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WATCHING TOGETHER AND WATCHING ALONE

**Watching Together and Watching Alone: An Examination of Audience Aesthetic and
Affective Reception of a Short Film**

A thesis presented by

Madalena Rathgeber

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in partial fulfillment of the requirements

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Abstract

This research investigated the differences between participants' affective response and recollection of a film, comparing two conditions, watching it alone at home ($n = 21$) or in an auditorium with an audience ($n = 28$). Participants were asked to view the short film, *The Neighbors' Window*, and answer questions about the emotions they experienced during the filming, plot points and favorite moments, as well as whether any personal memories were elicited. After two weeks, they were contacted again and asked to respond to the post viewing questions again. Contrary to hypotheses, it was revealed that in the two week follow-up responses, those who streamed *The Neighbors' Window* at home alone had significantly higher "engaged" and "moved" responses. Those who streamed at home also, in the two week follow up, reported a significantly higher frequency of elicited personal memories from the short film in comparison to those who watched it in the cinema treatment. Lastly, a significant positive correlation was found across the sample between both the electronic viewing habits and the "moved" factor, as well as the streaming with others habit and the "engaged" factor. These findings are discussed in context of the limits of the research, including a decrease of ecological validity in the cinema treatment, as well as COVID's possible role in changing the normal film viewing experience for college-aged students. Recommendations for future research are provided.

Keywords: aesthetic responses to public versus private viewing, memory of streaming video, affective responses in audiences

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Watching Together and Watching Alone: An Examination of Audience Aesthetic and Affective Reception of a Short Film

Imagine that you are sitting in a darkened auditorium, the glow of a projector dominating your field of vision. The audience has grown quiet in anticipation; the advertisements are finally over, and the movie is about to begin. Now contrast this moment with another—sitting comfortably on a couch at home, remote in hand, TV screen loading the chosen film for this evening's entertainment. Both of these experiences will overlap in many ways—it's even possible that the same film could be viewed in both settings—but will you feel the same way about the story? Will you be as immersed at home as you are in a cinema? Which setting will lead you to remember more of what you watched in the weeks after? Of course, there are many environmental differences at play between these two moments. A professionally built auditorium engineered for the sole purpose of movie spectators' reception has different capabilities than most individuals' multipurpose living rooms. Even self-proclaimed film fanatics may not be able to build a space at home that matches the capabilities of a movie theater. However, there's another variable that has been ignored time and time again: the audience.

What does the presence of an audience change in the reception of a piece? What does it mean to witness an event as part of an audience? These are the questions at the heart of this study. They are not just psychological questions—this is an interdisciplinary area of research, as many different factors are at play, including aesthetic and technical. However, for this research, the focus will mostly stay on the psychological experience of audience members, as well as on theater and film developments in the mainstream industries of the Western world that have changed that experience. As time has passed, a variety of stories have been told to ever higher numbers of gathered audiences. Spectators have come and gone, and individuals have attended

theaters prepared to enjoy a piece of art with their own expectations and contexts time and time again for countless plays and films in a diverse spread of genres and themes. Nevertheless, there is a key pattern to the progression of how storytelling has changed through the decades, particularly focusing on the Western world, that may have further implications for how we, as people, navigate existing together in shared spaces and experiences.

Early History of Audience Viewed Performance

For thousands of years, theater was a phenomenon that occurred outdoors. From Aboriginal tribes' theatrical masked rituals to Ancient Greece's performances on open-air stages, performances existed amongst the natural world (Berthold, 1972). In Rome and Greece their theaters existed outdoors without roofs, in semicircular amphitheater-like structures (Landels, 1967). In Grecian theater tradition, the audience could rely on a chorus to help guide them through the world and events of the play, and the choruses were sometimes made up of Athenian citizens (Rush, 2007). This outdoor event also allowed for plenty of social connections; festivals that focused on performances led to voting about the best playwright, and citizens met afterwards to discuss and prepare for the next year (Rush, 2007). Festivals such as the City Dionysia furthermore were timed in consideration of harvest cycles, allowing for the highest number of audience members—local and foreign—to attend (Rush, 2007).

Even as architectural structures that set boundaries on the theatrical space were introduced, such as the wagons used in the Middle Ages for cycle plays, these structures existed outside (Lopez, 2015). Setting the performance space of plays with a larger number of audience members outdoors meant that the play occurred during the day, it was mostly lit by the sun, and had to be able to be flexible as changes occurred with the weather (Hopkins, 2008). For a majority of the history of theater, there was no ability to dim the lights and immerse the audience

in darkness. Viewers and their reactions were, in some cases, as visible as the action on stage. This blurred the line between performance space and spectators' space, highlighted even more by the ability of audience members to sometimes sit on stage during performances (Thomson, 2010). Although there were still key architectural elements to consider amongst these structures, such as acoustics, the outdoor space did not result in high demands of what we may now consider as technological abilities. Nor did it put many restrictions on audience make-up. However, as the Renaissance bloomed in Italy, a bigger engineering shift began to take shape (Lopez, 2015).

There is an interesting dichotomy at play in the changes that Italian theater introduced to the art during the Renaissance. First, there was a notable shift in content. The introduction of Humanism, a focus on people and the value of life, shifted the narrative's attention away from the gods. Storytelling centered more around mortal life and the experiences within it. Humanism began an interdisciplinary curiosity in humankind that influenced the critical perspectives on productions (Beecher, 2016, 3). Even if performances still utilized archetypes and tropes, as well as the rules and patterns of plays from Roman playwrights, such as Plautus and Terence, writers of this time adapted and explored topics outside of these restrictions, creating narratives that spoke to modern interests (Beecher, 2016). The playwrights of the Renaissance translated these texts into the vernacular, while performances started to occur in banquet halls of nobility (Beecher, 2016). Theatrical spectacles were viewed for festivals, royal weddings, court receptions, and at schools and academies (Beecher, 2016). There is a contrast between the changing text of the plays that made them more accessible for comprehension, while the physical ability to attend a performance became slightly more difficult and class-based. There is a shift to becoming more centralized about the human experience, while simultaneously introducing the

hierarchy of class into the accessibility and production of performances. The most notable example of this introduction of hierarchy is the Teatro Olimpico.

