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M.PHIL
GLOSSARY AND FOOTNOTES
PHILIP. J. TAYLOR
**Axis Constriction [Jovia]**

(Page 5 [lines16-22])

This is the process of gradually building a theme by relay or repetition by the use of an axis pitch gradually adding more and more pitches: in relation to *Serial Minimalism*—this technique is one aspect of the underlined that is one pitch maybe accented’ the others forming subsidiary pitches, or, (as in the case of the main section in the second movement of Jovia), a whole line is repeated but gradually changes by contour shape or instrumentation.

In the 3rd movement of Jovia I have a fairly fragmented, pointillist theme that gradually is ‘filled out’ with variants of itself this being the theme section. In the first variation the theme is not so pointillist but the instrumentation is a larger different ensemble, (see under instrumental heading in Glossary). The second variation is larger, still, in scope and instrumentation so that by the 3rd variation, (the largest of the 4 individual sections), the variants, although related to the theme are more or less detached from it. The instrumentation returns to orchestral forces that are selected from the larger orchestral ones. In the 4th variation, a larger orchestra brings the system to a conclusion. In this variation I employ Axis Constriction by gradually relaying sections of the theme, by repetition adding a pitch at a time. In a sense this is similar to Into Focus where I introduce the Control Row. However the M.C.R. is a ‘compass tool’: its thematic identity less important than its real identity as a ‘pitch compasses. [257 words]
UNIVERSITY OF SUSSEX

PHILIP JOHN TAYLOR
Applicant for M. Phil in musical composition.

COMMENTARY ON THE FOLLOWING THREE COMPOSITIONS:-

JOVIA,

QUARTET FOR STRINGS

FIVE CONCERTANTES
Statement

The thesis or portfolio, whether in the same or different form, has not been previously submitted to this or any other University for a degree.

The thesis and music portfolio submitted for review is entirely my own work and is not a result of any collaboration or joint working with other persons. This submission is entirely my own work.

Signed

Philip J Taylor

Date 24TH JUNE 2013
# Table of Contents

<table>
<thead>
<tr>
<th>Content</th>
<th>Page number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement</td>
<td>2</td>
</tr>
<tr>
<td>Summary</td>
<td>4</td>
</tr>
<tr>
<td>General Introduction</td>
<td>5</td>
</tr>
<tr>
<td>Jovia</td>
<td>7</td>
</tr>
<tr>
<td>Quartet for Strings</td>
<td>15</td>
</tr>
<tr>
<td>Five Concertantes</td>
<td>18</td>
</tr>
<tr>
<td>• Concertante 1</td>
<td>19</td>
</tr>
<tr>
<td>• Concertante 2</td>
<td>21</td>
</tr>
<tr>
<td>• Concertante 3</td>
<td>22</td>
</tr>
<tr>
<td>• Concertante 4</td>
<td>27</td>
</tr>
<tr>
<td>• Concertante 5</td>
<td>30</td>
</tr>
<tr>
<td>Bibliography</td>
<td>33</td>
</tr>
</tbody>
</table>
SUMMARY (1 word)

TITLE OF THESIS: How I apply modes, jazz elements and serial procedures in my work and these methods to various musical influences in the past. (25 words)

JOVIA
I have two sections in this new version of the thesis a) the main part of the commentary and b) the Glossary and Footnotes that define with structural musical references the various terms that I use with page references. The opening section, Into Focus, is an overture that contains the main musical ideas for a set of variations. Some variations are for chamber forces that give scope in the orchestral versions for greater development (75 words)

QUARTET FOR STRINGS
My Quartet for strings is in 5 movements in total. The first is a theme movement that is followed by 4 others each being a variation. (29 words so far)

FIVE CONCERTANTES

A full list of terms and how they are used in my music is found in the glossary and footnotes at the end of the thesis.

I acknowledge that this summary is part of the main commentary
JOVIA

Introduction

The title ‘Jovia’ is given to a complete symphony, of which this is only the first movement. It is constructed around the idea of planet Jupiter and its satellites, but the music itself is not representational.

The composition of Jovia is written for large orchestra for 2 reasons 1) to give a maximum colour pallet and 2) in the first movement to differentiate between the music written for the chamber groups and the orchestral reworkings.

The various aspects of the tripartite structure used both interact and disagree simultaneously: they can often produce large chromatic chords and sometimes note clusters. I made sure that the lines of each instrument differed little in their structurally defined areas and that the timbre pointillism more or less defined the overall structure within the tripartite areas. Thus pitches outside one tripartite or percussion line would either be a low dynamic (p or pp) or loud with a low dynamic representing the main pitches, rather like a positive or negative film image.

The work is divided into ten sections:

INTO-FOCUS.

In the opening bars 1-6 of ‘Into Focus’, there are two enharmonic equivalents (Bb and A#). The two pitches are structural indicators of the enharmonic form of the natural scale (see under heading in glossary/modes). This scale might be termed an extra structural device, which corresponds more closely to the Ground Bass Mode than to the Main Control Row. The reason for the two enharmonic versions is that the pitches in the natural scale are often out of tune. I compensate this by having two versions of the enharmonic mode. The percussion lines serve as the main theme of the subsequent variations and through gradual complexity and simplicity relate more closely to the orchestral variations than to the smaller chamber versions.

The opening of Into Focus is musically like seeing the planet from a distance that is that the structural definitions of the modes are yet to be pronounced – none of the modes have due prominence except for the Ground Bass Mode who’s initial pitch begins Into
Focus and Jovia as a whole. I aimed at developing the first few pages of Into Focus by changing the orders of pitches in the modes. An example of this can be found in the example below, (the organ chords and string versions in bars9&10):-

<table>
<thead>
<tr>
<th>String Chords</th>
</tr>
</thead>
<tbody>
<tr>
<td>E/10/F1/</td>
</tr>
<tr>
<td>G#/</td>
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<tr>
<td>E/10</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Organ Chords</th>
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</thead>
<tbody>
<tr>
<td>10/E</td>
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<tr>
<td>8#/G#/</td>
</tr>
<tr>
<td>8#/G#/</td>
</tr>
<tr>
<td>9/B</td>
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</tbody>
</table>

[1] numbers relate to Main Control Row pitches

In form, the first section also acts as an overture: the first ‘subject’ appears as a theme only by the second movement and the second subject does not appear until the fifth movement. This is largely due to the ‘tool’ modes and their definition. In defined classical terms, Jovia is not strictly speaking a movement of a symphony; the modes suggested in ‘Into Focus’ are utilitarian, in that they serve to provide a structural compass, rather than important ideas for real development.

**INTRODUCTORY NOTE TO THE VARIATIONS**

In these variations there are pairings between 1 and 2, 3 and 4 and 5 and 6, with variation 7 standing alone (see variations/pairings in glossary and footnotes). The reasoning behind these pairings is structural. I consider ‘Into Focus’ (see above) to be a quasi exposition’, by which I mean that it is not simply an exposition of the first movement of Jovia, but acts as an overture to the symphony as a whole, as explained in the relevant notes. The first six variations stand, as a group, as a development section and the seventh variation serve as a counterpart to the recapitulation.

These groupings are not as arbitrary as they may seem, nor is the ‘Smaller Satellite Shadows’ section arbitrary: it serves as a transition from ‘Into Focus’ to the variations
The relationships between the groupings within Jovia and the classical sonata form include both similarities and differences. The Symphony’s first movement has more differences from the classical form than similarities: but one similarity is the repetition in some of the variations, especially in the chamber than the orchestral comparisons. The variations are primarily but not exclusively based on the percussion lines, more so in variations 1 to 6 and less so in variation 7, since this variation is an overall structure for the first movement of the symphony, Jovia, while ‘Into Focus’ is an overall structure for the whole symphony.

The cellular developments in these variations act very much like the developments in the orchestral versions of the chamber variations, when referenced to ‘Into Focus.’ One example is the xylophone scales in bars 7 to 8 of variation 1, which has now become 10:8 demisemiquavers instead of 2x5 semiquavers and is crushed to a diatonic scale of C (except for the C# in the first 10:8 demisemiquavers) from a whole tone scale: and likewise changed from mainly the marimba to the exclusively xylophone part. The vibraphone line in Variation 1 is comparable to an extension of the scale-like theme on the trumpet in ‘Into Focus’ bars 13-15, mixed with the vibraphone’s percussion line themes within the section.

“SMALLER SATELLITE SHADOWS ON JUPITER”

This section is scored for 2:2: cor anglais :2: Bass clarinet: 2:2 trumpets: Bass Trumpet: Tenor Trombone: Bass Trombone: Tubular bells: Glockenspiel: Organ: Celesta: Strings. This section acts as a transition from the ‘Into Focus’ section to the variations. The intervals generally expand and contract, acting as a thread to variation 1. Each bar acts as a multi suspension: the harmony in these twelve bars is very unstable until the final chord of bar 12, which is basically an added 9th chord on B natural, perhaps an inversion on the imposed harmony in the bass trombone part in bar 1. There are many references to the first variation with cells that correspond to that variation (for example, bar 6 in the Eb bass trumpet part). The section also anticipates the three-dimensional character of the orchestral variations, with variations of the percussion line themes in contrary motion.
VARIATION 1

This section is scored for Tabular bells: Xylophone: Marimba: Vibraphone.

