

Nicholas Peters

(student ID: 0622483)

Standard Deviation

For 8 Voices and 2 Sine tones

(2008)

Standard Deviation

A composition as part of a portfolio submitted for the degree of Doctor of Philosophy

By

Nicholas Rayfield Peters

School of Arts, Brunel University

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Performance Notes

Duration: c.21 minutes

• This comma represents a 3 second silence (breath) between each bar.

 Wide vibrato

 Narrow vibrato

non vib. Sing with no vibrato throughout, unless marked otherwise.

• Closed mouth

◦ Half open mouth

◦ → • Quick continuous transition from half open to closed mouth.

Text

i knEE

a ARm

u bOOt

di DIvide

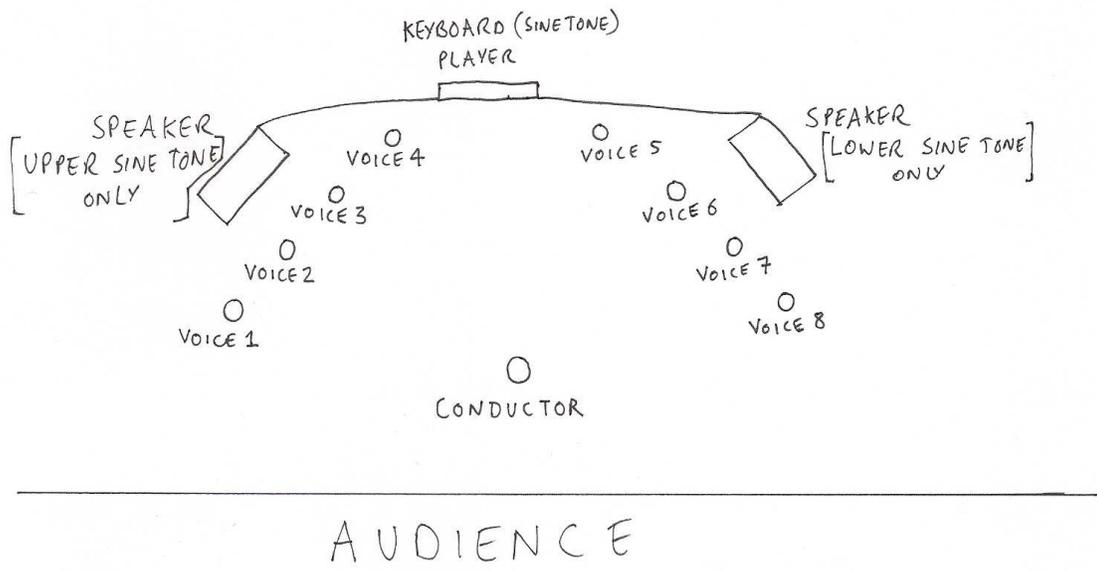
ru ROOf

The sine tones are produced through a midi keyboard connected to a laptop and played live by a performer. All of the performers should be positioned in the performance space according to the diagram on the opposite page.

Nicholas Peters, April 2008

Programme Text

Standard Deviation presents an interaction within a small pitch range between eight voices and two sine tones. The singers only ever have their mouths half open or fully closed, which combines with the different phonetic sounds to explore subtle alterations to the shape and size of the cavity in the mouth.



Standard Deviation

Nicholas Peters

$\text{♩} = 58$

The musical score is arranged in eight staves, each with a different clef and time signature. The time signatures are 19/16, 9/16, 7/16, 11/16, and 9/16, which are repeated in a sequence. The notes are marked with various dynamics and articulations:

- Voice 1:** Treble clef, 19/16, 9/16, 7/16, 11/16, 9/16. Dynamics: *pp* non vib., *ppp* < *pp*.
- Voice 2:** Treble clef, 19/16, 9/16, 7/16, 11/16, 9/16. Dynamics: *pp* narrow vib., non vib.
- Voice 3:** Treble clef, 19/16, 9/16, 7/16, 11/16, 9/16. Dynamics: *pp* non vib., *ppp*, *pp*, *ppp*.
- Voice 4:** Treble clef, 19/16, 9/16, 7/16, 11/16, 9/16. Dynamics: *ppp* non vib., *pp*.
- Voice 5:** Treble clef, 19/16, 9/16, 7/16, 11/16, 9/16. Dynamics: *ppp* non vib., wide vib., *pp*, *ppp* < *pp* narrow vib.
- Voice 6:** Treble clef, 19/16, 9/16, 7/16, 11/16, 9/16. Dynamics: *pp* narrow vib., wide vib., non vib.
- Voice 7:** Bass clef, 19/16, 9/16, 7/16, 11/16, 9/16. Dynamics: *pp* non vib.
- Voice 8:** Bass clef, 19/16, 9/16, 7/16, 11/16, 9/16. Dynamics: *pp* non vib., narrow vib.
- Sine Tones:** Treble clef, 19/16, 9/16, 7/16, 11/16, 9/16. Dynamics: *pp*.