Teatro Olimpico and Early Indoor Theaters

The Teatro Olimpico was built in Italy in 1585 and was one of the first permanent indoor theaters in Europe (Leopold, 2019). This was a grand engineering feat within the world of theater. Not too dissimilar in structure to auditoriums we may be familiar with today, it allowed for performances to occur indoors, and thus created even more clearly defined seating. The architectural design harkened back to Ancient Rome, but it integrated new elements to meet the opportunities of indoor theater. For example, they employed single point perspective painting in the sets (Amoruso, Sdegno, & Manti, 2018). This meant that the backdrop would depict a setting, such as a street scene, that further encouraged an emphasis on the depiction of naturalistic worlds on stage (Amoruso, Sdegno, & Manti, 2018). Teatro Olimpico has furthermore been credited as the origin of the proscenium arch—and thus the theoretical basis of the fourth wall that is associated with a proscenium arch (Oosting, 1970).

Although the invention of the concept of a fourth wall didn't develop until years after the Teatro Olimpico and the first proscenium arches, there is a notable division introduced by its engineering progress. The frame that the stage exists inside introduces a sense of a wall between the audience and the actors that did not exist before. Although the proscenium arch isn't the only form of theater structure, it has been the dominating one for many decades, particularly in older theaters built on Broadway in New York City and the West End in London. As these two locations are known for being a hub of theatrical creativity, the proscenium arch that theaters employ inform what other theaters decide to do. Individuals often see theater on Broadway or West End, also guaranteeing that this theater structure is well-known amongst audiences.

Furthermore, instead of performing outside, where theoretically anyone could discover the production or watch it without being a part of the allocated audience, there are literal walls and a threshold one needs to cross to join the viewers. The Teatro Olimpico therefore acts as a prime example of a technological or engineering advancement that led to further division between the audience and actors as well as division amongst the audience members.

As the Renaissance progressed, there was an increase in indoor theaters, some of which were built for nobility (Amelang, 2018; Nevile, 2017). The stage therefore changed more permanently from outdoors to indoors, where for the most part in the mainstream Western world, it has remained. Indoor seating places an increased value on the physical placement of the audience and the social standing that accompanies one's relative position in the theater. As increasingly elaborate structures were developed to house theatrical stages, various visual obstructions were also introduced and subjected the space to adjustment (Amelang, 2018). Furthermore, the existence of seating suggested a limitation in availability. Performances outdoors allowed for flexibility in seating and in audience configuration in a way that indoor seating does not. The movement to enclosed spaces allowed for theater purveyors to charge for admission, introducing a new financial accessibility element to theater (Amelang, 2018). Although the Teatro Olimpico does not include a "Duke's seat" in the center, and included multiple vistas to allow different sections of audience to have enjoyable sightlines, this quickly became the exception in indoor theaters, not the rule (Menta, 2020). Despite this democratic distribution of sightlines, the extreme sides of the audience sections have poor sightlines due to the stage's perimeter walls (Menta, 2020).

As time passed, a pattern of technological development occurred, resulting in isolation of viewership, and changing what it means to be part of an audience. Further architectural changes

within the theater auditorium divided the actors from the viewers, and from the 1850s onward, particularly in England, a sedentary and passive audience was to be expected (Bennett, 1997). The etiquette that was introduced continued to flourish and respond to societal higher class expectations. This change in behavior was sustained over the following centuries. With the move indoors during the Renaissance, lighting had to be intentionally procured from a source other than natural sunlight (Essig, 2007). Lighting was thus also able to become a part of the dramatic storytelling, and candles or oil lamps were used to light the actors and set on stage as well as for various special effects (Essig, 2007).

During the time of gas lights, windows placed high were employed as well to add to the light and to aid in ventilation (Essig, 2007). Gas lights allowed for more control over lighting, and this control led to differing light levels in auditorium and on stage (Essig, 2007). This made a complete darkening of the lights amongst the audience possible, and has become common practice since then (Essig, 2007). This immerses spectators in darkness, preventing them from observing anything except the actors that are lit on stage. This darkness grants anonymity and does not facilitate interactions or discussion between audience members until intermission. It also makes it more difficult for performers to see individual audience members, preventing easily formed connections across what would now be known as the fourth wall. The individuals in the audience may connect with the characters on stage, but the presence of an audience isn't directly addressed, unless there is a "breaking of the fourth wall."

Davis (2015) offers a strong explanation of the fourth wall and its employment in theater. The concept of the fourth wall is most often discussed when considering the tool of "breaking the fourth wall," a device where actors acknowledge the audience directly. This became shocking only after the presence of a fourth wall was developed by naturalist theatermakers, and is a

technique that breaks the audience's suspension of disbelief. The fourth wall immerses spectators so much in the play that it can be difficult to separate from it. This division also helps separate the reality on stage from the audience's reality; it is a technique that both allows for immersion into a piece and stops the audience from being actively present in the world of the play. Some artists, like Bertolt Brecht, would argue that it keeps the viewers from drawing connections between the messages and events on stage and the real world they will soon return to. The technique of "breaking the fourth wall" is often used for comedic effect—imagine a character in a scene quickly shifting their gaze from their scene partner to the audience to make a funny quip before returning back to the scene—but has also been used by creators like Brecht for political purposes (Davis, 2015).

