

A Brush with Modernism: Painting the Stars



Flute Concerto: *Cancri 55*

Commissioned by New Music Concerts, Toronto, for Robert Aitken and the New Music Concerts Ensemble, 2010

Project in collaboration with University of Toronto

First performed 6th March 2011

Today's agenda

How it came to be the way it is

How I wrote it

What the problems were

Where the doubts came from

My resolution of the doubts

The validity of a modernist approach

Programme note

In 2007 astronomers at the University of California announced that they had found for the first time a star around which exists a quintuple planetary system: Cancri 55 is a star roughly the same size as our sun, and the fourth planet out - and the last to be discovered - appears to be in the "Goldilocks zone" at such a distance from its star so as to be neither too hot nor too cold for life.

The tremendous excitement we might feel for what might be "up there" is tempered by the knowledge that no one is likely to know anything much for centuries - if ever. However we can go there in our imaginations! In my piece I invite you to join me in a musical journey visiting these five planets.....

Cancri 55's planets (and year lengths)

1	Neptune-size	3 days
2	Jupiter-size	14.7 days
3	Saturn-size	44 days
4	4 th planet – Goldilocks!	260 days
5	4x Jupiter-size	14 years
	Red dwarf	30,000 years

Programme note

Right at the beginning we hear a single *crotale* note, a pinpoint of light which we soon discover to be concealing five distinct "soundworlds". Each planet, as we approach, we find to have its own *tímbre*, its own pulse and harmonies, its own musical idiosyncrasies.....

Listening

00.00 – 02.30

More and more detail

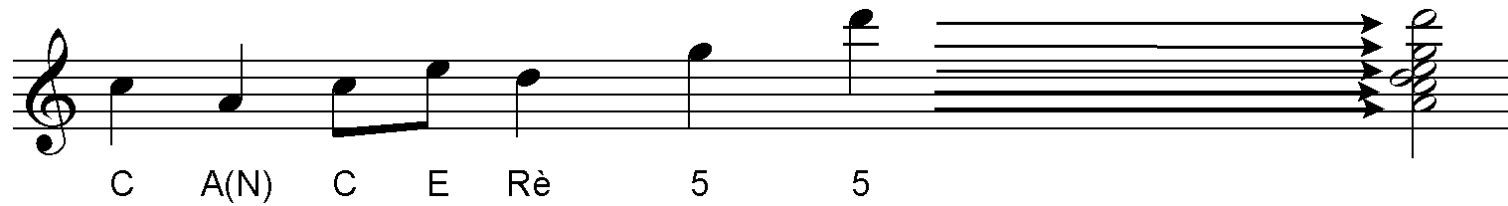
All five sound worlds manifest by the time of the flute entry

Flute reference to the chorale melody which becomes more and more important through the work.

