

MERGING CHOREOGRAPHIES OF CAMERA, DANCE, AND SCREEN TO CREATE A
MULTIMEDIA PERFORMANCE WITH LIVE-STREAM TECHNOLOGY

CULMINATING PROJECT ANALYSIS SUBMITTED IN PARTIAL FULFILLMENT OF
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INTRODUCTION

How can one experience dance? This question has continuously emerged throughout my choreographic journey. It first arose in 2015 when I choreographed a piece that broke the fourth wall as the dancers walked past the stage and performed with the audience, and continued to unravel with each new work I created. I found a curiosity for questioning what understood rules exist within dance performance, and how I could challenge them. More recently, I've approached this question in a way that combines movement and media, such as photography and film, in order to provide alternate perspectives on dance as a means to expand how one experiences dance as an audience, dancer, or creator.

In combining movement and media in order to challenge the experience of dance, I found a passion for screendance.

“Screendance, a term coined by Katrina McPherson, Douglas Rosenburg, and a group of video dance experts, is a hybrid art form that combines dance and film. It provides a new perspective on the movement and emotion of the performer allowing for a very profound encounter where the audience can take a closer look at the story being told by the artist. The videographer brings audience members inside the dancers' movement through the use of close-up and handheld camera shots creating an intimate connection and kinesthetic experience” (Ross 2020).

Screendance has allowed me to examine and see dance in a way one can't on stage. It provides the opportunity to get close to the dancer, surround the movement, and move the camera itself.

In an effort to continue my research of challenging the experience of dance performance, I created the piece, *With Undivided Awareness*, with the intention of combining screendance with stage dance. This eighteen-minute quartet brought elements of filmmaking onto the stage using cameras, live-streaming software, and projection to create a multimedia performance. In creating this work, I had the intention to expand the audience's experience of viewing a stage dance. I wanted to show the audience in real time what dance looks like from a different spot in the space

they're in and how it feels to be on a stage. *With Undivided Awareness* contains both in-person interactions between dancers and cameras and a live video feed projected onto a large screen spanning the back of the stage. The dancers observe each other directly, through the cameras, and on the screen. These interactions begin with a sense of curiosity—using the camera to examine each other's movement—and develop into chaos, as the images on the screen become less comprehensible and the dancers enter a state of frenzied looking.

CREATIVE PROCESS

The creative process for the piece, *With Undivided Awareness*, integrated three layers of choreography—camera, multimedia dance, and screen—in a multimedia performance that incorporated live-stream technology. These three layers of choreography occurred simultaneously to overlap in both creation and performance. Choreography for camera is the layer of choreography in which four cameras captured the dance to provide alternate perspectives on movement. Choreography for multimedia dance is the layer of choreography where techniques of dance composition were applied to the dancers, cameras, and a screen. Choreography for screen is the layer of choreography that utilized live-streaming software and film editing in order to effectively display the stage dance on the screen.

For this multimedia performance, the two mediums explored were stage dance and screendance. The stage dance was performed in a black box theatre, where the audience had a distanced, stationary perspective of the dancers on stage as they interacted with each other and the cameras. The screen spanning the back of the stage space displayed a live video feed from the cameras the dancers were performing with in order to create a screendance. I view screendance as a dance that integrates filmmaking techniques and is presented on a screen. For the purpose of this piece, I use the term screendance, as it was not just a video documentation or

video translation of the stage work, as the screen component had choreographed camera work, intentional shots, and edited transitions.

This multimedia performance is made unique by the use of live-stream technology, which uses an internet-enabled device to simultaneously record and broadcast a video feed in real time. While many multimedia performances use pre-recorded video, I wanted to use live video to make it clear to the audience that what was happening on the screen was the exact same thing that was happening on stage. This provided the audience with an experience of the dance from the perspective of the house, but also from the viewpoint of the cameras on stage.

Choreography for Camera

In the first layer of choreography, choreography for camera, I explored how cameras could provide alternate perspectives on movement through three methods: Camera Score, Vlog Mode, and Chaos Camera. Since the piece, *With Undivided Awareness*, contains both stage and screen components, the dancers had to not only take on the role of being a dancer but also act as videographers. This led us to find various ways in which cameras could expand perspective on movement.

The first method of choreography for camera, Camera Score, created a duet between the camera and the dancer. We utilized the end of a score, adapted from Katrina McPherson, which was directed as “focus on framing: the camera must stay focused on a single part of the dancer’s body, such as the face, limbs, torso, etc. Explore various camera shots, such as wide or close-up, to see how the distance of the camera can change the interpretation of the movement” (McPherson 2019, 68-69). Working in pairs, I assigned the roles of one dancer and one videographer. The dancer was instructed to continue to practice the movement we had generated. At the same time, the videographer was given a type of shot, a camera position, and a body part

to keep in the frame. For example, if I called out “close-up, birds-eye, elbow”, the videographer would position the camera in close proximity to the dancer’s elbow from directly above.

The second method of choreography for camera, Vlog Mode, challenged the dancer to film themselves while dancing. I directed the dancers in a similar method to Camera Score. I called out a camera position and body part, and the dancer would film their own body using the given camera position while improvising. For Vlog Mode, the camera could only be held within the dancer’s own reach, so most of the shots in this method were close-ups.