Notably, these changes that created division also, in some ways, invited unity. Due to the blocked off space dedicated to the theater and to experiencing a production, audience members were committing to their spectatorship in a way that they could not have been before. Distractions were minimized by setting the stage indoors and by dimming the lights, and intermission still allowed for people to gather and discuss the events they had just witnessed. As manifested particularly in London, England, indoor theaters both helped minimize the cacophony of the city while introducing better acoustics and more room per playgoer to enjoy the performance (Amelang, 2018). Theater maintained its status as a place for people to gather, and in some ways, the introduction of social class in the audience increased the attention paid to who was in attendance. In times before television and mobile electronic devices, theater provided a great source of entertainment and connection amongst the general public. In fact, it was a familiar trope in French and English novels of the 19th century that the work's characters would rendezvous, plot, "and see and be seen" at theatrical and musical performances.

Nevertheless, despite the large presence of indoor proscenium theater auditoriums, some theaters, particularly those with a long history of performance, have attempted to hold on to the traditions of the past. Take, for example, The Globe theater in London, England. This theater was where Shakespeare's plays were performed, and, despite burning down and moving locations, the theater has kept to many of the customs that occurred during Shakespeare's time (Amelang, 2018; *The Globe*, n.d.). It is an open air, nearly in the round, space, that relies on sunlight for a majority of the lighting. Audience members can buy a five pound ticket and be a "groundling," which means they stand in the yard—from the edge of the stage to the beginning of the seats—for the entirety of the play. Some spectators may bring food, lean on the stage, and everyone is visible in the natural lighting. The actors often have to be prepared for interruptions, such as airplanes and other city noise, adverse weather conditions, and understudies standing in at the last minute, scripts in hand. Their blocking often takes them through the groundlings, ad-libbing interactions with audience members. Set designers often incorporate a set piece amongst the groundlings, or find a way to extend the main stage into the groundling area, pushing the boundary between actors and spectators further. Even on stage, actors will directly address spectators in the courtyard when the text calls for it. Productions, and the performers in them, learn how to adjust to the reactions of the audiences, and spectators are loud. Gone are the expectations of sitting quietly and clapping politely when it seems appropriate. Gone, as well, is the boundary between those on stage and those off of it.

The Introduction of Film

The next most evident shift towards greater isolation in the media of the Western world is the introduction of film. Although this does not immediately appear as a tool of viewer isolation, it certainly separates the audience from the actors. Instead of the performance occurring live, it is

recorded, and many different editing tricks, tools, and techniques are developed to influence the final product of the film. The camera is able to choose what the audience can and cannot see of a performer: the director more precisely dictates what parts of an interaction are visible via the camera's frame. Although live theater has the ability to be shaped by the audience, the performance of a film is much less malleable. Theater performers learn how to adjust their performance to how the spectators are reacting; they may hold for applause or laughter, or directors, playwrights, and actors may make changes to the script and performance in response to the audience's reactions (Bennett, 1997). For film, this dynamic dialogue between actors and audience is not possible (although some studios might use a preview viewing in order to make final adjustments on the film). The performance has already occurred months, if not years, ago and cannot change or shift in accordance with the spectator's reactions or new cultural perspectives. There is also a permanence to film that is not present in theater. A movie is only created once, and then it is able to live for as long as the recording is maintained. A production is reinvented every night.

Nevertheless, during the early decades of the cinema, movie theaters were a common gathering place. They provided an easy access point for socialization while allowing people to escape from the outside world. Particularly in the United States during the 1930s in the wake of the economic crash, movie cinemas provided shelter from weather and cheap entertainment to spend a few hours and escape reality (Dixon & Foster, 2008). People would spend at least a day a week at the movies, watching some films multiple times, as well as enjoying double billed movies, cartoons, newsreels, travelogs, and coming attractions (Dixon & Foster, 2008). Similar to the development of the fourth wall by naturalist theater, there is once again evidence of valuing immersion. Viewers did not go to the movies to think critically about their current

reality—they went to leave it behind. However, as much as the audience may have wished to escape real life, movies could not avoid portraying the underlying truths of the times in which they were made. Films and shows did, and do still, reflect the dominant culture of the times. This can be seen in the demographics of the main characters, as well as how marginalized identities, such as women, were mostly portrayed in these times to match viewer expectations (Dixon & Foster, 2008). Lastly, many films maintained the tradition of providing an intermission for audiences, continuing a period of time in the middle of the narration that allows for discussion and reconnecting amongst the spectators. As film culture evolved and movie stars became a central component of the film-going experience, audiences also bonded over film-oriented magazines and fan clubs.

Progression to Television and Mobile Viewing

By the late 1940s, another technological shift occurred, and the mobilization of performance allowed for the next steps towards isolating the viewing audience. Following the invention and popularization of the TV, viewers were able to quit their general public audience membership in movie theaters and move to the nuclear family gathered around the television at home¹. Individuals no longer needed to leave the comfort of their own home to enjoy professional visual storytelling. Instead of sharing an experience and forming an audience with others from the general public, they could enjoy smaller gatherings of friends and loved ones. As the progress of technology developed even more, the ability to customize the viewing experience increased. Introduction of recording instruments allowed for watching movies and TV shows at their own pace and on their own time. Intermissions were no longer included in the running of a

¹ Notably, this had also occurred with the invention of radio. Although radio was a great source of entertainment for families or for individuals, it is not a visual source of entertainment, and will not be taken into consideration for the purposes of this research. Nevertheless, it is key to acknowledge the central role it had during the first half of the 20th century in entertainment..

film, although by the early 1980s, at any point a spectator could in essence “create” an intermission by pausing the video as they pleased. An emphasis is placed on convenience; people can watch their favorite show when they want to with access to as much comfort and luxury that their home dwelling is able to provide. Notably, for much of the history of television, it was common for individuals to attend movie theaters, and live theater also continued to thrive. However, as the ability to mobilize audio-visual technology allowed for customization and expansion of the viewing experience, more opportunities for private enjoyment of film, and even theater productions through live recordings, became possible. This has radically changed the viewing habits of the general public and reduced dramatically widespread attendance at the cinema and theater.