This variation is divided into three mini-sections. The first, (bars 1-11) has only two differently pitched instrumental parts, the vibraphone rising theme and the ‘canonical’ versions of the tubular bell part. The vibraphone theme is a hybrid variant of the percussion line theme in the previous section, where it was played on the cor anglais and clarinet.

The canonical theme in the rest of the percussion parts ranges from the slower-moving and more expansive tubular bells to the intricate writing for the xylophone. However, the canon is not exact and continues to explore hybrid versions of themes, i.e. themes that have close but not exact counterparts. The second mini-section is an answering phrase to the first and the main percussion parts are in inverted form to the percussion lines in ‘Into Focus’.

The final mini-section switches over to a further development of the ‘Into Focus’ percussion line referring, for example, to the marimba part, now transferred to the vibraphone in 'perpetual motion'.

VARIATION 2

This variation should be considered as a three-dimensional orchestration of variation 1, but with hybrid cell additions. To achieve this 3D effect, cells are either crushed or expanded in mainly all parameters. For example, in bar 1 of variation 2, there are, in Violins 1, (1st desk), two groups of quintupled semiquavers which correspond to the opening pitches in the tubular bells, xylophone and marimba parts in Variation 1. It is this combining and re-distributing of pitches and cells that helps to achieve the 3D effect, coupled with crushed and extended rhythms. Another aspect of variation 2 is of course timbre; the chamber versions, in the general sense of small combinations, are in texture chamber music, despite having orchestral sonorities.

As in classical variation form, the pitch order remains very much the same in the relation between the chamber and orchestral versions, but the additional re-ordering of cells, or even the way in which the cells continue into other bars, blurs the pitch structure. The ground bass mode in variation 2 virtually replaces the vibraphone hybrid theme in Variation 1 and in the course of Variation 2, there are further variants of this theme, but the orchestral variation cannot be considered to be a passacaglia.
In bar 7, the clarinet, organ and strings return to the texture in ‘Into Focus’ and the quintupled cells in this Variation include inversions. However, these quintuplets change in bars 10 and 11, organ part, into preparing for the textures in the corresponding five bars in variation 1. The variations therefore often mimic the processes in ‘Into Focus’, in the gradual metamorphosis.

VARIATION 3
One aspect that connects all the ensemble variations is the gradual increase in instrumental forces. In variation 3 the main accent is on the xylophone and piano, with the strings, on the whole, taking a subsidiary role. The pitch structure is split into 2 transposition areas, p=0(0-6) and p=0(2-7). The two transpositions represent the halfway point in the main control row’s twelve note series, the new ‘hybrid’ versions that are contour ‘shaped’ from the original. The piano opens the variation employing both transposition sets simultaneously.

The string trio comments on the piano’s pitches in a rhythmic augmentation, with some pointillist development, the bass largely based on the other transposition set.

VARIATION 4
In this variation I have extended the string ensemble so that the orchestration is much fuller, with 11 solo violin I parts and 6 cello parts in relation to the string trio in variation 3.

I have followed the pitch structure of variation 2 but adding a ‘cantus firmus’ on tubular bells and celesta, (but using out of focus orders): Variation 4 begins with various forms of the T=0(0-7) that on instruments, besides the strings, are in row order, but as in variation 3 the strings mainly concentrate on this theme. [Both themes are hybrids from the percussion lines - extensions rather than pure quotations]. The large string section then follows the leader in a canonic way in the first bar of variation 4. This form of ordering does not always continue, as the strings imitate the tubular bell and celesta cantus firmus rather than the other orchestral families and also includes the other serial orders (e.g. inversion).

VARIATION 5
This variation returns to the C natural transposition area, 4 in the ground bass mode after the 3rd variations’ split in the transposition areas: this variation is much
simpler and is aiming for the simplicity of the opening of the 7th variation, with its dominant 9th harmony. In this variation, the main source of pitch development is in the vibraphone part that, in a sense, takes over from the xylophone part in the 3rd variation and its own important position in the 1st variation. Whereas the third variation could be considered to be the climax of complexity in the 1st movement's variations, the 5th definitely turns back to a simpler structural process, in relation to the third variation, particularly in its more obvious pitch relationships with the percussion line theme demonstrated in the ‘Smaller Satellite Shadows’ on Jupiter. Each of the vibraphone cadenzas is different: in bar 10. The order throughout the pitches from the double bass in ascending order almost produces the vibraphone theme in variation 1. This is evidence of the hybrid technique in the whole of Jovia.

**VARIATION 6**

Variation 6 is an average variation in duration, (three minutes and 20 seconds). As with the other pairs of variations, variation 6 takes the previous one and creates an orchestral version of it concentrating on the vibraphone cadenzas and creating further hybrids of them throughout the orchestra.

The theme in pitch order is: C,G#,B,F,G,E,D,Eb,Bb,F#,Db,A. At bar 3 the strings produce a multi-dimensional view of the xylophone theme.

**VARIATION 7**

Variation 7 is the largest section in 1st movement of Jovia. It is the ‘stand- in’ for a recapitulation, although much has happened between ‘Into Focus’ and this variation and like the latter is really a movement in itself.

As far as pitch transposition is concerned, this section takes the 7th pitch in the Ground Bass Mode, (C natural the 1st pitch of the second half of this mode), and has quite a few special connections with the 2 previous variations: it is in 12 mini sections:-

**Mini section 1**

[Bars 1-3] establishes the C as the main pitch centre for this variation, (four instruments define the pitch area in this mini section). This variation also points towards the 4th movement of Jovia in the way that there are instances of pitch ‘sifting’: but this variation has nothing like the complexity of that movement and generally the pitches are simply moved around with some additions.
Mini section 2 (bars 4-8) strays from the opening and develops instead the organ chords from ‘Into Focus’, (bars 8-11 and 35-38), establishing this variation as a real recapitulation.

Mini-section 3 (Bars 9-16)
The orchestration is more substantial in this mini-section, especially when bar 15 occurs. The dynamics also become more contrapuntal, the shift now with the enharmonic natural series directed from the ground bass mode.

Mini-Section 4
This is similar to the previous 2 mini-sections, but has added trumpet cells influenced by the mallet percussion runs.

Mini-section 5
A combination of the mini-sections is a transition from the 2\textsuperscript{nd} mini-section ideas to the return of the opening mini-section: it also bases the transpositions on two areas, C natural and A natural. The vibraphone in bar 21 plays a mixture of C7/A7 pitches that appear in the overtone transpositions of that particular natural scale. These ground bass pitches relate to the double triplet crotchet pitches in the previous 3 mini-sections when the other pitches occur relating to the ground bass mode/natural scale.

Mini-sections 6 & 7
These sections are a repeat of the first and second sections.

Mini-section 8
This is quite a sizeable section of 20 bars. It is the longest in the variation/recapitulation, and is the only ensemble section in the variation. The ideas are derived from the 5\textsuperscript{th} variation’s vibraphone cadenzas, which are given all sorts of developments, within coded bars that go in sequences [A to F]. These groups of cells are not entirely repeated, as they are joined by certain woodwind instruments in the course of cell repetition, rather similar to the functions of the dynamics in ‘Into Focus’.

Mini-section 9 Letter C
At bar 70 the 1\textsuperscript{st} violin, tubular bells, xylophone, marimba and vibraphone all vie to be the main theme, (it is, of course, the violin solo that has the most important role), the other strings take up the repeated pitch idea and create ‘out of phase’ versions of it, tracing the theme at different time intervals. At bar 70/71/72 the tubular bells have a short theme, rather based on the percussion lines from ‘Into
Focus’. Later on in this mini section,[bars79/80], the leading ‘role’ changes from the violin solo to the wood wind and percussion, relating to the coded cell blocks from the last mini-section, the wood wind and strings tracing these pitches from various blocks instead.

**Mini-sections 10 - 12**

These sections return to the opening; the form could be considered as a sonata-recapitulation and has similarities with the 4th movement, like a symphonic movement in itself.
QUARTET FOR STRINGS

FORM/PITCH STRUCTURE
The first and fifth movements provide a very different perspective on how a section can define the character of a quartet. The first movement consists of a serial twelve-note first subject and four second subjects, one for each instrument. In the first movement and in the subsequent variations the subjects are almost individual movements in themselves. The fifth movement is a diatonic version of the first movement and gradually folds into chromatic and then microtonal pitches.

