Sound Becomes previewisible In The Form Of Radiance for flute, clarinet, violin, cello, piano and percussion 2010

Ned McGowan

For the Pittsburgh New Music Ensemble.

Integral to Sound Becomes Visible In The Form Of Radiance is the technique of bowing the piano. First introduced by Curtis Curtis-Smith and championed in Stephen Scott's Bowed Piano Ensemble, this way of playing opens up a world of uncharacteristic possibilities on the piano. For this piece I have chosen to concentrate on the sustain of long notes and the rich world of possible overtones enabled by this technique.

The music unfolds at a glacial rate, almost in slow motion, where the smallest details become expressive and theater

begins to play a strong role. Also, my purpose was to allow tone for the sound to enter the listener's being, to slow down our perception where the events can be ally experienced.

Primary inspirations for this piece were the work by the composers **James Teney**, John Cage, George Crumb, **Salvatore Sciarrino** and **Morton Feldman**, the visual artists **Piet Mondrian**, **Mark Rothko** and **Alexander 'alder**, and the m sic tradition from southern **India**.

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Duration: c. 28'

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Notes:

Timing and note lengths:

At the beginning of each bar is the approximate length of that bar in seconds. Single whole notes are intended to last the entire bar. Whole notes within a phrase with other note lengths are their normal duration. The rhythms within a bar are meant to be general guidelines for relative lengths, not to give strict relationships. The flow of the phrasing should have a feel that is free of pulse and the players can use a slight rubato to bring that out and emphasize certain sonorities or pitch changes.

Section H, however, does have a clear pulse with exact rhythms.

Quarter tones and tuning:

The quarter tones are meant to be exactly 50 cents lower or higher.



gran cassa

rolled with soft mallets

head scraped with brushes

small bells

a set of very small bells creating a very high tinkling thunder sheet

Cello:

The cello glissando in section I ends on a B below the lowest note of the C string. This should be played with scordatura either prepared beforehand or by continuing the glissando down from the lowest C by detuning the string with the peg.

On bowing:

Integral to **Radiance** is the technique of bowing the piano. Bowing is done in most cases with nylon fishing line that is coated in regular string rosin, then threaded between the piano strings. With one end in each hand, the performer draws the line basically perpendicular to the piano strings in a back and forth manner, similar to the way string instruments are bowed.

The lid should be removed to facilitate access to the piano strings. Bowing does not damage the piano in any way. At the most it leaves a bit of rosin on the strings that can be easily removed with a cloth and some rubbing alcohol.

There are four variables that affect the sound: speed: slow to fast pressure: light to heavy location on the string: front side of piano/ back side close to the bridge / away from the bridge on the single wire / on the coil (of the wrapped low string) angle to the string: perpendicular or at other angles

The bowing in **Radiance** is continuous and players bow for long stretches at a time. Therefore, it is important to find a comfortable position of the torso and arms while bowing. In general, an upright position with keeping the elbows at one's sides help a lot. Changing the direction of the bow should be done as smoothly as possible, but an audible bow change is often unavoir able, depending upon the register of the string and the parameters. On the low to middle register strings, a slight in treater in preference is in preference of the string of the string and the parameters and the string and the parameters are to the strings.

For **Radiance** there is a counction made between bowing the random marpitch of the sering (normal) and it's overtones (harmonics). The funcamentar councily a drone with slight harmonics in the sound. When harmonics is specific 1 the intention is a slow oscillation between various overtones without their fundamental (as much as possible). While it is almost impossible to predict the exact overtone, it is very possible to produce overtones in general. Specific combinations of the parameters can emphasize either the fundamental or overtones. For example:

fundamental

slower speed greater pressure away from the bridge

overtones

faster speed less pressure (lighter stroke) close to bridge

To oscillate between various overtones, vary the combinations of speed, pressure, location and angle. Often they take some time to start ringing and sometimes one overtone is particularly dominating. By gradually changing one or more parameters, eventually other overtones will burgeon. Additionally, changing the angle of the bow to the piano string can help produce different harmonics.