Corporations such as Netflix seized upon the opportunity presented by this developing technology. First through DVD rental services, and now through internet streaming, companies have been built to benefit from the viewing options TVs and at home movie theaters provide. More emphasis has been placed on the luxury of spending a night in and streaming a movie instead of going out to the theater. As phone and laptop capabilities have progressed, individuals have attained the option of watching entertainment on their own. No longer is audience membership occurring as a family in the living room, gathered around the television. These days, as satellite fades to the next thing of the past and streaming services take over, the option of viewing on our own, or with a select few, has come upon us. Furthermore, from an economic standpoint, as the ticket price for attending live theater or a movie theater have increased, the price of a streaming service, which gives someone access to hundreds of movies and TV shows at the click of a button for the average cost of \$5.99 to \$15.99, is the same as the price to see one movie at the theaters at \$11.75, or, in the United States, 5-15% of the price of your average

Broadway ticket (Barnes, 2023; Medine & Odell, 2023; Robinson, 2019). Audiences need a reason to leave their houses and still attend movies and theater with the masses. Given the combination of this shifting audience membership motivation with the recent COVID-19 pandemic, some may have predicted that live theater and movie theater attendance would become a thing of the past after we emerged from quarantine.

Theater and film attendance has not died, however. There still appears to be a need to gather and experience art together. A valuable example of this is the “Barbenheimer” phenomenon during the summer of 2023. The box office cinematic release of these two films—*Oppenheimer* and *Barbie*—on the same day led to an audience-generated ritual experienced by people around the Western world. Thousands of individuals made the choice to attend cinema viewings instead of waiting for the films’ inevitable release on streaming platforms. The event became more than simply viewing a movie or two; people curated outfits, gathered with friends and family, debated what order of the two films would be best, and were able to connect with strangers over their audience membership. If two people wearing all pink saw each other, they might greet each other with “Hi Barbie!,” a reference to the trailer for *Barbie*. Fan-generated art and trailers were created to celebrate both films, and the two vastly different narratives brought box-office sales back to pre-pandemic levels (Shafer, Frater, & Ramachandran, 2023).

The excitement and attendance were particularly observed amongst younger generations, who are also the audience members most accustomed to using streaming services. This phenomenon shows a disruption in this isolating pattern, and although it may have been an unreplicable event, it nevertheless indicates that there is still motivation towards coming together and enjoying art in shared space. Arguably, this phenomenon might not have happened if Warner Brothers and Universal Pictures released these two movies immediately on streaming platforms.

People may have dressed up, or may have still talked about both films over the course of the week of their release, but there would have been no real life gathering opportunity. Individuals would not have been able to connect face-to-face with strangers over this experience.

Furthermore, this was not an event that was created by the producing companies to generate more box office sales. The ritual that grew surrounding this double feature release day was completely audience generated and audience driven. There was still a common interest in gathering and sharing the spectator experience. Why is this, when our comfort levels and wallets would have benefited more from staying at home and waiting for the release to streaming platforms?

It's worth noting that, particularly in the last century as technology has progressed and mobilized the viewing experience, it has also increased the accessibility of art. People who live in places far from cities and that only have one local cinema with few movies playing can enjoy films at around the same time as the rest of society. Social media allows for a virtual connection and ability to share ideas or reactions to films that also helps account for what is lost in individualized streaming. This shared experience over virtual connections may be diminished, as social media can increase or decrease well-being, depending on the reason for its use (Choi & Choung, 2021). However in some ways, this means that fewer people are prevented from enjoying films and recorded theater performances. There is still a connection provided through internet capabilities, especially if spectators use social media or messaging to discuss their viewing experiences with others on a one-on-one basis. This value shouldn't be ignored; however, it's notable to investigate how the actual experience of the art may be influenced by a lack of other people present. Is it worth investing in the ability to watch something alone and with ease, or is it more worth investing in increased access to the viewing experience with an

audience? Understanding the benefits of having an audience present can help inform that decision. Furthermore, if there are benefits tied to sharing an experience with the general public, this is further motivation to ensure that theater and film stay financially accessible for citizens.

Throughout the history of humankind, there have been particular engineering, electrical, or technological advancements that have allowed for spectators to see more at the cost of sharing less. It was seen with the movement of the stage indoors during the Renaissance with buildings such as the Teatro Olimpico, with electricity allowing for dimming of the lights inside an auditorium, with the invention of film, the development of television into households, and now the mobilization of streaming platforms. These changes have brought along a division between the actors and the audience, isolation of the audience itself, and an increase in valuable but limited access, restricting lower socioeconomic classes from theater and movie cinema experiences. As we experience this last shift towards streaming platforms, ushered in by the global COVID-19 pandemic, it's valuable to stop and question what could be at risk if humans stop participating in and, possibly more importantly, investing in this shared experience. What does it mean to be part of an audience, and how does that membership influence our experience of art in the moment and in memory?

Empirical Research on Audiences and Their Impact

There is empirical evidence that the presence of an audience influences our experience of a film in cinemas. When we watch films in a movie theater we have heightened emotional reactions, particularly aesthetic emotional experiences (Fröber & Thomaschke, 2021). Meanwhile, watching films in isolation, especially if watching a movie more than once in isolation, leads to a higher experience of boredom (Fröber & Thomaschke, 2021). The film becomes less interesting and audiences are less invested during the second viewing at home. The

emotional reception of a film is a valuable aspect of the viewing experience, as individuals often use movies to aid in emotional regulation or repair (Harris & Cook, 2011). If someone does not experience as high of an emotional reaction to a film, they are less likely to return to it. There is, furthermore, evidence of a cinema audience's ability to influence the chemical composition of the atmosphere in a theater in accordance with their reception of scenes (Williams et al., 2016). In research conducted by Williams et al. (2016) to measure the changes in molecular atmospheric makeup within a cinema during film showings, they found that as pulse and breathing rates increased in response to content, the CO₂ levels would increase in trace amounts. Additionally, isoprene, a chemical associated with breath holding, muscle twitching, and cortisol, also had peaks during the viewings, and would peak at the same point in the film across four different audiences (Williams et al., 2016). This indicates that audience members were synchronized in their respiratory, muscular, and physiological responses to the film across multiple viewings (Williams et al., 2016). Although the topic of airborne chemical communication between people is still controversial, this environmental element of cinema is worth noting in comparison to at-home viewing (Williams et al., 2016). The presence of an audience changes the atmospheric make-up of the room where a film is being viewed, indicating a chemical change enacted by spectators that is not possible, or at least, as large of a change, in isolated viewing.

