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Back to the Basics: How Virtual Reality Films Harken Back to the Invention of Cinema

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Abstract: Visual storytelling has been a constantly evolving medium that continues to develop even in contemporary times. The foundation of modern filmmaking relies on the cut because it allows the storyteller to shift between different perspectives, time periods, and different scenes in order to create a strong, interwoven narrative. Because virtual reality filmmaking requires the absence of cuts in order to not be jarring to the audience, research needs to be done in order to gather data on the effectiveness of utilizing different techniques to capture stories with VR. The opening scene from *The Godfather* will be recreated and recorded using a stationary VR camera and a mobile VR camera. Those two versions of the scene will be shown to test subjects in a random order. After viewing the scenes, questions will be asked of the participants to gauge their engagement with the story and analysis of the subjects sight lines will be used to determine what visuals caught the subject's attention. The information gathered through this experiment could then be used by future filmmakers to discover how the rules of contemporary cinema either remain the same or are entirely changed.

Introduction: Visual storytelling has gone through many stages of evolution to reach the current medium of filmmaking that we currently know of. One of the earliest precursors of filmmaking was known as "a magic lantern show," where shadows of caricatures were projected through the light of a fire onto a flat surface, and was used as early as seventeenth century. It wasn't until the nineteenth century that inventors crafted a device that imprinted images onto film and thus birthed modern filmmaking as we know it (Dixon 1-2).

One of the biggest differences between contemporary filmmaking and the beginning of filmmaking was the fact that initially movies consisted of only a single shot. The plot of these films, as was the case for the Lumière Brothers' film *Workers Leaving the Station,* revolved around the observations of everyday occurrences: in this case workers leaving the station (Corrigan 99). Understandably, these audiences grew bored of these types of films after a period of time because they grew accustomed to seeing recorded actions which took away the sublime factor away from films that relied on showcasing a spectacle rather than an engaging story.

This is all changed when Edwin S. Porter introduced the style of editing called "Cross Cutting" through his editing of the film *Life of an American Firefighter*. Cross cutting is defined as "creating a story out of separate pieces of film, or shots, combined in a coherent fashion" and Porter used this technique to "build last-minute rescues to an unprecedented pitch of suspense" *(*Bordwell 13). In essence what Porter proved was that audiences could see two separate events occur and through the usage of clever editing, they could then infer a relationship between those two events which in it of itself caused the audience to become more engaged with the story as a whole. Through

this discovery, editing became the foundational way for filmmakers to tell audiences stories that went beyond simple "theatrical performances" (Bordwell 12).

The legacy this film had on the future of filmmaking is apparent in how since the release of *Life of the American Firefighter* the average film has gone from having very few cuts, to the film Mad Max which won an Oscar for editing and on average had a different cut every two seconds (Marine). If one were to solely look at this trend, it could be possible to believe that the quality of a film is dependent on how often a film utilizes its ability to cut between actions and play with the audience's level of suspense. If that were the case, then it would logically follow that a modern film without cuts would fail to compare to the quality of films that have a high number of cuts. Yet the very fact that films that lack any cuts, such as virtual reality films, are beginning to make their way into international film contests and win awards demonstrates that cuts are not what fundamentally make stories strong (Boykin).

In traditional cinema the audience is directed to look at certain images through the usage of cuts in order to establish a certain emotional mindset towards the events occurring within the plot, what separates Virtual Reality filmmaking as an entirely differ-ent medium is the fact that through putting each audience member within their own world where they can gaze in any direction "it gives the viewer a lot of latitude not to take direction from the storytellers but make their own choices of where to look" (Child). Truly, this can be seen as the biggest difference from all the styles of filmmaking that has come before the invention of virtual reality filmmaking because whether it is *Mad Max* or *Workers Leaving the Station,* the films of the past have always intentionally directed the audience to look at a specific visual which in turn allows the

storytellers to cut to a different visual in order to progress the story. Yet in virtual reality films like *White Room:02B3* there are no cuts and there are three hundred and sixty degrees of vision, thus making it so if each audience member engages with different visuals they will in turn progress through a story that will be different from every other audience member who chose to view different visuals (*White Room:02B3*). If each member of the audience has the ability to disregard the story that the storyteller has in mind then is it possible within a VR film direct the focus of the audience in a similar manner as traditional cinema just without cuts, and if so is there a better method to achieve this?

Background: The current issue that we have found with VR films is that when it comes to their reviews, there are rarely any details given about characters' performances or the emotional arcs of the narratives. The focus tends to be solely on how the films all "face unique challenges" and how stories where "The entire story isn't immediately visible" are great because it forces audiences to rewatch the film in order to see details of the story they missed (Hearn). By solely focusing on what VR films can do technically, we believe that these VR trailblazers are going down a wrong path. we believe that the best way to realize the potential VR films have with emotional storytelling is to experiment with the technology to see what VR films can do emotionally with audiences and how they can keep the audience's attention in order to tell a consistent story that the average moviegoer will not have to watch repeatedly in order to understand.

Methods: In order to investigate how best to focus the audience's attention within a VR film, we would like to recreate the opening scene from *The Godfather* utiliz-

ing VR cameras and equipment. Through replicating the set design and actor's appearances to be as similar as possible to the original scene, we will be able to limit the variables impacting the audience's engagement with the scene to how we utilize the VR camera and how we would choreograph the blocking for the actors. The two methods of audience engagement we would like to experiment with are based on the early and modern styles of filmmaking. The first method would be reminiscent of *Worker's Leaving the Factory* in that the VR camera would remain stationary while the actors would perform the scene around the camera. The second method is inspired by the complex shots used in modern films like Mad Max in that the VR camera would be positioned onto a moveable rig so that it would travel to different locations within the scene being performed by the actors. This method would allow for the audience to experience close ups, pans, and other camera shots without there needing to be any cuts. Through renting a rig like The Mantis, we would gain the ability to do complex movements that cannot be done with any other type of Dolly. In both version of the films the physical movement of the actors and their dialogue will remain relatively consistent, allowing the main variables between the two versions to depend on movement.

Expected Results: After recording the scenes using two different methods, we would showcase the two films in a randomized order to several different subjects and ask them about which method proved to be more engaging to them as well as what they believed that they were focused on during different parts of the scenes. We will then compare these results with the view-tracking technology present in the Virtual reality headset that we'll be using. Using the difference in the user's evaluation of their experience with the areas where we tracked them looking at the most, we will develop

a heuristic to determine the most effective methods of telling stories within VR. The information we gather would benefit future VR filmmakers due to the fact that they will now be able to identify the techniques present in traditional cinema which proved effective within VR cinema as opposed to those which were ineffective. Alongside the data gathered through this experiment, the creation of two different VR versions of an iconic film scene would benefit the population as a whole. It encourages people who have already seen *The Godfather* view the scene from an entirely different perspective and it demonstrates how art can be entirely reinterpreted through a different medium, affording us insights on how our art evolves in proportion to how the ways in which we express ourselves evolves.

Conclusion: While filmmaking has come a long way from Magic Lantern Shows to shows like *Mad Max*, the rise of VR filmmaking demonstrates that filmmaking has never been stagnant and will continue to evolve as time progresses. Edwin S. Porter demonstrated through his utilization of cross cutting that it is only through experimentation that we can discover new ways to tell stories in a unique fashion. Thus by pursuing new and innovative ways to tell stories, we believe that we will contribute to the evolution of cinema for years to come.

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