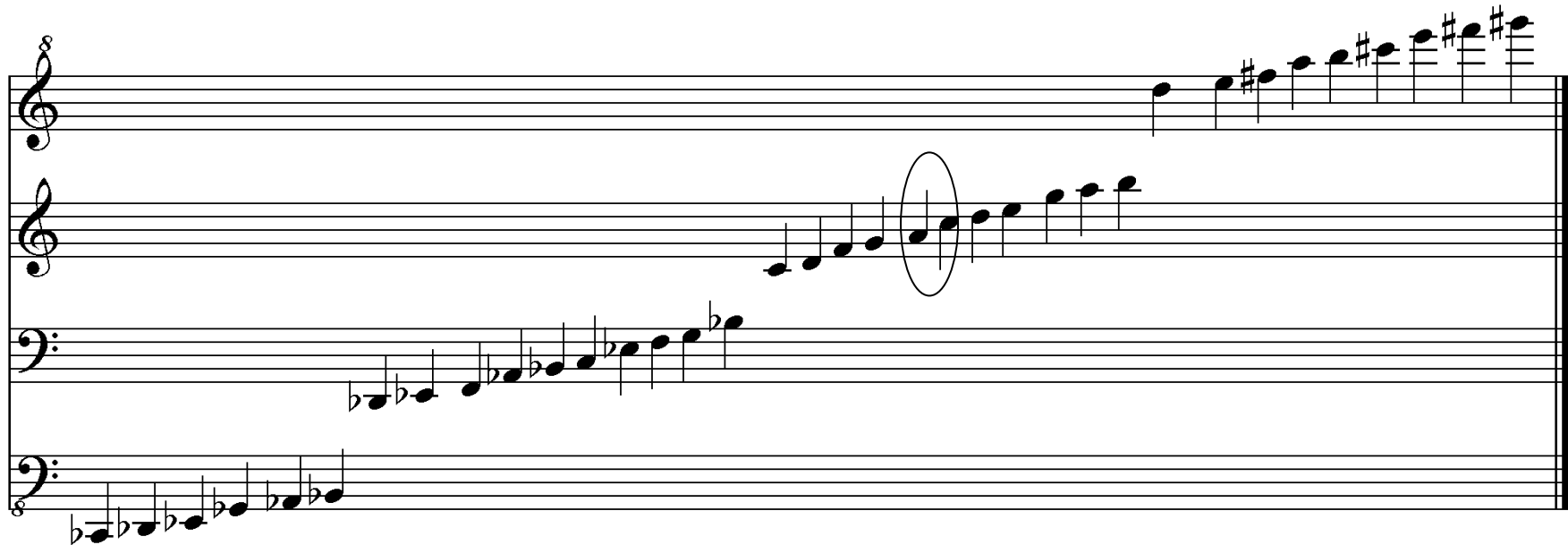
Creating five soundworlds

- Pitch - melody/harmony
- Rhythm, tempo and metre
- *Timbre*
- Musical idiosyncrasies and *motifs*

Cancri 55 cryptogram

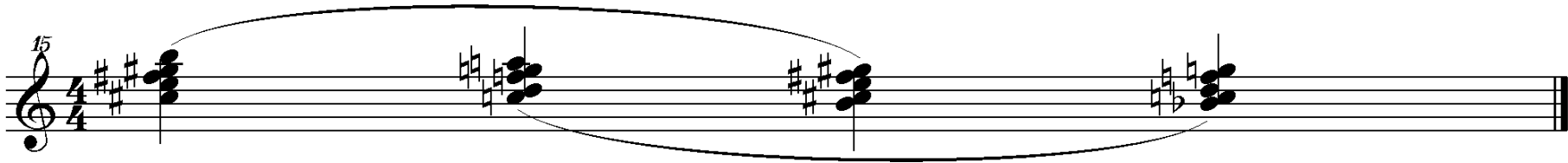


Planet 1



- Harmonic field - wholetone “triads” each separated by minor 3rds. “Core” is circled A/C.
- Scintillating textures from harp, vl.1 (opens strings and harmonics) metal percussion (glock. and vib.) Lowest note is lowest note of the harp.
- Light/dark rotation

Planet 1



- Parallel harmonic field (with contrasting *timbre*) – suggestion of rotation??.

Planet 2

The image displays a musical score for 'Planet 2' across three staves. The top staff is in treble clef with a soprano clef (8) and contains notes G4, A4, B4, C5, D5, E5, F5, G5. The middle staff is in treble clef and contains notes B3, C4, D4, E4, F4, G4, A4, B4. The bottom staff is in bass clef and contains notes G2, A2, B2, C3, D3, E3, F3, G3. A circled 'Core' chord is shown in the middle staff, consisting of notes G4, A4, and B4.

- Harmonic field - augmented triads each separated by minor 3rds. “Core” is circled A/C.

Planet 3

The image displays a musical score for 'Planet 3' consisting of four staves. The top two staves are in treble clef, and the bottom two are in bass clef. The music is written in a key with one sharp (F#) and a common time signature. The score illustrates a harmonic field of triads of perfect 4ths, each separated by a minor 3rd. A specific triad in the second staff is circled and labeled as the 'Core' A/C.

- Harmonic field – triads of perfect 4ths, each separated by minor 3rds.
“Core” is circled A/C.

Microtones sneak in to enrich the harmonies in this h.f. and in the parallel h.f. too.....

Planet 3

The image displays a musical score for 'Planet 3' across three systems of staves. Each system consists of a treble clef staff and two bass clef staves. The notation includes various notes, accidentals, and arrows indicating relationships between notes across different staves. The first system shows a sequence of notes in the bass clef staves (F, Bb, D#, F) and corresponding notes in the treble clef staff (C, E, G, B). The second system continues this sequence with notes like G, B, D, F in the bass clef and F, A, C, E in the treble clef. The third system shows notes like F, A, C, E in the bass clef and G, B, D, F in the treble clef. Arrows connect notes between staves, highlighting the intervallic relationships and the inclusion of quartertones (e.g., Bb, D#, F, G, A, C, E).

