Stuart Greenbaum: Chamber Concerto (2008)

analysis by the composer

program note

This Chamber Concerto draws on diverse popular music influences and is essentially non–programmatic. The first movement is fast and inspired by 1970's electronica. Marked 'dark, robotic' it is driven by contrasts: soloists (piccolo & glock) versus tutti, high versus low, major versus minor, dense versus sparse – but is ultimately consumed by itself in a vortex of polytonal arpeggios. The slower second movement features the alto flute and vibraphone as a duet within a 1980's soul/pop context and the final movement is fast–paced whirlwind of Bulgarian rhythms and contemporary jazz harmonies (flute & vibraphone). These three movements are separated by two brief interludes in which the flute and percussion soloists do not play. The work was commissioned by Father Arthur Bridge (Ars Musica Australis) for the Sydney Omega Ensemble. The group consists of wind quintet, piano, string quartet and double bass. This effectively a 'double concerto', featuring flautist (Emma Sholl) and guest percussionist (Claire Edwardes).

beginnings

At the suggestion of a colleague, I decided to write a non–programmatic work – something 'purely' musical. I was envisaging a multi–movement work and additionally trying to work out exactly what instruments the soloists would play. These two issues (structure and solo instrumentation) were considered and determined together. The instrumental choice was perhaps primary in that the flautist owned and was eager to play her alto flute. Upon further discussion she was also prepared to play piccolo along with a standard flute. So the piccolo / flute / alto flute combination seemed useful and then lead to the idea of a fast–slow–fast movement structure which could begin on piccolo, move to alto flute for a slow movement and then back to a standard flute for the final movement.

I intuitively knew that I wanted to somehow alter the fast–slow–fast structure but was not yet sure how. Matching percussion with the 3 flute sizes was partly a question of timbre but also of pitch and range. I certainly had concerns about being able to create equal dialogue with un–tuned percussion so that was effectively ruled out. And in consultation with the percussionist, the list was narrowed down to vibraphone and glockenspiel. Around this time I also decided on two brief interludes to separate the 3 main movements and that the soloists would not play in these. Subsequently, an overview of the structure formed as follows:

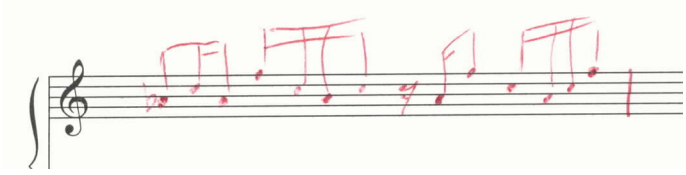
movement	tempo	solo flute	solo percussion
1	fast	piccolo	glockenspiel
interlude	slow		
2	slow	alto flute (flute)	vibraphone
interlude	slow		
3	fast	flute (picc)	vibraphone (glock)

Some flute was used (though not originally planned) in the middle movement. The high register work was originally written for alto flute going into ledger lines. This was playable but upon reflection would sound better on a standard flute. The final movement would include some piccolo and glock combination in reference to the first movement, but not thematically – only instrumentally.

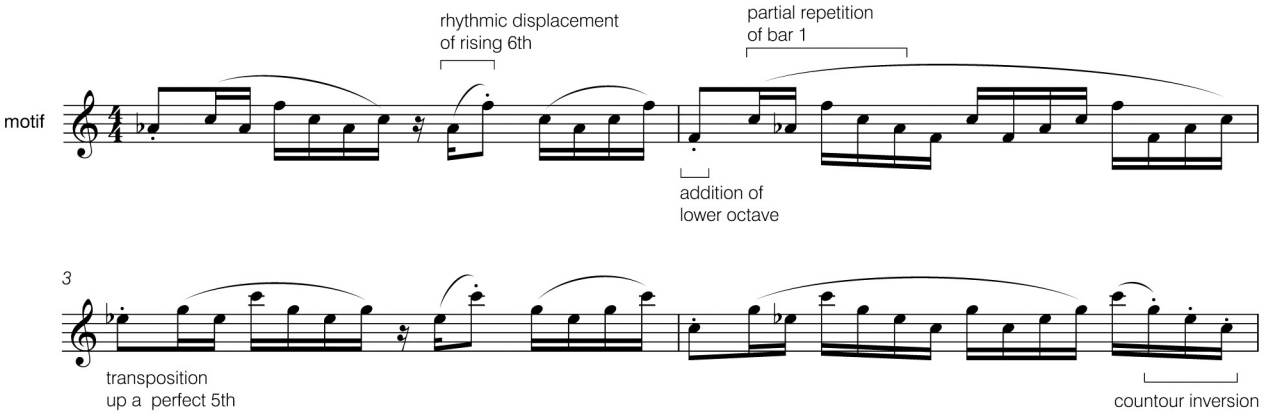
first movement

It has become increasingly common for me to deal with issues of orchestration (what instruments are involved / who plays where) as the primary structure concern of my music. And from the initial plan for the Chamber Concerto, what obsessed me most was the proposition of an opening movement where the soloists play only piccolo and glockenspiel. I didn't doubt that this might be possible, but could certainly see potential limitations in doing so and wanted to avoid creating a novelty–driven movement.

