Techniques

With Messiaen as the source inspiration for “*And on the Seventh ...*”, an early evaluation of rhythmic techniques was inevitable. In this particular case, following a thorough exploration of Messiaen’s own practice, an approach of internalising the ideas of the methodology within a personal response was chosen. Thus the varieties of rhythmic treatment are subtly subsumed into the composition.

The use of significant rests, rest-beats, or rest-bars, has already been discussed under structure, but its deliberate, continuous use, within the clarinet part, also offers one of the most prominent examples of rhythmic manipulation within this work. The restriction of the melodic contribution, thus imposed on the clarinet, has a direct influence on instrumental cohesion, phrase length and pattern and produces a consequent impact on rhythm. The clarinet, along with negotiating its requirement to breathe, has its invariably shorter phrases tied across bar-lines or into internal syncopations, which sets up inevitable rhythmic diversity. (A subtle invocation of Messiaen’s superimposition of Eastern rhythmic patterns)

Simultaneously the string trio frequently acts in a homophonic manner, which both highlights the clarinet’s alternative rhythmic structuring and also, provides an emphasised, driving impetus from within its own timbre. Clear and early use of canon is used to highlight internal rhythmic diversification, with subsequent rhythmic figures growing directly from within the existing material and morphing seamlessly into patterns of increasing complexity. The impression of pace is also increased, by virtue of a transition to figures of shorter rhythmic value.

Even within this subtle rhythmic technique, there is a further development, as semiquaver patterns become triplets and the introduction of a dotted figure within the triplet both hints at a more compound time signature and anticipates the *scherzetto* character at the centre of the work.

Within the *scherzetto* segment itself there are many examples of rhythmic complexities de-emphasising bar structure and of the gradual evolution of rhythmic figuring described above. Most notably here perhaps is where the triplet figures suddenly adjust to reveal a brief, perfect, harmonic and rhythmic quotation from Messiaen’s original “*Intermede*” and return to triplet figures again. The concluding, ‘eternity’ segment, of the work, employs syncopations

across bar-lines to renew the momentum of its rhythmically longer, upward-reaching phrases, with some particular patterns emphasised or exposed from within the texture to imitate birdsong. The final triplets used are exact mathematical multiples of the earlier quaver triplets, just as Messiaen's methodology envisions.

The solo clarinet work "*Manoeuvres*", carries both standard and evolutionary rhythmic techniques in its concept. The underlying melodic/harmonic premise of the work being, at one level at least, an exploration of a deconstructed trill, implies inherent sets of semitone-related quavers (or semiquavers). The superimposition of a further design, of rhythmic fluidity, involves a change in the emphasis brought on certain rhythmic figures, by alternative bar-placement, time-signature changes, or specific articulations. (Thus, the 'manoeuvres' of the title). These techniques, singly, or in combination, produce a complexity of rhythmic pattern which enables bar structuring to recede in favour of such instrumental freedom. A range of similar works from Britten's "*Metamorphoses after Ovid*", (Solo Oboe), "*Three Pieces for Solo Clarinet*" by Stravinsky, Stockhausen's "*Harlequin*" and Birtwistle's "*Linoi*" for clarinet (with minimal piano), were researched. Birtwistle provided rhythmic complications which were particularly challenging as they were even less reliant on bar structure, or even on the quaver movement within the bars. Other composers who have had influence on freeing rhythm from its perceived confines are Boulez, with his organised aleatoricism, the canonic 'chaining' of Lutoslawski, the rhythmic 'stasis' of Ligeti, and the 'phasing' of Steve Reich.

The first segment of this three-sectioned, continuous work, provides, as has already been stated, patterns of related rhythmic figures, which are drawn into and through many time signatures, all across the range of the instrument, to produce music with an intended freedom of line. The fact that the horizontal line is governed principally by the freedom within the rhythmic figures and in their relationship to one another, rather than by a constant pulse, creates a significant advantage in subjugating bar-lines and/or an underlying time signature. The use of additive technique contributes further credence to the natural evolution of the rhythmic and melodic material as being internally generated and therefore independent of bar structure. An important application of specific articulations, also contributes to the above process, but equally, introduces material which can be usefully reconfigured (re-manoeuvred) in the final segment. This re-configuration is achieved in two ways. Firstly, the rhythmic and melodic cells are regrouped into larger combinations in section three, with certain key figures given an alternative bar placement to section one, thereby de-emphasising their impact (or

conversely emphasising the significance of a different phrase). Note the positions of the triplet group Bb, E, A in the example below. Within the space of four bars, this figure appears as beat 4, as beat 3 and finally as beat 2 in the segment illustrated. This practice is repeated many times within this movement, selecting further prominent thematic fragments for repositioning.

Example 5

The image shows two staves of musical notation. The top staff is for Clarinet in Bb, starting at measure 108. It features a triplet of eighth notes (Bb, E, A) on the first beat, followed by another triplet on the second beat. The dynamics are marked *mp* and *f*. The bottom staff is for Clarinet (Cl.), starting at measure 110. It also features triplet patterns, with the same Bb, E, A triplet appearing on different beats. The notation includes various articulation marks such as accents and slurs.

The rhythmic fragments themselves are also more often grouped in sets of four than in the earlier sets of three. Secondly, the use of alternative articulations on these key phrases creates a subtle, yet important difference, in a new, rhythmic interpretation and perception of the original material.

The central segment of this work offers an almost complete focus on pitch relationships which, ambiguously releases the instrumentalist to an even greater freedom of rhythmic fluidity. The patterns of rhythm, having much less prominence, provide a less structured flow. The underlying harmonic patterning, however, introduces melodic steps which are not rhythmically implicit and consequently produce greater rhythmic ambiguity. This central movement provides a complete rhythmic contrast to the surrounding segments, which achieve their ends by the variety of treatments applied to similar rhythmic cells, as they progress throughout the work.

The physical redistribution of rhythmic or melodic cells, along with their re-interpretation through alternative articulations, pre-empt a similar development which is more fully explored in later works. (*String Quartet*, *Social Inclusion*, “*Confluence*” and “*Beneath the Surface*”).

Previously referenced under ‘Structure’, the African drumming technique of ‘looping’, used in “*Social Inclusion*”, has significant, additional, rhythmic implications. There is an obvious parallel here to the minimalist constructions of Philip Glass and to the ‘phasing’ of Steve Reich, but this usage involves pitch and therefore echoes the tonal journey of the “*String Quartet*”. Using principally an additive technique, where component rhythms are extended by

the inclusion of subdivided variations of an original rhythmic phrase, allows designed development in structural, rhythmical and textural complexity. The pace of this development and by implication, the inner momentum of the composition, is further influenced by designated, organised, patterns of intersection, of the other ensemble contributions and so two-bar, four-bar, and six-bar loops are used, along with visual patterning, canon or rhythmic *ostinato*. The design implications, of gradual development from pure rhythm, through to the inclusion of pitch, across the three segments of the work, fused with the ethnic origins or socially varied contributions of the piano, particularly in segment three, where it makes its broadest statements, also deliver individual rhythmic figurations and composite rhythmic interplay, which is predestined by the works overall concept.

Obvious links exist here to the independent rhythmic interplay between ensemble members in later works (“*Beneath the Surface*” and “*Confluence*”), but also in that interplay’s connection to a pre-existing, or gradually emerging inner pulse, which unifies or encompasses most of the previous, apparently unrelated, rhythmic interjections. (The presence of a gradually discovered, greater logic underpinning the work, which links to the explorations of the thesis).

Further rhythmic interest is fostered by the use of varied time signatures in the earliest statements of the opening material, and this mixture of time signatures is repeated or retrograded on subsequent appearances of the principal material. To the listener the rhythms appear unchanged, but they acquire small changes of inflection within the new time signature.

The role of the piano is almost, as an ‘agent of change’ within the three segments and as such, it is very important. Its early interjections serve to emphasise and sometimes redirect, the original rhythmic interplay, but in its full melodic role of section three, it provides new interpretations of pace and phrasing, programmatic influence, separate or dual-handed contributions to the polyrhythms and aural (pitch) suspensions, which are difficult to decipher in percussion alone. In fact, the piano provides so much content and impact to this closing movement that it could easily cloud the developmental continuum of contribution by the percussion ensemble, were it not balanced with an adequate exposition and an early, lightly-textured development.

“*Shattered Crystal*” and its aforementioned design brief of encapsulating the sharply contrasting elements of glass into its sonic representation, involves the use of a number of

rhythmic techniques in the process. The nature of shattered crystal being more refractive than reflective introduces both an angularity of melodic material and an asymmetric rhythmic cohesion. Many of the opening phrases of the right hand are rhythmically altered in the left, or are presented as a crotchet or quaver late and therefore ‘off-set’ from the expected rhythmical flow. Such angular, rhythmical reconfigurations constantly reappear throughout the detail of work, but equally, within the broader architecture of the composition, the same disjointed momentum is also employed. Episodes of new material, or changes of pace, despite their originating from within the rhythm patterns of the original material, interject with frequent irregularity and in such a manner as to portray the same fractured disunity within the overall momentum. The structurally important pairs of bars at 56/57 and 58/59, containing mirrored rhythms of contrary vertical motion, followed by the ensuing horizontal rhythmic stasis of a bar of perfect reflection, pursue the same sense of disconnect, as, even though they act as a pivot for the scope of the work, they are not centrally placed. The ensuing, quicker-paced, industrially-driven, repetitive rhythms, are themselves delivered over a variety of time signatures, allowing subtle nuances of inflection to perforate the perception of a regularity of pulse. A programmatic, nostalgic 3/4 segment interrupts the flow of each rhythmically-driven episode, adding a further layer of insecurity and uncertainty into the surrounding atmosphere. Both in a micro and macro sense, rhythmic interruption, in close tandem with harmonic reconfiguration, is employed, to present the core of this work.

The rhythmic techniques used in the composition of “*Confluence*” stem principally from Bartok’s rhythmic subdivisions. In combination with a device of melodic displacement, increasingly developed within the portfolio (“*Manoeuvres*’ and ‘*String Quartet No.2*”), and including an exploration of rhythmic interdependence and interconnectivity, expressed as elements of a greater underlying momentum, this work entails the constant displacement, yet cohesion of many pentatonic fragments which are largely rhythmically-driven. The component fragments are constantly juxtaposed in their interactions with one another. The title refers to the myriad elements of water-current, which are eventually subsumed into the relatively harmonious, but ever changing flow of a larger river. The work’s very premise is the constant redistribution of its rhythmic and melodic thematic elements.

Opening in *pizzicato* phrases, this piece appears to change rhythmic orientation by the second instrumental entry, when a pair of ‘off-set’ accented semiquavers, immediately redirects the original, lower-string opening phrase. The sequence continues in similar fashion through the initial eighteen bars, with each instrumental line providing its own, subtle, temporary

reorganisation of the beat structure. Similarities of technique to the varied rhythmic loops of the earlier percussion piece, “*Social Inclusion*”, become quickly obvious.

Arco bowing is introduced, but through accented cross-rhythms and interjection, the rhythmic direction continues its process of constant evolution. On reaching bar 41, internally slurred cross-beats have again influenced the rhythmic direction, which is further emphasised by the first violins thematic entry on the weak stress of a 3/4 time bar (bar 44). This thematic material, through use of tied notes and carefully placed accents, performs the same redistribution of stress pattern as before, but this time within the same instrumental line. Confining the melodic material largely to pentatonic groups furthers the surprise at the rhythmic redirection as

- A. The redirected phrase appears to grow organically from the previously similar material and is therefore not expected to provide such ‘change’
- B. Pitch, rhythmic variation or articulation can suddenly add the required brief prominence to a particular phrase, which can then quickly return to the general ensemble.
- C. Any notes outside the pentatonic group are quickly identified and add emphasis to new episodes.