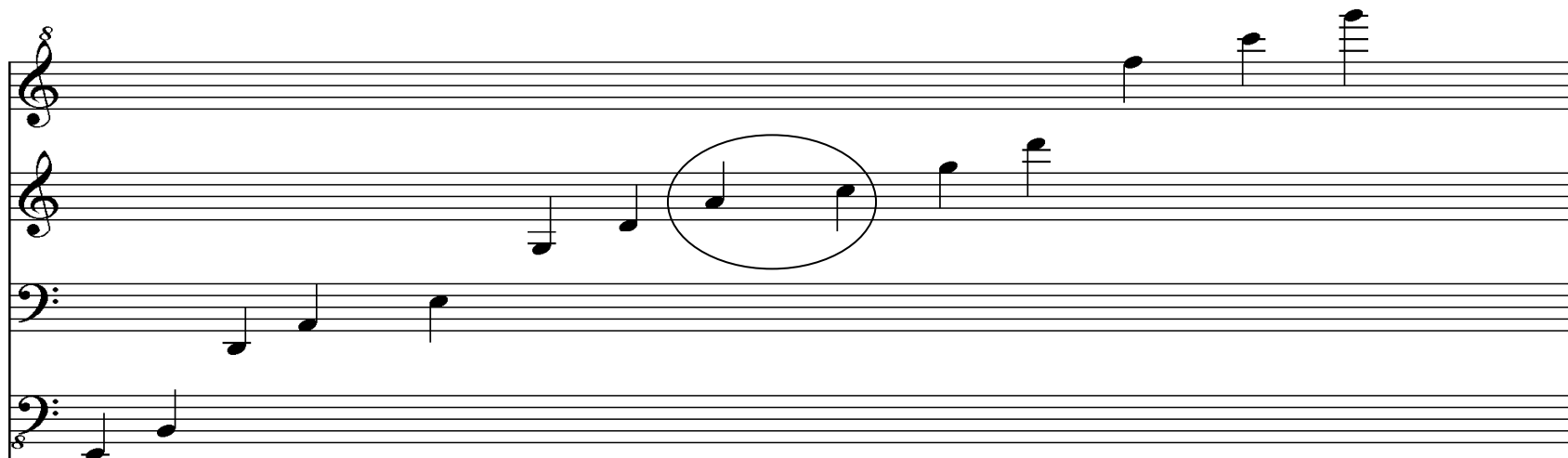
- Parallel harmonic field – incorporates quartertones midway between each of the perfect fourths ($5 \text{ semitones} \div 2 = 5 \text{ quartertones}$)

03:10 Planet 3 music starts

03:21 Planet 1 superimposed (glockenspiel chords
plus string harmonics)

03:40 Planet 2 bursts in

Planet 4



- Harmonic field – groups of 3 perfect fifths each separated by minor 3rds. “Core” is circled A/C.

- Parallel harmonic field at the other quartertonal level – oscillation between the two

HOWEVER the notes took on a life* of their own - much more harmonic subtlety and development here than in other soundworlds

*note that word!

Planet 5

The image displays a musical score for a piece titled "Planet 5". The score is written in 4/4 time and consists of three systems of staves. The first system includes a treble clef staff with a circled "8" and a bass clef staff. The second system includes a treble clef staff with a circled "4" and a bass clef staff. The music features a complex harmonic structure with many notes, including sharp and flat accidentals. Numerous upward-pointing arrows are placed above the notes in the treble clef staves, indicating specific intervals or melodic lines. The notation is dense and intricate, typical of a contemporary or experimental composition.

- Harmonic field – major 7ths separated by minor third “core” (A/C again)
- Colour enhanced by tight quartertone groups – cold, remote, acerbic

03:57 Planet 4 music

04:14 Planet 5 appears for the first time
oboe melody, double bass, bassoon

05:25 Planet 2 glimpsed briefly, then Planet 3

Programme note

We do not simply fly from one soundworld to the other. Often planets will eclipse each other, and sometimes we are overwhelmed with a richness of aural vision as we go through the awesome complexity of a planetary conjunction. We find that some of the planets are busy little places – like the earth – whilst on others we find maybe beautiful and unusual landscapes but little else....

