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Forum Response I- January 9, 2010

Professor Jaffe and Libby Larsen may view musical time through different professional lenses, but they are both constricted by their definition and view of time. What unites them is their attempt to capture behavior at the boundaries of time and push the boundaries of scientific and creative expression. I believe it is an innately human quality to want to explore limitation and extremities. In mathematics, operations research, or engineering, academicians are interested in finding the maximum, the minimum, the optimal, or the breaking point.

Quantum physics reveals the existence of a mathematically provable range of time. Along the wide spectrum of time, humans are capable of observing units of time in such a small band. The existence of cosmological and quantum timescales can only be perceived when time is artificially sped up or slowed down. Because humans are biologically limited to how fast we can translate images or waves into sight or sound, music in a purely scientific fashion is fixed into or constructed for a certain range of frequency and time.

The beauty in music that composers such as Libby Larsen attempt to capture is that grasp for the infinite, a push beyond that limited timescale of human perception. Although science tells us the musical score we are able to digest is fixed into a limited time or frequency range, the various reactions and interpretations music engenders give us an intuitive sense that music somehow defies the limited timescale that Professor Robert Jaffe mentions.

What I find interesting are the similarities in the limitations of the tools Professor Jaffe and Libby Larsen utilize in their disparate fields. The images telescopes capture provide the human eye with a 2D spatial observation. To find inspiration for her musical work, Larsen utilizes 2D spatial observation of O'Keefe's paintings. The job of Jaffe and Larsen is to translate what is observed in the 2D to deepen understanding of the 3D. To explain and model the behavior of space and other galaxies depends on a 3+ spatial dimensional understanding and an understanding of the time dimension. The medium of music works in the 3D spatial dimension and the time dimension. The sound waves that musical instruments produce vibrate air molecules in 3D space.

While Jaffe uses computer simulation to distort depiction of time and bring what lies beyond the range of

human timescales into the human timescale, Larsen manipulates what lies in the human timescale to give us the sensation of what lies beyond the range we normally comprehend. Larsen mentions pitch, rhythm, and architecture as the three essential elements a composer considers. While time was not the central theme of Larsen's composition, the interplay between time and color in O'Keefe's paintings provided the inspiration. As an artist, Larsen faces limitation in the time her commissioned work is paid to last, so time is a powerful consideration in any artistic work produced. Specific examples of musical tools include her use of the ostinato, or a persistently repeated motive, in the fourth movement of *Black Birds, Red Hills*. Repetition is a manifestation of the black bird's hovering. Larsen uses a V-shaped tessitura to depict the red hills' hugging of the sky. As the V-shaped tessitura is played out, the unfolding of music constructs a 3 dimensional image in the mind of the audience.

Concert Response I- January 9, 2010

Libby Larsen's *Black Birds, Red Hills* and George Crumb's *Eleven Echoes of Autumn* had the greatest effect on my senses. The presentations of these two works stimulated auditory and visual reaction. The physical performances were coupled with projections of related images. The juxtaposition of paintings and musical score with the production of sound left a stronger imprint on my mind. This should be expected as scientific studies have shown the stimulation of multiple senses promotes better retention of the memory of events. The projected images provided a link between the audience and the composer. This direct connection left me with a clearer understanding of the message the performers were trying to convey.

I found the unconventionality of Crumb's performance exhilarating. I heard the eleven echoes of autumn. Crumb utilized more than just the timbre of the violin, alto flute, clarinet, and piano. The piano was a drum, the violin a mandolin, and the clarinet a microphone. The clarinetist and flutist turned their backs to the audience and that action led me to concentrate on the purity of the sounds they produced. The face conveys multiple emotions, and when their backs were turned towards me, I only had their sound to guide me. The image of the circular musical

score made me realize there was no other reason than conventionality as to why music should be read in a linear form from left to right.

I enjoyed the layering in Libby Larsen's performance where the audience was able to see and hear the translation of the art into music and vice-versa. It was satisfying to hear my expectations come into fruition during the chamber group's trek through the musical score. In contrast to Crumb's composition, I felt like Larsen used more traditional means to convey her message. The use of the *ossinato* and the V-shaped *tessitura* amongst other musical tools gave a clear visual picture that eventually mirrored the projected images.

I felt like the concert as a whole explored the theme of the boundaries of time. The compositions all tried to play with time. The use of repetition was widespread, and many of the patterns established in the musical scores built upon earlier portions played with slightly new variations. The composers toy with human memory, both taking advantage of its strengths and weaknesses, as the audience is forced to recall and make predictions as the score is played out.

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