The opening motif played by the soloists was imagined entirely in response to the idea of a picc/glock doubling and was formulated on a succession of walks up Lever Street from the tram stop to my house in Coburg. This first pen sketch shows its beginnings:



This preliminary sketch was then completed at the piano and computer, formalising 4 bars of 'electronica'–inspired patterning that had permeated my waking hours:



In addition to the features of displacement (partial repetition, addition, transposition and inversion) that are marked on the example, it is also possible to observe the following:

• expansion of arpeggio from 2 to 3 to 4 notes (the lower octave arriving at bar 2)
• strategic mix of adjacent triadic notes with wider leaps
• non–articulated beats occur on the 2nd, 1st, then 4th beats of a 4–semiquaver grouping
• unbroken sequence of semiquavers total 6, compressed to 4, then substantially expanded to 14
• repetition of 2–bar motif is transposed up a 5th, but additionally inverts the contour of the final 3 notes to help create the impression of a 4–bar phrase

Stylistically, the motif has an opaque ‘electronica’ surface but close inspection reveals a tightly organised array of compositional devices working in concert to thwart expectation and maximise momentum.

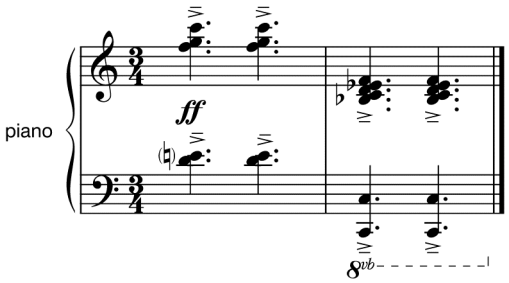
It was not my outright intention to write anything approaching techno or dance styles as such. But I did let my imagination run with what my subconscious dished up. In retrospect, the biggest subconscious influence on this motif was possibly the 1977 Electronica classic, *Oxygène*, written by French composer, Jean Michel Jarre. I have not studied or closely examined this work but I did hear it in my mother’s vinyl record collection in the early 80’s. The theme is quite different in feel but it does share the use of unadorned minor arpeggios that are subsequently sequenced up by a perfect 5th.

Having articulated an ‘electronica’ motif, I wanted to see how far I could extend an opening section where the piccolo and glock would play this motif doubled in octaves (as if a single instrument – like a certain organ stop) and the ensemble would be like a giant chord box in antiphonal relation to the soloists. This limitation (ensemble chords followed by arpeggios from the soloists) is held strictly in place for the first 27 bars of the piece (around a minute in duration). Developmentally,

this dualism is ‘advanced’ through expansion and compression of the motif and chords, together with a harmonic scheme of minor arpeggios that expands on the initial sequence (up a 5th) as follows:

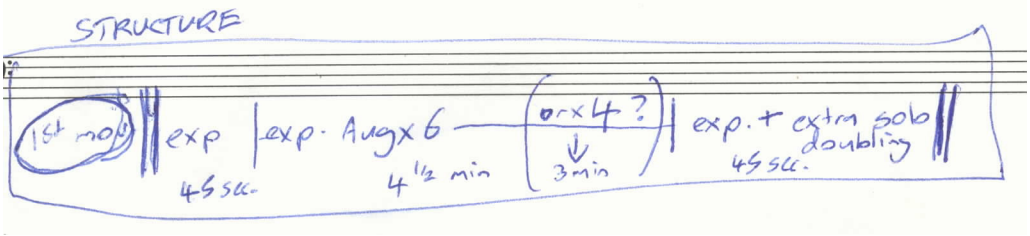
F – C – G – D – A – E

While these are not given equal duration, the overall shape can be seen to modulate from flat keys to sharp keys via a cycle of 5ths. The harmonic progressions represented by the arpeggios look tonal but while fully triadic, they do not follow the conventions of tonality. Right from the first bar, the ensemble chords signal sudden harmonic shifts:



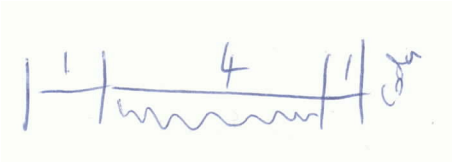
The voicing of the harmony is clustered (not triadic) with the 9th in the bass. The second bar immediately negates the major 3rd with the minor 3rd (modal alternation) and the bass note is the dominant (C). Within two bars the music effective serves notice: expect tonal materials but don’t expect voicing or progression typically associated with tonality. These ensemble chords show a 6/8 grouping within a 3/4 time signature and this continues throughout the opening 27 bar exposition as a hemiola device to contrast with the 4–bar phrasing in 4/4 of the arpeggio motif. In all, the soloists and ensemble are diametrically opposed in texture, rhythm, harmony and register, and also separated in time.