Pulses

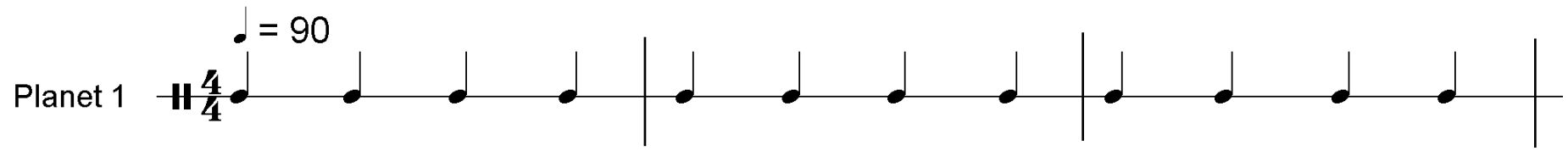
Planet 1 - crotchet = 90

Planet 2 - crotchet = 60

Planet 3 - quaver = 225

Planet 4 - crotchet = 150

Planet 5 - crotchet = 112(.5)



Planet 1 $\frac{4}{4}$ $\text{♩} = 90$

Planet 2 $\frac{5}{4}$ $\text{♩} = 60$ etc.

The diagram shows two horizontal lines representing orbits. Planet 1's orbit is marked with a 4/4 time signature and a quarter note symbol labeled '= 90'. Planet 2's orbit is marked with a 5/4 time signature and a quarter note symbol labeled '= 60'. Vertical tick marks on both lines indicate the positions of the planets at regular intervals. Planet 1 has 12 tick marks, and Planet 2 has 10 tick marks. The orbits are vertically offset, with Planet 1's orbit above Planet 2's. The text 'etc.' is placed at the end of Planet 2's orbit.

Planet 1 $\text{♩} = 90$
 $\text{H} \frac{4}{4}$

Planet 2 $\text{♩} = 60$
 $\text{H} \frac{5}{4}$ etc.

Planet 3 $\text{♩} = 225$
 $\text{H} \frac{5}{8}$

The image shows three musical staves for 'Planet 1', 'Planet 2', and 'Planet 3'. Planet 1 has a 4/4 time signature and a frequency of 90, with a sequence of 12 quarter notes. Planet 2 has a 5/4 time signature and a frequency of 60, with a sequence of 10 quarter notes followed by 'etc.'. Planet 3 has a 5/8 time signature and a frequency of 225, with a sequence of 25 eighth notes grouped into six measures of five notes each.

Planet 1 $\text{♩} = 90$
 $\text{H} \frac{4}{4}$

Planet 2 $\text{♩} = 60$
 $\text{H} \frac{5}{4}$ etc.

Planet 3 $\text{♩} = 225$
 $\text{H} \frac{5}{8}$

Planet 4 $\text{♩} = 150$
 $\text{H} \frac{5}{4}$

The image displays four musical staves, each representing a planet. Planet 1 is in 4/4 time with a frequency of 90. Planet 2 is in 5/4 time with a frequency of 60. Planet 3 is in 5/8 time with a frequency of 225. Planet 4 is in 5/4 time with a frequency of 150. Each staff shows a sequence of notes with stems, and vertical bar lines indicate the end of measures. The notes are positioned on a horizontal line, with stems pointing upwards. The frequency values are indicated by a quarter note symbol followed by an equals sign and the number. The time signatures are indicated by a double bar line followed by the numerator and denominator. The text 'etc.' is placed at the end of the Planet 2 staff.

Planet 1 $\text{♩} = 90$
 4/4

Planet 2 $\text{♩} = 60$
 5/4 etc.

Planet 3 $\text{♩} = 225$
 5/8

Planet 4 $\text{♩} = 150$
 5/4

Planet 5 $\text{♩} = 112.5$
 5/4

The image displays five musical staves, each representing a planet. Each staff begins with a treble clef, a time signature, and a frequency indicator. Planet 1 has a 4/4 time signature and a frequency of 90, with notes every 4 units. Planet 2 has a 5/4 time signature and a frequency of 60, with notes every 5 units. Planet 3 has a 5/8 time signature and a frequency of 225, with notes every 2 units. Planet 4 has a 5/4 time signature and a frequency of 150, with notes every 4 units. Planet 5 has a 5/4 time signature and a frequency of 112.5, with notes every 4 units. The notes are represented by stems with dots, and vertical bar lines indicate the end of measures. The staves are grouped by a large left-facing curly bracket.

