The creative application of extended techniques for
double bass in improvisation and composition

Presented in partial fulfilment of the requirements for the degree of
Doctor of Philosophy (Music)

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ASHLEY JOHN LONG

ARIEL

FOR SOLO DOUBLE BASS
ARIEL
for solo double bass

duration: c.3’30’’

NOTES

1) Solo or orchestral tuning may be used.

2) The piece should be very free, with an improvised character. The metronome markings however, are to be observed.

3) Page 3, last line; this sequence should be frenzied and complex, the given rhythms imply a suggestion of how the material should result rather than being definitive.

4) Page 5, 1st system; correct placement of the bow (usually poco sul pont) will create a sustained high harmonic of the pitch shown in addition to the trill beneath thereby causing a complexity of events from the single string.

5) Several passages are given a dynamic with the instruction but vary. It is intended that the performer should treat such passages as having a generalised dynamic level with variations subject to performer choice.

Special Symbols and Noteheads

♩ Vertical bowing, move the bow upwards

♩ As above but move the bow downwards.

♫ Place the bow in the normal bowing position and finger midway between the bow and the bridge

♫ Strike the string with the bow hair at the tip of the bow.
Strike the tail piece *col legno*.

Pitch ‘hammered-on’ with the left hand.

Left hand Pizzicato.

Harmonic *glissando*, but with constant variations in finger pressure.
Ariel
for solo double bass

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2017 \)
p espress.   \textit{mp} poco a poco cresc.

nat.        \textit{pizz. arco}

* See note.  

\( \text{mf} \) poco a poco cresc.

\( \text{f} \) \( \text{ff} \) rall.   \( \text{p} \)

\( \downarrow \text{=} 30 \)

\( \bigoplus \text{p} \) \( \text{f} \) \( \text{pp sub.} \) \( \text{p} \) \( \text{poco} \)

\text{Tempo primo}

\( \text{mf legato} \) \( \text{sfz} \) \( \text{mp dolce} \)
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Courant

for solo double bass
Scordatura

The work is to be performed in scordatura. The score reads as for standard tuning.

The work may be performed in any of the following tuning variations. Each instrument will respond differently but the lower pitched scordatura’s are preferable due to the increase in resonance.

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Performance Notes

1) All notes are to be played lascia vibrare. As such, any staccato articulations indicate a short attack of the bow which is then immediately taken off the resonating string rather than a short note.

2) The work should be of a consistent rhythm. Any use of rubato must be kept to an absolute minimum.

3) Two hand handed harmonic pizzicato is used in sections of this work. A full description of this technique can be found here: [http://www.themoderndoublebass.org.uk/pizz---pizzicato-harp-harmonics.html](http://www.themoderndoublebass.org.uk/pizz---pizzicato-harp-harmonics.html)

4) + indicates use of the left hand either for a pizzicato, or for a pitch to be struck with the thumb (see note below). These different uses are denoted at the various relevant points in the score.

5) A square note head indicates pitches to be struck with the thumb. The string should be struck roughly 1’ from the bridge and excessive force so that the string rebounds against the fingerboard should be avoided.

6) Indicates that the harmonics should be gently depressed and a short glissando following the trajectory of the line enacted.

7) Indicates that the harmonic should be pulled to the side with the finger and a rapid variable direction glissando roughly following the trajectory of the line enacted.

8) Passages which transition between either materials or techniques and which are not given specific durations are essentially free choice but should not exceed 12 repetitions of any boxed material.

9) Constantly vary the dynamic level between the specified levels.

Duration: c.8’
Programme Note

Courant is a piece which explores the increased sympathetic resonance offered by the use of a scordatura. Throughout the work, harmonics are used extensively as a method of gradually increasing the sympathetic vibrations offered by shared harmonics on strings which are not being played. As such, the vibration potential of the instrument gradually builds from the start of the piece, culminating in an apex around two thirds into the work then gradually subsiding. Although the work is predominantly in a triple meter, ‘Courant’ in this case is taken from the French to mean ‘flowing’ as the musical material shares few of the characteristics of that particular dance form using instead, compositional techniques more akin to minimalism in which small melodic cells are gradually developed before transitioning into a new area.