FIRST MOVEMENT
The various melodic strands form a 'bank' of structural possibilities that are the main basis for the movement's variations. The first subject (Fb, A - cello; C natural, Bb,Gb,E - natural first violin; G natural - viola; Ab - first violin; Cb,Db - cello; B natural - first violin) is really subsidiary to the four second-subject themes: in a sense, each instrument has its own structure, while still relating to aspects of the first subjects' intervals. In the first movement, this acts so as to 'dramatize' the instrumental parts: this is particularly evident in the cadenza.

SECOND MOVEMENT
The variation here is of a “Perpetual Mobile” style that follows a similar form to the first movement, with a brief cadenza solo sandwiched between two parts. The opening bars are 'manufactured' from various aspects of the first movement's cellular character. In the first section there are independent transpositions, combining crushed and expanded intervals over a drone of F#/C#. The rhythmic texture of the violins and viola in this section have an interdependency that provides a contrast to the cello drone, which is simply an open interval chord. The movement changes at bar 17-18, where the pitches of all instruments assume the drone of the cello. In bar 18 there is a short F natural / C natural chord which introduces the violin 1 cadenza. The second section contains a cadenza which acts as a further transition to the third
section. This transition has a direct pitch and rhythmic relationship to the first movement. The final section develops pitch and rhythmic components from the first movement over a transposed cello drone. To develop the first section of this movement, at bar 34 there is further uniformed transition in the cello drone which leads into the coda for this final section. The coda re-introduces elements from the first movement over various pitch drones in the cello.

THIRD MOVEMENT
This movement opens with an extended cadenza. It has some of the elements of the second movement but it is more intensely structured. In the first movement each of the instruments has a bank of cells, 24 for the first violin, 18 for the second violin and viola and 12 for the cello. These are transformed in the quartet by the use of number sequences in relation to each instrument. The third movement takes these cells and re-invents a new numerical sequence for each instrument. The effect of this technique is to link the third movement to the first movement, whilst ensuring that the third movement has its own unique identity.

FOURTH MOVEMENT
There are similarities and differences between this variation / movement and the preceding variations/movements. The tempo is designed to give the movement a sense of ‘slow motion’. For the duration of the opening bar, the cello plays a stretched pedal note that corresponds to the first violin note in the first movement. Similarly, the stretch to the notes played by all other instruments, whilst varying in length, continues to echo the rhythmic aspects of the first movement. The exception to this is second violin, whose note is only marginally longer, the reason for this being to provide context and foundation to the first movement. The effect of the stretching of the parts in this variation gives the impression that the intervals are warped, like an old gramophone record.

FIFTH MOVEMENT
This movement is part two of the quartet, which takes the first movement and develops it in a completely different direction. The movement, from bars 1 to 16, is purely diatonic. From bar 17 to bar 46 is the second section, which is based on different
aspects from the quartet's first part variations and here grammatic pitches are introduced. This section develops aspects from the fourth variation movement and the first movement. From bar 47 to bar 52, microtones are introduced which all relate and develop the pitches found in the first movement. There is a brief coda between bars 53 and 56, where only the grammatic pitches return. The final bar contracts all the pitches to a unison and the quartet ends.
FIVE CONCERTANTES

INTRODUCTION

The Concertantes are five compositions that are written for fairly unusual combinations of instruments for chamber ensembles. Mozart’s work entitled Symphony Concertante was the inspiration for the title of this piece. The construction and form of the Mozart work is a combination of both concerto and symphony, the form of which has inspired the format for these pieces. They can either be performed in their entirety or as individual pieces within a programme.

The first Concertante is a musical representation of time travel over a period of ten centuries, from the 11th to the 20th century. The second Concertante comprises three separate pieces that are connected structurally in pitch with thematic relationships between the first and third pieces. The second, owing to its ensemble size, is the closest to the idea of a concerto. The third Concertante is the longest and comprises seven separate pieces entitled “The Dawn of Seven Suns”. I have based the construction of this concertante on the Herzprung-Russel diagram on the classification of stars based on their heat, brightness and size: however, for the purposes of this concertante I have taken heat and brightness as the key considerations.

The structure of the third concertante is a graduated representation of stars, with piece 1 (Sirius) being representative of the brightest and hottest star and piece 7 (Betelgeuse) being representative of the dimmest and coolest star. Whilst Sirius is placed in the construction as the first piece, it was however written last as it takes small sections of rhythm and combines them with the pitch construction which is unique to Sirius.

The fourth Concertante continues with the unusual instrumental combination: however it is written in a more ‘classical’ form. I have taken an instrument from each family of the orchestra in score order, clarinet/horn/piano/viola, which gives this concertante its distinctive four movements.

The fifth Concertante is the smallest piece, comprising 3 tiny movements that derive their musical organisation and ideas from the opening viola solo, and a piano cantus firmus. The instrumental range within these three movements expands and contracts throughout the piece, like the intake and outflow of breath.
CONCERTANTE 1 – MUSEUM PIECE

The inspiration for this piece is the century zones which are typically used in the layout of a museum.

FIRST MOVEMENT
This movement depicts the 11\textsuperscript{th} century, in its use of the Greek modes used in Gregorian chants during that period. This use of Greek modes is contrapuntal. The movement reflects the structure of some medieval music through the use of beats of long duration. The modes are interrupted in the cello by two groups of triplet crotchets which are in open fifths. This is congruent with other aspects of the movement. The purpose of these is to change the direction of the structure, either to commence a new section or to generate a new harmonic perspective.

The movement is designed to be somewhat cyclical: however, towards the end of the movement some of the instruments, e.g. the violin and cello, are in double stop, with the viola playing the opening violin part of the theme. The cello at this point returns to the drone which is featured in the opening part of the movement.

SECOND MOVEMENT
This movement depicts the 18\textsuperscript{th} century, through its use of sequences and textures which during the early part of that century were a feature of the time. This movement is primarily a gradual creation of the theme that occurs in the bassoon. This theme is arpeggio in structure, based on pitch sequences which provide the foundation for the structure and changes throughout the movement, in a similar way to the construction one would witness when observing an artist painting a water colour.

The strings within the movement take on a minimalist interpretation from bar 22 to 33 and whilst the scales are not musically representative of this century, nevertheless they represent an important aspect in the construction of music at this time. For example, in the cello and viola parts there is a combination of diatonic and whole tone modes that are influenced by the modes in the first movement, but the adoption of these modes brings the structure more into line with the 18\textsuperscript{th} century genre. The use of these scales provides the basis for the further development of this piece into the third movement.
The bassoon part contains ideas that are operatic and in concerto style, which whilst difficult to play, add an element of flamboyance, thus separating the bassoon from the other instruments in the ensemble. This illustrates the use of unusual instrumental combinations which is the premise of this piece. The bassoon part is written to reflect the earlier 'oscillating' themes which are a feature in the strings from bars 2 through to 8.

The end of the movement features an 18th century triad formation, without the tonal implications of the middle pitch, so as to give it a more medieval quality which is indicative of the organum chord structure found in the first movement.

THIRD MOVEMENT

This movement brings Concertante 1 to its conclusion through the introduction of chemical / industrial ideas, which reflect the move of the piece into the 21st century.

I have applied the use of modes to represent elements within the periodic table in relation to various organic and inorganic substances. In order to provide consistency in this approach, it has been necessary to interpret and assign pitches to the chemical elements, thus enabling me to translate the chemical entities into a consistent musical interpretation. For example, in bars 16 and 18, the organic substance Quinine is featured through the use of the pitches Cb, Bb, F natural and G. Quinine is comprised of mainly carbon and hydrogen, with 2 nitrogen and 2 oxygen atoms. In this example, the enharmonic pitches within C (natural / sharp and flat) relate to carbon; B (natural/sharp and flat) represents the hydrogen atom; F (natural) is nitrogen; G (natural) is oxygen.

The strings provide an accompaniment using a version of the Greek modes in the first movement. In bars 15-17 there is reference to a 20th century popular ballad which is intended to add a different dimension to the otherwise scientific aspects of this movement.
CONCERTANTE 2
This is a suite of 3 movements, Jam Session, Time Pieces and Noel.

FIRST MOVEMENT – JAM SESSION
This movement is written for a completely different combination of instruments, combining a jazz instrument (vibraphone) with traditional orchestral instruments to depict the ‘warming up’ session employed by musicians prior to performance. There are six sections to this movement which are in variation form. There is a common theme present throughout the six sections, made up of cells which are played by the cor anglais. Throughout the sections within this movement, various elements of this theme are picked up and developed by the vibraphone and the celesta in the form of ritornello, creating the effect of embellishing and enhancing the main theme. The last section returns to the duo of the cor anglais and vibraphone, with the latter providing the embellishments and the lead.

