atmospheric études

no. 1
troposphere

for solo, prepared piano

Mari Alice Conrad
Artist’s Statement

As a fourth-year music composition major at MacEwan University, Mari Alice Conrad was interested in exploring the concept of vulnerability. She was particularly inspired by her recent vulnerable experiences returning to school as a mature student and sought to understand these existential experiences in more depth. This curiosity led Conrad to design a research-creation project in her Ethnomusicology course that utilized her skills in composing a musical work that explored vulnerability on three distinct levels: personal vulnerability, societal vulnerability, and global vulnerability.

The first level, personal vulnerability, plunged into Conrad’s personal experiences as a mature student who, by age and life experience, had been socially segregated to a minority group and how she was processing those experiences. The second level, sociological vulnerability, specifically focused on addressing societal traditions of classical music and notational conventions for the piano. Conrad sought to displace the customary approach she had developed with the instrument since childhood and considered ways to make the piano (an inanimate object) and its notated music vulnerable. The third level was a more global, ecological, or environmental vulnerability of the weather systems found in the troposphere, the first layer of the atmosphere. Conrad wanted to understand why this layer was extremely volatile and susceptible to multiple variables and how humans interacted with the vulnerability of this force. This third level was also an area that she could
universally connect with her audience (hence the title of the composition) and acted as a bridge to explore the other two levels of vulnerability in her work.

Throughout the research-creation process, Conrad was able to explore the three levels of vulnerability in tremendous depth, express her interactions and discoveries of these three levels, and further disseminate her findings through notating a graphic score, recording the composition, and crafting an audiovisual representation. The final result of the research-creation composition project (music score and video) brilliantly weaves together concepts of vulnerability in a compelling and meaningful way and shares insight into how these ideas influence and encapsulate Conrad’s budding artistic practice.
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for solo, prepared piano

by
Mari Alice Conrad
September 2020

Duration: c. 4.5’

Written for Allen Stiles, of the Standing Wave Chamber Ensemble, Vancouver, British Columbia, Canada.

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Program Notes:

*atmospheric études* is a collection of five etudes created to explore the sound potential inside the piano by completely closing off traditional access to the instrument at the keyboard. Through this process, I examined the inner workings of the piano and discovered a refreshing palette of atmospheric colours. These sounds inspired creative approaches to sonically materialize the five atmospheric layers found in meteorology and has further heightened my awareness of the complexities of the atmosphere and the anthropogenic pressure placed on this delicate system.

no. I: troposphere

The troposphere is the layer in the atmosphere that is closest to earth and hosts the weather systems we experience. It is the heaviest layer due to storage of water vapor, supporting the notorious water cycle. This heaviness is expressed in the music, as well as a sense of circular movement, in form and sound, which echoes the constant change, motion, and turbulence caused by atmospheric flow through wind, rain, and storm systems. The piece begins with quiet wind and softly falling rain, and soon builds into a violent storm with sounds of trees creaking and thunder crashing. Like the invisible nature of the atmosphere, there are also hidden musical nuances emerging in the piece. One can hear a distant wind chime and airplane turbines, for example, which represent the human relationship to the atmosphere. These sounds trigger a reminder of our symbiotic relationship with the earth and the responsibility to protect and sustain a healthy atmosphere.

This piece was written for pianist Allen Stiles, from Vancouver, British Columbia, Canada, whose support, patience, and enthusiasm for new music has helped breathe fresh-air and life into this composition.

~Mari Alice Conrad

September 2020
Performance Notes, Instructions, and Checklist:

Checklist Prior to Performing:

1. Position the piano with the keyboard facing the audience to avoid presenting the performer’s back toward the audience (see diagram below).
2. Remove the music desk from the piano and place off-stage.
3. Place the piano lid at full peg or take the lid off completely.
4. Close the fallboard over the piano keys.
5. Remove the piano bench and place off-stage.
6. Label quadrants inside piano (A-F) and bass notes at representing [plane turbines] pg.2
7. Place music on a cardboard backing and at the front of the piano, resting behind the tuning pegs (see pictures on page iv).
8. Prepare piano as outlined on page iv chart.
9. Prepare and place all the tools inside the piano.
10. Place a weight, covered with a black, soft cloth, on the damper pedal (furthest pedal to the right). This weight can be a sandbag or something else heavy enough to hold down the pedal. Please take great care as to not damage the pedal mechanisms or the instrument itself.

<table>
<thead>
<tr>
<th>Piano tools required:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Suction cup puller</td>
</tr>
<tr>
<td>2. rubber squash ball</td>
</tr>
<tr>
<td>3. plastic sandwich bag</td>
</tr>
<tr>
<td>4. metal drum brush</td>
</tr>
<tr>
<td>5. thick, textured paper</td>
</tr>
</tbody>
</table>

Diagram of the stage and piano position for a live performance:

- PIANO POSITIONING:
  1. Keyboard facing audience
  2. Performer stands in the belly or crook of the piano, reaching inside to the strings.
  3. follow checklist above to prepare piano.
## Prepared Piano and Tool Instructions