Time-signature change is briefly used to subvert the beat structure in bar 17 and is used more prominently around the fanfare segment, which begins in bar 76. Rhythmic interplay, using a dotted figure, continues the rhythmic imbalance until bars 117/120, where all parts, minus the double bass, join in rhythmic unity. This sets the scene for an upcoming melodic entry, which by use of an alternating pattern of off-beats in the double bass, and a delayed rhythmic placing of the expected melody, puts the stress on a very unexpected beat of the 3/4 time-signature and once again subverts the underlying rhythm. This, apparently melodic redirection, is also a rhythmic device developed from the earlier clarinet work and is further extended here, by use of a perfect, one-beat canon of the original theme, now emphasising yet another beat of the bar as a possible down-beat. The underlying rhythmic pulse has consequently appeared to shift position several times within two musically similar phrases, making any one of several choices into a viable option.

A transition to a further episode uses the dotted quaver figure as before, but, linking it to notes tied across bar-lines and interlacing it with delayed imitative entries (microcanon), once again, subverts the beat structure. A variation on the above (which echoes patterns in bars

67/75), interspersed with patterns of semiquavers grouped in fours, increases the rhythmic texture, to provide a surprise return to the opening *pizzicato* phrase (bar 191). This reprise foreshortens the inclusion of the other string sections, allowing them to weave into the rhythmic interplay in quicker order. The familiar *arco* line, once it arrives, is immediately decorated with rhythmic variants of the pentatonic grouping, placed in higher pitches in first violins. Further complexity of rhythm is then provided by a similar response in second violins, enabling an organic yet dynamic growth of both rhythm and pitch to lead easily to a strong conclusion.

The final work of the portfolio, although not as obviously rhythmically driven as “*Confluence*” above, has, surprisingly, a greater number of defined rhythmic techniques and in a sense, the same objective of accommodating rhythmic independence within an underlying pulse. The following list contains a summary of those techniques, (referenced previously under structural devices), as they also have significance there ; ‘Chaining’ from Lutoslawski, ‘stasis’, micropolyphony and rhythmic canon from Ligeti and also, an adapted form of serialism. These, recognised techniques, have been fused with new interpretations, by, among other measures, their placement in a personal harmonic framework, and in so doing, have revealed new perspectives. For instance Ligeti’s ‘stasis’ has been partially deconstructed to include only notes of immediate thematic relevance, therefore extending the use of stasis from an essentially rhythmic/textural device, into a technique offering greater flexibility of use, from rhythmic, through to harmonic or even melodic development. Its limited harmonic reconstruction also allows it to fit more organically into smaller scale usage, as it can be more easily thematically or texturally accommodated. Within this work, the less textured stasis chords allow individual notes to become emphasised (through articulation, instrumental timbre or syncopated restatement, for instance), allowing renewed rhythmic impetus to build from within the perceived stasis, or to allow tonal re-centring of a particular harmonic interpretation.

Articulation is used throughout this work as an important rhythmic device. The careful use of articulation, first explored in the solo clarinet work, manipulates small cells of disparate notes into rhythmic figures which can then logically interact with one another in an almost atonal manner. Certain articulations can even change prominence of particular note groups, allowing figures to align, or allowing their emergence as thematic fragments, or even stressing particular notes in order to achieve a change of harmonic implication. (i.e. the bubbles of movement two).

Careful choice of instrumental timbre also, surprisingly, becomes a rhythmic device within the work (particularly in movement one), as the ability of an instrument to sound, or subtly penetrate through a texture, provides an important element of secondary rhythm.

In movement two “*Sargasso Sea*”, one of the clearest examples of interdependent, interlacing, rhythmic interactions, leading to an involvement within a deeper, slower, more profound momentum is to be found. The programmatic interpretation of this movement features the long, flowing, interlaced tendrils of seaweed and the fish or sea creatures which live there. Thus two distinct characters exist within the segment, each with its own style of motion, the fish being given furtive, scurrying patterns, while that of the seaweed is flowing and languid. Both of these characters are musically represented by fragments which are largely rhythmically constructed and the movement is almost entirely built on their rhythmic, rather than on melodic or harmonic, interactions. It could be viewed as a form of fragmented, rhythmic counterpoint. A gradual deconstruction of the ‘furtive-charactered’ figures, leads to an identification of a triplet as a common rhythmic element, which synthesises the woodwind’s rhythmic contributions, (providing a vertical component to the texture which opens the possibility of harmonic contribution), though this synthesis does not yet have a settled, underlying rhythm-pattern. The sudden involvement of the piano (bar 232), in notes of longer value and frequently tied across bar lines, offers the first hint of a pre-existing, slower pulse. This piano sequence, through right hand and then left hand entries progresses in canon, which offers a gently undulating, but more profound and deeper rhythm. The woodwind’s participation in this canon, portrays their progressive encapsulation by the deeper flow, while the piano adjusts to voicing the earlier triplet patterns, but this time in a manner which clarifies the pre-existence of the slow 3/4 time pulse. In this way, the piano is used to provide a vital, but hitherto unmentioned character within the scene, which is the sea itself. Its separate character and individual treatment, therefore, are vital components of the design. Much of the above development is achieved, largely, by rhythmical means.

The third movement “*Noctiluca Bloom*” has the unique language of (manipulated) serialism as its main component, but within that is a very important use of rhythmic devices. The serial-style rows are organised into blocks of four semiquavers, (as referenced under structure). The relentlessness of the delivery of those quavers, offers a constant onward momentum, almost as the ticking of time, leading the thought process to an expectation of development, climax, or conclusion. Thematic fragments denote aurally perceptible landmarks of the manipulated serial blocks, giving an impression of calculated, rhythmic

growth, rather than of random continuation. As the woodwind characters join, their individual contributions are given definition by specific rhythmic patterning, offering an intricate, interweaving, seamless, liquid, legato, sonic presentation, of a visual scene. Given that all of the instruments chose notes from within the original serial blocks, this rhythmic patterning is a very important element. It is also a textural precursor to the imminent rhythmic canon. Bar 313 brings the first joining of the woodwind (flute) to the piano's patterns. This entry establishes a first layer of rhythmic canon, offered at a half-beat delay. Bar 318 brings the oboe into play, with a full beat delay on its layer of the closely textured canon. Such closely interwoven canon could be interpreted as 'chaining'.

Example 6

The musical score for Example 6, starting at bar 318, is written in 3/4 time. It features five staves: Flute, Oboe, Clarinet in B \flat , Horn in F, and Piano. The Flute and Piano parts play a complex, interlocking rhythmic pattern of eighth and sixteenth notes. The Oboe enters in bar 318 with a similar pattern, delayed by one full beat. The Clarinet in B \flat and Horn in F have rests until bar 319, where the Clarinet plays a single note marked *mp* (mezzo-piano). The Horn in F plays a series of notes that rise in pitch across the three bars.

With a gradual rise in pitch, denoted by the French horn's climbing patterns and eventually joined by clarinet and oboe in interrupted, harmonically related stasis episodes, the whole development thins out to a brief pinnacle on bar 331, resulting in a reversal to a downward pattern and a mini element of chaining between flute and piano (bars 332/333). The relentless motion, within the movement, is then subdued by a return to rhythmic stasis, with only the slightest internal pulses briefly permeating its closing effect.

The final movement, “*Great Barrier Reef*” opens with two clearly chained fanfares and then proceeds to re-present and fuse many of the rhythmic devices used in the earlier movements.

Example 7

Musical score for Example 7, measures 356-358. The score is for a woodwind ensemble and piano. The instruments are Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Horn (Hn.), and Piano (Pno.). The key signature has two flats (B-flat and E-flat). The time signature is 4/4. The music begins at measure 356 with a forte (*ff*) dynamic. The Flute, Oboe, and Clarinet parts feature a triplet of eighth notes in the first measure, followed by a sixteenth-note triplet. The Horn part has a whole note rest in the first measure, followed by a half note in the second measure. The Piano part has a whole note rest in the first measure, followed by a half note in the second measure. The music continues for three measures.

Musical score for Example 7, measures 359-361. The score is for a woodwind ensemble and piano. The instruments are Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Horn (Hn.), and Piano (Pno.). The key signature has two flats (B-flat and E-flat). The time signature is 4/4. The music begins at measure 359 with a forte (*ff*) dynamic. The Flute, Oboe, and Clarinet parts feature a triplet of eighth notes in the first measure, followed by a sixteenth-note triplet. The Horn part has a whole note rest in the first measure, followed by a half note in the second measure. The Piano part has a whole note rest in the first measure, followed by a half note in the second measure. The music continues for three measures.

The interlacing of disparate rhythmic figures, the gradual emergence of fragments of rhythmic cohesion, the extension of this cohesion throughout the ensemble by partial homophonic linkage, or by compatibility of interaction and finally, the extension of the

rhythmic figures to include notes of longer duration, indicating the underlying, inevitable pulse of the sea, are all present as a final recapitulation of the rhythmic devices explored through the preceding movements.

Mention must be made of rhythmic techniques used in both the “*Song Cycle*” and later in “*String Quartet No.2*”. The structural use of the semitone-governed buzzing of the fly or bee has already been discussed, but this feature also has an important rhythmic element which subtly influences the momentum within the work. Likewise, the independent interlacing of component ensemble members, frequently mentioned, also has rhythmic consequences, as the pacing, or the value of the notes in each contrapuntal entry has impact on both texture and impulse. The interrelated phrase structure also frequently seeks rhythmic resolution in subsequent lines.

Within the middle song, the cricket’s movement is purposefully rhythmically referenced as an interrupted arpeggio, whose features recur throughout the work.

While the singer’s contribution is somewhat rhythmically governed by the text, important contributory detail can be provided through rhythmical reference among the other ensemble members.

Referring once again to formal structure, one of the core objectives of the work being the achievement of a freedom of line unhindered by bar structure, required much careful use of rhythmic phrasing and melodic extension. Additive technique is an obvious device in this regard. Many of these rhythmic devices are employed, singly, in tandem, or, in coalition in order to achieve both the overall architecture and the fine detail within this work.

Turning to “*String Quartet No. 2*”, apart from the obvious rhythmic techniques noted earlier under structure and especially concerning the delivery of structural grouping (and therefore rhythmical grouping) of the rows in the serial movement, there are two other, subtle, but purposeful uses of rhythm. The first of these is present, largely in the second movement, where the call and answer technique (which also links to the African drumming devices discussed earlier), is used, to create much of this movement. In this case, both the rhythmic distance between call and response, and the length of note values used in the phrase, is decreased after the opening exchange, thereby gradually increasing the inner rhythmic momentum. The nature of the responding phrases also changes, in that more of the ensemble interject into the conversation and introduce greater harmonic complexity in their interlaced responses, which also appears to move the underlying impetus forward at a quicker rate. The

above features also have an engineered effect on the undercurrent of atmosphere being conveyed and by extension, particularly in terms of pace of interjection and increasing harmonic texturing, on the listener's emotional response. There is a subconscious reaction to the gradual piecing together of the hitherto disjointed fragments.

The second rhythmic subtlety is in the area of instrumental playing conventions, as outlined in the opening philosophy around the thesis, most particularly, in this instance, concerning bowing technique and its consequent rhythmic effects. Within the entire work, such an awareness of the importance of bowing, is brought to bear. The clearest example is within the third movement, where the first violin initially states the thematic material in long bows, phrasing several notes under each bow (bar 116). At its next appearance the notes of the phrase are delivered in detached bows, which add power, penetration, and subtle rhythmic impact. The accompanying instruments also increasingly slur together, bow together, observe syncopations together as they progress through the movement, finally interlacing their accompanying rhythmic figures in a densely textured, though flowing, synthesis of rhythmic figures and bow-stroke. This subtle use of natural instrumental technique is of enormous importance in providing sympathetic rhythmic impulse within instrumental composition. In the same way that Messiaen identified chords of particular resonance, by distinct relationships within their notes, the application of informed instrumental conventions adds intrinsic value, synthesis of inflection, impetus of internal rhythm and a consequential, special resonance, within a sympathetically constructed work.