The third method of choreography for camera, Chaos Camera, directed the dancers to perform movement phrases as they usually would while holding the camera. This allowed for camera movement with no thought or purpose to the shots that were being composed. The camera captured the space around the dancers as the choreography was performed. As the cameras moved with the dancers, the cameras captured the perspectives not typically seen in a concert, such as the edges of the stage and the audience.

Choreography for Multimedia Dance

In the second layer of choreography, choreography for multimedia dance, I explored techniques for how to simultaneously integrate dancers, cameras, and screens through three methods: Video Speed, Coordinating Location, and Juxtaposing Stages.

The first method of choreography for multimedia dance, Video Speed, uses film editing terms to direct the timing of the movement performed on the stage. This method contributed to the multimedia dance by bringing filmmaking techniques into the stage choreography. I was influenced by Lisa Nelson’s *Tuning Score*, in which we used film editing terms such as “play”, “rewind”, “pause”, “slo-mo”, and “fast forward” to direct the dancer’s movement (Buckwalter 2010, 122-123). The dancers performed this score in a tight space repeating a single movement.

They would each make calls using one of the film editing terms which affected their timing as a collective group. By playing with timing as one would when editing a video—slowing down an action for impact, repeating a movement to emphasize detail, or pausing to linger on a single moment—I was able to set the timing of the stage choreography as I would when editing a video.

The second method of choreography for multimedia dance, Coordinating Location, aligned dancers in the same location both on stage and on screen. I had to consider the coordination of the dance, as the choices of where the dancers' bodies, the cameras, and the screen were placed in space affected the choreography. Looking at the opening of the work, there was a connection between the staging of the choreography both on the stage and on the screen as the dancer was displayed on the same corner of the screen as the corner in which they performed on the stage. For example, the dancer in the downstage right corner was located in the lower right corner of the screen. This created a connection between the stage and screen so that the audience could easily identify the dancer in each corner of the stage to the same dancer on each corner of the screen.

The third method of choreography for multimedia dance, Juxtaposing Stages, provided the audience with two simultaneous views of the dance: the audience perspective and the camera perspective. This idea was explored as the audience witnessed a soloist surrounded by four cameras on stage. The screen displayed a view from each camera on the screen so that as the soloist performed, the audience could see her movement from all angles. As I continued staging the work, I had to consider these juxtaposing stages, as the audience was not only watching the stage or the screen but both simultaneously. If the audience only had a view of the dance from the house, I would have had to stage the dance so that important gestures were performed toward the audience. Instead, the dancers were able to face in any direction, performing the movement

directly toward a camera. This gave the audience a close, frontal view of the dancer on the screen, accompanied by a more distanced perspective of the dancer from the house.

Choreography for Screen

In the third layer of choreography, choreography for screen, I designed the video displayed on the screen through three methods: Understanding Technology, Programming the Screen, and Pre-editing.

The first method of choreography for screen, Understanding Technology, consisted of learning how to display live video on a screen effectively. I found that iPhone cameras proved to be the best source for video, as they have both good quality and WIFI connectivity. In order to live-stream from the iPhones, I used Open Broadcaster Software (OBS), which is a “free and open source software for video recording and live streaming” (“OBS Studio”). In OBS, I was able to program various scenes that projected live video feed from the cameras in several different configurations such as: having multiple cameras shown on one screen, each camera displaying individually, two or more cameras overlaid, and so on. I was able to transition between these scenes using common film transition effects such as cut, fade to white, and fade to black. Once I had the cameras and the software to create the screen component, I needed to find a program that would allow me to share the video feed from the cameras with the OBS software. I settled on a browser-based software called VDO.Ninja which uses peer-to-peer technology to bring live video from a smartphone directly into OBS (“VDO.Ninja”).

The second method of choreography for screen, Programming the Screen, organized the live video feed as if it were a screendance. As a section of movement was staged, I would analyze the video feed from the cameras during that section and decide how to most effectively display the movement on the screen before moving on to set the next section. It was through this

method that I had to consider what I wanted the screen to highlight from the stage dance, and how to display that without taking the focus away from the stage dance.

The third method of choreography for screen, Pre-editing, is a process I developed in order to edit the live video before it was streamed. In a typical filmmaking process, one first pre-plans the action and camera shots that are needed. After filming all of the shots, one usually separates from the physical practice to complete the work digitally in the editing process. As I was trying to create a film with live footage, I wasn't able to edit after the work was performed, so I had to do the editing process before the work was performed, or as I am calling it: pre-editing. To pre-edit the screendance, I programmed eleven different scenes in OBS. I was able to jump between these scenes in OBS using common film transition effects. I found and installed an extension for OBS called "Advanced Scene Switcher" ("Scene Switcher WIKI"), where I was able to pre-program these transitions, which set the choreography for the screen. For example, I could tell the OBS software: Start on a black screen. Fade to scene "Camera 1" for five seconds. Wait ten seconds. Cut to scene "All 4 Cameras". Wait 10 seconds. Turn off "Cameras 2 and 3". This was displayed as: a black screen that slowly faded into a large single screen that showed a live video feed from Camera 1. In a quick cut, this switched to a screen that showed all four cameras' point-of-view on screen together. After ten seconds, the second and third cameras' displays disappear, leaving only the display of the first and fourth cameras. I was able to pre-edit the entire eighteen-minute work, and at the press of a button, it cycled through the switching of live cameras in a way that seemed as if the film had previously been shot and edited. In this instance, pre-editing served as a way to choreograph the software, just as I choreographed the dance.