**These items need to be PREPARED and IN PLACE prior to performance and prior to performer coming on-stage.**

<table>
<thead>
<tr>
<th>Tool/Preparation</th>
<th>Effect</th>
<th>Details</th>
<th>Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight placed on damper pedal (far right pedal)</td>
<td>Damper pedal sustains for whole piece</td>
<td>Wrap weight in a black, soft cloth, careful to not damage the instrument.</td>
<td><img src="image1.png" alt="Photo" /></td>
</tr>
<tr>
<td>One, black rubber squash ball</td>
<td>Airplane turbine effect on copper-wire strings</td>
<td>Place inside piano Near section D</td>
<td><img src="image2.png" alt="Photo" /></td>
</tr>
</tbody>
</table>
| One, tile suction cup tool                | 1. To slide the paper on the strings in section C (creating a wind effect)  
2. To slide directly on strings in section D (creating a low, thunder rolling effect). | Place tool on top of the square sheet of paper in section C of piano | ![Photo](image3.png) |
| One, 5x5” piece of thick, textured paper with corners folded up towards the middle | To rub on strings to create a wind effect. | The four corners are folded so the paper does not get caught in the strings while moving. | ![Photo](image4.png) |
| One, metal drum brush                     | Create a wind chime effect in area F of piano. | Storage and easy access: Place on top of the cross beam near section B when not in use (see below). | ![Photo](image5.png) |
| One, plastic sandwich bag                 | Heavy rain sound                            | Gently rubbing the plastic bag over the wood and metal at the bottom of strings near the felt ribbon in section C. | ![Photo](image6.png) |
| Music placement                           | Adhere music to stiff, black cardboard and place behind the tuning pegs. | ![Photo](image7.png) |
| Wire drum brush placement                 | Set prior to performance and when not in use. | ![Photo](image8.png) |
| Suction tool and paper placement          | Set prior to performance and move around as directed in score. | ![Photo](image9.png) |
Inside-the-piano Quadrant Legend:

Areas correspond with letter names in the graphic score. Note!* These quadrants are approximate. The performer can set up their own quadrants relative to this diagram that work with the construction of the grand piano they will be using.

Use the edge of the brush

Rub plastic bag over this area
Graphic Score Legend:

Rubato: senza misura

The score does not have a tempo marking. It is meant to be unmeasured. There are time brackets located above each line to help with approximately time values for sections.

The score is divided by RH (right hand) and LH (left hand) and each system is labelled as such.

Letters inside the octagonal shape represent a quadrant on the inside of the piano. Please refer to quadrant legend on page v.

All instructions to the performer are inside a box.

Dynamics for the RH are marked over the top line. Dynamics for the LH are marked under the bottom line. Passages where both hands do the same dynamic shaping are marked in between the two staff lines.

Descriptive words for the intended sound are found inside brackets [ ]

Sweep in a semi-circular motion, following the shape of the lines, while using the suction tool and paper in quadrant C.

The RH palm is to strike both the grace notes and upper note as fast as possible.

Premark specific pitches where rubber ball rubs on strings.

Rubbing of plastic bag is to be as even as possible without a break in sound, like background rain.
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tools required:
1. Suction cup puller
2. Rubber squash ball
3. Plastic sandwich bag
4. Metal drum brush
5. Thick, textured paper

please prepare piano prior to performing:
1. Place weight on damper pedal.
2. Close fallboard over keys.
3. Remove piano bench off-stage.
4. Position piano as outlined.
5. Open lid to full-peg.
6. Remove music desk.
7. Label quadrants of piano (A-F)
8. Place tools inside piano as outlined.

c. 35 sec

Rubato; senza misura
[quiet wind]
slide suction tool on top of paper up and down strings

C
RH
LH

mf

f

[middle chimes]

F
brush across metal strings in F section from high to low with side edge of drum brush molto rit.

C. 20 sec

RH
LH

[finger slowly falling]
dead stroke with finger tip and nail on top of random strings slowly, then gradually faster

Place tool and paper in upper left corner of C section


B
dead stroke with finger tip and nail on top of random strings slowly, then gradually faster

RH
LH

sim.

p

sim.

mp
atmospheric etudes

[c. 25 sec]

[knuckle knock metal frame closest to fingers]

RH crosses over to C

[mf] 

LH crosses over to B

[mf] 

LH moves to plastic bag

[p] 

[c. 10 sec] 

[plane turbines]

slide rubber ball from farthest point that arm can reach towards the end of the string on specific notated pitches

RH crosses over to

pick up rubber ball and prep to slide down copper coiled strings in strings section D.

LH crosses over to C

 mf

LH moves to plastic bag

[p] 

[c. 5 sec] 

[c. 10 sec] 

[c. 20 sec]

pick up suction tool and place on section D. Leave paper in section C in the upper left corner.

Slide suction tool up and down strings in section D.

[mf] 

[c. 25 sec]

[becoming more violent]

[knuckle knock on wood on inside of piano belly]

place tool off the strings.
[thunder crash]
RH hand strike strings with palm in the piano D section.

knuckle knock anywhere on wooden soundboard

pick up tool, place back on strings

Place tool silently back on square paper in C section

RH crosses over to becoming more sporadic

brush across metal strings in F section from high to low with side edge of drum brush

let sound completely decay