Furthermore, by employing a “uses and gratification framework,” researchers have attempted to understand what dictates the choice to watch a film in the movie theaters or wait until it is available to stream at home (Tefertiller, 2017). Affective gratifications, such as meeting the need of a beneficial emotional or aesthetic experience, appear to most notably explain the decision to attend a theater across a variety of film genres (Tefertiller, 2017). This could indicate that we are aware of the increased emotional response and technological abilities

provided in a cinema that cannot be achieved to the same level at home. Participants' intentions also depended on their comparison of the quality of viewing technology at home and at the cinema (Tefertiller, 2017). This means that cinemas are in competition with at home streaming abilities as well as fellow theaters. As our technological abilities to immerse in a film at home increase, the motivation to leave the house and attend a cinema may decrease (Tefertiller, 2017). Notably, this study focused on intentions and not on behavior outcome, and future research would benefit from investigating the manifestation of these intentions in actions (Tefertiller, 2017). However there is an indication that the valuable gains from attending the cinema may be at risk of losing the competition with at-home technological abilities, matching the pattern thus far observed.

In the cinema, individuals can appreciate the presence of others, a loss of control, a commitment to occupying a shared space, paying undivided attention to a film, and lastly the possible shift in perspective they may experience after viewing (Okumuş, 2022). This loss of control, in some ways, is self-applied when we watch films at home. Dinsmore-Tuli (2000) investigated the practices of cinephiles with VCRs, and although the technology is now outdated, the findings are still applicable to modern day viewing abilities. Despite the opportunity for controlling the presentation of a film at home—such as rewinding or fast-forwarding through moments, pausing, or stopping films—91.4% of participants said that they would watch a film uninterrupted and completely on their first viewing, and 68.6% said they would do so in viewings after the first (Dinsmore-Tuli, 2000). Repeated viewings were enjoyed for many reasons, including “the chance to discover more about a favorite film”, and they found themselves immersed in the story even if they knew what was coming next (Dinsmore-Tuli, 2000, 319). This maintains the lack of control and shift in perspective that viewers may enjoy

when in a cinema setting, but it doesn't account for the absence of others with whom to share the experience. Furthermore, participants reported doing what they could to mimic the cinema setting and to minimize distractions (Dinsmore-Tuli, 2000). In fact, one of the acceptable uses of fast-forwarding was to skip any advertisement breaks that may have been added to movies recorded on the television (Dinsmore-Tuli, 2000). This research supports the competition that is at hand between at-home capabilities and those of a movie cinema, but once again leaves out the element of the presence of an audience.

If spectators are ideally able to replicate the experience of watching a film in the cinema at home, the only variable that they are not able to replicate is the presence of many other individuals. If the presence of an audience is a valuable part of the cinema experience, the replication will never fully capture what they're missing by staying at home. They won't share the emotional experience of the narrative and may be less likely to audibly react without others doing the same, nor may they have the opportunity to discuss immediately after with fellow viewers. Watching alone takes away the sense of unity or comfort that sharing an experience can generate in an audience, something notable particularly in disturbing or upsetting material. Lastly, the recollection of the film becomes an individual's own, and does not include other people in a shared memory.

The Present Research

The research question at hand has not been explicitly addressed in the literature for the theatrical industry or through psychological research, although it has many different applications and implications for both fields. For a phenomenon that has been occurring amongst humans for centuries, little attention has been paid to it. There has always been a gathering force derived in the theater and in sharing stories, indicating something at play here that is worth exploring,

particularly as we progress technologically and allow for more individualized experiences of film and theater. The interest in conducting this investigation is both to help inform theatermakers and to consider grander implications of what the presence of others can change in an individual's spectator experience.

Investigating the role that storytelling plays in our society is valuable for the clarity it can provide in understanding the points of contact that we have with others. With the rise of social media and easy access to virtual life, there has been a decrease in feelings of connectivity and belonging, particularly amongst younger adults (Primack et al., 2017). Diminished, as well, are the number of experiences that we share with others. Theater and movie cinemas provide a space for us to connect over a common interest or investment in a narrative. Although we do not interact immediately with the people around us, there may be an inherent dialogue occurring with those around us just by hearing each other's reactions, watching together, and seeing each other before a show or film starts, during intermission if there is one, and after a piece. The value that this connection has on our experience of the art is important to understand for a variety of reasons for different individuals.

There is, understandably, a motivation for artists to better understand the phenomenon of audience presence. Plays and movies often have goals—whether it's to capture the collective mainstream attention or to enact a change in society—and knowing what effect, if any, the presence of an audience can have on an individual's experience and recollection of a performance is key. Particularly in a time of streaming platforms taking over release schedules of movies, a company will want to know if their film will be more successful going through box offices and cinemas first and then being released to streaming service, or if immediate release to streaming services is best. The longevity that a film stays in the mind of audience members is

important, as well; if something occupies more of an individual's focus and attention, they will talk about it more, are more likely to rewatch it, or are more likely to care about future products related to that film. The ability for a piece of art to stay with a spectator after witnessing it may be influenced by whether they shared that experience with others, and if it is, that is important for creators to understand and keep in mind when the finished product comes into contact with the general public. Particularly for pieces with more serious goals of encouraging a broadening of audience members' perspectives and understandings of the world around them, knowing how an audience influences their emotional reaction as well as their recollection will inform the way artists pursue that goal. To refer back to Bertolt Brecht, some creators are interested in leaving their audience still thinking about the film or play they watched. This is not possible if audience members do not experience high emotional reactions or cease to think about the story they witnessed in the weeks following.