Having pushed the opening premise about as far as seemed useful (just under a minute of music), a complete structure for the first movement was investigated:



This first sketch proposes a structural augmentation of the opening followed then by a return of the opening with extra doubling of the solo parts. The diagram questions whether the augmentation should be by a factor of 6 or a factor of 4. This goes partly toward what the overall length of the

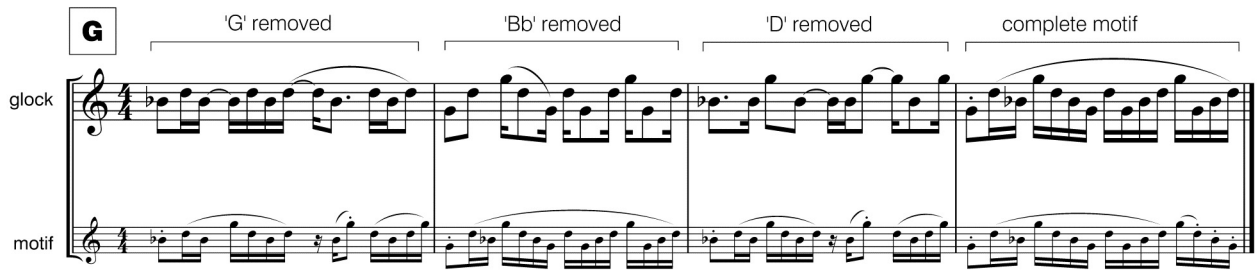
movement might be but also what the proportional relationship of sections will be. A later, simplified diagram answers this question:



The augmentation factor has been determined as 4, but after a return of the opening, a coda is to be added. The opening tempo of 108 is marked ‘dark, robotic’, and once the intensity of the opening minute has run its course, these 97 crotchet beats are then presented stretched out (at an augmentation factor of 4) creating a section of 388 beats. The exact proportion of chordal and arpeggiated beats is maintained and the harmonic cycle is replicated exactly, only slowed down to 25% of the original rate of harmonic change. At the surface level, it is almost like listening to the opening at crotchet = 27 (instead of 108). While the chords are ‘stretched out’ across the expanded canvas, however, new melodic material is woven through the texture maintaining rhythmic flow, together with the arpeggio motif which remains in semiquavers but with more extended repetition.

Additionally, strict limitations that applied to the opening are gradually relaxed. From the start of this new section at letter A, the soloists start to merge with the expanded, sustained ensemble chords. From letter B, the ensemble takes on the arpeggio motif for the first time and the soloists (who can now function independently, rather than as a unit) answer this in turn – first the glockenspiel and then the piccolo.

This expanded middle section is like a free fantasia built upon an exact metrical and harmonic augmentation framework. At letters G and H, the glockenspiel and piccolo respectively have more extended unaccompanied solo passages which present the arpeggio motif three times, each time missing one of the 3 notes of the arpeggio before in the 4th bar completing the full pattern. The result of this rest–substitution variation is to bring out internal syncopations that are hidden within the fabric of the pattern itself. This can most easily be seen in the glock at letter G:

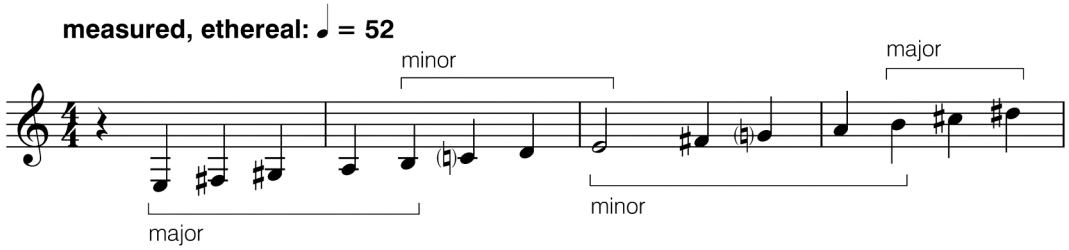


This sort of variation is connected to what Steve Reich refers to in his music as ‘resulting patterns’ – notes that are embedded in the overall texture but not obvious until pointed out. The Reich connection does not stop there, because the new pattern is created through substituting rests for beats (of a specific pitch). These two techniques (resulting patterns and substituting rests for beats) normally occur separately in Reich’s music, whereas the above example in the Chamber Concerto effectively fuses them as one process.