5

Voice 1 *pp* 4:3 *ppp* *pp*
i u a u

Voice 2 *pp*
i u a u

Voice 3 *pp* narrow vib. 4:3
i u a u

Voice 4 *ppp* *pp* narrow vib. wide vib.
i u a u

Voice 5 *ppp* *pp* *ppp* *pp* *ppp* *pp*
i u a u

Voice 6 *pp*
i u a u

Voice 7 *pp* wide vib.
i u a u

Voice 8 *pp* 4:3
i u a u

Sine Tones

The score consists of nine staves. The first eight are vocal parts (Voice 1-8) and the ninth is for Sine Tones. Each vocal part has a treble clef (except for Voice 7 which has a bass clef). The time signature is 9/16, with changes to 7/16 and 10/16. The lyrics are 'i u a u' for each voice. Performance markings include dynamics (*pp*, *ppp*), vibrato types (narrow vib., wide vib.), and a 4:3 ratio. The Sine Tones staff uses a treble clef and contains sustained notes.

This musical score is for eight voices and sine tones. The lyrics are 'i ru i u'. The score includes dynamic markings such as *pp* and *ppp*, and performance instructions like 'wide vib.'. The piece is in 11/16 time and consists of 16 measures. The voices are arranged as follows:

- Voice 1:** Treble clef, lyrics 'i ru i u'. Dynamics: *pp* (measures 1-2), *ppp* (measures 3-4). Includes a 4:3 triplet in measure 1 and a 'wide vib.' instruction in measure 3.
- Voice 2:** Treble clef, lyrics 'i ru i u'. Dynamics: *pp* (measures 1-2), *ppp* (measures 3-4).
- Voice 3:** Treble clef, lyrics 'i ru i u'. Dynamics: *pp* (measures 1-2), *ppp* (measures 3-4). Includes a 'wide vib.' instruction in measure 3.
- Voice 4:** Treble clef, lyrics 'i ru i u'. Dynamics: *ppp* (measures 1-2), *pp* (measures 3-4). Includes a 3:2 triplet in measure 4.
- Voice 5:** Treble clef, lyrics 'i ru i u'. Dynamics: *ppp* (measures 1-2), *pp* (measures 3-4).
- Voice 6:** Treble clef, lyrics 'i ru i u'. Dynamics: *pp* (measures 1-2), *ppp* (measures 3-4).
- Voice 7:** Bass clef, lyrics 'i ru i u'. Dynamics: *pp* (measures 1-2), *ppp* (measures 3-4).
- Voice 8:** Bass clef, lyrics 'i ru i u'. Dynamics: *pp* (measures 1-2), *ppp* (measures 3-4). Includes 3:2 and 4:3 triplets in measures 1 and 3.
- Sine Tones:** Treble clef, lyrics 'i ru i u'. Dynamics: *pp* (measures 1-2), *ppp* (measures 3-4).