Similar effects are achieved in the patterns of rhythms (therefore of bowing) and the particular articulations used in the opening movement's serialism. Thus employed, the instruments clearly voice their contributions together with added power and resonance, or are clearly determined as distinct voices when required.

Returning briefly to the first movement, the repeated use of a rhythmic figure, on a low D in the 'cello, has its own programmatic effect, in suggesting the constant, threatening, pulsing of tank engines, prior to the terror of the attack. The ensuing unified bowing, through doubling, or through pairings of instruments adds greatly to the effect of the following, quicker-patterned segment. The homogeneity of attack and the angularity of the melodic material, combined with a rhythmic consistency and synthesis of bowing, produce a physical ballet of movement which is itself a subconscious contributor to the musical scene being portrayed. Such a technique, applied to full orchestral scores, allows complete orchestral sections to

'speak' with conviction, achieving added resonance, rhythmic inflection and textural definition, which all add greatly to the power and momentum of the composition.

Chapter 3: Harmonic Style

The experimental nature of a portfolio such as this implies the investigation of a number of alternate systems of composition, the use of which would have consequences, sometimes amounting to restrictions, or impositions, on harmonic style. The use of serialism in certain works, Messiaen-inspired harmonic relationships in another, pitch class sets, heterophony, tonal re-centring, chaining, manipulated stasis and minimalism, all involve processes which inevitably influence the harmonic relationships within the compositions. Furthermore the nature of the texts being set within the vocal pieces, plus the experimentation around harmonic colour, numerical relationships, harmonic refraction, melodic restrictions (pentatonic segments), orchestration and impressionism, must all have their own effects on the harmonic palette. Yet across the broad spectrum of the portfolio there are consistencies of harmonic style in evidence. While some of these consistencies would have been somewhat influenced by the personal philosophies outlined at the outset, the objective was to give due diligence to the systems under investigation and not be predetermined by such personal bias. It is a verification of both system and philosophy then that consistencies, which amount to components of an individual style, have remained. That a methodology can be employed within, or at least in tandem with, each composer's individuality, is a testament to the functionality of that methodology and another validation of its concept. Such fusions of the self and the method are more creatively valid than any slavish adherence to a system which restricts the impact of the self and merely replicates the system. It has been reassuring therefore to see certain harmonic fingerprints emerge from within the process and it is equally satisfying to discover that those recognisable traits have sometimes been extended, developed or clarified, but that they have not been subsumed or lost.

The chamber work "*And on the Seventh...*", having been given its primary impetus from Messiaen's "*Quartet for the End of Time*", is heavily, though not solely, influenced by some of the key drivers of his harmonic landscape, namely mode, colour, birdsong and number. The opening melodic material is developed from numeric relationships within his original modal melody, coupled with a potentiality to include birdsong references. The leap of seventh which follows the quaver figures later in the exposition (bar 102) and which is included in *scherzetto* theme, is a reference to the lonely call of the curlew while within the final segment (bar 288), a series of trills represents an ascending lark. With melodic

relationships so constructed it is inevitable that the resultant harmonic language is likewise influenced. The principal numeric combinations are 1,2,5 and 7 and much of the harmonic resonance, particularly in the strings, comes from those combinations of notes (bars 29-31) (bars 77-79) (bars 81-84). This combination also appears manipulated as 1,5,2,7 in the clarinet's opening figure of the *scherzetto* (bars 118). The legato clarinet melody at (bars 156-159) and at (bars 164-167) is also derived from those numerical relationships and there are many other examples within the final, 'eternity' segment of the work.

However much influenced by Messiaen's constructions, the work does not remain solely within those parameters and personal input has broadened many of the decisions made, including those of the harmonic landscape. Some of those decisions have already been referenced under compositional approaches, but revolve heavily around the clarinet's role, the work's overall architecture, particular sonorities and ensemble momentum. The overall harmonic journey of the work begins from a modal pattern of D to eventually achieve the atmospheric lift to D major.

The "*Song Cycle*" is more of an investigation of rhythm, text-setting, ensemble interaction, architecture and extended melodic compass, rather than harmonic style, but the lack of such an imposition allows more of an individuality to emerge.

The governing influence to the harmonic implications within these songs, is the nature of the atmospheres and characters present within the text. The insect characters have idiosyncrasies of movement, which are sonically represented, thereby providing some melodic/harmonic reference points, whereas Dickinson's poetry is often suffused with shadowy, mysterious portents, limiting the involvement of bright or major keys to small segments. The largely unsettled atmosphere within the poetry is reflected in the slight dissonance achieved through pairs of major or minor seconds and their tendency toward unstable resolution. The keys for the songs themselves do have a progression of relationship, as they appear in C minor, F closing in F minor, with the final song starting out in G minor, but ending in G major, which offers some degree of cyclical closure (as the text implies).

The buzzing nature of two of the characters, resembling an interrupted trill, is captured in varied patterns of semitones. This has subsequent melodic and harmonic implications within both the vocal line and the contributing ensemble. (See Example 8)

Example 8

The musical score for Example 8 consists of three staves: M-S. (Mezzo-Soprano), Vla. (Viola), and Pno. (Piano). The M-S. staff begins at measure 13 with a rest, followed by the lyrics "I heard a fly buzz" starting in measure 14. The dynamic marking *mf* is placed above the first note of the vocal line. The Vla. staff features a triplet of eighth notes in measure 13, followed by a series of eighth notes and a triplet in measure 14. The dynamic marking *mp* is placed below the first note of the viola line. The Pno. staff shows a complex harmonic structure with a series of chords and a long, sustained note in measure 14. The key signature is three flats (B-flat, E-flat, A-flat).

The middle song's lighter atmosphere allows more room for a major or modal F structure, but even here the pair of adjacent seconds is frequently present in the piano part, denoting the precarious, unpredictable movements of the cricket. The closing of the song, in F minor to reflect the arrival of 'night' in the text, allows the pairings to re-emerge and affect even the final bar with their unresolved, uncertain subtext.

The semitone step not only opens (and closes) the final song and features throughout, but it also provides the material for a very idiosyncratic, ambiguous and repeating, harmonic passage, reflecting the uneasy 'murmur' and a suggestion of 'witchcraft' which enters the text. This sequence is achieved by taking two pairs of the semitone partners F# G and D Eb, and briefly alternating the outer notes of the cluster in a syncopated rhythmic pattern, which makes them appear to change without any real change in the components. Such an atmospheric, harmonic interpretation of the text and scene being represented is one reflection of a particular harmonic style.

The choral work "*Dawn Calls*", although subject to certain harmonic implications in view of its subject matter and performance location, still maintains a consistency of approach in using open-ended modal or tonal layers, which eventually clarify to an episode of greater tonal centring. The fact that the subject matter in fact facilitates this approach is an added bonus.

The work was commissioned to celebrate the arrival of the first dawn of summer. It therefore sonically represents growing shafts of dawn light, as they merge and increase, until the full light of day arrives. This imagery, combined with the detail that no text was provided, guides both the architecture and harmonic style of the work. The composition therefore was treated

as a choral, musical rendition of the arrival of morning, with the voices treated as instruments and not just as musical interpreters of a dominant text. The piece is musically conceived with lyrics entering the composition as part of a natural progression, which leads the listener through from the mistiness and haze of early dawn, to an increased clarity, which can be enunciated in words. In the same manner, solos, or pairs of choristers are used to denote the singular clarity of the early entries, with the full ensemble gradually adding to the growth of colour, texture, volume and tone.

Harmonically, the work adopts some ambiguous pairings which can then grow outwards to complete a variety of atmospheric cluster chords. Using reduced forces of upper voices adds a lightness of character and clarity of penetration and development to these opening chords. The opening note pairing of A/G holds the listener from establishing a true tonal centre. Harmonically they lean toward a possible A minor (7th), with the G available as a perfect point of departure for a possible C major modulation. This, slowly emerging, minor (or modal), to major transition underscores the 'out of the shadows and into the light' journey, which is implied in the work. The A/G pair open through addition, to resolve upwards onto an equally ambiguous chord of suspension. This pattern is repeated three times, growing to chords of increased colour each time. The third entry (bars 9-1) builds, by rhythmic contraction to a wider spread and different inversion of the 'suspension chord', with an inclusion of the lower voices to develop scope and tone. The addition of a Bb (bar 12) further colours the original harmonies and allows for another upward resolution.

The opening 26 bars are voiced without text, for reasons which have been explained earlier, often opening in single voice or upper voice group to echo clarity. The growth, through staggered entries, with solo or split-voicings providing heterophonic rhythmic pulses or phrases within the chords, alludes to the title, suggesting the presence of subtly interwoven birdcalls, heralding the arrival of dawn.

The first entry of text, (solo soprano bar 25) leads from a bare open A minor implication, through some dark and lower-voiced progressions, to a gradually thickening texture of flat keys and their related minors. This flat key progression, disguises and consequently provides a surprising return, to a high register C major (bar 48) on the syllable 'day' (of daylight), and the first full light of dawn. This first coloured C major climax cannot be sustained right through to the finish and consequently drops the intensity to a thinner textured, upper voice segment (bar 61-66). The single, solo, over-voicing, along with the triplet rhythm, reference

the earlier bird calls once again, as the chorus sequence builds to the next, final and full C major chord-spread (bar 72) on the word ‘skies’.

Now in the radiance of full dawn, the C major climax sequence is restated, with a cascade of exuberant triplets echoing through the elongated final chord of this section (bars 76-81). The inversion in use here, placing the fifth of the chord in the bass line, prevents the piece from settling fully home. A closing phrase captures the gentle warmth of the newly arrived day, by use of a coloured version of the now understood tonic, C major. The added sixth, enclosed in the G/A pairing has been used throughout the work, within other chords, or split across voices, right to the end of the piece, as a subtle, unresolved, suspension, deflecting rigid finality.

The primary thrust of the solo clarinet work is in rhythmic, articulatory and melodic redistribution, but curiously, for a work for solo instrument it also contains two interesting harmonic explorations. The first of these is scattered throughout the work, in that the melodic impulse and therefore many of the melodic fragments, are based on an interrupted or deconstructed trill pattern, providing a subconscious forward momentum and a frequent use of a semitone step within the melodic material. The second of these harmonic structures occurs within the central, second movement of the work. This slower segment is entirely composed from the semitone interval inherent within a trill, temporarily giving far greater prominence to pitch over rhythm. The predominance of the semitone reduces the melodic choices available to a given note, or its octave, or to the semitone immediately above or below the given note, or its octave equivalent.

Example 9



Thus a type of ‘non-sequential numerical serialism’ is employed. Using an amended version of ‘Pitch Class Sets’, as defined in Joel Lester’s book, ‘Analytic Approaches to Twentieth Century Music’ (1989 WW Norton & Co; New York and London), with that amendment being the introduction of mathematically directed numbers to indicate the downward leaps, the intervals used are as follows;

0, +1, -1, +11, +12, +13, -11,-12,-13

Which, when placed in a corrected, mathematically directed sequence, with the permutations surrounding the selected note, allows the true symmetry to emerge;

-13, -12, -11, -1, 0, +1, +11, +12, +13

A final semitone step (bar 104), brought to a pause, is actually the surprise transition the final, third segment of the work.

Both the “*String Quartet*” and the orchestral work “*Evening Light*”, have explorations of harmonic style which are closely shaped by the structure, or the prioritised rationale of the compositions. The latter, in its use of heterophony, allows a form of vertical impact of harmonic content to be added to the technique, by careful choice of the component steps within the heterophonic sequencing. The consequences of this development have been more thoroughly referenced earlier, under structure, but its harmonic influences can be subtly manipulated to achieve a number of effective impressionistic textures. The melodic sequencing (and therefore harmonic overtoneing), can be selected to alter the entire mood of a piece, if so desired. This particular work illustrates its use in a programmatic, essentially consonant, harmonically coloured, legato, impressionistic style.

