

## Stony Brook Lecture Outline:

First and foremost, thank you all so much for having me here to speak about my music and for the opportunity to write for this amazing group of musicians. Stony Brook has long been an institution I look to as a role model for how music education should be done and I'm honored to be here participating in that.

I think it's always nice to start off talks like this with a little live music, so I'd like to play for y'all a solo piano version of the third movement of my commission, *Rivers of Sand*, which will be played here tonight. This piece is called "the Clench of Sunlight", titled after a poem by New Orleans poet, Nicole Cooley. In it I try to communicate the unsettled stillness of immediate post storm living

Play: "the Clench of Sunlight"

Anyways, the main focus of my talk today will be my use of microtones to expand the color palette of instrumental music. First I will give a brief overview of a few important pitches and then narrow in a bit on the specifics of *Rivers of Sand*

- 24tet basis
  - My language assumes a basic quarter tone system. This is a division of the octave into 24 equal steps, adding a new chromatic step between each semitone.  
[See Fig. 1]

- Sixth tones
  - I often use sixth tones as a rounding to approximate the seventh harmonic partial of the overtone series. I use these with more discretion, only when demanded by the harmony. [See Fig. 2]
- Untethered intonation with a 12tet backbone
  - Through these methods, I try to create a language which goes far beyond the coloristic possibilities of the 12 tone equal tempered system, while always maintaining 12 tone equal tempered pitch centers. This allows performers to always come back to a familiar reference pitch, while exploring far out microtonal worlds.
- NHS
  - The natural harmonic series is also an important part of my work. When I use the NHS, I often obscure or place it in the background as a sheen of beauty. It is also the basis from which I derive a great deal of my melodic language. The natural harmonic series itself is conceptually vital as it is one of the few things in music that is undeniably present in nature and hence the foundation to all tuning systems, whether or not it is acknowledged as such. It is present in all things in the natural sound world. [See Fig. 3]
  - That said, it is often too pristine to truly represent the world we all inhabit, especially that of southeast Louisiana. It is for that reason that I devised my **Mirrored Harmonic Series** some years ago. The MHS focuses on the implied intervals of the harmonic series. Exploiting perfect fourths and minor sixths as the basis rather than the major thirds and perfect fifths of the natural harmonic series. This serves as a sort of allegory for the industrial landscapes of my home.

Industrial landscapes are unsettlingly gorgeous, often seeming to fit into the land they are destroying. To me, this MHS system represents the human degradation of the natural world and the frail, decimated ecosystem we inhabit in Louisiana.

[See Fig. 4]

In Rivers of Sand, particularly the first movement, I needed a fluid sense of motion- of organized decay.

The ambiguity and beautiful slipperiness of 12 tone equal tempered pitches directly against a quarter tone inflection is a color I absolutely love. That said, I feel the “NOTE”, “QUARTER TONE NOTE” idea has become a bit of a cliché trope in contemporary literature- so one of my main focuses is giving these little coloristic inflections solid functional and theoretical reasons for being in the music.

[See fig. 5]

It was through this thought I became fixated on the ambiguity of 7th and 11th partials in a dominant to tonic relationship.

[See fig. 6]

In the first movement of Rivers of Sand, we have a strong F and C feeling. The seventh harmonic partial of C is Bb(- $\frac{1}{6}$ ), the 11th partial of F is a B1/4b. These two pitches have very distinct timbral properties and can be used in a plethora of ways to support tonicising I (F), IV (Bb) and V (C).

This blurriness of color and function fits into my MHS system

particularly well due to the fact that my system is based around perfect fourths, minor sixths and colorful octaves.

Since the C harmonies, in this case dominant harmonies, are only there to reinforce F, the “tonic”, I am also able to exploit F as both the second “partial” to C in my MHS system and the functional tonic. Similarly, Bb can be treated as the second “partial” of F, as a functional predominant. What this leaves me with is a wonderful collection of shades, Bb(- $\frac{1}{6}$ ), B1/4b, and Bb.

Bb( $\frac{1}{6}$ ) is hence a tendency tone to A (the third of F), B1/4b a tendency tone to Bb (the fourth of F), and Bb as a tendency tone to C (the dominant of F). I can do all of this while still maintaining the option of plagal feeling cadences on F, while treating it as the second partial of C, or plagal cadences on Bb coming from F. This constantly shifting functionality has a sense of fluid motion, while maintaining relatively static “key” centers- allowing for a great variety of color without truly modulating.

[see fig.7]

Throughout the discourse of the first movement, I try to move from these hazy harmonies, to moments of harmonic clarity and bursts of rich color. To me, this pretty accurately reflects the feeling of being on the edge of the Louisiana Coast- coming through a dense patch of trees, seemingly endless; suddenly giving way to a massive, endless expanses of the Gulf of Mexico; all the while being undercut by the currents which rip away the land day by day due to fracking and sea level changes from polar melt-water.

Are there any questions about this or any areas you'd like me to elaborate on?

Great!

For the remainder of the talk I just want to take y'all through a bit of the programmatic aspects of Rivers of Sand.

The second movement, the sky is a flute, is in reference to the incredible sounds generated during hurricanes. As mentioned in the program notes and promotional material, I received this commission just about a month before Hurricane Ida hit Louisiana. Ida went down as the most powerful storm to ever hit the United States. My husband, my dear friend luca hoffmann and I all rode out the storm together in Uptown New Orleans and nearby in Jefferson Parish as I was composing the first half of this work.

The harmonic concision of hurricanes is striking. There is always a single drone, lasting for days. In this instance, that pitch was an Fnat. This F became the focus of the second movement.

Throughout a hurricane other pitches come and go, in a way, like passing tones. The central, unchanging pitch, comes from the rapid motion of the eye of the storm- it grows louder and louder as the eye approaches. The "passing tones" become present due to the force of the air columns in various strata resonating against each other- this is very similar to the physics of sound in flute multiphonics.

The third movement is “a clench of sunlight” and, as I said, is meant to portray the immediate calm after the storm before the reality of the destruction sets in.

The fourth movement, “tons of it piled up- like dunes, ash, corpses” is certainly the most serious and heavy part of the piece.

Once the storm passes, everyone checks on their neighbors and family, that is when the real tragedy begins to unfold. You begin to hear stories of relatives and friends losing their houses, boats, livelihood. A dear friend of mine's close family friend was literally eaten by an alligator during the storm- a story which attracted some national attention.

It is in these moments the assessment of loss begins and the process of grief begins. The title of this movement, and indeed the whole work, is in reference to, and in honor of the terrible devastation the barrier island community of Grand Isle faced.

7 feet of sand were piled up across the entire island. Every single building suffered major damages. - - photographer Luca Hoffmann and I recently visited the island, some 2 months after the storm, and there is still much work to be done. Teams of recovery crews are working around the clock still, bringing in cranes on airboats to rebuild powerlines, and piling up all the sand and debris in massive dunes of rubble.

Where once was a sign reading “welcome to grand isle” is now a temporary junkyard multiple stories tall- one pile is for the remains of houses, one is for all the sand.

In the final movement, I try to reflect on the pangs of reality one feels after disaster. There is a numbness with explosions of realization.

Why is it that we are still here? How high can we build our levees? How long can we live in the water?

For me the answer is obvious, because the feeling of home can never truly be destroyed, and Louisiana is a place worth hearing out.

To close I would like to play you all a movement of my 2019 piano suite floodgates, followed by a small excerpt from the Fourth movement of Rivers of Sand.

Thank you for listening.