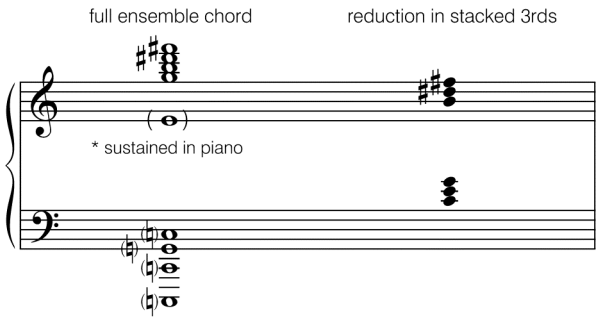
From letter i, the texture and dynamics build toward a triple forte recapitulation of the opening at letter K. This time, however, the ensemble starts to double the soloists’ presentation of the arpeggio motif and octave disposition pushes the motif down into the lower registers of the ensemble for variation. This then flows directly into a coda based exclusively on the main motif accumulating new entries in parallel bi–tonal harmony. Once all instruments are playing, the resultant dissonant texture then undergoes metrical compression from 16 semiquaver beats to 12, 8, 4, 3 and 2 before finally thumping out a single alarming sonority. The effect is like a machine spiralling out of control. That which is initially charming and playful ultimately becomes ‘dark and robotic’.

interlude 1:

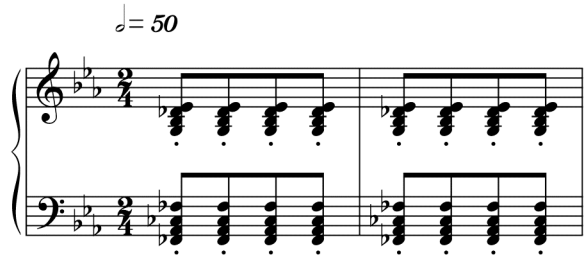
The idea behind the interludes was to create a ‘palette cleanser’ – a little like having a small cup of green tea between main courses. To this end I wanted the two soloists to be tacet for these interludes. This serves two functions: it physically gives them a break and also helps the listener to renew focus upon them after a brief absence. In exact musical terms, this effect was sought through the presentation of a rising scale in crotchets on the piano (almost like an exercise) that would be gradually coloured by the ensemble. The scale, over two octaves, presents the first five notes of E major but then followed by a minor 6th and 7th. In the second octave, it does the reverse – starting with a minor scale but then allowing a major 6th and 7th:



This is then repeated up an octave but spilling over to the next to notes and coming to rest on F#. This creates a pitch–set of 10 notes (missing only the minor 2nd and the tritone). All ensemble notes double this rising scale and those sustained or left ringing at the end build up to a resultant harmony of a major 7th chord with a #9 and #11:



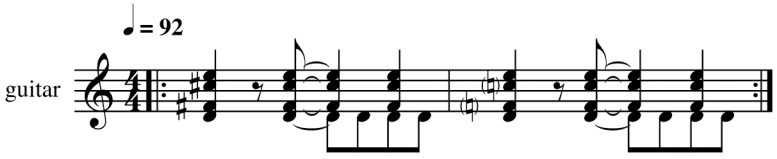
Alternatively, when this is reduced to a voicing in stacked 3rds, this may be viewed as B major superimposed over C major – two major triads a semitone apart. Coincidentally, this is virtually the same harmonic bi–tonality that Stravinsky most famously served up in 1913 in *The Rite of Spring* ('The Augurs of Spring, Dances of the young girls'):