The “*String Quartet*” uses three different harmonic styles in order to achieve the tonal journey inherent in the overall concept of the work. In forwarding the aims of the thesis, despite their separate styles, there is a unifying logical consistency covering the three linked movements. The four opening notes of the lullaby theme (movement three) are used in both a harmonic sense and in the relationship between their intervals, to create much of the fragments of material which interlace to make movement two. The lullaby theme is also used to form a pentatonic grouping of its major component notes, which is placed in conjunction with the semitone adjusted derivation of that same pentatonic group, to provide the bulk of the essential material for the serial row used in movement one. This provides a structure of harmonic unity underpinning each of the three movements, despite their vastly contrasting stylistic derivations. In performance, the work makes the tonal and ultimately comforting journey, from the jagged, dissonant, serialism of movement one, through the fragmented, deconstructed figures of movement two, to the tonal synthesis of movement three.

“*Sleeping Giants*” explores the harmonic landscape of thematic development and as such, being the only complete work of absolute music within the portfolio, is free to explore the consequent harmonic developments, with only minor concessions to the other objective, of achieving new fusions of brass scoring, within the work. The thematic cell (concert C Bb F),

is introduced, retrograded, deconstructed, treated canonically and manipulated by addition, with all its consequent harmonic implications, as the work develops. In order to achieve some of the orchestration effects of some of the great earlier composers (predominantly Russian in this instance), some particular harmonic extensions or effects have been used.

Example 10

The musical score for Example 10, starting at measure 191, is arranged in a standard orchestral format. It includes parts for Horn 1/3 in F, Horn 2 in F, Trumpet in Bb 1, Trumpet in Bb 2, Trombone 1, Trombone 2, Bass Trombone, Timpani, Cymbals (crash) and Gong, Snare Drum, and Bass Drum. The music is in 3/4 time and features a variety of rhythmic patterns and dynamic markings, including a forte (f) dynamic. The score shows a transition from 3/4 to 2/4 time in the final measure.

Close harmonies, often including semitone clashes in French horns, reminiscent of Stravinsky (Example 10 above), open textured, widely spaced chording of Copland, blended overlapping harmonies of Ravel, resonant, sonorous coloured chords of Messiaen, raw, piercing interjections of Janáček or Shostakovich and ringing structured orchestrations of Rimsky Korsakov, all feature. Each of the above contains ensuing harmonic implications for the general thematic scheme. The introductory fanfare opens in what appears to be Bb minor but by the first appearance of the main theme (bar 18) has settled into a clear Bb major. Various rhythmic treatments then lead through a number of transitional modulations to arrive at a D

minor syncopated segment of particular orchestration (bar 62). Following a further transition similar to the above, we arrive at a Bb minor rhythmic episode of scoring significance (bar 83). Joined by French horns the underlying harmony returns to F major and although extended occasionally, remains there for the statement and exposition of a chorale, developed from the initial three note cell. An eventual return to Bb major, interrupted by some exciting rhythmic and scoring initiatives, sets the scene for a final sequence, where the theme is reprised at two separate paces and in two compatible variations, to conclude in the original Bb major. The reasonably standard harmonic construction, used in relation to a work based on thematic development, is fused with scoring and rhythmic initiatives, sufficient to modernise what appears to be conventional and extend its use as a compositional strategy.

Two key components, (including the harmonic implications), underpin the design, which has been employed in the composition of the piano solo "*Shattered Crystal*". The first, is the decision to build the piece from the relationships within a carefully considered, restricted palette of material, rather than from a theme. This allowed a constant evolution of the material and in the context of the subject matter chosen, a freedom to redefine these initial relationships in new ways.

The second, is that the piece would musically represent the particular nature and the many contrasts present in crystal glass, most notably its refractive rather than its reflective qualities. Therefore many of the conventional elements of the composition are set in diagonal distortion rather than in reflective coalition.

The former strategy supplies the pre-existing compositional technique, with the latter providing the re-interpretation and fusion, which leads to the new creativity espoused in the thesis.

Research of the piano works of Webern, Messiaen, Copland and Ginestera revealed interesting compositional approaches, which amounted to varied systems of logic present in their works. Webern's careful use and restriction of material, and Messiaen's meticulously calculated constructions are but two of the approaches noted. Such a technique of carefully worked rationale, as outlined above, was to strongly influence this composition. As this process involved building on the particular relationships between the notes of the selected material, those same relationships would also have a bearing on the melodic and harmonic developments within the work. In consideration of the representation of crystal, the note group chosen was D, C#, A, Bb and F. These notes appear in three additive statements,

culminating in their exposition as a complete chord. This chord then contains the harmonic ‘seed’ for the entire work, as it contains both the clarity of open fourths and the dissonance of semitones, simultaneously representing the transparency of crystal and its fragility.

Example 11

The unusual harmonic spelling is maintained throughout in order to continue the particular note pairings. There is also the implication, when viewed in this spelling, of the bitonality of a minor key and a related major being explored together, which could be viewed as an illustration of the disjoint caused by refraction.

As noted earlier, the clarity plus dissonance in the ‘seed’ chord is calculated to capture the transparency yet fragility of crystal. The clarity is further emphasised by higher register presentation of the thematic material. The jagged, linear connections between the component notes can be reassembled in a number of permutations, to suggest the interrelated sharply defined patterning, which is often a feature of cut crystal. These re-assemblies have consequent effects on the harmonic developments. Further attributes of crystal are also referenced, such as its ability to produce many changes of colour and the unpredictable spontaneity of such changes, but most noteworthy, is crystal’s ability to both reflect and refract light. It is this element of refraction which has the greatest influence on the harmonic style within the work. As the refraction also involves rhythm, the many and sudden changes of time signatures, pacing and note values, has a consequent effect on melodic distribution and therefore on harmonic resolution. The result is a constantly changing soundscape of broken chords, delayed resolutions, tonal re-centring (due to elements of the chords being refracted to an alternative position), partial inversions and fractured, unstable cohesion.

The answering phrase to the three falling opening expositions, is a rising three-note-chord, of a sixth with an internal semitone E C B. This group becomes a strong harmonic feature within later, much repeated episodes, which in turn become one of the main rhythmic features in the piece.

The entire exposition sequence is eventually answered, largely in the left hand, by a similarly shaped, slightly manipulated (rhythmically and harmonically), transposed version of the opening 'seed' chord. These two versions, or inversions of one and other, continue in obvious, but constantly changing canon with (bars 8-23). Again, the constantly changing interactions have harmonic implications and cause a recasting of tonal relationships.

Two strong rhythmic passages, a sad, waltz-like 3/4 episode and a much quicker paced repetitive sequence of semiquavers, emerge to alternate and interrupt one another. Even within these apparently rhythmically balanced segments, there are articulations which simulate syncopations and disrupt the harmonic flow, by emphasising alternate notes within the grouping.

The mirrored, central pivot of bars of the work, have been referenced under structure, but this momentary static harmony signals the segment of greatest harmonic and thematic development and of most interaction and interruption.

The falling semitone figure of the opening chords is reintroduced, accompanied by high register, echoing chords of the answering pattern ECB. These elements are teased out with fluctuating dramatic import. As the work draws to a close, several powerful statements of the falling semitone figure (bars 144-149), are slowly allowed to drain away, conveying a sense of emptiness and uncertainty.

Despite its use of established constructional and harmonic techniques, the fusion with the programmatic element of musically representing crystal, produces a fragmented, disjointed, novel soundscape, which still achieves a functioning structure, even though it is constructed from interweaving imbalances. In its slightly-delayed, or off-set harmonic resolutions, it could be loosely linked to the 'phasing' of Steve Reich, and equally, through its angular reshaping and interlacing of certain melodic, rhythmic or harmonic contours, it could almost be represented as a form of musical cubism.

Given that different aspects of an undersea world are represented in each of the movements of "*Beneath the Surface*", it is inevitable that there is a certain amount of variety within the harmonic style, but, notwithstanding, there are also a number of overarching concepts. Chaining, micropolyphony, partial deconstruction of stasis, rhythmic canon and the sound worlds of Lutoslawski and Ligeti are the principal reference points for exploration within the work. A number of those techniques offer similarities of process, resulting in a work which is built from closely interlacing fragments, operating in a synthesis which is not immediately

evident, but which is present, in a subtle though all encompassing manner. The premise of the work is the activity of many, disparate, (undersea) elements, which operate, each in their own way, but inevitably, such complexity of individual interactions is perceived to be part of a greater unity.

Bearing in mind the approach of providing a subtle framework of reference throughout the portfolio, this work, similar to movement one of the String Quartet, harmonically bases itself largely on two pentatonic groupings, connected by semitone relationships. With a tonal centre of C, the initial group reads C, D, E, G, A. In order to best explore Ligeti's clustered harmonies the semitone-related partner group can be organised as the flattened notes of the above, thus B, Db, Eb, Gb, and Ab. This arrangement or inversions thereof, allows a fluidity of atmosphere and of tonal centring. In the third movement, this restricted palette of melodic material is re-organised into sub-groupings, which, when recombined in various patterns, allows a form of manipulated serialism, which extends the multifunctional use of this technique, as explored earlier in the "*String Quartet*". Schnittke's outlook of not wanting to be confined to any one system or style is relevant here, as he makes a solid case for fusions and reinterpretation, which, to some degree may be anachronistic, but which emerge as contemporary by their very execution. Arvo Pärt, Maurice Durufle, John Taverner and David Childs have all used similar re-interpretations of older systems.

Unsurprisingly, given that the first movement, "*Mariana's Trench*", deals with the deepest part of the ocean, the work begins very low in the range of the piano, gradually journeys upwards, and descends again to the original depths. The opening chord, starkly and immediately establishes the semitone relationship which underscores the harmonic framework. The woodwind's first entry extends the initial semitone pairing of C, B, by the addition of the next semitone partner, in a brief example of stasis built around this C, Db and B grouping. Having thus entered, the woodwind and French horn then alternate with the piano in exchanges of this relationship. Although other semitones are briefly included, the scoring, articulation and momentum of the figures continue the tonal centring around the original cluster. Utilising the implicit character of the woodwind, the particular articulation used in resolving the semitone-step, (that of a longer opening note slurred upwards to a shortened partner note), is of deliberate design. It presents an important atmospheric contribution, as it sonically approximates to a bubble. As such, this entire first movement is rhythmically and harmonically built from these "bubbles", gradually growing and overlapping in an upward spiral, from the initial depths. (See Example 12)

Example 12

42

Fl.

Ob.

Cl.

Hn.

Pno.

The increasing frequency of the overlap adds a rhythmic and harmonic complexity which references Ligeti's micropolyphony. The gradual rise in pitch climbs to an upper inversion of the original cluster which surges forward in waves, climbing higher with each re-sounding. Having reached this peak, there is a dramatic chaining, through the entire ensemble, which chases figures and snippets of rhythmic canon back through the expanded range, unravelling into the deep, dark, layers, once again. A brief harmonic expansion, using the now familiar semitone overtone then ensues and a certain atmospheric and harmonic tension is built. But the piano is once again left as the sole proprietor of the melodic material, which it carries back into the depths from whence it came. Within this descent, the piano briefly includes some of the earlier note groups, but releases them again in favour of the original and dominant C,B pairing, which, finally, also includes the Db and completes the primary cluster.