SECOND MOVEMENT – TIME PIECES
This movement introduces the full percussion ensemble, without the cor anglais component. The movement is written in three sections; the first is crotchet equals 60 beats / minute, the second 90 and the third 120, this gives the impression of time speeding up. The main constituents of this movement consist of a series of chromatically rising pitches which are metronome-like in character. The main beat of the movement is held by the tubular bell: the other instruments, whilst not in total contradiction with the beat, are slightly misaligned so as gradually to form a theme of their own. This structure is repeated at the end of each section, albeit with different pitches.
As each section unfolds, each instrument takes on its own role in building up the tempo of the section and the cells at the beginning of the section are the basis for the on-going development of the themes. The marimba is introduced at the beginning of the final section so as temporarily to replace the tubular bells, and whilst it maintains their role, the wooden quality of the instrument provides a more distinctive metronome beat. The final section introduces five mixed drums so as to provide an additional rhythmic dimension, the purpose of which is to add to the jazz quality of the movement and exacerbate the sense of drama.
THIRD MOVEMENT - NOËL
This movement is for the full ensemble, cor anglais and full percussion (with the exception of drums). The idea is musically to create the effect of an illuminated Christmas tree. The movement begins with one single pitch, Eb which is shared by glockenspiel, xylophone, tubular bells and marimba, a pitch which is developed to mimic the main theme of the first movement. One of the essential ideas in this movement is the use of percussion beaters to create different sounds and textures, in order to lay the foundation for what will be the main section. The main section is from bars 18 to 25 and consists of one line shared by four different instruments. It is further developed in bar 22 by the re-introduction of the original main theme in the first movement, but picking up the misaligned aspect of the second movement. The structure is linear but uses the harmony to create a multi-faceted effect, which represents the intermittent sequences which would be seen on an illuminated Christmas tree. The final section opens with the last cell of the main theme (1st movement) and is comparable to a varied form of a recapitulation to take the movement back to its beginning, not in its exact form but in a deconstructed way.

CONCERTANTE 3 – THE DAWN OF THE SEVEN SUNS
This concertante comprises of seven movements, each relating to a star and its order of classification according to the Herzprung Russell (HR) diagram.

FIRST MOVEMENT – SIRIUS
Sirius is the hottest and brightest star out of the stars that are represented in the dawn of seven suns according to the HR diagram, it is the first of the seven movements and it is the most important. It serves as an overture to the main movements of the piece, by combining excerpts from the seven other movements with its own pitch structure produced through the piccolo, vibraphone, cimbalom and two pianos. The movement is structured into eight sections, which reflect the other movements within this concertante and whilst recognisable in rhythm and instrumentation, the pitch has been manipulated to blend with the structure of Sirius. This is done by using a similar technique to that which was used in into focus (Jovia). The length of the sections reflects the approximate proportions of the following 7 movements in relation to the overall piece.
SECOND MOVEMENT - MIRA

Mira is a binary star which means it has two separate components one being brighter and larger than the other. This has been reflected in the musical framework of this movement by splitting the structure into two main layers, with the double bass binding these two layers. The movement is scored for 18 instruments (the full ensemble for this concertante) which are utilised to create the impression of a jazz big band, through the use of complex rhythmic and timbre pointillism. The pitch in this movement is split into two instrumental layers which in the beginning of the movement work independently but then combine in bar 17 to create a single pitch structure. However, the rhythm then becomes more complex, through the use of irregular rhythms throughout the bar, plus smaller beat versions slightly reminiscent of the rhythmic techniques used by Brian Fernyhough. In order to represent rhythmically the binary nature of the star, I developed a system of rhythmic cells, one to depict the main star containing a combination of longer note durations coupled with shorter durational beats: and the other representing its dimmer companion, containing only shorter durational beats. In relation to the metre, I also developed a table for metric hybrids which for the brighter star range from 5 quavers to 35 crotchets. For the companion star, the range changes from 1 demi-semi quaver to 25 semi-quavers. This approach has enabled me to depict musically the separate entities of a binary star, yet to keep the homogeneity of Mira.

THIRD MOVEMENT - FORMALHAUT

This movement was influenced by the name of the star Formalhaut, I have changed the name to Formalhaut (direct German translation = high form) to reflect the construction of the movement. This movement is a sonata grosso for the full concertante 3 ensemble and focuses on the sound of the instruments to a greater degree. It uses sonata labels such as exposition, development and re-capitulation, however I have added a prefix 'pre’ to prepare the various components of the sonata form, in order to adjust the pitches towards the next component, in a similar way to traditional transitional composing. The piece has two functions, firstly, to use the pitch and the sound of the tubular bell as an influence for other instruments, and secondly to extend the concept of the rhythmically irregular bars which were a feature in Mira.

Exposition

The tubular bells act as the lead instrument and it is the pitch from this that is reflected in the individual themes of the other instruments. All the other instruments are
misaligned in pitch but one pitch relates the preceding pitch from the tubular bells. The shape of the themes is frequently altered by subtracting a pitch.

Development
There are 4 classes of themes relating to various instruments. The function of these themes is to misalign the pitches of the other instruments in the ensemble in relation to the tubular bells, whilst at the same time creating an internal structure for that particular instrument and the structure as a whole. The misalignment in the development is at their most complex as the pitches in the tubular bells are developed.

Re-capitulation
The function of re-capitulation is to create the classical interpretation of returning to the repetition of the exposition. However, during this phase, whilst the themes of the exposition are evident, the contributions of the instruments in the ensemble are phased out through to final bar, when only the tubular bells and cimbalom are left performing a version of the original theme in unison. The sound of the cimbalom however provides a variation to the original theme through its use of tremolos on each pitch.

FOURTH MOVEMENT - CAPELLA
This is written for a smaller ensemble than the previous movements. Whilst the title relates to a star, I have taken the musical term ‘A capella’ which relates to writing for voices without accompaniment. As there are no voices in any of these concertantes, I have improvised on this through the use of homophonic chordal progressions through a jazz riff in the saxophones. Capella is made up of three short movements, the first movement acts like an exposition in a sonata, rather as Into focus acts like the exposition in the Jovia symphony. The other two movements of Capella utilise the riff produced by the saxophones from the first movement, but develop it further in each movement through the production of hybrids, both in terms of pitch and transposition structure. In the first movement the percussion parts act as solo improvisations, slightly reminiscent of the improvisations found in “Pli Selon Pli” by Pierre Boulez, but are more jazz-orientated, in design rather than pitch language. This aspect is even further pronounced in the subsequent movements 2 and 3, where the thematic content is developed by oscillating tremolos in whole bar and part bar irregular rhythms in a way similar to, but far more complex than, the second movement of concertante 1. Capella is a suite and although it has separate movements, it is necessary to have connections between them in order to achieve the flow of the piece. One of my textural interests in
composing is the use of tremolos and how it is possible to make them a 'bona fide' system of pitch development, as opposed to the late 19th century concept of a flowing accompaniment. The poem of ecstasy by Alexander Scriabin is an example of this approach, where there is a structural purpose in relation to the tremolos, but often they are part of the orchestration technique, rather than a particular method of construction for their own sake. In Capella the tremolo is used sparingly, and is used in the shape and pitch construction. This is mainly in relation to the use of hybrid themes that are not alien to the original, but are composed for a definite harmonic purpose.

FIFTH MOVEMENT - SOLAR
Though scored for full ensemble, this is the shortest of the 3rd concertante movements, (in Sirius it is only represented by 3 bars), and its total duration is just one minute 45 seconds, however it does contain a number of musical elements. Solar is the smallest star in this group as defined by the Hersprung Russell diagram and this has been represented musically by the duration of the movement. Of all the stars represented within this concertante, Solar and Capella are the only two which are classified as main sequence stars. This commonality has been musically depicted in Solar through the development of riffs and themes which are featured throughout Capella. The movement is divided into 4 sections, bar 1 to 7; bar 8 - 13; bar 14 - 15; bar 16 - 20 (end). This movement has been written in sonata form with bar 1 - 7 acting as the exposition, and bar 8 - 19 as the development phase, with the piano reproducing in the final bar a recapitulation. The other instruments in this bar remain in development mode.

The cimbalom has the main instrumental part in section one and the theme is related to the riffs in Capella’s first movement. In this section the rhythm of the riffs from Capella are represented but the intervals have been gradually extended, and this process is developed further in concertante 5. In the second section, the use of oscillating pitch lines are introduced which pick up the theme from Capella but without using contrapuntal oscillation. Here they are concentrated within a thematic line. In sections 3 and 4, the oscillations have been modified to pedal lines which help to define the harmony. The final bar of this movement acts a tiny coda, compressing all the elements within this movement with the exception of the pedal notes.
SIXTH MOVEMENT - ALDABARAN

This consists of 2 movements. The first movement is in 3 sections, the first an exposition of the 3rd and the middle section a transposed collection of lines reminiscent of the linear themes in Formalhaut. The transpositions in this section are different, in that they are more minimalist in form and are used to enable the movement to return to the original pitch which takes the composition to the third section. In the opening section of the 1st movement, bars 1-9 pitch and rhythmic cells are joined and expanded which work towards a structure which ends in the first section with a more unified texture. The second section builds on the ideas of the first but the themes are more linear and minimalist in structure, they are repetitive and they change through transposition, rather than through cellular development. The third section is a recapitulation combining elements of the first and second sections, whilst contributing its own musical components to bring the movement to its conclusion. In the second movement I provide scored improvisations (see Capella) and extend the use of hybrid themes which stretch the intervals and thereby create a structural variation reminiscent of the first movement. There are similarities to the composition structure in Capella but without the tremolo techniques.