Planet 1 $\text{♩} = 90$

Planet 2

Planet 3

Planet 4

Planet 5

Detailed description: The image shows a musical score for five planets, labeled Planet 1 through Planet 5, all in a 12/4 time signature. A tempo marking at the top indicates that a quarter note equals 90 beats per minute. Planet 1 consists of a single staff with a steady sequence of 12 quarter notes. Planet 2 consists of 8 groups of eighth notes, each group containing 6 notes. The ratios between the groups are labeled as 5:6, 5, 5, 5, 5, 5, 5, and 5. Planet 3 consists of 6 groups of eighth notes, each group containing 4 notes. The ratios between the groups are labeled as 5:4, 5:4, 5:4, 5:4, 5:4, and 5:4. Planet 4 consists of 4 groups of quarter notes, each group containing 3 notes. The ratios between the groups are labeled as 5:3, 5:3, 5:3, and 5:3. Planet 5 consists of 3 groups of quarter notes, each group containing 4 notes. The ratios between the groups are labeled as 5:4, 5:4, and 5:4.

Timbre

Planet 1 – sparkling - metal percussion, harp, string harmonics, brass

Planet 2 – strong, colourful - woodwind, brass

Planet 3 – staccato/pizzicato strings, BD, harp, tuned percussion

Planet 4 – “warm” sounds - clarinets, arco strings, horn, trombone

Planet 5 – all instruments used “coldly”, untuned metal percussion

05:41 end of this appearance of Planet 3 (flute contributing)

06:34 Planet 4 – warmth

07:29 Planet 1 superimposed

Stop at 07:40

Writing the monster

Rhythmic complexity

Textural complexity

Complexity of rhythm and texture combined with extended structure - how to keep the thing cohesive and coherent!?

Graphic planning – in itself helping me to imagine sound

A bar a day

08:40 Flute playing “Bach” against a backdrop of Planet 4 music

09:16 Planet 1 added

09:34 Planet 2 added

09:35 Planet 5 added

Conjunction

10:14 Planet 2 added

Drifting apart – flute and double bass duet

Cadenza

Writing the monster

Rhythmic complexity

Textural complexity

Complexity of rhythm and texture combined with extended structure - how to keep the thing cohesive and coherent!?

Graphic planning – in itself helping me to imagine sound

A bar a day

Instrumental complexities

Integrating the flute

Programme note

The flautist – in my imagination the traveller – looks on, takes part in the planetary music, and even sets up a dialogue with musical fragments (life forms?) it finds – listen to the duet with the double bass ten minutes into the work. Throughout its musings, never far away is the melody of Samuel Rudigast's joyful chorale *Was Gott thut, das ist wohlgetan* (What God has done is well done). This pervades the harmonies of the planets; and the flute "tries out" the melody in the alien modes of the five soundworlds, before it bursts out in a quotation of one of Bach's own settings (from Cantata 100).

229

gliss. 3/4. $\frac{1}{4}$

gliss. $\frac{1}{4}$

233

Much slower ($\text{♩} = c.60$)

gliss. 1/4

gliss. 3/4

f

$\frac{1}{4}$ $\frac{3}{4}$ $\frac{3}{4}$ $\frac{3}{4}$

pp *lontano, misterioso, oscuro*

237

pp *lontano, misterioso, oscuro*

pp

accel...

239

Back to speed ($\text{♩} = 225$)

$\frac{3}{4}$ $\frac{3}{4}$

ffs

14.02 End of cadenza

Adding Planet 3, Planet 1, Planet 2

Adding Planet 4 (15:27)

Bach quotation

Melting away

19:05

Programme note

As a small boy, I remember wondering whether, if there are intelligent beings on other planets, there might also be music elsewhere. Is there another Bach in the universe? And if so does his music have the same wholeness and strength? Does it rejoice in the same God?

Perhaps these are idle musings for a grown man. Yet consider the words of Gaston Bachelard: "In a flash the stars break our solitude..... Distance is abolished. An infinity of communion erases an infinity of size. The world of stars touches our soul".

Problems and doubts

- Initial reaction of soloist and orchestra
- Extremes of pitch/technical capabilities asked for
- Rhythmic complexities – inevitably long bars
- Reaction of media
- Self-doubts – “did it work?”
- Expecting too much from a piece of music?
- Is there another way I might have written the piece?
 - Polytonality?
 - Antiphonal or 8-channel – projecting the sound?
- Is the concept beyond the reach of instrumental music?

Resolving doubts

- Enthusiasm for the work from Jonathan Harvey
- Audience reaction
- Finding the courage of my convictions...

What is music?

- Music as commodity
- Music as an enhancement of our consciousness
- Music as devotion
- Music as something that sounds nice
- Music as a questing for a new beauty
- Music as a reflection of who we are