The melodic and harmonic techniques used in movement two "*Sargasso Sea*", are initially broadly similar to those used in the opening movement, but they achieve a new atmosphere by a re-centring of pitch, a change of instrumentation and a specific pattern of rhythmic interaction. Programmatically, this region of the ocean is characterised by two principal motions, the quick furtive movements of the sea creatures, and the slower languid flow of the abundant seaweed. These two rhythmic patterns then have consequent effects on harmonic treatments, in their intersecting or layering capabilities. The quick, figurative interplay, typical of micro-polyphony, which is quite exposed and apparently unstructured at the outset, gradually becomes more interwoven, with some cohesive patterns of rhythmic and harmonic structure emerging. This asymmetrical rhythmic convergence, (referenced under rhythmic

techniques and also in the context of the string orchestral work “*Confluence*”), has a direct effect on harmonic structure within composition, as rhythmic convergence of melodic lines offers richer texture and therefore greater harmonic potential.

Briefly excluding the piano, which immediately suggests a change of atmosphere and timbre, the second movement opens with short rhythmic figures, each one seeming to represent a different sea creature, emerging from within a selection of notes, ranging from Gb to C. The higher pitch, emphasised by the use of upper woodwind, is immediately evident, but no one figure, or tonal centre, is fully established, beyond the cohesion of a similar pool of melodic material. Certain recognisable figures begin to emerge from among the alternating fragments, and commence to reflect patterns in the individual contributions, suggesting a cohesion. A derivation of the rhythmic fragments is eventually stated concurrently within the bar structure, which provides sufficient prominence for the varied voices to coalesce into a defined, repeating pattern, establishing a harmonic framework around Eb, with semitone dissonance. This pattern is joined by the clarinet and mutates to favour a triplet version of the semitone progression.

The first entry of the piano, in this movement, is significant for a number of reasons. Firstly it is a new voice and as such it can represent a new character within the scene being depicted. Secondly, it emphasises a harmonic centring, which is an important element of the growing convergence. Thirdly, it enters using a syncopated and apparently new melodic grouping (derived from earlier fragments) offering an undercurrent of alternate, slower, rocking, rhythmic pacing. Fourthly, its greater range captures a growing, stronger, deeper and more powerful element within the scene, which is the ocean itself. The piano, further asserts its quiet dominance by quickly introducing a deeper repeat of its melodic material, in canonic imitation within the left hand, which shifts the balance away from the triplet patterns. This dominance is further borne out, in that the woodwind soon break from their triplet figure and follow the piano, in a many-faceted rendition of the piano’s theme, by further canonic imitation, almost as a slow, tonally grounded exposition of chaining. Meanwhile, the piano has reverted to the earlier triplet pattern, uttered in less dominant range and indicative of the sea’s ability to encapsulate other patterns of movement and harmonic structures, within its own internal motion.

Slower syncopated chords, drawn from the piano’s opening figure, grow into a sustained woodwind chord, constructed from the components of the earliest woodwind figures of minor and major second intervals. This chord surges in dynamic, by renewed, individual entries,

(deconstructed stasis), of the component instruments and at the same time is peppered by counterpoint of the original woodwind figures in both ranges of the piano. As the woodwind chord fades, the piano sounds pianissimo echoes of the earlier triplet characters, now used in more widely-spread intrusions, which veil the tonal centre and indicate a distant continuation of what appears to be, an infinitely variable combination of perpetual motions and harmonic extensions.

The third movement "*Noctiluca Bloom*", depicting a very unusual phenomenon of seasonal bioluminescent convergence among plankton, derives its harmonic style from the different sound world created by manipulated serialism. The original palette of notes, now featuring prominent semitone steps or designated leaps within the horizontal progression, is assembled into sets of four semiquavers. These sets are then treated as building blocks within a linear wall, which is assembled from varied combination of the blocks, to complete bars and ultimately phrases. Some of the blocks have their material retrograded, some overlapped or re-assembled from subdivisions of earlier bars. Apart from an opening sequence, which determines a starting point, there is no regularity of repeat or discrete patterning applied to the subsequent organisation of the blocks, which has import both for melodic progression and consequent harmonic inference. The combination of the veiled logic of a recognisable repetitive pattern, in a hitherto unused range of the piano, conjures a peculiarly ethereal and otherworldly effect, which immediately distinguishes it from the character and harmonic construction of the previous movements.

Opening, initially with fragments of the above referenced assembly of semiquaver blocks, the piano soon launches into the full hypnotic, rhythmic regularity of the semiquaver sequences. It is quickly joined by the flute, which defines and repeats the tonality of a starting phrase but then proceeds to offer its own arrangement of the selected notes in an independent, though compatible rhythm sequence, producing complex harmonic readings. This pattern is then further expanded, by inclusion of the clarinet and oboe, each of whom offer their own, compatible, though independent, arrangement of melodic sequencing. The implication here is not only of that of a growing accumulation of participants, but also, of a disjointed canon, whose elements seem to float through layers of similar note relationships. Nothing is clearly defined, or appears specifically organised, though the participants in this mysterious dance are subconsciously inter-related. This pattern is broken by the piano's reassertion of its opening, questioning, rhythmically-abridged fragments. On re-entry, the hitherto veiled canon is made immediately more obvious by a mirror entry on flute, which is only a half beat

out of sequence. The constancy of the repeated notes and the close rhythmic and harmonic proximity of the mirrored phrases has actually propelled the effect beyond canon to achieve a clear chaining. Although the French horn introduces a new direction, the chaining is re-emphasised when the oboe joins the fray in another strand of the canon, this time a tone above and a full beat behind the original. The raised pitch and timbre of the instrument offers further harmonic layering and complexity. The woodwind gradually detach from the chain and join the French horn's climbing phrase, using overlapping semitone pairings to create tension and climax. A sustained concert D in French horn, overtone by the oboe's Eb, is harmonised by the Clarinet's concert C and rendered surprisingly major by the oboes upward resolution to E natural, employing a harmonic effect to emphasise the natural apex of the climax. The woodwind briefly decorate this climax, before beginning a noticeable sequence of inter-related, semitone-paired, descending phrases, which continue until they reach the lowest part of their ranges, with a consequential decrease in dynamic. Independent movement suddenly disappears as the woodwind, in uniform, slower, rhythmic pattern, offering new sonorities and tight, clustered harmonies, echo a final repeated figure, to reach a low, static chord, comprising the semitone pairing and the tone pairing of the original material. Rejoined by the piano, the pitch and harmony is extended downward by similar harmonic relationships, signifying its final decrease in independent movement by the elements within the scene, as they sink back into the depths.

The final movement of this work is titled "*The Great Barrier Reef*" and as a noted centre of biodiversity, this movement requires many of the elements previously deployed, to interact in a more intricate manner, to help achieve areas of almost aleatoric freedom, which reflect the implied natural spontaneity. This movement too, is designed to eventually encapsulate many disparate elements of rhythm and pitch, in a final all-encompassing unity.

Commencing with two, clearly chained, woodwind fanfares the attention is taken quickly onward by patterns of linked, rhythmic interjections. The fanfares are constructed a tone apart, with the movement within them achieved in semitone steps, maintaining a harmonic link with the earlier movements.

The piano enters quickly, with fragments based on the original bubble motif and harmonically connected by the cluster relationship of semitones. The two piano entries echo the opening fanfares, by raising the semitone interval to a tone on the second entry. The ensuing figurative interplay continues as before, to a rocking piano figure, based on a similar

triplet motif in movement two. The similar harmonic element of clashing and releasing semitones is immediately apparent.

Example 13

The image displays a musical score for measures 375-377. The score is arranged in two systems. The first system covers measures 375 and 376, and the second system covers measures 377 and 378. The instruments are Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Horn (Hn.), and Piano (Pno.). The key signature is one flat (B-flat major or D minor), and the time signature is 3/4. The piano part features a complex, rhythmic accompaniment with many sixteenth and thirty-second notes. The woodwind parts have more melodic lines, with the flute and oboe often playing similar motifs. A dynamic marking of *p* (piano) is present in the horn part in measure 375.

This motif is used, at a variety of pitches and in retrograde shape, for the next twenty or so bars, eventually deconstructing into a much slower piano figure, which begins to define the underlying Andante tempo. The woodwind, still within the governing pool of notes, have by now begun to unify in response to the piano motif and are coalescing as a unit. Just prior to the slower piano episode (bar 389), the woodwind exchange inversions based on the secondary cluster of concert C, D, Eb, dropping to a whole tone version of this, when the slower paced episode begins. This full tone and semitone alternation continues, through interlacing suspensions and syncopated interplay, for 23 bars, climbing to a woodwind chord

of the same C, D, Eb, sustained over cross-rhythms in the piano. The underlying tonality changes to a more obvious C minor, with the woodwind again alternating harmonic inversions around this C note. Falling to the lower registers, a subtly syncopated, sustained chord, gives way to a static chord of the original C, D, B, cluster, then slowly ebbs to the finish. Bar 440 includes a pianissimo reference to the earlier Db, to briefly extend the semitone reference.

Through this movement, all of the previous interactions have been consolidated into gradual coalition with a slower, underlying pulse, which is first provided by the piano, in its process of encompassing the independent patterns of the other participants into the omnipresent, depth-of-motion of the sea. The harmonic, cyclical unity has been preserved in the return through C minor, to the original, left hand, note group of the opening bars of the entire work.

Chapter 4: Word Setting

The ideal techniques of word setting are usually self evident and should present unobtrusive, coherent, readily intelligible results. Berio's work in his 'Sequenzas', a musical patterning of the natural rhythms, patterns and inflections of speech, is in itself creatively interesting and worthy of some consideration within less specific works. Deviation from normal syllabic patterns, extended vowel delivery, jagged melodic cells, unusual word placement (relative to pitch and rhythm), mixed stress patterns or slurred connectivity, may prove difficult for the performer, but can also be usefully employed for specific effect. As cited in the foreword, for the purposes of this portfolio, such measures are rarely used and an adherence to normal speech patterning is sufficient to explore the work in question and illustrate particular subtleties of approach and extensions of technique.

The "*Song Cycle*" is composed around a pre-existing text, which in itself, provides some indications of shape and structure to the overall composition. Certain areas of climax, focus, or attention, can be mapped within the overall context, with an underlying atmosphere and syllabic patterning providing suggestions of pace. Individual words are available for literal interpretation, with phrases of text indicating melodic shaping, pitch and dynamics.

Specifically concerning the setting of individual words, care is taken to place stressed syllables on strong beats, compound words are not over-extended, word endings are given apposite rhythmic support, word tone, especially at the outer extremes of voice range, is appropriately judged and syllabic patterning is rhythmically reflected.

Vocal range and consequent voice placement is carefully considered to provide opportunity for appropriate delivery, atmospheric content, penetration and sustain. Vocal placement also has implications for dynamics, phrasing and breath control. Word placement at extended vocal range is musically supported, sparingly accompanied if in the lower timbres, appropriately approached if in the higher reaches and rhythmically/dynamically compatible. Contextual phrasing is designed to harmonise with vocal and ensemble phrasing, with physical phrasing (breathing), accommodated accordingly. Opportunity for characterisation, for ensemble interaction and for sympathetic atmospheric and convincing performance is provided, by facilitation of technical considerations for the singer and by appropriately addressing the dramatic content of the text. Careful observation of such vocal, and technical

considerations, facilitates intonation, tonal support and ultimately, assists conviction in performance.

Of particular note within the cycle is:

- A. The vocal phrasing, through time signatures and across bars lines, to achieve a freedom of line and expression (and also reflect the sense of continuity into the ensemble, preserving the sense of atmosphere beyond the text).

Example 14

M-S. 18
Still - ness in the room was like the Still - ness in the air

Vla.

Pno.

- B. The careful vocal placement and dynamic setting, to achieve clarity and/or homogeneity within the timbre of the sympathetically toned ensemble.
- C. The segment of extended vocal technique in song 1, which uses the nasal ring of humming to characterise the 'fly'.

Example 15

M-S. 71
Hmm hmm

Vla.

Pno.

During song two, the text, plus an underlying, deeper connotation, gives rise to a complete change of pace in melodic interpretation. In bars 47/48 the word ‘vastness’ appears in the text with an implication of a presence which is larger than life, therefore, deeper and more profound. A ‘*stretto*’ is applied to the entire phrase, facilitating the literal extension of the ‘vastness’, but also providing the suggestion of added importance, gravitas and reverence to the sentiment behind the words.