SEVENTH MOVEMENT - BETELGEUSE

The final movement of concertante 3 is the longest, Betelgeuse is the largest of the stars in the piece, albeit the coolest and dimmest as referenced in the HR diagram. This piece is comprised of 3 movements, similar to Capella but on a larger scale. The first movement consists of a theme for baritone saxophone and a set of variations written for this instrument and the full concertante 3 ensemble. The first variation takes the first 2 bars of the baritone saxophone theme and transfers the pitches to the marimba and xylophone and the woodwind section add the remaining pitches of the baritone saxophone solo in a gradual manner. This is repeated in the percussion section as scored improvisations. The second variation, bars 16-23 transfers little cells from the baritone saxophone solo to alto saxophone and has pedalled chords on the vibrraphone to sustain the harmony. Finally the third variation has the theme performed on the baritone saxophone with subtle doublings and other pitches from its solo. The second movement takes the baritone saxophone pitches and with the marimba and vibraphone creates a duo where lines expand the interval relationships in bars 1-9. Following this there is a solo on the marimba which joins the duo to the tubular bells and xylophone.
through oscillations and tremolos. In bar 6 the marimba performs a version of the opening vibraphone pitches, the intervals through the instrumental range are crushed to create a variation-like quality related to the baritone solo in the first movement. The final movement combines elements from the entire concertantes work, not necessarily in pitch form but more in texture and structure. For example: woodwind and brass have semi-breve beats which are reflective of the first movement of concertante 1 and the percussion theme cells are taken from the tempo aspect of the second movement of concertante 2. The tempo gradually slows down over the three sections from semi-quaver = 170, 111 to 88 in the third section. Finally, in bar 67 there is a rallantando which brings the third movement to an unbearably slow end. The purpose of this is to reflect musically the enormity of Betelgeuse and the endless horizon which this massive star is presumed to have.

CONCERTANTE IV - A PUZZLE

I consider this concertante as the closest in classical form and structure of all the concertantes in the collection. However, it is not exactly a piece of ‘classical period’ music as there are more differences than similarities. The inspiration and title for this piece derive from a Sudoku puzzle (see below), using a similar principle to the approach taken in concertante 1, third movement, (the interpretation of musical pitches using the periodic table) to convert numbers within the puzzle to musical pitches.

<table>
<thead>
<tr>
<th>Pitches used</th>
<th>Columns</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>Cn</td>
<td>8 4 9 5 3 6 1 2 7</td>
</tr>
<tr>
<td></td>
<td>1 5 9 2 4 8 6 3 6</td>
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<td>3 2 6 1 7 8 4 9 5</td>
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<td>9 6 7 3 8 5 2 4 1</td>
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<td>4 3 2 7 9 1 5 8 6</td>
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<td>5 1 8 6 2 4 3 7 9</td>
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<td>2 9 1 8 6 3 7 5 4</td>
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<tr>
<td></td>
<td>6 8 3 4 5 7 9 1 2</td>
</tr>
<tr>
<td></td>
<td>7 5 4 2 1 9 6 3 8</td>
</tr>
</tbody>
</table>
I have developed two themes reminiscent of sonata form, first and second subjects. I have produced these themes through the translation of the numbers within the various columns to pitches. As there are only 9 numbers in the whole puzzle, I have had to manipulate the 9 numbers of the puzzle to correspond to the musical pitches in a serial row. I used the 9 vertical columns of the puzzle to create the translation, starting with column 1. I wanted to translate the first number, 8, into A natural, I based this decision on the fact that an orchestra uses A as the tuning pitch and this was a logical place to start. I chose C, C#, Cb as the starting point for the translation in order to ensure that 8 translated into A, it was C# that provided this translation. The method I applied to create the translation was to assume that each of the pitches within the pitch family was equal to 0 or 1 – in the example below the methodology is outlined where C# = 0 in order to arrive at the pitch of A

<table>
<thead>
<tr>
<th>C#</th>
<th>D</th>
<th>D#</th>
<th>E</th>
<th>F</th>
<th>F#</th>
<th>G</th>
<th>G#</th>
<th>A</th>
<th>A#</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
</tr>
</tbody>
</table>

This translation was then applied to the pitch families of C,D,E,F,G,A and B. This piece is not a direct translation of the Sudoku puzzle, but I have used the sidoku puzzle as a platform from which to develop the pitches and themes of the piece. The first subject contains intervals which largely are based on thirds and seconds, the second subject has similarities with the first but contains perfect fifths. These two themes are similar but the first three pitches expand the intervals in the first subject to give a richer quality to the music. The illustration below demonstrates the translation of the pitches from the numbers in the puzzle, including in the 4th movement the variations on the original pitches to bring the number of pitches from 9 to 12.
This is a concertante primarily for clarinet, incorporating one instrument from each musical family, the rationale for this being to reflect the classical music genre. The lead of the clarinet has been influenced by Mozart who frequently featured this instrument as the lead. The piece is written in 4 movements. The pitch structure is a gradual change through variant groups of the theme to middle transposition, to inversion in the second movement, inversion of a Gb group in the third movement, and finally in the fourth movement, inversion of C group/middle transposition of G group and finally the original transposition group. All the groups are variants based upon a Sudoku puzzle solution.

**FIRST MOVEMENT**

The opening for clarinet takes A natural as its translated pitch and takes the first vertical puzzle line numbers. The 1st movement could be considered as the exposition of the piece with 4 variants and 5 versions relating to my idea of genetic thematic transformation. Thus the transformation of a theme may not necessarily alter its original character beyond recognition, but produce ‘families’ of pitch identities: sometimes the differences need only be a transposition of the original.

There are four ‘games’ relating to the puzzle and a numerical pitch, timbre, rhythmic and dynamic version each movement representing a game. [pitch puzzle]
SECOND MOVEMENT

The second movement begins, like the 1st, with a duo but this time on viola and piano, the latter playing inside strings like a harp. There is a sense of improvisation and chance here, with the performer on the piano often only plucking one particular pitched note. After only a shape made from grace notes the sound world in this movement is further altered by the viola performing into the piano strings with techniques such as col-legno, pizzicato and molto vibrato to change instrumental colour. [Timbre puzzle].

THIRD MOVEMENT

In this movement only the Bb and bass clarinets are used. The pitch choices can be found in the table in the introduction. This movement is, primarily, the rhythmic puzzle and in those terms could be considered a cyclic rondo movement with excerpts from other instruments, (e.g. Horn from 1st movement, bar 81 shared with some of the clarinet’s own rhythms). It is a short movement connected very much to the finale and it mimics the slow movement of a sonata.

FOURTH MOVEMENT

Originally this movement was to be a second section to the previous one, but I decided that I would compose this one just for one player, playing either Eb or bass clarinets. The pitches are found in the table above, the Eb clarinet section carries on, thematically, from where the last movement ended and should be played with only a very short break. The pitch area has changed from Gb to G natural, (though starting on a F#), and uses an oscillating choice of pitches. The final 12 bars are for bass clarinet and ‘sum up’ some of the ideas of the piece rather like a recapitulation. This final section however is not cyclic in pitch, ending in the group intended.

CONCERTANTE V

Scored for Viola, Clarinet, Piano and Drums

FIRST MOVEMENT

The first piece for viola could be considered as a microcosm of the whole concertante, on a very small scale, as ‘Into Focus’ is to Jovia. It is one theme, quite expansive, section that contains 4 added transpositions to the original. The previous concertante,
although very different, has many qualities in common, one being the use of transpositions as pitch areas, rather like serial jazz. The second part of the 1st movement has a ‘Cantus Firmus’ theme in the bass of the piano, over which are fragmented versions of the viola theme, but in the 1st section transpositions from bars 11-14 and returning to C natural continuously, (bars 7-10), and the third section, (solo viola), are separate always with the viola cross-referenced instrumental parts.

SECOND MOVEMENT

As in the other concertantes, I have sections of movements, for example Sirius in number 3, where I have used smaller ensembles from the full ensemble. The second movement begins with a duo for viola and vibraphone that, within the confines of a very few bars, returns to the opening section, albeit with a new system of transpositions. The thematic lines are, of course, based on the viola theme in the first line of its 1st movement solo. In this movement transpositions play a very important part, (often one pitch will be in one transposition in one bar and another in the next). In the first 7 bars there is formed by the transpositions a differently pitched theme which has many interval qualities related to the viola theme. In the next 8 bars, the same transposition choices have now become chords, (bars 16, 22, 23, 30 and 32 all have perfect 4ths or 5ths choices, another very important interval in the viola row). The final bar has the same interval, in transposition choice as bar 1, only itself now transposed down a tone, another important interval relating to the viola (p=10/p=3 becomes p=8/p=1).