13 *pp* di ru i a

13 *pp* di ru i a *wide vib.*

13 *pp* di ru i a *ppp*

13 *pp* di ru i a *ppp* *pp*

13 *pp* di ru i a *ppp*

13 *pp* di ru i a *ppp*

13 *pp* di ru i a *ppp*

13 *ppp* di ru i a *pp*

Sine Tones

17

Voice 1 *pp* u di ru di

Voice 2 *pp* u di ru di

Voice 3 *pp* 4:32 u di ru di *ppp*

Voice 4 *ppp* *pp* *ppp* *pp* *ppp* u di ru di *pp*

Voice 5 *ppp* *pp* u di ru di *pp*

Voice 6 *pp* u di ru di

Voice 7 *pp* narrow vib. u di ru di

Voice 8 *pp* *ppp* *pp* u di ru di

Sine Tones

21

Voice 1 *ppp* *pp* u i a i

Voice 2 *pp* u i a i

Voice 3 *pp* u i a i

Voice 4 *pp* *ppp* *pp* *ppp* u i a i

Voice 5 *pp* *ppp* *pp* *ppp* u i a i

Voice 6 *pp* u i a i

Voice 7 *pp* u i a i

Voice 8 *pp* u i a i

Sine Tones

25

Voice 1 *pp* u di i ru

Voice 2 *pp* u di i ru

Voice 3 *pp* u di *ppp* i ru

Voice 4 *ppp* u di *ppp* i ru

Voice 5 *pp* u di *ppp* i ru

Voice 6 *pp* u di i ru

Voice 7 *pp* u di i ru

Voice 8 *pp* u di *ppp* i ru

Sine Tones

29 *pp* , , , ,

Voice 1 *pp* a u i ru

Voice 2 *pp* a u i ru

Voice 3 *ppp* *pp* a u i ru

Voice 4 *pp* *ppp* *pp* *ppp* a u i ru

Voice 5 *ppp* *pp* *ppp* *pp* *ppp* a u i ru

Voice 6 *pp* a u i ru

Voice 7 *pp* a u i ru

Voice 8 *pp* a u i ru

Sine Tones

33

Voice 1 *pp* , , *ppp* *pp* ,

di u di u

Voice 2 *pp* , , , ,

di u di u

Voice 3 *pp* , *4:3* , *4:3* ,

di u di u

Voice 4 *ppp* *pp* , *ppp* *pp* , , ,

di u di u

Voice 5 *pp* , *ppp* *pp* , , *ppp* *pp* ,

di u di u

Voice 6 *pp* , , , ,

di u di u

Voice 7 *pp* , , , ,

di u di u

Voice 8 *ppp* *pp* , *ppp* , *pp* ,

di u di u

Sine Tones

37

Voice 1 *pp* 4:3
i ru di a

Voice 2 *pp*
i ru di a

Voice 3 *pp* *ppp*
i ru di a

Voice 4 *ppp* *pp* 4:3
i ru di a

Voice 5 *ppp* *pp* *ppp* *pp*
i ru di a

Voice 6 *pp*
i ru di a

Voice 7 *pp*
i ru di a

Voice 8 *pp* 3:2 4:3
i ru di a

Sine Tones

41

Voice 1 *pp* *4:3* *ppp* *pp*
i a ru u

Voice 2 *pp*
i a ru u

Voice 3 *pp* *4:3*
i a ru u

Voice 4 *ppp* *pp* *ppp* *pp*
i a ru u

Voice 5 *ppp* *pp* *ppp* *pp*
i a ru u

Voice 6 *pp* *ppp* *pp*
i a ru u

Voice 7 *pp*
i a ru u

Voice 8 *pp* *4:3* *4:3*
i a ru u

Sine Tones

45

Voice 1 *pp* i di ru di

Voice 2 *pp* i di ru di

Voice 3 *pp* i di ru di *ppp*

Voice 4 *ppp* i di ru di *pp* *ppp* *pp*

Voice 5 *ppp* i di ru di

Voice 6 *pp* i di ru di

Voice 7 *pp* i di ru di

Voice 8 *pp* i di ru di *ppp* *pp*

Sine Tones

Detailed description of the musical score: The score is for a multi-voice setting. It begins at measure 45. The time signature is 7/16. The key signature has one flat (B-flat). The lyrics are 'i di ru di'. The dynamics range from *pp* (pianissimo) to *ppp* (pianississimo). There are various ornaments and trills. The sine tones part at the bottom consists of a series of chords and single notes in the same time signature and key signature.

