Sound Painting

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Abstract

After reading an article that stated the average viewer only spends 30 seconds in front of a work of art, Ashley Lane and Bhakti Duran set out to see if art could be designed to literally give viewers pause. Bhakti's immersive sound work and Ashley's work on the impressionist animated painting come together to draw in viewers and encourage focused contemplation on the art at hand. After spending time with *Sound Painting*, participants have reported feeling "refreshed" and "relaxed."

Project Description

Sound Painting combines an animated painting with 3D binaural audio to create a mixed media participatory installation. The binaural audio extends the flat projected painting into the space of the viewer, encompassing them in the world of the painting. The magnetic pull of oceanic sounds draw the viewer in and the subtle movements of the painting gently entice the viewer to stay. In Figure I, you can see the relationship of the viewer and the projected painting. The movement of the painting is not immediately perceptible, but those who spend time with the painting are rewarded with its secrets. Sound Painting has been called "very calming and relaxing" and "refreshing" by many participants. Indeed, Sound Painting seems to have an uncanny ability to imbue a meditative-like state of stillness and mental focus in its participants.

Video Documentation

This video version of the piece demonstrates the combined effect of the video and binaural audio. Please use headphones in order to experience the encompassing effect of the binaural audio. Figure I shows a still from the video. Here is the URL: https://www.youtube.com/watch?v=iKKxRLqZix4

Fig I Sound Painting (still), 2015, Ashley Lane and Bhakti Duran, digital painting, © Texas A&M University.

"The Art of Slowing Down…"

"Most people want to enjoy a museum, not conquer it. Yet the average visitor spends 15 to 30 seconds in front of a work of art, according to museum researchers. And the breathless pace of life in our Instagram Age conspires to make that feel normal. But what's a traveler with a long bucket list to do? Blow off the Venus de Milo to linger over a less popular lady like Diana of Versailles?" laments Stephanie Rosenbloom in her 2014 New York Times Article, entitled "The Art of Slowing Down in a Museum" [1].

This statistic - that people spend less than 30 seconds on average in front of art – inspired the artists of *Sound Painting*. Rosenbloom's article went on to suggest a viewer-centric solution, namely that viewers set a timer for 20 minutes in front of an artwork that speaks to them [1]. Rather than relying on viewer discipline, Ashley Lane and Bhakti Duran used Sound Painting to explore ways art itself might literally give viewers pause and reward them for time spent with the artwork.

Impressionistic Movement

Impressionism is a French style of painting that originated in the late 19th century and that often features implied movement and the passage of time, which would seem to make it ideal for animating. However, using traditional 2D animation techniques technique would likely mean compromising impressionism's broken color and visible brush strokes for the sake of efficiency (Ashley was the only painter working on the project). In order to stay true to the style of impressionism while animating, Ashley Lane created the visuals for *Sound Painting* on multiple layers in Photoshop and then animated those layers in AfterEffects. Before starting the Photoshop painting, Ashley searched Claude Monet's impressionist paintings for underlying motifs to help her construct an original impressionist-style painting. She discovered that sunsets, lonely sailboats, and distant towns were themes that cropped up everywhere in Monet's paintings. When animating the Photoshop layers in AfterEffects, Ashley aimed to create "impressionistic movement" rather than realistic movement. To accomplish this, Ashley animated simple

AfterEffects techniques (like rotations, translations, and ripples) extremely slowly. The resulting movement is on the edge of human perception and, from the feedback we've received, is oddly mesmerizing.

Creating Immersive Soundscapes

Sound Painting's audio is sent through two channels, but unlike stereo speakers, uses Edgar Choueiri's cross-talk cancellation algorithm from Princeton's 3D Audio and Applied Acoustics Lab to emulate the sounds as if they are happening within the real world [3]. Different from surround sound, binaural audio does not seem to come from fixed speaker locations, but appears to emanate from the environment itself. To make the soundscape environment of *Sound Painting* as believable as possible, Bhakti Duran combined sounds from *The Hollywood Edge* and *The Production Garden* in *VibeStation LE*. Bhakti aligned the position of the sounds within the audience's environment according to the position of key elements of the painting. For example, to really give the impression these sounds are happening by the feet of the audience, Bhakti placed the waves sound cues in front of the viewer and below the speaker. Once rendered binaurally and played through the *Big Jambox* by *Jawbone*, a three dimensional soundscape is created that envelopes our audience in sound without encumbering them with headphones.