THIRD MOVEMENT

The concepts in this movement are two fold:

a) to crush the pitches so that they resemble the opening of the concertante by using various transposition areas and oscillating theme and retrograde pitches and

b) the gradual crushing of the range of the instruments so that the music comes to a one pitch ending.

Both of these concepts are achieved by the use of a coda that changes the transposition pitch definitions, so that although there are repetitions of various cells they are re-defined by their transposition identities. Even when the theme returns in direct quotation in the coda, bars 29-43, the rhythm has altered, as instead of the theme being related to p=0, the original transposition it is now related to pitch and retrograde equals eleven.
The vibraphone briefly interrupts this process by a misaligned C# that really redefines the function of the final.

_This concludes my commentary on the music presented for the examination._

*Word count 9,713*
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**Concertantes**

**Concertante 1**

**Page 19 – 4th line**

The word *depict* should be considered rather as an influence of modal influences in this movement rather than a conscious attempt to base it on any specific piece of music from the past.

**Page 19 – 7th line**

I intended this movement as a structural ‘spring board’ for the other movements of the piece. This is why I kept the influence of each period as a general idea: I did not intend to depict the music of the 11th century rather than have music of an 11th century ‘flavour’. Obviously the majority of very early music can be considered basic in texture compared with the polyphonic age. In my own music I simply adapted the concepts of organum so that the chromatic structural aspects could extend to the other movements.

**Page 19 – 16th line**

“...sequences and textures”.

In bars 13 and 19-20 I used sequences to a) join one harmonic area to another, (the whole movement is centred around E, (mainly the minor form but with a serial structure ‘superimposed’).
Bassoon

Cello

The tremolando I substituted for the Alberti Bass but also as a later period link to the final movement's minimalist bassoon part. Bar 14 returns to the $1^{\text{st}}$ 4 pitches the $1^{\text{st}}$ 5 written as flats*, (see footnotes), accentuating the Bb as an additional chromatic version of the A natural ending in a quasi-cadence.

- I wanted to continue the ambiguity between the flat centred F chord heard at the beginning of the second movement and the sharp centred E (see opening bars 1 and 2 of the second movement.
[270 words]
DIMENSIONS
GROUND BASS MODE

(Page 5 line 30)

I would like to clarify, further, how the Ground Bass Mode works in the context of Jovia.

Into Focus

In ‘Into Focus’, each pitch in the Ground Bass Mode is a fundamental in the natural series, over which, are superimposed, either the natural scale or the Main Control Row (see under heading). I had ‘set up’ a hierarchy of related overtones, by which I mean that the relations between the fundamentals and the overtones are in tableau form: as an example B♭...A

0- Relates to pitches closely related to the fundamental.

1- Related but not so closely as 0

2- Some relation but weaker than 1

3- Distantly related
In the opening of Into Focus, bars 2–4, (Cellos), the relationship between fundamental and overtones are out of synchronization — in the orchestra as a whole all the fundamentals and all the roots are represented in relation to the *Ground Bass Mode* pitches 0–3 (Bb–Ab). The first violin part is a mixture of different overtones from different fundamentals — C♯(A–2), D(Bb–2), F♯(A–6)): violins II add to this collection D(Bb–2), A–8), E(Bb–5), C♯(A–2), B(A–4), G♯(A–8)). The organ part in these bars alternate from the A, (3 in the G.B.M.) and Bb (0 in the G.B.M.): the piano part in bar 3 does something similar but uses C (4th from Bb), C♯ (2 from), D (2 from Bb). Because of the enharmonic aspect in the piano part of bar 2, the pitch Eb replaces D♯, (A–5)): the reason for this is because the Eb is the 2nd pitch in the *Main Control Row.*
**Hybrids**

*Page 5 lines 15 and 23-29*

What is a Hybrid? In relation to my musical language I use a form of intra-specific and, more commonly version applied to biology –1 ‘Hybrids between different subspecies within a species, or crosses. In musical terms, I take, for example, 2 different themes of different interval qualities and produce a new theme keeping the general harmonic sense, intact, but changing the specific intervals. I employ serialism in this sense because of a lack of pitch hierarchy is fundamental to this hybrid process.

In Jovia, a hybrid technique is attempted in different ways, mainly relating to serial considerations but without the adoption of serial sets. I create themes out of themes by altering a themes’ interval personality to create either ‘compass modes’ or ‘String-texture themes rather like strings in cosmology. An imaginary example is given below:

**Theme A:**  Ab,Db,Gb,Cb,Fb,Bb,Eb,A,D,G,C,F (Mainly comprising 4ths and 5ths)

**Theme B:**  Ab,C,A,C#,Bb,D,B,D#,F#E,G,F (Mainly comprising 3rds and 2nds)

**New Theme C:**  Ab,C,Gb,C#,Bb,D,Eb,A,E,F (Mainly comprising of the 4ths in theme A and the 2nds in theme B).
New Theme: Ab, Db, Bb, Eb, C, E, B, G, A, D, F
(Mainly comprising of the 4ths of theme A and the 3rds in theme B)

In my examples I have consciously decided that my themes will start and end with the same pitch this allows super-sets* the themes have similar qualities that is the harmony is only deviated by small amounts – an example in nature would be the cross between a Zebra and the horse producing the Quagga. The Quagga has some of the stripes of the Zebra and some of the characteristics of a horse.
Not all the themes in Jovia are capable of producing super-sets in this way. For example, another method of producing hybrids is to change the contours or to connect theme to inversion; inversion to retrograde and the changes, on route, to still contain elements of the same contour shape. For example the hybrid in the 1\textsuperscript{st} variation in the first movement of Jovia, (the vibraphone part is a crushed,(open) version of the \textit{Main Control Row}, (Bb, Eb, Ab, C, A, F, D, Ab, Db, G, B, E, F#) in its retrograde form.

To end, I would state that I put Hybrids into 2 distinct categories. A) Category is where the hybrid has exact interval relations to 2 themes and B) where the theme is shaped by contour manipulation, (an example in the 1\textsuperscript{st} Evolutionary variations sets in the 2\textsuperscript{nd} movement where a theme is gradually moulded out of shape by stretching or contracting intervals in a quasi-minimalist technique.

Why have I employed this method of using Hybrids? Mainly to give an expression of Jovia’s Cloud Systems as I mentioned in the main commentary. The themes tend to have qualities in relation to the shapes of the clouds, that although, transient, in the rapid movement of Jupiter’s orbital velocity are more stable in a slowed down film version.

I didn’t intend to replicate Jupiter — that is, in practice terms, impossible, but I did intend to give an impression of the planet — perhaps a cross between Debussy’s \textit{La Mer} and Benjamin Britten’s ‘Sea Interludes’ from \textit{Peter Grimes}: that is the shapes of clouds coupled with the imaginary reality of seeing the planet first hand.\[522\text{words}\]
**Instrumentation**

**In Jovia:**

A) Why did I use an orchestra in Jovia B) why did I have chamber ensembles in an orchestral symphony? C) and why such a large orchestra?

The answers to A and C are similar. I needed a large orchestral pallet to convey the cloud systems of the largest planet of the Solar System and also I have often felt that large orchestral forces have a different sound to a standard one. I also needed different sized orchestral groups to convey different aspects of Jupiter and its satellites. Therefore all the Galilean satellite pieces are individual in their instrumentation and structure and should be considered a separate suite - Io, has a large orchestra to portray the volcanic dramas on its surface, Europa mainly strings and percussion with an additional trumpet in D to convey its lined smoothness and yet give an indication to its icy surface that may or may not contain water underneath? Ganymede, like Io, has a large orchestra representing a very large satellite here I employ chord textures. In Calisto I centred on one area its extinct volcano, Valhalla here I accented its icy crystal formations using string grace notes.[198 words]
The Main Control Row is one of three main ‘compass’ pitch operators: by which I mean that it has an architectural influence on Jovia as a whole. It is only in Into Focus where the M.C.R. has any thematic significance; even then, the theme is often slightly changed or played against itself, (for example in bars 12-18 in Into Focus accented pitches display the M.C.R.’s theme in proper order whilst other pitches are like ornamented jazz notes that is that their orders may be related but different, (for example some of the solos in Cool Jazz such as Ornette Coleman and elements in the Avant-Guard jazz movements). A jazz solo may incorporate pitches in various orders relating to the surrounding pitch syntax but also include, in classical terms, passing notes and incorporating pitches in various orders sometimes in repetition.

At bar 18 I return to incorporating the other pitch compasses — the enharmonic natural scale and the Ground Bass pitches.