There is a strong body of research literature that continues to investigate the effects of social media on our connections with the people around us. This thesis follows a parallel line of questioning, and could help continue to understand what our decreased real life involvement in shared experiences could mean for our enjoyment of life. If we are less involved in the art we see and have no one to share it with, that may be a diminishment in our quality of life. However, if viewing in isolation does not lead to a diminished experience of the art, this raises questions about whether humans need to have these shared experiences, or if in this case, social media and messaging capabilities balance any diminished communal feelings after experiencing art.

Lastly, there are other applications of this line of questioning outside of the theater and film industries. The most immediate context that comes to mind is that of witnesses in court—how may their recollection and emotional experience of an event be influenced by the presence, or

lack thereof, of other people who witnessed the event? We know already from prior research that memory is a nuanced, and not always dependable, facet of human capabilities (Schacter, 1999). The presence of other spectators adds a variable to the equation of valuable real life scenarios that require a clear understanding, and an ideally unbiased, individual's recollection. Does the effect of this shared audience change if the witness does not identify themselves in alliance with these people, if they do not know these people, or if they have no perceived shared experiences? If they do know these people and discuss the event with them afterwards, how can that change their recollection and affective reception of an event? And, most importantly, if they are the only person there, are they less likely to recall details or have intense emotional reactions to what they saw? Although these questions are for now outside the scope of this research, they are potentially related avenues of investigation that could have valuable implications in our justice system. This is notable not just for considerations in witness testimony, but also the potential influence of video testimonies versus in-person testimonies.

Notably, although some of the research in the literature involves comparing at-home streaming comparisons to the experience at a cinema, few explicitly investigate the role of co-viewers in our experience of a film. There is also a lack of investigating an individual's recollection of a film after watching in a cinema or at home. Memory of an event, particularly of the emotions that a spectator experiences during the viewing, can function as a measure of how effective the film was at leaving an impression and staying with audience members in the weeks following. This research continues investigating what others have started to look at in the literature surrounding the aesthetic receptive differences between movie cinemas and streaming films.

This investigation also, however, introduced a focus on recollection and memory, and collected more qualitative data about people's awareness of either isolation or company. Asking participants if the film sparked any personal memories helped investigate whether stories that resonate more with our personal experience stay with us longer. Following up two weeks after the viewing and repeating the questions from the viewing illuminated how thoughts and opinions about this story changed after time in the two treatments. If an event doesn't leave a lasting impact on its audience, it is less likely to capture their attention beyond the first exposure. Individuals may report lower emotional reactions to the film the second time, recall fewer plot points, or indicate decreased interest in a second viewing. Furthermore, establishing what the presence of other people does to our memories of a shared experience has valuable implications in other areas of the psychological field. If witnessing something in company leads to a different recollection of the event than witnessing it alone, what could that mean for real life situations, such as witnessing crimes or important personal events in our lives? If our emotions are heightened due to the presence of other people, are we more likely to associate that memory with our personal narrative and are we more likely to have a strong recollection of the experience? There is finally an interest in how aware participants are of their setting, and whether they are consciously aware of other people's reactions.

It was hypothesized that those in the cinema setting would have heightened affective reactions to the film, as well as a clearer recollection when asked to think back to the film and their emotional ratings two weeks later. It was also hypothesized that they would be more likely to report a desire to rewatch the film or discuss it with others. On the other hand, it was hypothesized that students who watched the short film on their own would have less emotional or clear impressions of the film and would recall less about the narrative in the weeks following.

The possibility that demographics, such as usual watching habits and participation in film studies, interacted with the data, but random assignment was likely to decrease the influence of these characteristics on the group analyses. There might also have been a difference between those in isolation and cinema in the amount of personal memories that the movie sparked. Individuals in the cinema treatment were expected to recall memories more frequently and furthermore be more likely to retain these memories in the subsequent two weeks.

Method

Participants

A total of 55 individuals participated and responded to the first survey. After data cleaning, 49 participants were left. This data cleaning included removing individuals who did not provide a summary of the film, as it could not be confirmed whether or not they watched the film. There was also one participant who did not bring a friend to the cinema viewing and thus did not have the same experience as those who did. The reverse of this, streaming it with a friend, was also disqualified as they did not watch the film by themselves. Of these 49 participants, 22 responded to the follow-up survey that was sent to them two weeks after the viewing. Nine of these participants identified as male and 40 identified as female. There were 15 first years, 18 Sophomores, 3 Juniors, 12 seniors, and one who reported to be from a class that had already graduated, with a mean age of 19.45 and a standard deviation of 1.355. (see Table 1 for race demographics).

Table 1: Demographics

Race	n	%
Asian	3	06.12%
Asian/Caucasian	1	02.04%
Black	4	08.16%
Black/African American and white	1	02.04%
Black/Afro-Caribbean	1	02.04%
Caucasian/Central Asian	1	02.04%
Middle Eastern	1	02.04%
White/Caucasian	35	71.43%
Did not indicate	2	04.08%

Participants were also asked questions about their normal viewing habits, including four questions asked on a five point likert scale; this questionnaire asked how frequently they stream media on an electronic device, how often they stream media by themselves, how often they stream media and watch with friends and/or family, and lastly how frequently they attend a film at a movie theater. T tests were conducted to compare these four demographic variables between the conditions, and there were no significant differences found between the two groups. This suggested that random assignment effectively varied the participants between conditions.