49 *pp* 4:3

Voice 1
i u ru a

Voice 2
pp
i u ru a

Voice 3
pp
i u ru a

Voice 4
ppp *pp* *ppp* *pp*
i u ru a

Voice 5
ppp *pp* *ppp* *pp*
i u ru a

Voice 6
pp
i u ru a

Voice 7
pp
i u ru a

Voice 8
pp 4:3
i u ru a

Sine Tones

53

Voice 1 *ppp* *pp* u ru di a

Voice 2 *pp* u ru di a

Voice 3 *pp* *4:3* u ru *ppp* di a

Voice 4 *pp* *ppp* *pp* u ru di a

Voice 5 *pp* *ppp* *pp* u ru di a

Voice 6 *pp* u ru di a

Voice 7 *pp* u ru di a

Voice 8 *pp* u ru di a

Sine Tones

57

Voice 1 *ppp* *pp* *4:3* u i di a

Voice 2 *pp* u i di a

Voice 3 *pp* *4:3* u i di a

Voice 4 *pp* *ppp* *pp* u i di a

Voice 5 *ppp* *pp* *ppp* *pp* *ppp* *pp* u i di a

Voice 6 *pp* u i di a

Voice 7 *pp* u i di a

Voice 8 *pp* *ppp* *4:3* *ppp* *pp* u i di a

Sine Tones

61

Voice 1 *pp* ru di i a

Voice 2 *pp* ru di i a

Voice 3 *pp* ru di i a

Voice 4 *ppp* *pp* *ppp* *pp* ru di i a

Voice 5 *ppp* *pp* *ppp* *pp* ru di i a

Voice 6 *pp* ru di i a

Voice 7 *pp* ru di i a

Voice 8 *pp* *ppp* *pp* ru di i a

Sine Tones

65

Voice 1 *ppp* *pp* *ppp* *pp*
u di i ru

Voice 2 *pp* *ppp* *pp* *ppp*
u di i ru

Voice 3 *pp* *ppp* *pp* *ppp*
u di i ru

Voice 4 *pp* *ppp* *pp* *ppp*
u di i ru

Voice 5 *pp* *ppp* *ppp* *pp*
u di i ru

Voice 6 *pp* *ppp* *ppp* *pp*
u di i ru

Voice 7 *pp* *ppp* *pp* *ppp*
u di i ru

Voice 8 *pp* *ppp* *pp* *ppp*
u di i ru

Sine Tones

69 *pp* , , , , ,

Voice 1 *pp* di a ru di

Voice 2 *pp* di a ru di

Voice 3 *pp* *ppp* *pp* *ppp* di a ru di

Voice 4 *pp* *ppp* *pp* *pp* di a ru di

Voice 5 *pp* *ppp* *pp* *ppp* *pp* di a ru di

Voice 6 *pp* di a ru di

Voice 7 *pp* di a ru di

Voice 8 *ppp* *pp* di a ru di

Sine Tones

73

Voice 1 *pp* *ppp* *pp*
i di u di

Voice 2 *pp*
i di u di

Voice 3 *ppp* *pp* *ppp*
i di u di

Voice 4 *ppp* *pp*
i di u di

Voice 5 *ppp* *pp*
i di u di

Voice 6 *pp*
i di u di

Voice 7 *pp*
i di u di

Voice 8 *pp* *ppp* *pp*
i di u di

Sine Tones

77

Voice 1 *pp* a ru u i *ppp* *pp*

Voice 2 *pp* a ru u i

Voice 3 *ppp* a ru u i *pp* *ppp*

Voice 4 *pp* a ru u i *ppp* *pp* *ppp*

Voice 5 *pp* a ru u i *ppp* *pp* *ppp*

Voice 6 *pp* a ru u i

Voice 7 *pp* a ru u i

Voice 8 *pp* a ru u i

Sine Tones

89

Voice 1 *pp* ru di a ru

Voice 2 *pp* ru di a ru

Voice 3 *pp* ru di a ru *ppp* *pp*

Voice 4 *ppp* *pp* *ppp* ru di a ru

Voice 5 *pp* ru di a ru

Voice 6 *pp* ru di a ru

Voice 7 *pp* ru di a ru

Voice 8 *pp* *ppp* *pp* ru di a ru *4:3*

Sine Tones

93

Voice 1 *pp* di ru a ru

Voice 2 *pp* di ru a ru

Voice 3 *ppp* di ru a ru

Voice 4 *pp* *ppp* *pp* *ppp* di ru a ru

Voice 5 *pp* *ppp* *pp* *ppp* di ru a ru

Voice 6 *pp* *ppp* *pp* *ppp* di ru a ru

Voice 7 *pp* di ru a ru

Voice 8 *pp* di ru a ru

Sine Tones

97

Voice 1 *pp* 4:3 i a u a

Voice 2 *pp* i a u a

Voice 3 *pp* *ppp* *pp* 4:3 i a u a

Voice 4 *ppp* *pp* 4:3 *ppp* *pp* *ppp* *pp* 4:3 i a u a

Voice 5 *ppp* *ppp* *pp* *ppp* *pp* *ppp* *pp* i a u a

Voice 6 *pp* i a u a

Voice 7 *pp* i a u a

Voice 8 *pp* 4:3 i a u a

Sine Tones

Detailed description: This page of a musical score, numbered 97, features eight vocal staves and a Sine Tones staff. The music is written in 7/16 time, with a key signature of one flat. The vocal lines are for Voice 1 through Voice 8, each with lyrics 'i a u a'. The score includes various dynamic markings such as *pp* (pianissimo), *ppp* (pianississimo), and *pp* (piano), along with accents and slurs. Time signature changes from 7/16 to 11/16 and back to 7/16 are indicated. Voice 1 has a 4:3 ratio marking. Voice 2 features a wavy line above the notes. Voice 3 has a 4:3 ratio marking. Voice 4 has multiple 4:3 ratio markings and dynamic changes. Voice 5 has dynamic changes and a wavy line. Voice 6 has a wavy line. Voice 7 has a wavy line. Voice 8 has a 4:3 ratio marking. The Sine Tones staff at the bottom provides a harmonic accompaniment for the vocal lines.