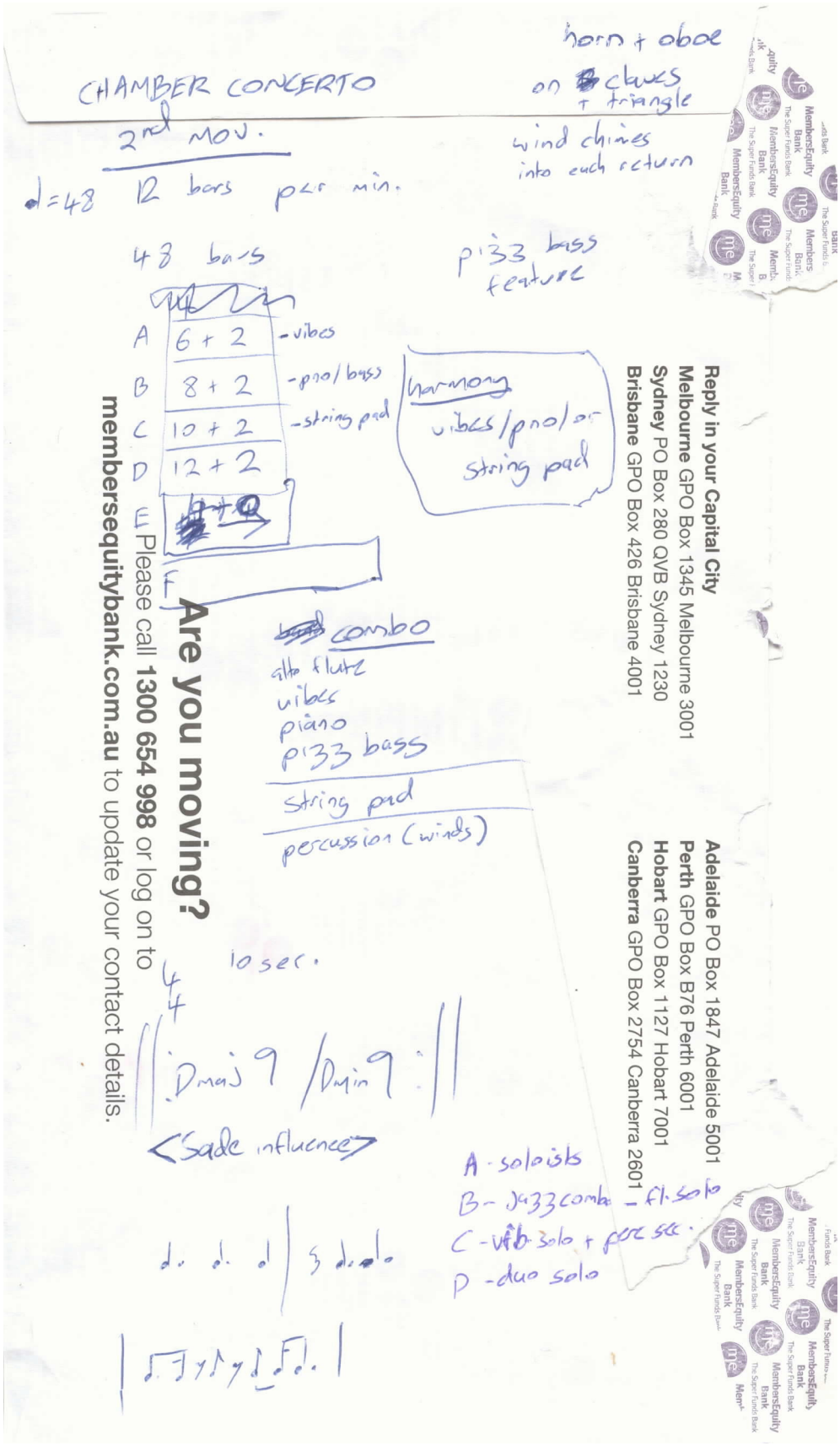
The context here is not as confronting as the more rhythmically aggressive Stravinsky example but the underlying concept of major triads superimposed a semitone apart does create a tangible (if unintended) connection.

second movement

The inspiration for the second movement came initially from a pop song, *War of the Hearts*, released by Sade (Helen Folasade Adu) on her 1985 album, *Promise*. Specifically, the harmonic progression of Stuart Matthewman's guitar that underpins that song's verse is a bar–by–bar oscillation between Dmaj9 and Dmin9:



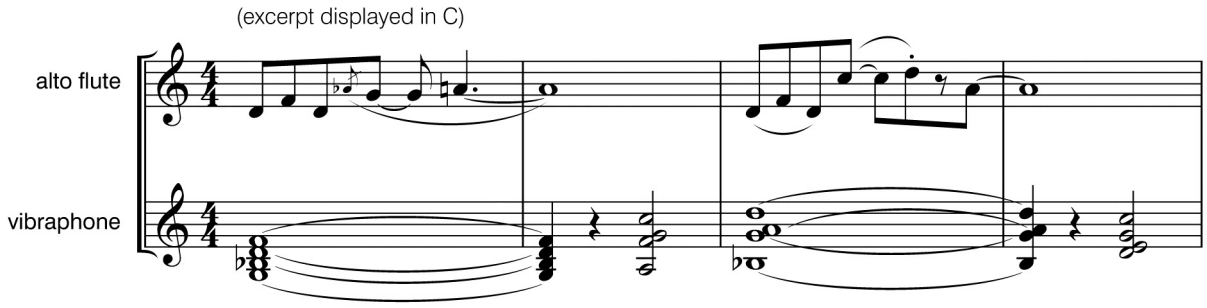
This was a deliberate influence (though I had to look back later to ascertain exactly *which* Sade song I thought I had in my head). I wanted to adopt this progression and see where it could be taken. In the second movement of the Chamber Concerto, the tempo (minim = 48) is effectively similar, though the harmony oscillates every second bar (not every bar) and therefore has a two–bar feel that is slightly different. Of most difference though is the structure of the movement, which does not follow a conventional song form but something of a more minimalist architecture. Sketches on the back of an envelope reveal some of the formative ideas:



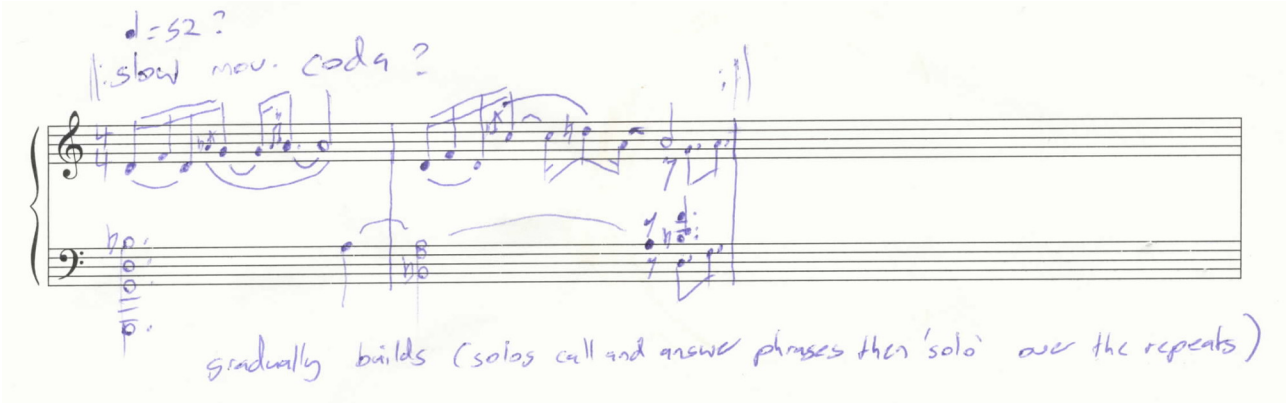
These various jottings in regard to metrical structure, harmony, syncopation and instrumentation finally took on a concrete form as follows:

rehearsal letter	maj9 / min9 (bars)	turnaround (bars)	instrumentation
A	12	4	**alto flute + vibes duo**
B	16	4	combo: a fl, vib, pno + bass
C	20	4	combo + strings and perc.
D	24	4	full ensemble
E	8		thinning out back to:
F		16	**alto flute + vibes duo**
G		16	full ensemble build–up
H		16	**alto flute + vibes duo**
i	28		full ensemble

The final structure shows the modal alternation sections are getting longer (12, 16, 20, 24) while the 'turnaround' progression remains a brief, albeit pungent, 4–bar statement.



Reference back to an early sketch (below) shows the 'turnaround' originally written in half values (semiquavers instead of quavers). It also suggests that its build–up would take the form of a coda:



The 'coda' idea was abandoned, but from letter F, the above table shows that this turnaround figure becomes the focus – effectively repeated for 48 bars (twice the length of the previous longest section of modal alternation) before returning to the alternation for 28 bars at the end. The overall form may therefore be viewed as a modified minimalist structure of gradual expansion.

In addition to the metrical structure, which consists entirely of 4–bar phrases, the soloists are featured 3 times as an isolated duo. The instrumentation structure also takes advantage of the possibility of an internal jazz combo (alto flute, vibes, piano and bass) together with extra auxiliary percussion (claves, triangle, small ride cymbal, egg shaker and wind chimes) all played by the wind section of the ensemble who put down their oboe, clarinet, horn and bassoon to briefly augment the rhythm section.

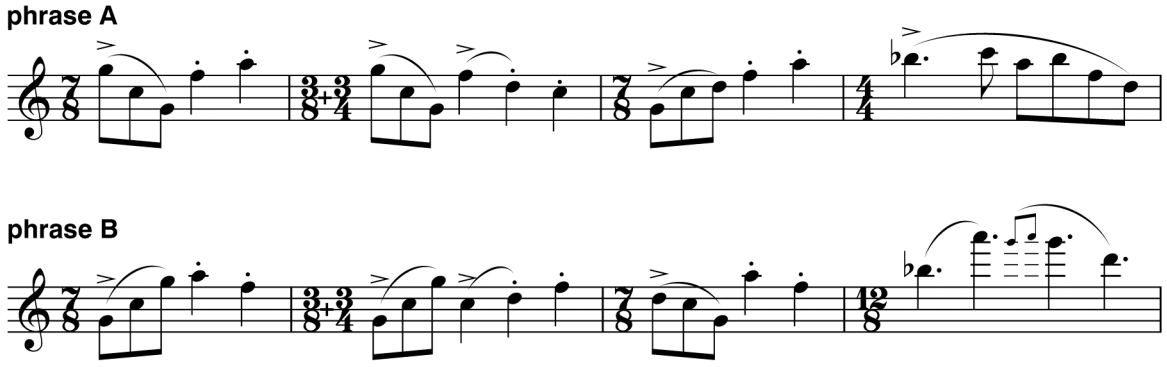
At times, the soloists may appear to be improvising (alto flute in letter B and vibraphone in letter C). The melodic invention is fully notated and deliberately shaped in terms of register and figuration, but the *feel* is improvisational. They are effectively 'solos' but the compositional process allows for advance planning and re–editing so if anything the result is perhaps closer to multiple takes of a solo in a studio environment that also allows for drop–ins. This is not 'improvisation' in the true jazz meaning of the term though it is also fair to say that the 'improvisational' nature of some of these melodic lines is not accidental.