Ashley John Long 2017

The first performance of Courant was given by the composer at Cardiff Poetry Experiment, Cardiff on 24 June 2015.
mf → f until β

All pitches pizz unless struck with thumb.

x4 for all repeats

Place down bow whilst playing with LH thumb then switch to RH

PP

MSP Gradually transition to bouncing at bow tip

PPP

molto legato

rit. (throughout)
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POLYNYA

for solo double bass
Ashley John Long

POLYNYA

for solo double bass


Duration: c.7’

First performance The Space, Isle Of Dogs, London. (14/06/2010)
General Notes

1) The piece should flow as much as possible with as little space between position shifts as possible.

2) The work explores the possibilities offered by timbral multiphonics. Where instructions such as *poco ponticello* are given, it is intended that the performer constantly move within each of these areas to provide as wide a sound variation as possible.

3) Material within boxes is to be freely alternated by the performer but must follow the rhythmic characteristics specified.

Techniques

1) **Helicopter Bowing**
   Place the bow at a 45 degree angle on the string and bow normally whilst moving the bow rapidly up and down within small area of movement.
   See: [http://www.themoderndoublebass.org.uk/arco--helicopter-bowing.html](http://www.themoderndoublebass.org.uk/arco--helicopter-bowing.html) for further details.

2) **Arco Mobile**
   A legato articulation but constantly move the placement of the bow so that it activates natural harmonics.

Compound Artificial Harmonics

Two node points played simultaneously on the same string.
Can either be single pitches:

\[ \text{\textbullet} \quad \text{\textbullet} \]

or as a chord using more than one string, for example:

\[ \text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet} \quad = \quad \text{\textbullet} \quad \text{\textbullet} \quad + \quad \text{\textbullet} \quad \text{\textbullet} \]

Other

\[ \text{\textbullet} \]
A combination of excessive bow pressure and reduced left hand finger pressure applied to a glissando. The line demonstrates the duration of use.

\[ \text{mf} \quad \leftarrow \]
Small variations in dynamic around core dynamic level.
POLYNYA
for solo double bass

(A=60) But very freely.

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LENTO (i/ii)

For Two Double Basses And Ensemble
Ashley John Long

Lento (i/ii)

for two double basses and ensemble

(2017-2018)

Instrumentation

Flute
Oboe
Clarinet in Bb
Bassoon

Horn in F
Trumpet in Bb
Trombone

Piano (with extended lower range)*

Vibraphone (4 Octaves)*, large Tam-Tam

Solo Double Bass (2 instruments, 1 performer)**

Violin 1
Violin 2
Viola
Violoncello

* See general notes

** See notes for double bassist and general notes.

The score is written in C except for the double bass part in Lento (ii) for which a solo scordatura is used and which is written down a minor 7th.

Total Duration: c.15’
General Notes for Soloist

1) 2 instruments are required, the first must be in orchestral tuning, the second in solo scordatura.

2) The first instrument is to be played with its back on the floor; the soloist plays seated on the floor.

3) The first double bass requires the following equipment:

   2 bows: 1 bass bow, 1 violin bow or similar
   A cello bridge
   3 Contact microphones
   1 Regular double bass pickup (ideally situated on or under the bridge)
   A mixer capable of supporting 4 channels.
   A soft beater (i.e: timpani stick)
   A lightweight knitting needle
   Amplifier (unless the concert venue is to supply a PA system)

4) The second movement requires the two instruments to be in constant contact. This is best achieved through the endpins in which case the first instrument’s endpin should be fully extended.

Suggested Stage Layout For Soloist(s)
Contact Microphone Placement (Double Bass 1)

1: Scroll (any part)

2: Upper shoulder (bass side)

3: Front (lower treble side)

The levels of these are to be controlled by the bassist during performance. With that in mind, the device used to control the levels should be relatively simple to use. The level is demonstrated thus:

- Highest level
- Off

The ‘standard’ pickup should be set at the same level as the highest level of the contact microphones and should remain constant. The level should be set so that the bass is clearly heard over the loudest orchestral moments but not dominate completely. Feedback should be avoided at all costs.