Research Design

There were two conditions in this research: group viewing and watching alone. Instructions were provided to participants throughout the process to make clear the expectations

for each. For those watching in the group, they were asked to bring a friend to the viewing, to help increase the presence of the audience and to approximate more realistically how individuals who attend theaters watch films (e.g., it is more common to go to a movie theater with at least one companion than to watch the film by yourself along with the audience in the theater). For those watching alone, the instructions provided made it clear that they did not have to be the only person in the room, but they did need to be the only person watching the film.

Measures

Participants answered demographic questions as well as both qualitative and quantitative questions regarding their viewing habits in day-to-day life. After viewing the film, they were asked to summarize the movie as well as list their top three favorite moments. Then participants were asked whether or not they would recommend the movie, whether or not they would watch it again at a later date, alone or in a cinema, and what, if any, memories were sparked by the short film. The AESTHEMOS scale was then distributed to measure their aesthetic reception of the movie, and lastly they were asked about the context in which they watched the film, focusing on audience presence for those who watched it with others and focusing on the setting for those who watched it by themselves (Ines et al., 2017). The AESTHEMOS scale consisted of 42 statements about their personal experience of the film that they would rate on a 5 point likert scale, including phrases such as “I found it beautiful” and “[it] worried me” (see Appendix F for the full measure).

All participants watched the short film *The Neighbors' Window*, an Academy Award winning 20 minute movie inspired by a true story that came out in 2019, written and directed by Matthew Curry. After combing through and watching the award nominated live action short films of the past decade for the Oscars and BAFTA Awards, the researchers concluded that this

was the best film for the given procedure. This film was chosen as it fit within the film length researchers felt was ideal—too short and audiences would have little to respond to for questions about plot, too long and participants may not be able to spend the time to complete the research or focus on the film. This narrative furthermore was emotionally moving while avoiding most potentially disturbing content. It is a 20 minute film that follows two parents living across the street from a younger couple. The younger couple does not have blinds, which allows for the parents to watch their lives and escape from their reality for even a few minutes. This continues until they realize that the grass isn't always greener on the other side, when the man of the younger couple passes away. The researchers furthermore chose a short film as it decreased the likelihood that participants had viewed the movie prior to the research, and restricted the search to the past decade to make sure any technological differences from past decades would not interfere with audience reception.

Procedure

This research was a mixed design experiment. Participants were randomly assigned to one of two treatments, but all participants received the same viewing survey as well as the two-week follow up survey. Participants were recruited through SONA, posters were put up around campus, and the study was advertised on Instagram. After virtually signing an informed consent on the first survey, their emails were collected and then they were randomly assigned to an ID number and to one of the two conditions: watching the film alone or attending a viewing in an auditorium on campus. This assignment gave them detailed instructions, including the location, the date, and the time for those assigned to the group condition and instructions about watching the film alone for those assigned to the isolation condition.

The day before the viewing date, all participants were emailed a reminder at 3pm of their specific condition, the date of viewing, and the location, if applicable. The next day at 3pm everyone was emailed individually a reminder of their randomly assigned ID number, the link to the second survey, and any clarifying instructions. For those that were randomly assigned to watch by themselves, they were provided the link with the survey and asked to complete the survey and viewing within 24 hours of receiving the email. They were reminded at 8am the next morning to complete the survey, if they had not already done so. For those who were randomly assigned to the group viewing, they were reminded of the time and location one last time around 7:15pm. Once participants and their friends all arrived at the auditorium, they were given instructions about how to complete the survey, and friends were asked to sign a hard copy of the informed consent, or, if they wished to do so, were invited to complete the survey. QR codes on the projector allowed for friends to access both surveys if need be. Participants were informed within the informed consent about the potentially harmful content of the film, and received this informed consent two times before viewing the film—once in the initial sign up and again at the viewing. Resources were also made available for and frequently communicated to participants if they were made uncomfortable in any way by the procedure. Once instructions were provided, participants were given the time they needed to complete the beginning part of the survey.

After signing the informed consent once again, participants were able to complete the second survey of this study. The second survey was split into three sections: before viewing questions, the viewing itself, and post-viewing questions. The questions administered before the viewing involved demographics and viewing habits. Included in the demographics question was a request for the randomly assigned ID number from the first survey; this way answers could maintain anonymity while still allowing for researchers to compare responses from before and

two weeks after the viewing. Participants were also asked whether or not they had seen the short film *The Neighbors' Window* before; the few who indicated that they had were not included in the final data analysis. They were then asked to take the time to watch the short film. The link to the film was provided in the survey so that those watching on their own had easy access to it. For those who were watching in the group, they were instructed to pause at that page, as the film would be presented on the projector, and thus there was nothing more for participants to do at that point.

After viewing, the group in the cinema was asked to discuss amongst themselves for two minutes before continuing with the survey. Researchers notified them when the two minutes were over. It was observed that people continued to discuss with their friends as they completed the survey. It's possible that the questions in the survey prompted further conversation. This discussion was another way that the presence of an audience may influence the participants' reception and recollection of the film, and felt key to include. The questions administered after the viewing included questions about the content of the film, the likelihood they would recommend or view it again, whether the film sparked any personal memories, the AESTHEMOS scale, and their experience of the condition to which they were randomly assigned. If they watched the film on their own, they were asked to provide a description of their setting during their viewing, and if they watched the film in a group setting, they were asked about how aware they were of the other people in the room. At the end of the survey there was a brief debriefing, and although it did not yet explain the purpose of the study, it thanked participants, provided them with any necessary resources and contact information, and made them aware of the final survey.

Finally, participants were sent the third survey two weeks after receiving the second survey, except for the second cohort of participants, who received the third survey 13 days after to account for the Thanksgiving holiday period. They were once again emailed with a reminder of their randomly assigned ID number and the link to the third survey. They were again asked to sign an informed consent before continuing with the survey, then were asked for their randomly assigned ID number. This final survey repeated the questions that were presented to participants after the viewing in the second survey, including questions about the film's content, whether they viewed it again or would view it again, whether they talked about it with other people, and if it sparked personal memories. They were also once again presented with the AESTHEMOS scale before finishing the survey and receiving a complete debriefing.