interlude 2

This interlude is identical to interlude 1. Before the first interlude had even been written, it was intended that both interludes would be identical. It would have been easy enough to modify the second interlude based on the same material but the point of the interludes is to refresh the audience's aural concentration; and the idea of them being identical helps to create an unchanging backdrop against which the foreground movements (featuring the soloists) can be appreciated. Hopefully, the interludes are sonically engaging in their own right, but their main function is to create a transparent contrast to the more varied discourse of the 3 main movements.

third movement

The final movement of the concerto is based around rapidly changing time signatures of alternating triple and duple feel:



The harmonic rendering and accompaniment of this motive makes use of contemporary jazz harmonies, parallel shifts and open modal voicings. The motive itself has no 3rd (E or Eb) and the

7th (Bb) does not appear until the 4th bar of each phrase. This lends the music a very open feel and helps to create harmonic ambiguity. When a 3rd final appears (E natural at bar 19), it is immediately contradicted by its opposite (Eb) in the following bar. This exact same dichotomy is found at the very opening of the work in bars 1 and 2 of the first movement. In the third movement, this harmonic ambiguity continues throughout. There are moments of harmonic repose (such as the arrival at letter E) but they don't last long.

The **A** phrase translates metrically as:
7/8 (3+2+2)
3/8+3/4 (3+2+2+2)
7/8 (3+2+2)
4/4 (2+2+2+2)

The **B** phrase is identical until the last line where 4/4 is replaced with 12/8:
7/8 (3+2+2)
3/8+3/4 (3+2+2+2)
7/8 (3+2+2)
12/8 (3+3+3+3)

When put together in sequence, the 8–bar pattern reads as:
A: 7+9+7+8 **B:** 7+9+7+12 = 66 quaver beats

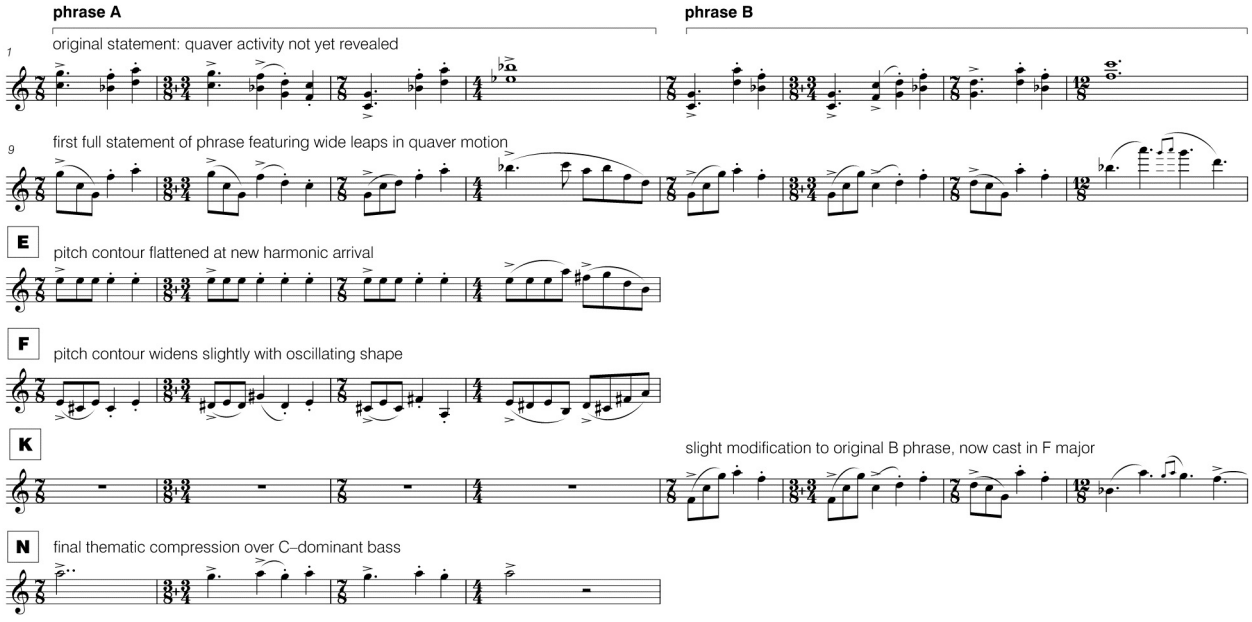
The movement is built around this 8–bar, 66–quaver cycle with minor variations along the way. In the first three bars of the **A** phrase, the triple cells articulate all 3 quavers whereas the duple cells are staccato crotchets. When the **B** phrase answers, it uses exactly the same notes but in an inverted order. The harmonic implication is left intact but the motivic contour is reversed.