Microphone Placement Double Bass 2

A small microphone should be suspended from the scroll as shown. The amplification level is at the discretion of the soloist but should be at a level that the quietest sounds are clearly audible in the relevant passages.
Notations And Special Techniques

Double Bass 1

The first double bass should be played on its back with contact microphones attached as shown above. Normal concerto positioning (i.e, to the right or left of the conductor) should be used if both movements are performed (see general notes, note 4).

A cello bridge is to be inserted for the duration of the movement.

The cello bridge should be inserted thus:

The bridge itself is played throughout movement 1 which is discussed in more detail below.

Various parts of the cello bridge are bowed or struck with various transitions between them. Two bows are sometimes used simultaneously and a violin bow is used to further isolate specific areas.

This stave shows the bridge areas which are to be bowed:

Transition between these areas is shown graphically with a solid black line.

Other areas of the bridge and double bass are also to be bowed and are indicated by the following symbols:

- Top of bridge (bowed horizontally)
- Bridge leg (bowed vertically)
- Side of bass and bridge leg bowed simultaneously (bowed vertically)
- Tail piece wire bowed tremolando
Other techniques include:

1. Top of bridge struck with Timpani mallet.

2. Knitting needle inserted into bridge eye from tip to mid point. The needle should be loosely held so that it can vibrate freely.

3. Strings bowed underneath usual bowing area (i.e., between string and body). The lower stave shows the bow position between prepared bridge and instrument fingerboard. (low to high)

**Bow Techniques**

All bowing should be made with full hair contact unless the following symbols are used.

- **Half hair, half wood.** When shown in conjunction with a horizontal arrow, a gradual transition between full hair and this technique should occur.

- **Col legno tratto.** If a horizontal line is shown then the process is as above.

Dynamics are achieved by variations in bow pressure which are notated from 0-5 with hairpin markings indicating transitions between them. The pressures are at the performer’s discretion but must take 0 as very light feathered bowing and 5 intense enough that the bridge causes the strings to rattle.

**Conventions of Notation**

As shown above, black lines are used to show activity, amplification levels or areas of the bridge which are to be bowed.
A legato bowing is to be used for the majority of the work and bow changes should be as unobtrusive as possible. Occasionally, specific rhythmic figures are to be articulated which are achieved by subtle manipulations of bow pressure and notated thus:

Double Bass 2

- **Pulled Harmonic**

- **Harmonic pitch distortion through excessive bow pressure.**

- **Helicopter Bowing (see below)**

- **Hammered on pitch (either hand, left hand denoted by +)**

- **Finger pressure change, in this case for light to normal**

- **Harmonic glissando but with constant variations in finger pressure**

- **With nail (also used for pianist)**

**Abbreviations**

- **SP**  *Sul Pont*
- **ST**  *Sul Tasto*
- **MSP**  *Molto Sul Pont*
- **MST**  *Molto Sul Tasto*
- **MP**  *Multiphonics (always natural)*
- **SH**  *Sub Harmonics (see below)*

All other techniques are explained at the relevant point in the score.
Further Explanations

**Helicopter bowing:**
Press bow into the string and bow in normal directions whilst rapidly moving the bow up and down.

**Compound Artificial Harmonics:**
Fingering as normal for a 4th interval harmonica but place another finger on the string exactly between the thumb and fourth to create a triple octave harmonic.

**Subharmonics:**
Place the bow at the 6th partial of the harmonic series of the fingered pitch and bow with excessive pressure and an absolutely consistent speed. The increased pressure will distort the vibration of the string, producing a phase loop which, in turn, produces the subharmonic.

N.B It may be found that a lighter bow will produce these sound more effectively than a regular bass bow, in which case the violin (or similar) bow may be used for the entire movement.

**General Notes**

1) *Lento (i)* can be played as a stand alone work for soloist and ensemble.

