AFTERIMAGES

BY

PHILLIP SINK

Submitted to the faculty of the Jacobs School of Music in partial fulfillment of the requirements for the degree, Doctor of Music
Indiana University
May 2016
Accepted by the faculty of the
Indiana University Jacobs School of Music
in partial fulfillment of the requirements for the degree
Doctor of Music

Doctoral Committee

_________________________________________________________
Don Freund, Chair and Research Director

_________________________________________________________
Claude Baker

_________________________________________________________
David Dzubay

May 2016
Afterimages
for orchestra
(2016)

Phillip Sink (b. 1982)
Program Note:
The original inspiration of Afterimages came from a video and electronics piece I composed in 2015 titled To See in Color. The piece guided the audience through the anatomy of the human eyeball and explored what it means to see in color. Through composing To See in Color, I discovered that the “design” of our eyes is quite backwards. For instance, the photoreceptor cells (rods and cones) are located in the very back of our retinae pointing in the opposite direction of the light source. As a result, in certain light we can see shadows of white blood cells coursing through the capillaries of our retinae. This particular effect is called the “Blue Field Entropic Phenomenon,” which makes an appearance in Afterimages.

The concept underlying Afterimages is based on three different natural phenomena that cause us to see objects and flashes of light that are not there. The piece opens with the concept of floaters in the eye, which is represented by chromatic noodling figures. Floaters are caused by debris in the 8 µd of our eyes. If the debris is close to the retina, it can cast shadows causing the appearance of floating objects.

The second phenomenon, which largely guides the form of the piece, is the afterimage. The afterimage occurs whenever the photoreceptors in our eyes fatigue after we look at an intense image for too long. When we look away from the image, a faint ghostly impression will briefly remain in our vision. I emulate this by composing larger sections of music called “images” followed by “afterimages,” which are residual musical passages that either fade away or crossfade into new sections. I use the image/afterimage pair idea for large global sections as well as local events. For instance, towards the end of the piece, you’ll hear melodic material that is echoed in other instruments throughout the orchestra. The final phenomenon and climax on the piece is the aforementioned Blue Field Entropic Phenomenon, which causes one to see zips of lights as he or she stares into the clear, bright blue sky.

The form of the piece is designed as: Floaters in the Eye – Image/Afterimage I – Floaters in the Eye Return – Image/Afterimage II – Blue Field Entropic Phenomenon with Afterimages – Coda. The first image emerges out of the introduction and is lyrical in mood. A rhythmic ostinato drives an acrobatic flute solo. This ostinato is transferred to the high strings in the first afterimage. In direct contrast, the second “image” is pulsated and comical in character. In this section, you’ll hear an enthusiastic trombone section and flexatone player. The second “afterimage” surges with harmonies from “Image II” played by the strings using a circular bowing technique. In this moment, you’ll hear remnants of rhythm and previous sounds cutting through the veil-like texture of the strings. In the final section, flitting woodwind lines and string ricocchet bowing represent the Blue Field Entropic Phenomenon. In this concluding section, listen for earlier ideas to “float” throughout the orchestra.

Performance Notes
Repeated pattern: In many instances in the piece, wavy-lined arrows indicate a repeated figure for a given duration. During these moments, players should perform the repeated figure as fast as possible without synchronizing with others. String players should bow freely without coordinating with downbeats or pattern changes.

<table>
<thead>
<tr>
<th>Repeated pattern as fast as possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP</td>
</tr>
<tr>
<td>_</td>
</tr>
<tr>
<td>PP</td>
</tr>
</tbody>
</table>

Harmonic glissando trill (Vc. mm. 3-6): Players should oscillate between the open string and touched string at various nodes up and down the string. This will create a shimmering effect in the cello section.

Air effects in the brass: Players should blow air into instruments while trilling given pitches. No pitched sound should result.

Circular bowing (violins/violas starting at rehearsal 163): Players should bow double stops in a circular motion from sul pont. to sul tasto without crossing the bridge.

Fingering noise: Players should hammer down forcefully on the string without bowing or plucking the string with the right hand. The resulting sound should be noisy with faint pitches.
Instrumentation

Piccolo
2 Flutes (2nd = Flute 2/Picc. 2)
2 Oboes
English Horn
2 B♭ Clarinets
B♭ Bass Clarinet
2 Bassoons
4 F Horns
3 C Trumpets
2 Trombones
Bass Trombone
Tuba
Timpani (4 drums)

Percussion 1: Claves, Crotales (2 octaves). Tam Tam (medium), Snare Drum, Glass Wind Chimes (shared w/ Perc. 3), Xylophone
Percussion 2: Glockenspiel, 3 Cymbals (medium suspended, medium-high suspended, high splash), Vibraslap (shared with Perc. 3), Egg Shaker, Flexatone, Whip
Percussion 3: Marimba, Ratchet, Bass Drum, Suspended Cymbal (medium), Glass Wind Chimes, Güiro, Vibraslap (shared with Perc. 2)

Piano
Strings

Duration: 10:00

Score in C (Octave transpositions have been preserved. Crotales and Glockenspiel sound up two octaves; Xylophone and Piccolo sound up one octave; Contrabass sounds down one octave.)
Senza Misura 12" - 14"

[Notation and musical symbols]

Afterimages - Full Score