Creating the bows:

The bows consist of multiple strands of fishing line, tied at the ends through rubber key covers. Two different thicknesses of fishing line are used - 0.5 mm and 0.3 mm - and the bows should be between 32 to 36 inches in length. Each bow should have 5 strands of line and care should be taken to make sure the lines are all equal length so that they are all equally taught when bowing.

When threading the bows between the strings, either a small pocket comb or a partially opened up paper clip can help grab the lines to pull them up.

When bows are not being used in the piece, they should be stored in a way that does not obstruct the normal playing of the piano, either on the keys or the strings.

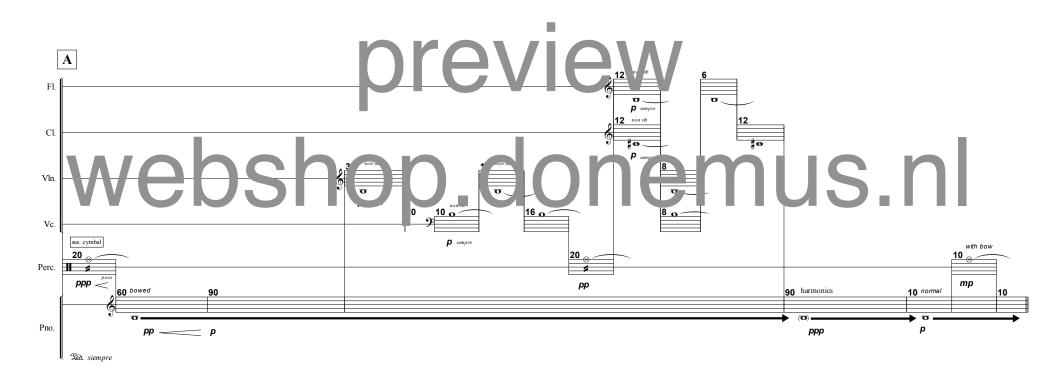
The following piano strings should be threaded with bows before the performance.



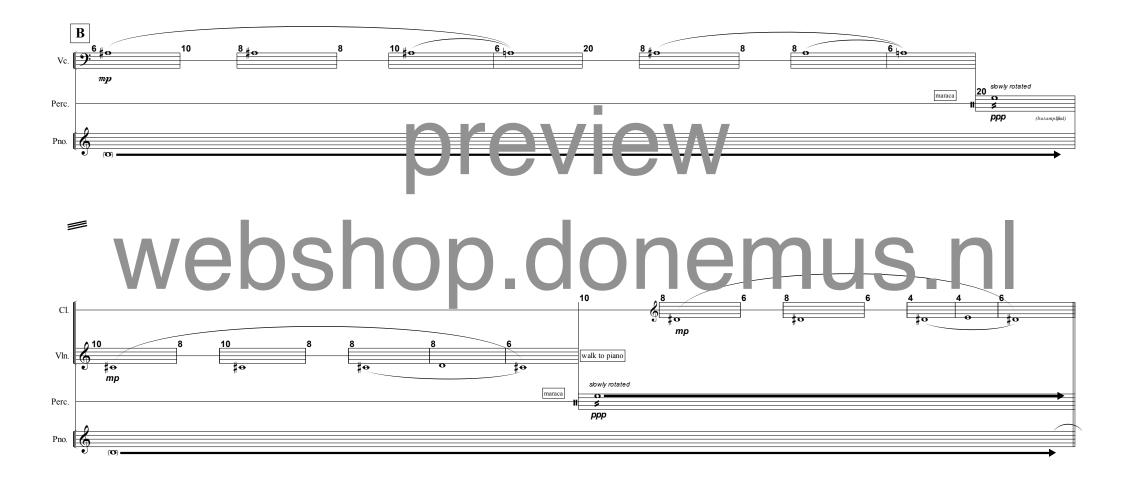
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- Hazrat Inayat Khan







... Radiance