Example 16

The musical score for Example 16 consists of two systems of music. The first system, starting at bar 47, features a vocal line (M-S.) with the lyrics "A Vast - ness as a Neigh - bor came a". The vocal line is accompanied by a violin (Vla.) and piano (Pno.) accompaniment. The piano part is marked *mf* and features a complex, rhythmic accompaniment. The second system, starting at bar 53, features a vocal line (M-S.) with the lyrics "Wis - dom with - out face or Name". The vocal line is accompanied by a violin (Vla.) and piano (Pno.) accompaniment. The piano part is marked *mf* and features a complex, rhythmic accompaniment. The vocal line in the second system is marked with a *stretto* and a triplet over the words "Name".

This approach allows the word ‘wisdom’ to be delivered with equal, studied emphasis, accentuating the import. The closing words of that stanza, ‘and so the night became’ are delivered at even greater extension, sustaining the words across several bars, which allows the thoughts to continue unobtrusively but meaningfully into the subconscious. This slower paced, legato delivery of the identical melodic material is all the more effective in following the opening stanza, where a pattern of the cricket’s motion is achieved by use of a semiquaver/quaver pairing, to rhythmically and textually reflect the quicker movements involved.

The choral work “*Dawn Calls*”, offers even greater opportunity for creative word setting. As no text was originally supplied, words of particular resonance could be suitable placed to

achieve a desired effect. Darker toned words are matched with deeper harmonic implications. Bright, open vowels are used to allow clarity and sparkle to permeate the higher pitched segments, or the musical interpretation of the subject matter. Careful and texturally sympathetic dynamic sculpting, in combination with graduated, blending, articulation, is used to achieve a sense of interweaving, organic growth.

Example 17

35

Soprano *mp* Night fades the light soft dawn light, *mf*

Alto *mp* Night fades light dawn light, *mf*

Tenor *p* Night fades (dark) Night fades light soft dawn light, *mf*

Bass *p* Night fades Night fades soft light, *mf*

The musical score for Example 17 consists of four staves: Soprano, Alto, Tenor, and Bass. The Soprano staff begins with a treble clef and a 2/4 time signature, followed by a key signature change to one flat (B-flat major). The lyrics are: "Night fades the light soft dawn light," with dynamic markings *mp* and *mf*. The Alto staff also begins with a treble clef and a 2/4 time signature, with lyrics: "Night fades light dawn light," and dynamic markings *mp* and *mf*. The Tenor staff begins with a bass clef and a 2/4 time signature, with lyrics: "Night fades (dark) Night fades light soft dawn light," and dynamic markings *p* and *mf*. The Bass staff begins with a bass clef and a 2/4 time signature, with lyrics: "Night fades Night fades soft light," and dynamic markings *p* and *mf*. The score includes various musical notations such as rests, notes, and dynamic markings.

Multi-syllable words are placed to provide rhythmic momentum, propelling certain phrases forward, with words of a single vowel sound being used to allow colour and clarity to prolong the sound within certain sustained chords.

Extending the technique even further, as the subject matter of the composition involved the gradual arrival of shafts of light into the early dawn, pure, open-vowel, vocal sounds, of carefully calculated penetration, are used in the opening bars, graduating to complete words as the piece develops. The vocal sounds themselves, 'Ooh' to 'Aah', are chosen and sequenced to achieve an increasing fullness and warmth of tone, prior to the change to complete text. These sounds are uttered by solo, duet, ensemble and full (though with reduced dynamics), voices, to emphasise the sense of growth and paint a picture of fragility and of the co-existence of individual shafts of light within the developing colours. Harmonies are rhythmically extended across bar lines to simulate undulating waves of light and heighten expectation, prior to the arrival of the next colour, in the following chord. (See Example 18).

Example 18

The musical score for Example 18 consists of two systems of vocal parts: Soprano (S), Alto (A), Tenor (T), and Bass (B). The first system covers bars 14 to 19. In bar 14, all parts begin with a vocalization 'Ooh' in a mezzo-forte (*mf*) dynamic. The time signature changes from 3/4 to 2/4 to 4/4. In bar 19, the vocalizations change to 'Aah' and 'aah' in a piano (*p*) dynamic. The second system covers bars 20 to 23. In bar 20, the vocalizations are 'aah' in a mezzo-forte (*mf*) dynamic. The score shows a progression from solo vocalizations to a full ensemble of four voices.

Therefore, an evolution from vocal sound to intact text is used as a subconscious framework, to emphasise the sense of growth within the work. An increasing amount of notes per chord (from two to six) is applied to each of the sounds as they arrive, furthering the sense of deepening colour, with an equal graduation from solo, through duet, to ensemble, providing the required voices and facilitating the harmonic expansion and intensification of sound. Staggered, ‘*marcato*’ entries provide pulses of rhythmic impetus, suggesting the overtoning of bird calls, alluding to the title of the work and solo or subdivisions of the ensemble are used, to provide similar textural echoes within the body of the piece. At the point of change from vocal sounds to full words (bars 25 and 26), the solo voice bridges the gap of the introduction of words. Here the significance of the choice of words is most evident and representative of the thesis, in that each of the words (‘Dawn’ and ‘calls’) has a clear consonant, followed by a long warm vowel. This enables the soloist to sound, with piping clarity, over the sustained chords, without resorting to undue volume. The choice of

consonant and the clarity of the following vowel ensures the desired effect. Similar instances of solo, or *divisi* echoes are used in bars (25/26) (58/60) (63/64) (76/77), all following the same incisiveness and rhythmic use of word-setting.

Within the complete text, explosive consonants or natural syllabic patterning is used to provide rhythmic impetus and moments of natural intensity, decreasing the need for further graduated sonic layering as used in the opening bars and increasing the impact of the chord clusters by homophony.

Example 19

76

S. shining bright new skies

A. skies bright shining new skies

T. skies (shi - ning, shi - ning skies mor ning skies, mor ning skies.

B. skies.

Thus vocal sounds, word-colour and tone, syllabic percussion, vocal placement and creative use of voice as an instrument, all extend the effectiveness of standard word setting techniques, adding layers of subtlety to outwardly standard speech patterning.

Chapter 5: Orchestration, Instrumentation and Sonorities.

Many elements from previous chapters, such as structure, compositional approach, or genre, provide ensemble combinations or compositional methodologies which strongly influence the sounds generated within a particular piece. Certain instrumental combinations are predetermined by genre, e.g. string quartet, choral work etc. and those ensembles, being frequently composed of homogeneous participant forces, bring about a need for a creative and subtle approach, to register significant sonorities. Within the larger ensembles, variety and combinations of instruments are more easily available; therefore a greater range of timbre can be achieved.

Early in the portfolio, a desire for new sonorities is signalled in the instrumental combinations used within the ensembles. The opening work uses a string trio plus clarinet to deliver its content. This choice of instrumentation, although partly chosen to reflect some of the elements of Messiaen's original quartet, is also selected for its contrast of sound generation, as well as its sonic permutations. The timbre of the clarinet and its range, allow it to mingle harmoniously within the lower string figurations, as a quartet unit, while its wind generated construction permits it to clearly separate from the strings when necessary. The richness of sound and the 'colour' of some of the harmonies is achieved through the clarinet's ability to blend and/or contrast with the string ensemble. Alternating the clarinet and first violin positions in the vertical structure of the final segment also provides a sonic extension to the atmosphere.

Mention must be made of the technical, physical, sound generation capabilities of the instruments involved, as this too provides natural, sonic, contrast opportunity within the work. The strong homogeneous integrity, in both timbre, inflection and momentum, which can be achieved by using sympathetic bowing and figurative conventions within the strings, proves a perfect foil for the clarinet's interpolated melodic interactions. The restricted duration of the clarinet's offerings, (due to the constructional premise of limiting the clarinet to six notes on each entry), is far more pointed when placed in contrast with the strings unity. To achieve valid phrases using only six notes often involves drawing the clarinet's melodic patterns across bar-lines, which generates extra rhythmic interest through polyrhythms and flowing harmonic complexity, which further extends the sonic effects. (See Example 20)

Example 20

218

Cl. *f*

Vln. I *f*

Vla. *f*

Vc. *f*

Maintaining the clarinet's pitch within easy range of the upper strings, allows comfortable absorption of the clarinet's contribution to within the general sound being created, therefore providing a seamless interaction, which furthers the momentum and generates a particular warmth of sound as required. The clarinet's more animated, piping character is then later available, as a valuable extension of timbre within the leaping rhythms of the 'scherzetto'.

The specialty of function given to the clarinet in this work is not to diminish the role of the strings. They it is who provide much of the harmonic structure and rhythmic impetus within the piece and create the richness of sound, often through sympathetic inflections of bowing, wherein the clarinet operates. This important contribution, that of the inclusion of informed string techniques and playing conventions, is further expanded in earlier paragraphs concerning "*String Quartet No. 2*" and "*Confluence*", but, it is in the interactions of all of the ensemble, that the particular sonorities of this work emerge.

Reference must also be made to the compositional approach previously outlined for this piece as, in addition, its compositional brief, of honouring Messiaen's original '*Quartet for the End of Time*', also brings about deliberate inclusions of mode, colour and birdsong, which themselves have an influence on the overall soundscape.

The "*Song Cycle*" immediately extends the expected sonic concept of a composition in its genre, by inclusion of an ensemble of musicians to deliver the work, rather than the traditional voice and piano. Further than this, the extra instrument chosen, the viola, by way of its rich, characterful tones, is selected to complement, extend and amplify the atmosphere suggested in the poetry, rather than as a contrast of sound, provided simply for variety. The obvious

blend to the voice range chosen, mezzo-soprano, is another significant factor, as is the viola's ringing, but non-strident timbre, when used in its upper reaches.

The structural approach of this work, referenced in an earlier chapter, has further implications here, in that the decision to promote all three of the ensemble members as equal partners in the drama of the songs, allows interludes when each of the instruments deliver their contribution in solo, duet, or alternating interaction, without the constant need for the vocal line, or the text, to carry the atmosphere forward. This constructional premise, allows for equal voiced participation and therefore, for extended segments of pure instrumental timbre.

Carrying this approach one step further, sees the vocal contribution deliberately used as a participant instrument, rather than solely as a vehicle for carrying text, when it embarks on an extended, atmospheric humming segment, without any inclusion of text. The viola also includes extended technique in its '*sul pont*', bowing, to suggest the distant buzzing of the insect characters.

(See Examples 8 and 15 above).

The predominately minor key chosen and the overtone, interjectory, style of ensemble interaction, has further effect on the overall consequent sound.

The piano's percussive abilities and its broad range allows moments of further contrast, most noticeably in the rhythmic vitality of '*The Cricket*' or in the gentle closing '*Adagio*' segment of '*The Bee*', where, in the latter, the transition to G major in combination with flowing arpeggio patterns, creates the soothing sound of a closing lullaby.

"*Confluence*" and "*String Quartet No. 2*" are, as the titles and orchestration suggest, both string dominated works. This unanimity of scoring would not necessarily indicate a predisposition to an extension of timbre, but it exists, in both works. The guiding principal here is a deliberate consideration of bowing techniques and of conventions within string writing, which allow the ensemble to play more cohesively as a complete section. This homogeneity of technique carries with it a richness and fullness of sound, an inner momentum and a capacity for ensemble inflection, which adds greatly to the musical impetus of the work. Such a compatibility of phrasing and bowing, produces a stronger attack where necessary and a significantly more resonant sound. Messiaen's chords of particular resonance develop their unique sound from the relationships between the notes of the chord, but compatible string phrasing and its associated bowing, generates an equivalent effect, in that

all of the strings are drawn into similar patterns of vibration, which amplifies their contribution and allows an intrinsic, organic, ebb and flow within phrases, which in turn has a significant influence on the overall sonorities within a work.

