Having fun with mathematics and music

Review

CANONIC OFFERINGS
Yong Siew Toh Conservatory Concert Hall/Last Saturday

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Canonic Offerings was a concert and part of Mathe-
musical Conversations, an international workshop
on music and mathematics organised by the National
University of Singapore’s Institute of Mathematical
Sciences and Yong Siew Toh Conservatory.

For centuries, mankind has pondered on and cele-
brated the intimate relationship between the two sub-
jects and this concert provided a brief glimpse of
what happens when both are united in harmony and
time.

Music is essentially a sequence of notes, frequen-
cies and silences conducted over the passage of time.
It is the variables of these parameters which give
music its meaning, making it interesting for listen-
ers, the end-users of seemingly complex formulae.

The canon, with notes played over a repeated
rhythmic pattern of fixed durations, is one of the
foundations of musical form.

Anyone who has sung Three Blind Mice or Row,
Row Your Boat will understand how it works.

American composer Clifton Calender’s Canonic
Offerings presented a series of 10 short canons each
of different time signatures for string quartet, which
was an ideal medium as the four voices could operate
in unison or independently while staying perfectly in
time.

Being fiendishly difficult to coordinate was part of
the equation and the members of T’ang Quartet were
aided with ear pieces which provided the beats that
sometimes accelerated wildly or slowed down to sta-
sis as called for in the score.

Although mathematical in conception, the tonal
idiom and skilful employment of counterpoint made
it a quite pleasant listen.

The foursome were joined by Australian pianist
Jacob Abela for the world premiere of American
Dmitri Tymoczko’s S Sensation Something, which
took on a more visceral approach to the subject.

The slow opening with two violins gradually
joined by other voices was canonic – it almost resem-
bled Pachelbel’s ubiquitous Canon but soon took on
a life of its own by shifting and playing around with
the rules.

Its fast central section ambled from lively to vio-
 lent but the underlying pulse was never lost in the
process, winding down for a fairy-tale world of glim-
mering textures and a quiet close.

Was there a programme or story to the music’s
fantastical imagery? This was where mathematics
could be made to resound with palpably human emo-
tions.

Johann Sebastian Bach might be considered the
grandfather of mathematics in music. His Goldberg
Variations, originally composed for one keyboard,
comprised an Aria, 30 variations (on the left hand
sequence of the theme rather than its melody) and
bookended by a reprise of the Aria. Every third varia-
tion is a canon based on different intervals.

Australian don Stephen Emmerson’s transcription
of the variations spread the work between two per-
formers on two pianos in a neat division of labour.
With each pianist having less to play, there was
scope for enhancing the harmonies and discreetly
adding counter-melodies.

The basic architecture being kept intact, there
was little fear of blowing the work out of proportion
in this fun experiment.

Pianists Emmerson and Bernard Lanskey, head of
the conservatory, clearly enjoyed their tasks at hand
and there was much humour in their interplay and
exchanges in leading the melodies. Even if some of
the variations did not go neatly as planned, it was
the keen musicianship that won the day.

By Variation No. 30, a cheeky Quodlibet that
mashes up trite Teutonic tunes of the day, and the
Aria’s return, a breezy voyage of harmonic explora-
tion had transpired.

Cerebral or otherwise, it was not a bad way to
spend an evening with a loved one on Valentine’s
Day.