

# Developing Interactivity Between Live Music and Video Performance

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## Abstract

Music and video can interact with each other in various ways to help the audience understand the message of the end product better than if one were to be used individually. A collaboration of music and video can make it easier for an audience to be able to emotionally connect with the artist and the meaning they are trying to get across. Emotions have always been integral to all types of artwork, but also play a part in how we interact with the world around us. Recent advances in technology make it possible for an artist to express themselves creatively while creating a real-time connection with an audience.

## 1. Introduction

There are many ways that music can support video, and vice-versa, in precomposed contexts. Many examples, like movie scores and music videos, have been thoughtfully edited to show the viewer the best composition possible and to enhance the creator's intended message. In these situations, the artist has a specific story that they want to tell and a specific emotion that they want their audience to experience when watching the product.

However, with new developments in technology, artists are starting to expand towards an improvisatory collaboration between music and video. These developments allow for artists to have an original story they are telling, but also allow the artist to use emotional feedback from the audience to inform how they express the music using particular performative subtleties, like dynamics, tempo, and expression. This gives the artist the ability to express their feelings to their audience at the specific moment of the performance.

While there are different levels of emotional connectivity that we can have with art, a collaboration of music and video has to potential to greatly enhance the emotional experience of the intended audience. Proposed in this paper are two connective emotion types: static and kinetic. An art project has a static emotion state if it remains the same regardless of the actions of the artist or audience, and a project has a kinetic emotion state if it is dependent on the actions of the artist or audience. Emotions have always been integral to all types of artwork, but also play a part in how we interact with the world around us. In the words of R. W. Picard, "Aesthetic success is communicated via feelings."<sup>1</sup>

## 2. Music of the Movies

The music score of the movie *A Quiet Place* (2018),<sup>2</sup> gives the viewer a lot of auditory clues as to what is happening in the plot, and to what the actors are thinking and feeling. In many cases, the music changes and gives the audience an auditory cue before anything happens on screen. There is a lot of play between complete silence, white noise, and subtle sound. All this combines to give the viewer auditory clues about what is going on. If *A Quiet Place* was watched without the soundtrack, the viewer would be extremely lost and miss a lot of important details of the plot.

In contrast, the soundtrack of *The Matrix* (1999),<sup>3</sup> a movie famous for its visual effects, is more about enhancing what is going on in the film. In a lot of cases, the music follows and reacts to what has just happened on the screen visually. The action sequences of the movie are enhanced by the music and are not dependent on the soundtrack. A viewer would be able to watch *The Matrix* without the soundtrack and not miss very many, if any, details of the plot.

When talking with pianist Gabrielle Tee about her work composing piano scores for silent movies, she explained that one of the most important things that she considered was how to keep the audience immersed in the film.<sup>4</sup> She explained that while it was very important that she compose music that fit a dance scene or a sad section, it was also extremely important to write a smooth transition between the scenes so that there is a natural flow from one to the next. Helping the audience create an emotional connection with the film is her main goal in this work.

Even with this amount of variety in the amount and manner that music can support the emotional experience of film, it is still a genre that generally only has a one-way emotional connection. In all three instances above, the music is composed with a specific narrative in mind that the artists want the audience to be able to connect to in some emotional way. But while films with soundtracks are one-sided, silent films give a musician the potential to be able to take the information from the emotional feedback of the audience and slightly alter their musical response. Movie scores are static and unchanging after the editing process is completed, while silent movies open up the possibility of a kinetic connection with audience.

### 3. Video Supporting Music

The connective emotion type of a music video is static, essentially equivalent to a painting. The artists involved in both music videos and paintings put their thoughts and feelings in their work to create a singular piece of art that will remain unchanged once completed. The artist uses their medium to create a piece of art that has a specific message, story, or point that they want to tell. The end goal is the product.

The singer/songwriter known as Washed Out produced an album called *Mister Mellow* (2017); this was a visual album, because each of the twelve tracks came with an accompanying music video.<sup>5</sup> Although the music is mainly electronic and ambient, there is a little bit of talking/singing throughout the album. The visual style is also abstract, featuring 2D animation overlaying aged film as well as various other animation styles. While the videos are mostly abstract, they allow for the viewer to get more out of what each piece of music means and connect with the song more.

Peter Gabriel's music video for the song "Sledgehammer" (1986) is a balance of absurd and literal imagery.<sup>6</sup> The video is made with various stop motion styles to create dancing chickens, painted clouds traveling over Gabriel's face and a singing face made of different fruits, among many other created images. The video for "Sledgehammer" won nine MTV Video Music Awards and while the single did top the Billboard charts for a few weeks, it only had three Grammy nominations.<sup>7, 8</sup> The main role of a music video is to enhance the message of the musician's song, however, in this case the video seems to overshadow the song.<sup>9</sup>

### 4. Live Performances

Live performances can fall in various places on the scale of static to kinetic emotional connections. There are various factors like how much the artist wants to decide beforehand, venue capabilities, and how important in-the-moment artistic decisions are to the artist.