The mixed metres (7 or 9 quavers) are a mixture of triple cells and duple cells. The 4/4 which ends the **A** phrase is entirely duple, whereas the 12/8 which ends the **B** phrase is entirely triple. Early on, the 12/8 is sometimes expressed as 3/2 for ease of reading when no subdivision is present. In addition to the **A** and **B** phrases are $\mathbf{A^1}$ (which adds an extra 4/4 bar to the phrase), $\mathbf{B^1}$ (which adds a 6/8 bar), $\mathbf{B^2}$ (which adds 12/8), **C** (7+9+7+7+9) and **D** (9+7+8+8). The **C** and **D** phrases only occur once at the end for additional variation and are intended to create a heightened sense of unpredictability and therefore excitement to the ending. In all, the metrical phrase structure looks like this:

rehearsal letter	phrases
	A, B, A, B
A	**A, B^1, A, B**
B	**A, B^2, A, B, A, B**
C	**A, B, A, B**
D	**A, B^2, A, B, A, B**
E	**A, B, A, B, A, B**
F	**A, B, A, B, A, B, A, B^2**
G	**A, B, A, B, B^2, B, A, A, A, A**
H	**A, A, A, A, A, B^1**
I	**A, B, A, B**
J	**A, B, A, B, A, B^2**
K	**A, B, A, B**
L	**C, A^{1,}, B, A, B**
M	**A, B**
N	**A, D**

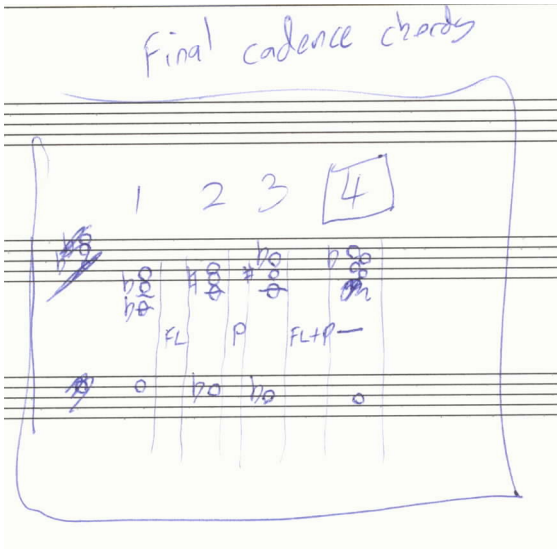
What we can observe in the first half of this structure is a relatively regular alternation of **A** and **B** phrases. The **A** phrases have a duple ending (4/4), whereas the **B** phrases have a triple ending (12/8). Half way through rehearsal letter G, however, we get a whole string of duple endings (nine in a row), before going back to more regular alternation with **C** and **D** adding variation to what is effectively a coda.

While the phrase structure shows a relatively regular alternation of **A** and **B** phrases, the pitch contour and rhythmic detail is constantly morphing into new incarnations. The musical example below picks out some of the notable transformations that occur:



There are exactly 2,612 quavers in this third movement and they are played at crotchet = 212 without rubato. Of these, 1,436 (or 55%) are part of duple cells and 1,176 (or 45%) are part of triple cells. This tells us that there is slightly more emphasis on duple feel, but in reality the mixtures are so frequent that this is probably not a noticeable majority. What is structurally noticeable are the phrase endings and extensions of these – where one cell gets repeated before the other appears. And the most prominent of these are the five instances of **B^2** where two bars of 12/8 allow for eight triple cells (3 quavers) in a row.

The overall approach to instrumentation is similar to the 1st movement – driven by antiphonal dualities (soloists/tutti, high/low, dense/sparse). At letter G the piccolo and glock return in answer to the ensemble tutti and this is also a reference to the first movement. The thematic material is different but the textural and instrumental treatment is identical. This then leads to unaccompanied statements from both soloists before spiccato octaves (C) in the string lead to a sequence of harmonically distant major triads in the ensemble midway through letter H. As the music builds toward climax, the notes F and C effectively fight for supremacy. In the end, C wins out – but as a dominant note (not a tonic):



The four–chord progression shown in this sketch reveals the following progression:

Db / F C / Eb F# (add #11) / Db Fsus (add 9) / C

In between the 4 chords are final utterances from the soloists – first separately, then together. Chords 2 and 3 are quite dissonant (even bi–tonal) in the inner parts, but the horizontal voice–leading in the outer parts is quite clear and the final arrival chord sums up the horizontal motion that precedes it. This dominant ending can be found in other works of mine but there is a particular connection here with the joyous ending to Steve Reich's *Tehillim* (1981), a work that has had a seminal influence on my own music.