Early Feedback & Casual Observations

Early feedback has been overwhelmingly positive. Many participants have reported feeling "relaxed" and "refreshed" after experiencing *Sound Painting*. Viewers who quickly passed by or only spent a brief amount of time with *Sound Painting* often neglected to see the movement. From casual conversations with viewers, a consensus seems to be that the more time is spent with the painting, the more motion becomes apparent. In several cases, small groups were found gathered around *Sound Painting* arguing about whether or not the painting is moving. From the written feedback we received, participants also commonly reported enjoying the colors and sound of *Sound Painting*. Overall, while some viewers quickly passed by, many spent several minutes or more with Sound Painting, apparently mesmerized by the sound and movement.

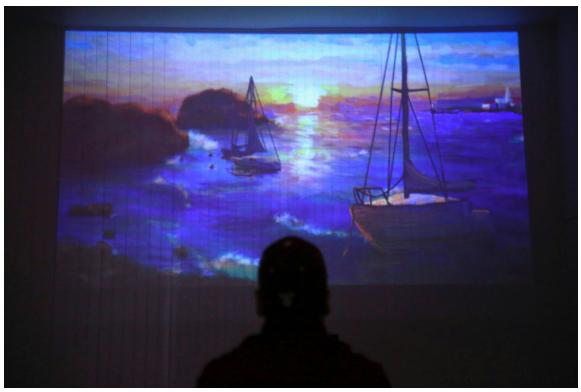

Fig II. Audience experience in the room with *Sound Painting*

References

1. Stephanie Rosenbloom, "The Art of Slowing Down in a Museum," *The New York Times*, accessed October 9, 2014, http://www.nytimes.com/2014/10/12/travel/the-art-of-slowing-down-in-a-museum.html?_r=1
2. Jeffrey K. Smith and Lisa F. Smith, "Spending Time on Art," *Empirical Studies of the Arts,* Vol. 19 no. 2
3. Choueiri, E. (2008). "Optimal crosstalk cancellation for binaural audio with two loudspeakers." Princeton University: 28.

Biographies of the Artists

Ashley Lane

Ashley Lane is an artist from Texas who enjoys working in various media, including digital painting, video, and animation. Her loves of impressionism and cinema have been major sources of inspiration for several of her works. In 2014, she earned her B.S. in Visualization from Texas A&M University. Ashley is currently studying to obtain her master's degree from the same program.

Bhakti Duran

Bhakti Duran is a Dominican-American artist born in New York City. Through his work, he explores how 3D binaural audio can be combined with various mediums to foster better audience immersion. His work seeks to not only immerse the audience in the story but to also generate a profound sense of emotional resonance. Bhakti is currently studying to obtain his master's degree from Texas A&M University, where he hopes to contribute to immersive storytelling.

Jinsil Hwaryoung Seo

Jinsil Hwaryoung Seo is an interactive artist/researcher focusing on aesthetics of interactive experience. Currently she is an assistant professor in the Department of Visualization at the College of Architecture and a faculty fellow in the Center for Health Systems & Design at Texas A&M University. Seo received a Ph.D. in Interactive Art and Technology from Simon Fraser University in Canada and an MFA in Computer Arts from School of Visual Arts (SVA). With interdisciplinary, interactive art practice, Seo investigates the intersection between body, nature and technology. Seo has been fascinated by the aesthetic qualities of human experience, the relationships that emerge through interactions within artworks, the underlying beauty and pattern inherent in the nature. Her current research concentrates on designing for tangible and kinetic aesthetics in the contexts of performance, child development and health. Seo has chosen interactive art for her creative practice and research in particular as it encourages immersive and embodied relationships within a work of art.