THE BIG IDEA

The big idea that emerged from creating the piece, *With Undivided Awareness*, is a new way of dancemaking that shows both context and detail simultaneously through the use of live-streaming cameras to bring the audience an alternate perspective on dance. This work is on the developing edge in how technology can expand the experience of a live dance performance by bringing elements of screendance to stage dance performance. In expanding the experience of dance to include technology and media, dance becomes a function of the time we're in, where we have the ability to use tools such as cameras, projection, and live-streaming to bring awareness to aspects of dance that one may not usually have the ability to see.

In order to analyze how my creative process contributes to a new way of dancemaking, I had to first examine what merging the three layers of choreography—camera, multimedia dance, and screen—added to the experience of dance. The cameras provided alternate perspectives on movement through various angles and proximities. The multimedia dance allowed for choreography techniques to include dancers, cameras, and a screen. The screen created a secondary performance space in which one could view the dance from a different perspective in space. Together, these three layers of choreography merged to produce a multimedia performance of two simultaneous components: a stage dance and a screendance.

The multimedia performance called for a simultaneous awareness of what was happening both on stage and on screen, suggesting that the dance happened in the interepistemic space between the stage and the screen. "Interepistemic space is a concept used by Gamma Fiumara... metaphorically, it is a place where it is possible to explore how seemingly opposing ideas interconnect, interrelate and inform each other... Think of this as a "both/and" rather than an "either/or" space." (Fiumara 1995) In this multimedia dance performance, the two seemingly

opposing ideas were the stage dance and the screendance. Rather than focusing on these as two separate ideas, I had to simultaneously work on both components to figure out how they inform each other.

As the dance was performed on both stage and screen, the audience was able to see the intricate details of the movement, while also having an understanding of the context of the movement within the stage dance. An example of this is a hand gesture that was performed directly into the camera. If this gesture was only performed on stage where the audience had a distanced viewpoint, the gesture wouldn't be as interesting or dynamic as when viewed through the live video feed. When only viewed on the screen, all the audience could see was the details of the hand gesture but none of the context behind it.

With Undivided Awareness displayed dance in an overlapping of human and digital gazes—through which I expanded the experience of where dance happens, what dance is, and how one can dance. Dance happens in the interepistemic space, in the case of this work, it lives between stage and screen.

IMPLICATIONS TO CAREER PATH

The implications of this project to my career path highlight the impact that technology can have on dance practices by emphasizing process and using video to expand the experience of dance. I aim to achieve this through two outcomes: creating a dance film using footage from *With Undivided Awareness*, and developing a workshop based using the methods from *Choreography for the Camera*. My overarching goal is to continue to challenge the experience of dance in a way that might spark others' curiosity. I hope to specifically connect with those who may not have a history in western dance performance, those who think “outside of the box”, or those who are looking for a different way to experience dance performance. I believe that

technology and media can only heighten the field of dance by further making the unseen seen, through aspects of filmmaking and editing techniques, external elements such as animation and motion-tracking, and presentation formats through projection, installations, and so on.

The first implication of my career path is demonstrating that the process is just as important as the final product. I aim to do this by creating a dance film of the piece, *With Undivided Awareness*, and submitting it to film festivals around the world. Because of the nature of this project, I recorded the cameras' view of the dance from the first rehearsal to the final performance. With this abundance of footage, I'm interested in editing a dance film that utilizes moments from the work that show the evolution of the process. The film will cut back and forth between the same moment in the piece from different points in time to visually demonstrate how the piece shifted throughout the process.

The second implication of my career path is to share how to use video to expand the experience of dance rather than just document it. I aim to do this by continuing to develop a workshop based on the methods used in the *Choreography for the Camera* layer of the creative process. In the Fall of 2022, I created a workshop titled, *Exploring Movement Through Media*, and presented it at Texas Dance Improvisation Festival (TDIF) using the methods from the *Choreography for the Camera* layer of my creative process. The workshop begins with a brief introduction to basic filmmaking techniques to further explore methods such as: "Camera Score", where the camera follows movement as if it is performing a duet with a dancer, "Vlog Mode", where the dancer acts as both a mover and their own videographer, and "Chaos Camera", where the camera acts as an extension of the body and visualizes the space around one as they move. The dancers' cameras will be live-streamed and displayed on a screen so that the dancers are able to witness the other cameras' views throughout the workshop. Through the feedback I got from my

first iteration of the workshop at TDIF, I would like to continue to develop this workshop and share it with more dance communities, such as universities, dance studios, dance conferences and conventions, and smaller community-led dance organizations.

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