An example of a performance with a previously decided style and message is Selena Gomez's performance of "The Heart Wants What It Wants" at the American Music Awards in 2014.<sup>10</sup> This performance was specifically arranged, but also very minimalist. Gomez only moved in a straight line from the back of the stage to the middle as she sang, but was accompanied by a video projection that was perfectly timed to her lyrics. During the first chorus the lightning flashes that are timed to the background vocals and during the second verse there is imagery of glass breaking precisely on the words, "pieces" and, "torture". While the minimalistic stage and abstract video projection left room for the deep meaning of the lyrics to be interpreted by the audience through their own personal experiences, the intention of the performance was to tell Gomez's story.

Musician Alison Wonderland teamed up with Microsoft's Music x Tech program in 2017 to create an interactive visual accompaniment to her tour music set. They used a motion capture camera to give data to a VJ (video jockey) program that would let Wonderland's movement and her music have a direct influence on the visuals. While the general style of the visuals is decided beforehand, it is important for Wonderland to connect with her audience at each event. In an interview with online publication *Your EDM*, she talks about how important it is for her to be able to

connect with her audience so that she can “let go and do my thing on the [DJ] decks and vibe with the crowd.”<sup>11</sup> She even states that if she cannot feel a real connection with her audience, she does not feel that the show was a successful one. This is a great example of a situation where a live performance with pre-decided visual aesthetics and music can be focused on the kinetic emotional connections of an artist with their audience.

Another category is the collaboration of live music and live video, namely, collaborations between DJs and VJs. In most cases, either the DJ or the VJ is the lead in the duet, but both can feed off each other to create new musical and visual combinations. VJ Jason Scott Furr (JSF) is an artist who likes to leave his creative decisions to the last minute.<sup>12</sup> He uses material/footage that he already has made or can easily access to create the visual aesthetic that he wants or that the event is going for. Using his VJ software, he can use computer algorithms to match the visuals to live data inputs like the music volume or a live controller to directly change the video projections. Because of this technology he can tap into the emotions of the venue as much or as little as he likes depending on what he is feeling.

## 5. Interactive Performances

When using a piece of music as the starting point, one must consider who the author is and if their history, culture, and meaning behind the song will be influencing the performance project. Ultimately, if the composer of the music and the artist performing it are two different people, the amount of influence is up to the artist. The artist must consider what message that they want to convey in their performance and how best to represent that using colors and images. They also need to decide who the performance is intended for, themselves or the audience.

In Alison Wonderland’s work, she focuses on creating an experience for the audience where all attendees can connect with one another and immerse themselves in the experience. Wonderland’s performance sets at festivals, utilize a combination of visuals on screen and changing lights that help her express her style to all who are in attendance.<sup>13</sup> VJ JSF takes cues from the musician or the event manager to decide what visuals will be used in conjunction with the music.<sup>14</sup> Both artists use the music as a starting point in deciding how to create the visual accompaniment for the performance.

When using video as the starting point, the artist must consider how to communicate visually their main message. They must consider how the different color palettes, editing styles, and video transitions will affect the interpretation of the meaning by the viewer. In many ways relaying a specific message to an audience of a similar cultural background is easier if using video as the starting point, since one image can hold more context clues than one music note. However, in this case consideration needs to be given to how prominent the music should be in order to not detract from the visual component.

Lei Han, an artist and designer, has collaborated with Dr. Wayne Kirby and Roy “Future Man” Wooten to perform a few audio/visual live improvisational performances. In one specific performance, Lei Han wanted to use footage of her trip to Iceland as the starting point of the set. Han compiled shots, mainly of the landscape, that she wanted to use as well as created 3D renderings of mountains similar to the ones in her footage. Then before they performed, Han briefly discussed with Kirby and Wooten the footage and general emotion for the set. In this way they created a performance centered around the in-person creative collaboration.<sup>15</sup>

In my work trying to create collaborative and interactive music/video performances, I have found that it is easier to create a cohesive performance if there is an overall theme not specifically tied to either the music or the video. In an early prototype project, an Old Time ballad “Tennessee Waltz” was used as the starting point, with loss and heartbreak being the overarching theme. Collaborating with fellow classmates, I filmed various scenes to represent love, loss and heartbreak, then edited the footage into a background video to loop throughout the performance. The color palette stayed mainly in the blue/purple range with a few hints of other colors spread throughout. A Max MSP software patch was used to take the volume data from my laptops microphone to influence the way that the prerecorded footage was mixed and affected during the live performance. The result was a video of a performance of “Tennessee Waltz” with the background video projections, edited to help tell the story of the lyrics and showcase the performers.

## 6. Conclusion

Making interactive visual art accessible for mainstream musicians to have in their arsenal can help them to create a more immersive experience for their audience. Not only will the musician be able to change what they play in real time based on the immediate feedback from their audience, they will also be able to have visual elements that will follow their playing. Musicians will be able to decide what they most want to convey to their audience, whether that

is a specific emotion or storyline, and be able to create a visual accompaniment that can enhance their performance. Video artists will be able to use software to mix their footage and graphics in real time while having a musical accompaniment that syncs to their changes. Mainstream incorporation of live music and video interaction can expand the ability of all artists to tell their stories and connect with their audiences.

## 7. References

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