Referenced in an earlier chapter, the phrasing and consequently the bowing for the first violin, in the final movement of the “*String Quartet*”, gradually decreases the amount of notes taken within each bow, at each successive entry, subtly increasing the impact and by association, the strength of penetration and sustain of each note of the theme. By the final phrase of the theme, a bow per note is called for, offering the strongest delivery and, consequently the clearest tone quality. The accompanying instruments, have, at the same time, moved from broken layered chords, which require interrupted bow strokes, to patterns of flowing, interweaving *arpeggio*, which allows continual bow movement and an inherently more resonant timbre, which further contributes to the sound.

Example 21

The musical score for Example 21 is presented in a four-staff format, labeled Violin I, Violin II, Viola, and Violoncello. The music is in 3/4 time and begins at measure 161. The key signature is one sharp (F#). The Violin I part starts with a half note G4, followed by quarter notes A4 and B4, then a half note C5. The Violin II part features a triplet of eighth notes (G4, A4, B4) followed by quarter notes C5, B4, and A4. The Viola part has a triplet of eighth notes (G4, A4, B4) followed by quarter notes C5, B4, and A4. The Violoncello part also has a triplet of eighth notes (G4, A4, B4) followed by quarter notes C5, B4, and A4. The score continues for four measures, showing the interaction between these parts.

Within “*Confluence*”, the complexity of rhythmic and thematic interaction, consequently the intrinsic sonority, is enhanced and extended by careful orchestration. The thematic fragments are constantly exchanged among the various sections, offering subtle changes of timbre and a continued development of colour and inflection, as opposed to a possible linear development, featuring a particular tonal group. The inclusion of first violins at a lower pitch than the second violins, in their early rhythmic contributions, along with ‘cellos and violas sharing some of their thematic fragments at similar pitch and then diverging, further adds to the tonal variety, of having no single instrumental timbre dominating the exchanges of sound. The thematic growth, emanating from the lower and middle strings, brings a particular, rich

sonority to the exposition and offers contrasting possibilities of pitch and timbre within both the central, *legato* segment and the closing reprise.

The string writing with “*Evening Light*” follows the same approach, that of the observation of traditional playing conventions, to enhance the sonic values within the work, but considering the heterophonic construction of this piece, many more careful considerations of orchestration are also made.

The process of heterophony demands the careful redistribution of melodic or thematic material across other instrumental lines, layering the horizontal line through, or below, other contributions, and in effect, varying its completion. This process, as it stands, requires detailed selection of instrumental timbre and dynamic to achieve the necessary tonal balance across the layers. Given that, within this work, an extension of that process has been contrived, by designing the progression of the melodic line to achieve vertical clusters on that progress and that each new contributor to the evolving chord, offers the potential to reinterpret the inversion, or to realise a tonal re-centring of the vertical harmonies, then the instrumental balance, particularly on their entries, must be very carefully considered. The early bars of this work use the upper strings to sustain veiled harmonic contribution across several expositions of a thematic phrase, while the woodwind, with its slightly more penetrative facility, provides the interjected notes to extend both the complexity of the harmonic veil and the direction of the melodic line.

Example 22

21

Flute 1

Flute 2

Oboe

Clarinet in B \flat 1

Clarinet in B \flat 2

Bassoon

The method resembles a form of harmonically manipulated additive technique, where each instrumental entry is part of the addition. The sonic effect is that of graduated, veiled

harmonic layering, or a meandering stasis, which relegates rhythmic pulse or strong dynamic input to the background. This could be viewed as a sonic equivalent to impressionist painting.

A later segment (bar 86-111) employs strings only, to provide a new soundscape, as they crescendo and ebb through ‘*tremolando*’ bowing passages, to represent the programmatic element of a moonlit sailing ship, unfurling its sails as it heads to sea. The sectionalised orchestration used here is important, to provide tonal contrast within the overall work. This particular bowing effect among the strings provides a perfect, metaphorical representation of the fluttering sails of the imaginary sailing ship. The programmatic element, related to the title, combined with the heterophonic process, leads, in this instance, to sparing use of brass and percussion throughout the composition. This restricted use, is to allow focus on the contribution of instrumental timbre within the projected soundscape and is a direct development of the similar use of the woodwind participants in the opening segment. The texturing throughout the work also requires detailed orchestration, to avoid any impression of constrictive density, despite the fact that the process depends for its effect on several layers of interaction and is consequently always subject to careful textural balancing.

Although it is written for solo piano “*Shattered Crystal*” has particular uses of texture and timbre which merit mention. The jagged, asymmetric design of this work has already been referenced under the heading of compositional approach, but this same approach gives rise to certain consequences of timbre within the piece. The fractured nature of the atmosphere is reflected in broken chording throughout the range of the piano, with repeating rhythmic patterns which have almost an industrial repetitiveness in their delivery, providing one style of texture. The representations of crystal however are most often delivered in high-range, brittle, clusters, which offer completely different textural passages. These chords are designed to ring with a particular timbre through use of semitone dissonance and high range placement. The answering phrases are frequently placed low in the left hand system, providing an expanse of empty textured space between the phrases, which creates the stark, bare atmosphere being sought. The many changes of tempo, brought about by varying rhythmic patterns and note values, in combination with sudden interruptions and re-directions of the component phrases, provide further layers of complexity, which contribute to the unsettled, turbulent nature of this work. Texture, timbre and sonorities therefore experience the same sudden changes and fluctuations.

The instrumentation within “*Beneath the Surface*” provides crucial timbre towards achieving the variety of related atmospheres required throughout the work. The slurred, semitone

resolutions of low-register woodwind has already been cited as creating the sonic ‘bubbles’, which permeate movements one and four. The physical characteristics of woodwind also allow them to deliver their contribution with sinuous, liquid flow, making them an ideal choice to represent water or the creatures which live there. Their use, particularly in their lower registers, offers a close-textured pool of sound, which is constantly and subtly varied, while still remaining within the same general soundscape. This capacity for close interweaving further facilitates the ‘chaining’ and ‘micropolyphony’ outlined in the structural design. The inclusion of French horn adds depth, power and a particular open sonority to the overall sound being sought, without involving the sometimes strident quality of lower reeds. The resonance of the French horn provides added emphasis to climbing or descending passages in the work, while still blending perfectly within the required moments of stasis.

The piano’s contribution to movement three has been fully explained in an earlier chapter, where its softly percussive delivery sustains the repetitive patterns of juxtaposed serial blocks. However, the piano actually performs a vital, multifunctional role within the entire work, ranging from its ability to provide simulations of depth through its great range, to imitating or portraying some of the sea creatures which permeate the work. On top of all these achievements, the piano also provides a function which is suggested in movements one and two but becomes more clearly defined at the end of movement four. The piano shows itself to be the sea, whose constant, deep, powerful motion, eventually encapsulates all of the other disparate, instrumental contributions into a unified, harmonious momentum. This completes another of the explorations within the portfolio (“*Confluence*”, “*Manoeuvres*”), that of providing a sub-current of structure, which subsequently balances the apparent imbalances, by allowing the piano to operate on a broad logic, which is present, but not obvious.

Of all the portfolio compositions, “*Sleeping Giants*”, for brass ensemble and percussion, explores the greatest range of orchestration cues, with a view to examining new sonorities. Its structural design alone gives it scope and shape, which enables it to operate as a composition for brass orchestra, with consequent, appropriate, allocations for instruments, which may not always reflect their traditional orchestral roles. As a result, new ensemble combinations are fostered, leading to new sounds. The orchestral order of placement of the instruments within the score further reflects this change of role. The title refers to a number of great composers, many of whom were Russian, who offered particular departures in their brass and percussion writing, which in turn underscore some of the explorations here. A brief summary of their

influences is as follows; Aaron Copland's spread of intervals within his chording, Stravinsky's use of semitone dissonance within passages for French horns, Shostakovich's favouring of brass (often solo trumpet) and percussion, (especially snare drum), within his piano concerti, and Rimsky-Korsakov's declamatory use of trombones. In many of the above references brass and percussion became more obviously involved in thematic, substantive development within composition and not merely reserved for the traditionally favoured moments of fanfare or climax.

Within this work similar departures from convention, such as those cited above, were included for investigation, and fusion. Very quickly after the tutti introduction the percussion, in particular, side drum with bass drum, form a prominent part of the continuing momentum and rhythmic development in their exposed interaction with trombones, bars 7 – 17, and again 32 – 39. Timpani perform a similar role from bar 111 to bar 126. The entire percussion section forms the answering rhythmic phrasing from 178 to 198, with the side drum's earlier prominence restored in building the climax from bar 199 to 207. The percussion section returns to traditional usage for the final bars.

Stravinsky's semitone dissonances, having been alluded to in the early bars of the chorale introductory segment (126 – 132), gain their clearest reference (and dramatic timbre associated with it) from bar 191 to bar 198. The fusion with the earlier referenced percussion role within these bars offers an extension of dramatic import, as suggested within the thesis abstract.

Rimsky-Korsakov's influence is particularly obvious in the prominence of trombone leads in bars 45 – 56 and 82 -101, with the first entry on 82 exactly echoing his famous melodic figure in '*Scherzade*', but quickly re-directed in this context. The trombone section's emergence, with the theme of the developing chorale, is paralleled in Britain's finale to '*The Young Person's Guide to the Orchestra*'.

Copland's influence, with his strategic chording and rhythmic invention is most obvious from bars 178 to 188, where the scoring uses the pitch spread of the entire brass ensemble in rhythmic conversation with alternating percussion combinations, providing yet another extension of technique achieved through a fusion of influences.

However, the work does not rely solely on the fusion of several methods to extend its sonic impression. There are direct and specifically constructed instrumental combinations which are designed to achieve new sonorities and extend the nature of brass scoring. The first of

these is in sectional interactions involving the melodic material. This process involves French horns, trumpets and trombones all equally involved in the thematic exchanges and discussion evident between bar 18 and bar 44. Pitch choice and careful orchestration allows the theme to flow easily among the sections, offering varieties of timbre within the segment, without any sense of disconnection in the evolution of the thematic material. The traditional role of the trumpet, as holding the thematic lead position, is discontinued, in favour of the broader more varied, sectional exchanges.

Another exploration of new timbre occurs from bar 62 where low trumpets are mixed with the syncopated material of the French horn section, offering a new combined sound, opposite the trombone solos of bar 65 and 68.

Example 23

The musical score for Example 23 is written in 4/4 time and B-flat major. It begins at bar 62. The French horns (Hn.) and trumpets (Tpt.) play a syncopated melodic line starting at bar 62, marked *p* (piano). The trumpets are marked "senza sord" (without mutes). The trombones (Tbn.) have a solo starting at bar 65, marked *mf* (mezzo-forte). The bass trombone (B. Tbn.) also has a solo starting at bar 65. The timpani (Timp.), cymbals (Cym.), snare drum (S. D.), and bass drum (B. D.) are marked with rests throughout the passage.

The process is developed and extended within the succeeding bars, with the trombones assuming the syncopated material and the French horns, at a higher pitch, offering their version of the counter melody (bar 72 onwards). This mingling of instrumentation, through

use of pitch-led re-grouping i.e. low trumpet to blend into mid French horn range, produces a spectrum of brass colours not frequently employed.

A third development of the particular approaches to orchestration outlined above, is that, arising from the close-timbred blending of the various brass sections, is the availability of any one of the lead instruments to emerge, lending its particular character to a renewed melodic drive. Thus the delivery of thematic fragments is being constantly varied within a range of subtle, instrumental characteristics, in a manner which is novel, but equally compatible with the range of blended timbres being explored.

The combination of many of the approaches outlined above provides new sonorities within the work in question, but perhaps more significantly, offers a direction in expanding the role of brass orchestration beyond its traditional role and exposing a potential for a greater range of textural and developmental consideration.