I chose the intervals, carefully for the Main Control Row. Whereas the natural scale is predominantly in 3rds and one 2nd, (obviously the higher overtones are ‘out of tune’ anyway), in the Main Control Row although there are quite a few 3rds, intervals of 4ths and 2nds and one of a 6th add a dimension to the interval pallet.

I then transposed the M.C.R. as a series and in octaves and gave the 1st, 3rd and 5th octave one set of dynamics and the 2nd, 4th and 6th octaves another transposing the dynamics throughout the M.C.R. transposition sets for example the Bb transposition
This idea may seem very fussy but I wanted effects of some pitches at certain points being subdued to relate to the colour changes at high orbital velocity of the planet’s cloud systems: I did not intend to be very accurate, ( indeed it would be impossible to be so with Jupiters's sidereal period of just over 9 hours the clouds would be changing shape and colour at an alarming rate).

The Main Control Row is used in conjunction with the other Compass Modes so that by the time the orchestral tutti passages occur the modes van be used in counterpoint. [368 words ]
MODES

In Jovia
Pitch Processes

Jovia is a pitch process journey, (see thematic processes). The basic, (a) pitch undercurrents are represented by 8 pitches, (of which only 6 are different sounds). These basic sounds are partnered with the Main Control Row, (figs ) and then set into triads- see below:

EB 5th above Ab
F 5th above Eb - Main overtones above roots
G 5th above C
B 5th above 3rd of C
E 5th above C or A- Lesser important overtones above lesser roots or main root C
F# 3rd above D

The second pitch process in Jovia is the Ground Bass Mode (G.B.M.) see (a) above: this is the basic pitch compass that developed into the Main Control Row and also the Enharmonic Natural Scale the next main pitch ‘compass mode’- this is where I take all the transpositions with the enharmonic versions and relate them to the M.C.R. and G.B.M. for example:
Note that the Bb to the A# is not transposed directly – this is to avoid double sharps and in some transpositions double flats

The Ground Bass and Percussion Lines

1st Movement

The Bb and A# that begins ‘Into Focus’ are the same sounding pitches on the piano but in Jovia I consider them, in syntax, as different – that is a microtone lowered or raised depending on whether the pitch is A# from Bb, for example or Db from C#. Indeed in certain passages it may not be possible to accurately find a specific microtone so the A# is a symbol of the transposition from Bb: this may sound unduly finicky but I wanted small nuances symbolizing the cloud colours on Jupiter’s system.

As mentioned in the commentary not all Ground Bass pitches are employed in the Jupiter music as a main pitch area, the majority of the music uses Bb,(0) and C,(4) or a triadic version (d,f), or (e,g): for example in the third movement the theme switches from Bb main pitch to F natural triadic pitch. In Into Focus pitch areas pitches are classed in relation to their compass modes and are often used in counterpoint especially in the orchestral tutti areas. The table, below, is a description of those areas

<table>
<thead>
<tr>
<th>Bar/page</th>
<th>Woodwind</th>
<th>Brass</th>
<th>Percussion</th>
<th>Strings</th>
<th>Average Pitch area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A,Bb,Bb,A,Ab</td>
<td>A,Bb,Ab,Ab</td>
<td>Bb,........C/Bb</td>
<td>Bb,A,A,Bb</td>
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<td>19</td>
<td>A,BbBb, A, Ab, Ab</td>
<td>A, Bb, Ab, Ab</td>
<td>C/Bb...organ mcr Bb/Bb</td>
<td>ground bass (double basses)</td>
<td>Bb, A, A, Bb</td>
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<tr>
<td>20</td>
<td>E.N.S/G.B.M</td>
<td>E.N.S/G.B.M</td>
<td>G.B.M./M.C.R</td>
<td>G.B.M./M.C.R</td>
<td>A</td>
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<tr>
<td>X</td>
<td>A, Bb, Ab, A, Bb, Bb, A, Ab, A</td>
<td>A, Bb, Ab, Ab</td>
<td>Vibraphone F natural/A Organ Bb/Bb</td>
<td>Bb, A, Bb, Bb</td>
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<tr>
<td>Bb, Bb, Bb, Ab, (M.C.R), A</td>
<td>A, Bb, Ab, Ab</td>
<td>A/Bb Organ F/Bb</td>
<td>Bb, Ab, Bb, Bb, Bb</td>
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<td>Bb, A, Ab, Ab</td>
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<td>Bb, Bb, Bb, Ab, (M.C.R), A</td>
<td>A, Bb, Ab, Ab</td>
<td>A#/Bb</td>
<td>Bb, Ab, Bb, Bb, Bb</td>
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<td>Bb, A, Ab, Ab</td>
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<td>A, Bb, Ab, Ab</td>
<td>A#/Bb</td>
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<td>Bb, A, Ab, Ab</td>
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<td>24</td>
<td>E.N.S/G.B.M/Percussion Lines</td>
<td>E.N.S/G.B.M</td>
<td>G.B.M./M.C.R</td>
<td>Ground Bass (Double Basses)</td>
<td>Bb</td>
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<tr>
<td>A, Bb, Ab, Ab</td>
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<td>25</td>
<td>E.N.S/G.B.M/Percussion Lines</td>
<td>M.C.R.</td>
<td>A#/Bb</td>
<td>Ground Bass (Double Basses)</td>
<td>Bb</td>
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<tr>
<td>A, Bb, B, Ab</td>
<td>A#/Bb</td>
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<td>26</td>
<td>Percussion Lines as main dynamic and pitch area</td>
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<td>Bb</td>
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<td>Description</td>
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<td>27/XIII</td>
<td>Percussion Lines as main dynamic and pitch area</td>
<td>Bb</td>
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<td>28</td>
<td>Percussion Lines as main dynamic and pitch area</td>
<td>Bb</td>
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<td>29</td>
<td>M.C.R</td>
<td>Percussion lines</td>
<td>Percussion lines</td>
<td>Percussion lines</td>
<td>Bb</td>
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<tr>
<td>30/XIV</td>
<td>M.C.R</td>
<td>M.C.R</td>
<td>Percussion lines</td>
<td>M.C.R</td>
<td>A</td>
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<tr>
<td>31</td>
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<td>Percussion lines</td>
<td>M.C.R</td>
<td>A</td>
</tr>
<tr>
<td>32/XV</td>
<td>M.C.R (Bass Mode)</td>
<td>M.C.R</td>
<td>Percussion Lines Piano – E.N.C</td>
<td>M.C.R [Transpositions]</td>
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<td>33</td>
<td>Percussion Lines</td>
<td>M.C.R</td>
<td>Percussion Lines Piano – E.N.C</td>
<td>M.C.R [Transpositions]</td>
<td>Bb</td>
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<tr>
<td>34/XVI</td>
<td>Percussion Lines</td>
<td>M.C.R</td>
<td>Percussion Lines Piano – E.N.C</td>
<td>1) 8va 1st violins 2) M.C.R from G.R.M.</td>
<td>Bb</td>
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<td>Percussion Lines</td>
<td>Percussion Lines</td>
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<td>M.C.R from G.R.M.</td>
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<td>36/ XVII</td>
<td>M.C.R</td>
<td>M.C.R</td>
<td>Percussion Lines</td>
<td>M.C.R</td>
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<td>37</td>
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<td>M.C.R</td>
<td>Percussion Lines</td>
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<td>38/ XVIII</td>
<td>M.C.R</td>
<td>M.C.R</td>
<td>Percussion Lines</td>
<td>Percussion Lines</td>
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<td>41</td>
<td>Oboe – E.N.S. M.C.R. (Double Basses II)</td>
<td>M.C.R</td>
<td>Percussion Lines</td>
<td>Percussion Lines</td>
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<td>42 XX</td>
<td>Xylophone (flute only)</td>
<td>M.C.R</td>
<td>Organ (right hand only) – Marimba Percussion Lines</td>
<td>Violins I – Xylophone dyn Violins II – Vibes Cellos – M.C.R. Double Basses I Tubular Bells Double Basses II – E.N.C.</td>
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<tr>
<td>43</td>
<td>Marimba [flute only]</td>
<td>Xylophone</td>
<td>Percussion</td>
<td>Violins I –</td>
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<td>Lines</td>
<td>Xylophone dyn</td>
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<td>Trumpet</td>
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<td>Violins II –</td>
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<td>Percussion</td>
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<td>Lines</td>
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<td>Cellos – M.C.R.</td>
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<td>Double Basses I</td>
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<td>Tubular Bells</td>
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<td>Double Basses</td>
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<td>II – E.N.C.</td>
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<thead>
<tr>
<th>44</th>
<th>Marimba [flute only]</th>
<th>Xylophone</th>
<th>Organ –</th>
<th>Violins I –</th>
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<td>Trumpet/Bass</td>
<td>Vibraphone</td>
<td>Xylophone dyn</td>
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<td>Trumpet</td>
<td>Dynamics</td>
<td>Violins II –</td>
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<td>Percussion</td>
<td>Percussion</td>
<td>Vibes</td>
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<td>Lines</td>
<td>Lines</td>
<td>Cellos – M.C.R.</td>
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<td>Double Basses I</td>
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<td>Tubular Bells</td>
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<td>Double Basses</td>
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<td>II – E.N.C.</td>
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</tbody>
</table>
| 45 | Tubular Bells [Flute] | Trumpet –  
Vibraphone  
Trombone –  
Tubular Bells |

**Remarks** – As can be seen and heard the changes from one compass pitch area to another is very gradual and tends to be bar by bar in bars 18-44. This tutti section is less complex than the second, (bars 65-111) tutti area – perhaps less gradual. There are bars that are repetitive to allow the harmony to settle down.