2) The movements can be played simultaneously by two performers in which the orchestral material from *Lento (ii)* is used. However, the second bass must still be in contact with the first.

3) The double bass part from *Lento(i)* may be played a solo piece.

4) If only *Lento(ii)* is performed, it is not essential that the soloist be located at the front of the stage as per regular concerti and can be integrated into the ensemble if wished.

5) The piano and vibraphone are written for instruments with extended ranges. In each case, notes outside of the usual range are indicated in brackets. The pianist should play only the bracketed notes in the extended lower register if this feature is available. If using a standard piano then play the upper octaves as shown. If a five octave vibraphone is available, bracketed notes should be transposed either up or down an octave as appropriate. The pitches should be played in the register shown if a three octave instrument is used.

6) Throughout, wind and brass players have held pitches for extended periods of time. Players should breathe as required but aim to stagger the breathing within sections so the texture is not disrupted.

7) Further to the above point, the French horn part has pitches which are tied over an extensive number of bars. If the player requires additional rests then passages in which this may be undertaken are indicated thus: □ □
LENTO (i)
for two double basses and ensemble

Ashley John Long
(2017-2018)

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* Free but slow rhythm. The notes within each barline must occur as such but relate visually rather than rhythmically, to their placement.
* Free but slow rhythm. The notes within each barline must occur as such but relate visually rather than rhythmically, to their placement.
mostly air
Here the work enters into relative free time. Barlines denote periods of activity.
The double bassist is to cue the beginning of each bar.
ASHLEY JOHN LONG

ONTSINDN

FOR SOLO DOUBLE BASS
Performance Notes

1) The work should be performed throughout, as calmly and gently as possible whilst still allowing each pitch to be clearly heard.

2) The events at bar 28-29 and 71-end produce a subsidiary harmonic. This is the intention and should not be rectified.

3) A wavy line indicates the use of vibrato.

4) Specific strings are indicated by 1-4: high to low.

Negotiation of Letter B

This section combines several techniques within a single phrase. As such, the change between techniques should be seamless so as not to disrupt the flow of the phrase. Techniques are denoted by specific note-heads thus:

1) All arco pitches in the section should be played sul tasto with a very fast bow speed (but with little bow pressure) and should sustain for the full length of the pitch. The bow must the immediately be taken off the string so it is allowed to vibrate and care must be taken not to dampen the string with the bow hair.

2) Hammered on pitches are always applied to an already vibrating string an, as such, should not be overtly percussive.

3) Glissandi in this section should be as fast as possible but not comical.
Programme Note

This work was written at the request of David Heyes as part of a series of pieces to celebrate the 85th birthday of the great bassist Bertram Turetzky. As Turetzky has been a very important figure in my life, responsible for awakening my interest in contemporary performance techniques through his seminal work *The Contemporary Contrabass*, which would form not only a large part of my early performance career, but my subsequent doctoral research, I approached the composition of this work with much pleasure. Responsible as Bert was, for the development of many new techniques for the instrument, I was keen that my own work should explore a only a few of these techniques rather than too many. As harmonics became a central means by which to expand the tessitura upwards I have explored in miniature, a variety of ways in which these can be produced as well as a range of left hand articulations. ‘Ontsindn’ is Yiddish for spark.

Ashley John Long 2018

The premiere performance was given at Wells Cathedral School, 4 November 2018 by David Heyes.
for Bert Turetzky on his 85th Birthday

Onsindn

for unaccompanied double bass

Ashley John Long

Molto Lento, Mysterious and flowing. (♩=60)  

A Tempo (♩=60)  

* Small pitches indicate the harmonic should be very lightly depressed causing a slight 'bulge' in sound.  
** Not the exact number of pitches, very freely.  
*** Cresc and dim achieved by varying bow hair contact.
B Più mosso (♩=68)

Molto tasto

mp dolce poco cresc. mp dolce poco cresc. sempre.

C

arco nat

D Suddenly much slower, very freely.
(each bar roughly 4/8 but not exact)
pizz (2 hands)