Conclusion

The early part of this research has revolved around an exploration of particular, significant, compositional techniques and the composers who developed them, through the 20th and early 21st centuries. Thus identified, these techniques have subsequently been explored as vehicles for creating new, original work. This process has then been analysed and reviewed for significance and/or development. Such a review enables a test of validity, or relevance in a modern age, to be applied to these techniques, the application of which, within the newly composed works, puts these works at the accepted forefront of modern composition.

The overall direction taken in this research may have been essentially chronological, but it was not inflexibly linear in design from start to finish. There is a strong sense of directed evolution about the work, which allows for individuality of development, response to challenges, informed re-appraisal and calculated solution.

There was not, originally, a clear intent to champion a personal philosophy, but rather to pursue an open-minded investigation of significant compositional techniques and to reach an evaluation of their continuing validity, or not, through their re-presentation, individually or in combination, within new compositions. Closely allied to the above was the opportunity to re-evaluate certain techniques in the light of later or current developments. Notwithstanding the open-minded approach of this research, it soon became obvious that many decisions had to be made, in connection with the compositions, which amounted to expressions of a personal philosophy which had been informed by practical experience. In this way, the research of processes which are at the forefront of composition, also offered a validation of some of these personal philosophies as an addition to the primary investigations. In practical terms, the new compositions are not merely exercises displaying facility or competence in the use of several, extended, compositional techniques, but they are real, purposeful compositions, constructed from a consideration of those new techniques, which have been subsequently internalised and then re-presented in a coherent combination of personal expression. This approach has offered several, subtle levels of evaluation or validation of the techniques in question and further supports the development of new perspectives, which adds to the body of knowledge in this area.

On an initial level, the material produced through the research process outlined above, has allowed the transformation of some of the selected techniques into developments above and beyond their original conception, whilst still achieving a synthesis into an effective voice. It has developed new usages, new variations or new combinations of the researched material and thereby added a new thread of creativity to the continual evolution of musical composition.

The initial development process involved taking established techniques and executing them as part of a new, individual, musical landscape, investing them with new interpretations, evaluating them against new artistic or social norms and opening up possibilities beyond their original conception. Such a process re-energises routine elements, by re-interpreting them in an original way, often effecting their transformation, by a perception in a completely new light. A new validity is then added to the original concept by virtue of this process, much as Andy Warhol or Picasso created original art from re-interpretation of familiar objects.

Emerging from the above, a further level of specific development and advancement is achieved, by combining modern compositional strategies with unexpected or less modern frameworks, which results in the achievement of a new synthesis, a new fusion, where the whole appears unexpectedly richer than the mere sum of the parts. This is where certain elements of a personal philosophy are brought into combination with the techniques under investigation, to provide a creativity, which has been informed by careful research, but which, by its very nature, must amount to new perspectives and therefore, unique results. Examples of this from within the portfolio would be, heterophony used over tonal or modal harmonic systems (*'Evening Light'*, orchestral work), Ligeti's micropolyphony, extrapolated into exposed, neo-baroque styled, figurative interplay (*'Beneath the Surface'*, chamber work), or Stravinsky's dictum of achieving musical spontaneity, by pushing figures across barlines, achieved by combining Bartok's redistribution of beat patterns with a novel displacement of prominent thematic material (*'Confluence'*, orchestral work). Other permutations are given more fully in the preceding chapters and are specifically referenced in the vocal works, but almost all have a sub-plot of creating something new and exciting, over a layer of veiled familiarity, which serves to intrigue and retain the interest of an audience. This has been previously expressed as clothing an established framework with new solutions and is one of the clearer examples of the fusion of a personal philosophy with informed current practice. At its core, it is not too far removed from Schnittke's collage of musical eras and simultaneously

operates as historically referenced but contemporary, while at the same time is undeniably novel, without appearing to be stridently radical.

Touching on radicalism opens the discussion to complexities of composition and styles of contemporary composition. From two factors already mentioned above, it is not surprising that the compositions contained in this portfolio do not come across as strongly radical examples and these two factors are: A; Basing some of the influence on veiled familiar frameworks and B; A personal philosophy which values the impact of purity of sound and respects the continued validity of traditional, instrumental playing conventions. That is not to say, that other, or future compositions, may not be sonically more adventurous, or that the music contained here is not complex, but simply that contemporary music does not need to present all its elements at the outer edge of complexity, to achieve its aims. After all, if every composer operated at the extremes of complexity then the extreme would become the norm and therefore conventional. Recent movements such as 'phasing' or 'minimalism', attest to the patterns of organisation which are currently influencing composition and such patterns tend to create works which conspire to present the complexity far less turbulently.

An important extension of the above point, concerning the complexity of some contemporary music, is the level of difficulty it presents in performance. Achieving a desired result within the parameters of reasonably normal instrumental technique and professional competence is surely a more desirable aim, than a proposition which requires extraordinary forces, very complicated preparations or unique virtuosity. A work, which makes such enormous demands of the performers, will be rarely performed at the level which will fulfil its potential and may subvert its original purpose into a novelty to be attempted for controversial reasons. Very few compositions will be performed at the level of the 'Ensemble Contemporain' and such rarefied works, although justified in their original context, would be of limited value as general exemplars. Although more fully discussed within the relevant, earlier chapters, it must be stated, as part of the overall conclusion, that there has been a considered and intentional personal design, to construct the works in this portfolio as challenging, interesting and rewarding compositions, for both the performer and the listener, with the integrity of the music prioritised over exhibitionism, novelty or shock-value. An underlying conviction held, is that the work should be achievable and repeatable, without the aid of exotic preparations, or extraordinary soloists and that none of the sensationalism of the virtually 'un-climbable mountain' is employed. In fact some of the most fulfilling peer review received during this period of research was that which came from the professional musicians who performed a

number of the portfolio works and their comments, that they would be interested to replay or newly perform other examples of my work, as it was 'real chamber/orchestral music' which was interesting and rewarding to play and not contrived or purely academic. This same philosophy, of valuing the music over the prevailing trend or expectation, was tested in an earlier work, (a concerto for viola and strings, not included in this portfolio), where the question to be answered was, - is this work to portray the range of character of the instrument, or the skills of the performer ? Being that it was titled a Viola Concerto, it becomes obvious that the task was to showcase the instrument and the music it could express and so, the work was composed accordingly.

The case is therefore proposed for studying and then internalising the researched methodologies, before creating a personal expression of them, alongside the philosophies outlined above. This is a more unique response and therefore more individually creative, which consequently adds material of greater truth and value to the continuum surrounding this area. Such a process also rationalises earlier personal work as contributing to the progression rather than as isolated from it. Given that it was not the pre-eminent aim from the outset, it is still an important outcome that personal principles can be sustained within this work and that advancements in compositional endeavours be informed by research. This should allow the progression to reach new depths and complexity, but within a framework of relevance which amounts to a subconscious logic.

The compositions contained in the accompanying portfolio have been chosen to present as many genres and varied ensembles as possible. The works range from single, through continuous, to multi-movement compositions. Styles and constructions such as impressionist, expressionist, designed aleatoric, absolute and theatrical fusion have been visited. Solo, small ensemble, larger ensemble, vocal, choral and orchestral forces have been employed. Each of the orchestral family groups, woodwind, brass, percussion and strings has been variously featured, as well as piano used in solo and ensemble roles. Solo and choral voices have been presented, along with a use of vocal and instrumental forces in combination. New uses and fusions of established techniques have been employed. Modal, tonal, atonal, shifting tonal centres and pitch class sets are just some of the systems explored, which have provided varied harmonic frameworks.

The individual compositions range from just under five minutes, for the *a capella* choral work, to over nineteen minutes, for the four movements of '*Beneath the Surface*', which,

when taken collectively, amounts to a substantial portfolio of 103 minutes of total music, realising over two hours in performance. More than half of the works have been publicly presented and performed during the period of research, which has allowed for continuous review and the inclusion of insight and score refinement informed by such performances, as well as peer, public and professional review.

Although constantly supported and encouraged in research which explored the outer limits, the techniques selected and the particular constructions and expressions of music which have been chosen, have been done so, with the notion of assessment or appraisal in the background. As such, some of the compositions have been slightly curtailed or restrained in duration, to facilitate accountability. Certain of the works may acquire companion pieces at a future date. Areas not visited, such as electro-acoustic music, or the use of extended instrumental techniques, would most certainly be considered where appropriate and fit for purpose.

During the period of research, other compositions, not included in the portfolio, have been commissioned, composed and performed. These works are an important indicator of a continuum of compositional involvement and of a presence within an active performance circuit, which in itself is a gauge of being current. These extra compositions have not been included within the portfolio for a variety of reasons. Some, would have repeated the same instrumental configuration, or would have been too short on time, by virtue of the commission brief. There are other works which were designed for specific ensembles or occasions, with particular requirements, which would have slightly compromised the position which those compositions could take within the portfolio.

There are three works, which have not been included, which deserve particular mention, as they have particular significance in terms of personal and professional development.

The first of these is an '*a capella*' work, in the Irish language, which was designed as a competition entry for an emerging choir. It has since been used three times, by different choirs, within differing categories and on each occasion has been part of those choirs' winning programmes in Cork's International Choral Competition. In fact, in 2011, it was the work with which one choir was awarded the 'best performance of the festival' and it appeared on the festival's "Highlights of the Festival" CD. This piece has subsequently been performed in a number of venues, including, in spring 2013, a performance in Carnegie Hall, NY.

The next piece is a song for children's voices, with piano accompaniment. This was designed to fit with a presentation which an accomplished, Irish, postgraduate candidate was making, as part of her studies in America. The design brief had to include significant teaching points in the development of young voices and of singers in general, as this was the purpose of the presentation. An invitation has subsequently been extended for repeats of this presentation in a number of venues and for an inclusion in the Association of American Choral Directors' conference programming for 2014.

The third item was an unusual commission by Waterford Choirs Association and Waterford City Council, for a very high profile event which was held in the summer of 2011. The occasion was the opening ceremony to the International Tall Ships Festival, which was hosted by the city and this work was performed before civic dignitaries from a number of countries, including An Taoiseach and an audience of many thousands. Parts of the performance were recorded and broadcast on several national television and radio programmes and the background to the composition is the subject of an ongoing documentary. One of the unusual features of this commission was that it was a collaboration of five composers and five poets, to produce a composite work which explored a planned theme over four, designated, specifically timed movements, with linking verse and music. The venue and performers also featured in the brief, as it was to be an open air venue with a massed choir, comprised of an amalgamation of some thirty choirs of various levels of experience, in combination with members of the general public. The composition was an interesting and exciting challenge on so many levels and the achievement of which was so fulfilling for all concerned, as to create the very rewarding outcome of an appetite for similar events in the future.

Although there may not appear to be any immediate relevance to the inclusion of work which is not presented within this portfolio, there is an obvious merit in offering a more complete picture of the range of activities which inevitably occupy the practice of composition. The level of involvement in a research project such as this is so all-consuming that it is important to provide real-world context for the work being undertaken and not to operate in isolation from the activities which comprise the music scene within which we all operate. While not wishing to be limited by the demands of one particular music scene and equally, wishing to preserve a more global outlook, composition, even at its most esoteric levels, can be valuably informed by current practice and the practicalities of achieving valid performance. Such an involvement in current, exciting developments, underpinned by contemporary, artistic

relevance, can in turn, provide a direction, an exploration and a dynamic progression, which may be the very rationale and springboard, for future composition. This very pragmatic standpoint is one of the elements outlined in the introduction to the thesis and is therefore worthy of validation in its consistency of application.

The content of this volume therefore and its partner portfolio of compositions, is only a reflection of a particular time and circumstance. Creativity should always seek new expressions and new perspectives, consequently the journey will never really cease, despite the arrival at certain destinations such as this, which ultimately prove to be significant, but temporary, staging-points.

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