[783 words]
**Percussion Line Mode**

In section 1 of *Into Focus* within the tutti orchestral subsection, (bars 18-45), the importance of the percussion lines echoes the musical focusing of the mode prior to the modes importance in the variations, (see previous heading - pitch processes). The percussion lines have a sense of having the identity of a ‘piece in themselves’ and contain the form of a varied rondo coupled with ‘passagalia qualities’ though, hardly, considered as an real example of the form. The 1st 4 bars are like an exposition after which the instruments take over each other’s parts: the only exception to this rule being the Marimba part that acts as an anchor not only within the P.L.M but throughout the orchestral tutti passages within *Into Focus*. (see below the 1st 4 bars in full).
PAIRINGS

IN JOVIA’S VARIATIONS

As I have mentioned the pairings of variations consist of a chamber variation followed by an orchestral reworking. In the Glossary and Footnotes section of this commentary I have demonstrated, briefly, how variations 1 and 2 are linked by displacement and contrapuntal use of cells. In variation 1 the tubular bells, xylophone and marimba more or less are played, identically, in pitch up to bar 11 but that their rhythms are written for their performance personality, that is that the writing serves the character of the instrument. When the first variation is superseded by the second I originally attempted to explain the orchestral variation as ‘three dimensional’ a term I used in a loose way: yes there is depth with the repetition of cells within bars on different instruments and the use of longer note values from the vibraphone part of variation 1 now performed on bassoons and bass trombone gives a sense of breadth but I did not try to have a mathematical representation of a real three dimensional model. (171 words)
Serial Minimalism

How do I define Serial Minimalism when I do not strictly keep to the minimalist concept?

And how does the techniques of serialism work in my music?

To answer the first question, I feel that the concept depends upon the individual composer. The American Minimalists are more interested in diatonic scales but this avoidance of chromaticism belongs more to the American music tradition. I saw a television programme on Messiaen that he was partly a minimalist but certainly not in the nature of Reich and definitely not in the nature of Glass. [94 words]
Sonata Form

(In the classical period and the relationship with JOVIA)

The form of Jovia, as a whole is as follows:-

a) **1\textsuperscript{st} Movement** – Into Focus, (Overture)
   
   Smaller Satellite Shadows on Jupiter, (transition piece)
   
   Variations in pairs, (chamber/orchestral reworking)
   
   1-6
   
   Variation 7

b) **2\textsuperscript{nd} Movement** – Io (separate suite piece 1)
   
   Evolutionary Variations 1 (variations that change the shape of a theme by structural contours over near repetitions).
   
   Europa (separate suite piece 2)

c) **3\textsuperscript{rd} Movement** – Theme and 2 variations
   
   Ganymede, (separate suite piece 3)
   
   Variation 3(a,b,c,d)

d) **4\textsuperscript{th} Movement** – Symphony within a symphony (influenced on Jupiter’s Great Red Spot/White Oval and Filaments between the two).

e) **5\textsuperscript{th} Movement** – Callisto (separate suite piece 4)
   
   Prelude to Evolutionary variations 2
   
   Evolutionary Variations 2 (Finale)
In classical sonata form the sonata form movement, (usually 1st movement), has its structure based on a key system containing, generally, a first and second subject with maybe a transition between the subjects. In Jovia I dispense with the 1st and 2nd subjects until the second movement and 5th movements, respectively, when they appear in the each of the sets of Evolutionary Variations. The structural use of ideas in the first movement is metamorphical. One mode, be it the Ground Bass Mode, Enharmonic Natural Scale Mode or the Main Control Row, vie for importance until the introduction of the Percussion Lines that serve as the real basis of the 1st movements set of variations. In the second movement, the M.C.R. is transformed by changing the interval structure away from the predominance of 4ths to 3rds and becomes the 1st subject, similar in contour shape to the M.C.R. Likewise, the Vibraphone ‘hybrid’ theme, derived from the retrograde of the M.C.R. becomes the second subject in the 2nd Evolutionary Variations set.

In the third movement there is a second exposition with a hybrid theme, again, derived from the M.C.R.

To end I would have liked to completed and submitted the whole of Jovia as the form and structure evolves throughout the piece but it was considered to be too long and, besides, needed some revision. I accept that the modes do not constitute a key system but the Tool Modes, especially the M.C.R. maintain their ‘compass’ identity throughout Jovia (372 words)
Tool Modes

These modes differentiate from modes in other pieces that they belong specifically to Jovia. Each mode is described under its individual heading in the glossary, (Main Control Row, Ground Bass Mode, Enharmonic Natural Scale Mode, Percussion Line Mode). A tool mode, in Jovia essentially means a mode that has only function and does not define a subject in sonata terms. Thus a tool mode may exist as a theme, in transit, but its thematic properties are not the main reason for its existence. The introduction of first and second subjects does not actually occur in Jovia until the 1st set of ‘Evolutionary Variations’ in the second movement and the second subject forms the basis of the 2nd set of ‘Evolutionary Variations in the 5th. Into Focus, in the first movement, is an overture/exposition where the subsidiary modes, (in relation to the pitch structure of the 1st movement, i.e. the M.C.R, G.B.M. E.N,S), develop gradually to the percussion line mode that serves as the main pitch mode for the variations in the first movement of the piece. In the first movement as described under the variation heading, the variations are in pairs developing all the time the percussion lines
JOVIA
FOR LARGE ORCHESTRA
By Philip J Taylor

(SYMPHONY NO 1) IN 5 MOVEMENTS

FORCES: 2 Piccolos
4 FLUTES [also Alto Flute]
4 OBOES [also Cor Anglais]
4 CLARINETS [also Piccolo Clarinet in Eb, Clarinet in D, Bass Clarinet, Contrabass Clarinet]

4 Bassoons
2 Contra Bassoons
8 Horns
6 Trumpets [also Piccolo Trumpet and 2 Bass Trumpets]
4 Tenor Trombones [also Bass Trombone and Contrabass Trombone]

2 Tubas
Untuned Percussion
Tubular Bells
Glockenspiel
Xylophone
Marimba
Vibraphone
Celesta
Piano
Organ
Double String Orchestra

1. Into Focus, Smaller Satellites shadows on Jupiter, 7 Variations, IO
2. Evolutionary Variations 1, Europa
3. Theme and 2 variations, Ganymede, 3rd variation a),b),c) and d)
4. Great Red Spot White Oval [symphony within a symphony]
5. Callisto, prelude to Evolutionary Variations 2, Evolutionary Variations 2 [Finale] (Duration at Present 80' - Intended Duration 88')
QUARTET FOR STRINGS 1
IN 5 MOVEMENTS
BY PHILIP J TAYLOR

• THEME MOVEMENT
• 1\textsuperscript{ST} VARIATION
• 2\textsuperscript{ND} VARIATION
• 3\textsuperscript{RD} VARIATION
• 4\textsuperscript{TH} VARIATION
• 5\textsuperscript{TH} MOVEMENT
Quartet for Strings 4th Movement

Violin I

Violin II

Viola

Violoncello

Vln. I

Vln. II

Vla.

Vc.
CONCERTANTES
FOR VARIOUS INSTRUMENTAL ENSEMBLES
By Philip J Taylor
University of Sussex

1. For Bassoon and String Trio in 3 short movements
   Musuem Piece
2. For Cor Anglais Tubular Bells, Glockenspiel Xylophone, Marimba, Vibraphone,
   Piano and String Bass
   i) Jam Session, ii) Time Pieces, III) Noel
3. From The Dawn Of Seven Suns
   For Jazz Band, +Alto Flute, Vibraphone, Glockenspiel and Piano
   1. Sirius
   2. Mira
   3. Formalhaut
   4. Capella
   5. Solar
   6. Aldabaran
   7. Betelgeuse

For Clarinet, Horn, Piano and Viola9(n.o.4)
For Viola, Clarinet, Vibraphone, Piano and Drums
(Total Durations 85’
Concertante 2 first movement
CONCERTANTE IV
1st Movement
Concertante 5 second movement

Viola

Vibraphone

Piano

Vl. 2

Vib.

Vl. 3

Vib.

Vl. 4

Vib.

Vl. 7

Vib.

Vl. 10

Vib.

Vl. 11

Vib.