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Acoustic Composition 4

Natural Causality (2006/09)

Phenomenon Explored

Elements of Analysis and Synopsis

First Movement

If one looks at the first page of the score, it seems the opening middle C on the piano creates a pitch-wave that spreads through the ensemble. In theory, the actual cause of this event is the middle C in bar 4 (piano). This produces a multi-timbral chromatic ripple:

The image shows a musical score for the first movement of 'Natural Causality'. The score is written for a chamber ensemble and includes the following parts: Clarinet (Cl.), Tub. B., Mar. (Maracas), Vib. (Vibraphone), Pno. (Piano), Hp. (Harp), Vln. I (Violin I), and Vln. II (Violin II). The score is in 4/4 time and begins at bar 4. The piano part features a middle C in bar 4, which is the starting point of a chromatic ripple. The other instruments follow with various rhythmic patterns and dynamics. The dynamics range from *p* (piano) to *f* (forte). The score includes various musical notations such as slurs, accents, and dynamic markings.

This intervallic ostinato was composed from Factor 1 of the method: horizontal semi-quavers and vertical semi-tones around middle C. This is restated with some alterations in bar 8 to conclude the event symmetrically. It is a compositional causality loop, a recurring cause and effect, which appear in various guises throughout the piece.

Figure C marks the start of Factor 2: event 1 (bars 22-39). This is distinguished by another multi-timbral intervallic ostinato, this time in the form of a repeating whole-tone ripple that shapes the entire passage: vertical whole-tones and horizontal quavers around the pivot note of middle C:

C ♩ = 88 The nature of probability... rit.

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Perc. 1 *p* *ppp*

Perc. 2 *pp*

Perc. 3 *p* *ppp*

Tub. B. *p*

Mar. *mp* *pp*

Vib. *poco ped.* *mp* *pp*

Pno. *mp*

Hp. *mp* *p*

C ♩ = 88 The nature of probability... rit.

Vln. II *pizz.* *mf* *pp*

Vla. *arco* *p* *a niente*

Vc. *pizz.* *mf* *pp*

With a visual element inspired by longitudinal waves, the woodwind and primarily the tenor saxophone introduce and control the material during Factor 2, event 2 (bars 65-97). As shown in the following examples, the parts are played both in counterpoint and in harmony with each other.

[♩ = 76] **poco accel.**

65

Fl.

Cl.

T.Sax

mf

mf

mf

I [♩ = 96] **The big mix: Probability of hybrid anomalies... rit.** [♩ = 63]

75

Fl.

Cl.

T.Sax

f

mp

mf

p

PPP < p > PPP

f

mp

mf

p

PPP < p > PPP

f

mp

mf

p

During this passage, a pizzicato contrabass (not shown in the example) provides an individual voice until it rejoins the collective ensemble again at Figure I in the score.

The combination of whole-tone and semi-tone writing from Figure K onwards unites the two source materials (interval types) of this first movement and their combination (resulting in a minor third interval) also provides an ideal transition into the Factor 3 material (minor third interval) upon which the second movement is composed.

There is another intervallic ostinato at Figure P, this time a diminished ripple: vertical minor thirds and horizontal dotted-quavers around middle C. This acts as a transition into Factor three, event 2. An altered repetition of this material can be seen at Figure R (See Score PDF), again serving as a transition between 'events':

P ♩ = 88 A call to order; a new topic is introduced... poco rit. [♩ = 76] Q ♩ = 88

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Fl. *mp* *pp*

Cl. *mp* *pp*

T.Sax *mp* *pp*

Tub. B. *p* *pp*

Mar. *mp* *p*

Vib. *Ed. p*

Pno. *mp*

Hp. *mf* *p*

P ♩ = 88 A call to order; a new topic is introduced... poco rit. [♩ = 76] Q ♩ = 88

Vln.I *mp* *pp*

Vln.II *mf* *p*

Vc. *mf* *p*

Cb. *mf* *p*

The 1st violin makes the opening statement of Factor three; event 3 at Figure S. Bar 154 is repeated in Bar 157, where it reconnects to material repeated from bar 156:

S ♩ = 88

154 *p* *mp*

159 *mf* *f*

In this way, the initial statement is expanded and elaborated into a long exploration and development section, gathering momentum with the rest of the ensemble towards textures of crescendo, interspersed with passages of melodic interlude (See Form Chart).

The following example shows the primary subject for the ensuing development section played by the 1st violin, whilst viola and cello play an overlapping phrase, which acts as the 2nd subject:

T ♩ = 88 With increasing intensity and belief...

163 *mf* *ff*

Vln. II *pp* *mp* *a niente*

Vla. *mf* *f*

Vc. *mf* *f*

Cb. *f* *ff* pizz.

Synopsis in Conclusion

After the initial semi-tone chromatic sections, the first movement generally has the lighter character of the two. The music retains a sense of cohesion throughout the sonic journey, but one can aurally distinguish the various sections of form as the timbres and interval characteristics change with each factor and/or event within the preconceived method.

The second movement has a more continuous sense of linear pitch contour and vertical harmonic progression, with clear evolutions of musical line and an extended development section. The minor third interval (and the flexible variables conceived within the method) dominates the material and provides the serious character most often associated with final movements.

The linear writing and subsequent interaction through mirror inversions; reverse rhythms, canon and counterpoint within the ensemble can be viewed as a continuation of the style that emerged during composition for *Quartet of Daydreams* for string quartet. When one considers the additional concerns raised by the need to combine the variable timbres of the ensemble, this score is not only a continuation, but also a clear evolution of this style.

Contact:

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