A Collection of Three Pieces for Solo Instrument and Electronics

Borcherding

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A COLLECTION OF THREE PIECES FOR SOLO INSTRUMENT AND ELECTRONICS

by

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A thesis submitted to the Graduate College
in partial fulfillment of the requirements
for the degree of Master of Music
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This collection of three musical compositions for solo instruments and electronics explores the interaction between acoustic instruments and electronic media with a specific focus on musical form. The musical form is apparent due to clear musical segmentations, and the coherence of each work is maintained by the inter-contextual relationships evident in the musical material. Each piece is divided into three parts: beginning, middle, and end. Each beginning sets up a strong relationship between the two media by using closely timed action-reaction gestures. The middle section diverges away from these reactionary gestures, while the ending then brings about a short return of earlier material. Both the electronic and acoustic parts adhere to this structure.

Each piece combines live and fixed electronics with a different instrumental type in order to explore the potential relationships between both media. Live electronics process sound in real time whereas fixed media is a combination of set audio files that sound the exact same way each time they are played. “Tangled Illusions” is written for koto, a plucked stringed instrument, and triggered fixed media. “Empyrean Tides” is written for alto flute, a wind instrument, and a combination of predominantly triggered fixed media and live electronic effects. “Learning to Speak” is written for woman’s voice, a vocal instrument, and a combination of predominantly live electronic effects and triggered fixed media.
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TANGLED ILLUSIONS

Score ........................................................................................................... 1

EMPYREAN TIDES

Score ......................................................................................................... 12

LEARNING TO SPEAK

Score ........................................................................................................ 22
Tangled Illusions in a Twisted Dream

Koto

right of bridges

left of bridges

Electronics

\[ \frac{3}{4} \]

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oshide gradually

oshide on 3

oshide on 3

oshide on 3

oshide

oshide
add pitches downward as rapidity increases

63

oshide gradually

69

scrape along string 6
\[ \text{Mute} \quad \text{-----} \]

\[
\begin{align*}
97 & \quad \text{mf} \\
& \quad \text{-----}
\end{align*}
\]

\[ \text{Mute} \quad \text{-----} \]

\[
\begin{align*}
100 & \quad \text{f} \\
& \quad \text{-----}
\end{align*}
\]

\[ \text{Mute} \quad \text{-----} \]

\[
\begin{align*}
102 & \quad \text{ff} \\
& \quad \text{-----}
\end{align*}
\]

\[ \text{Mute} \quad \text{-----} \]

\[
\begin{align*}
20 & \quad \text{furiously} \\
& \quad \text{-----}
\end{align*}
\]

\[ \text{subito} \quad \text{p} \]

\[
\begin{align*}
20 & \quad \text{-----}
\end{align*}
\]

\[ \text{Mute} \quad \text{-----} \]

\[
\begin{align*}
24 & \quad \text{-----}
\end{align*}
\]

\[ \text{Mute} \quad \text{-----} \]

\[
\begin{align*}
25 & \quad \text{-----}
\end{align*}
\]

\[ \text{Mute} \quad \text{-----} \]

\[
\begin{align*}
26 & \quad \text{-----}
\end{align*}
\]

\[ \text{Mute} \quad \text{-----} \]

\[
\begin{align*}
27 & \quad \text{-----}
\end{align*}
\]
palm slaps moving upward
in pitch on both sides of the bridges
end delay + reverb
Learning to Speak

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\( \frac{1}{6} \) = 60 quick, freely
meek, with nervous energy

Voice

Top
Mid
Bottom

Elec.

[1] spectral delay: on

[3] time delay: on
[4] time delay: off
sound: "yuh gasp"

classically sung

[5] flanger: on
[6] time delay: on
[7] flanger: off
[8] time delay: off

[1]
[2]
[3]
[4]
[5]
[6]
[7]
[8]
mp< mp< mf  p mf  p < mf  mp

[i] [i] [i] [o] mm [e] [u] [a] mm mm mm mm mm

H

time delay: on

p  pp  mp  pp

[e] [u] [i] [u] you [u] mm [a] [e] [i] I I

H

[9]
sound "you"

delicate  mf  p  mf  pp  pp  mf  p

[e][u] [e][u] I Am I Am mm [e][u] [e][u][e][u] [i] [i] [i] [i] ah

H

[10] sound "you"

time delay shortens

f

f  f  mf  p  f  p  mp  f  p

Ah [u] mm Am Nn Nn [a] Nah o Yuh Ah [e] I [u] You

H

[11]
sound "e-u"

frustrated

almost to
growl  

growl  

Ah [u] mm Am Nn Nn [a] Nah o Yuh Ah [e] I [u] You

H

[12]
sound "you"

time delay shortens

[13]
sound "e-u"

frustrated

almost to
growl  

growl  

Ah [u] mm Am Nn Nn [a] Nah o Yuh Ah [e] I [u] You

H

[14]
spectral delay: on

time delay shortens

[15] time delay: off

[16]
spectral delay: off
I don't need don't need don't need don't need

speak-sung

speak forcefully

suddenly act nervous again

Wait for electronics to fade out completely.

time delay: off

evenly, robotic

labored

sound "hiss"
sound "whispers"

flanger: on
whispered
breathy
lightly
delicately,
faster frenzied

I am not who not tuh tuh tuh tuh Ah!

A!

F

I am not I am not I am not Ah

[72] spectral delay: on
[73] flanger: off
distortion increases
sound "ah!"
time delay: on
spectral delay: off

with some growling

I Am Not Who Not What Who
incoherent mumble
what what what what what what what
shuffle words:
am, I, not, say, what, who, you

[76] sound "delay laugh"
time delay increases
distortion: off

[77] distortion: on
sound "gasp"

growl to scream
furiously, shouting

Ah

[79] time delay: off
distortion: off

cut off electronics
distortion: on
distortion increases
electronics off