Some exceptions were made to account for schedule conflicts for participants randomly assigned to the group viewing. They were offered other dates if they were not able to make the one they were assigned to, and in one instance, they switched to the individual viewing treatment. Furthermore, a psychology course in family and couples therapy was invited to participate. Students in the class were notified a week ahead of the scheduled date for the researcher to come in and conduct the study, to give them time to decide whether they wanted to participate or not. The researcher attended the end of the course, allowing for anyone to leave early if they did not wish to participate in the study. The study was conducted as close to the other groups as possible, although some changes in instructions were made to accommodate for the lack of randomization and time to email with reminders of assigned IDs. The QR codes were projected and students were able to use their phones to access both surveys, then the film was projected, and students were given time to complete the second survey before leaving for the day.

It is key to note that there was a dropout rate in participants in between the initial viewing and the two week follow-up. Of the 21 participants that viewed the short film in the group setting, only 7 responded to the second part of the study. Similarly, of the 28 who streamed *The Neighbors' Window*, 12 completed the follow up survey. These dropout rates were similar, with 42.86% of participants that streamed and 33.3% of participants that viewed in a group completing both surveys. This did impact data analysis; the responses to the first survey and the follow-up survey were investigated separately, with two different MANOVA analyses, until upon review of the means and standard deviations a pattern was noted, and it was decided to analyze the small sample of participants that responded to both surveys.

Data Cleaning

Before conducting analyses, some data cleaning and coding were required. Individuals that did not provide a summary of the film were not included, as there was no concrete evidence that they actually watched the film. Then a coding system was created for the qualitative responses to make analyses easier. Both summaries of the film and personal memories were broken down and a binary was generated. First, the responses were read through and coded either 0, indicating that they did not mention the theme or “moral of the story”, and 1 if they did do so. After reading the responses provided by participants, researchers decided to focus on this element of the summaries because those who could identify the message at the heart of the film would have experienced a deeper understanding of the narrative. For example, one participant's summary was as follows: “A husband and wife become engrossed in the life of the couple who just moved in across from them and unknowingly become the subject of their attention as well when the man across the street becomes terminally ill”. Although this is relatively comprehensive, it does not indicate the message of the film, like this next example does: “The

woman and husband were envious of the lives they did not have. As the film went on, the grass appeared to not always be greener as the couple they envied suffered loss once the husband got sick and died”. The first example above would thus be coded with a 0 while the second would be sorted as a 1.

The same rules were applied to the personal memories; researchers read through the responses, looking for those who reported personal stories that aligned with the film’s themes versus those that did not. A personal memory that did not touch on the deeper message could be like the following example: “Made me think of how my ex boyfriend and me used to be before we broke up. Absolutely devastating but also made me happy at the same time.” On the other hand, a memory that was coded with one as it included the message of the film is the following: “I’m someone who lives by ‘the grass is always greener’ and this challenges that. I can think of times when I thought other people had it all figured out - when I later learned they didn’t”. This coding provided a clear way of evaluating the strength of recollections as well as how aligned the personal memories were with the short film.

Results

Before diving into analyses, some preliminary investigations and exploratory data analyses were conducted to better understand the data at hand. T-tests of the viewing demographic by treatment group were conducted to ensure that random assignment properly controlled the effect of personal preferences between the two groups (see Table 2 for viewing habit means and standard deviations). Every t-test was nonsignificant. Next, a factor analysis was performed on the AESTHEMOS measures in order to simplify the number of examined variables.

Table 2: Means and Standard Deviations of Reported Viewing Habits

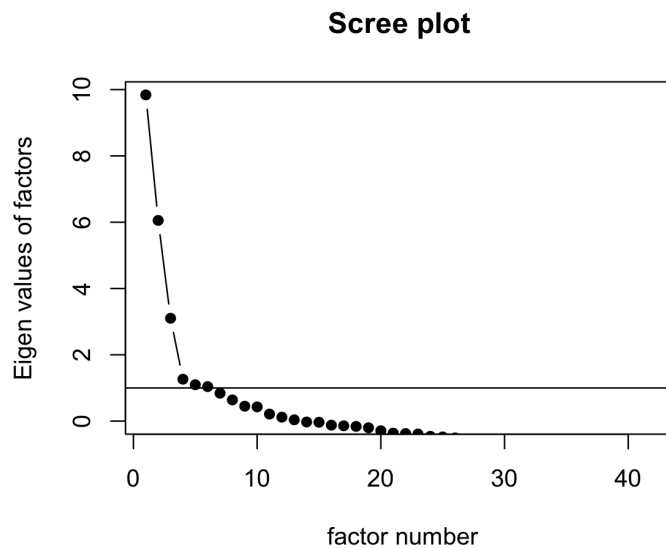
	Cinema (<i>n</i> = 21)	Streaming (<i>n</i> = 28)
Electronic Viewing	3.81 (0.98)	3.64 (0.95)
Streaming Alone	3.48 (1.08)	3.75 (1.14)
Streaming with Friends/Family	3.00 (0.97)	2.61 (0.92)
Attend Movie Theater	2.00 (0.78)	2.04 (0.44)

In the table above the mean and standard deviation are reported, with the standard deviation in parentheses. These questions were asked on a five point likert scale, with the first three anchored with 1 as “never”, 3 as “once a week”, and 5 as “every day”. The last question, asking about their movie theater attendance, had 1 as “never”, 3 as “once a month”, and 5 as “once a week”.

To create factors for analyzing the 42 variables of the AESTHEMOS scale, an exploratory factor analysis was conducted. The data of these 42 questions were compiled into a dataframe and eigenvalues and a scree plot were generated. The scree plot indicated that four factors would be most effective (see Figure 1). Eigenvalues were all above 1 for these four factors. Using a varimax rotation, factor loadings for four factors were created, with a cutoff of 0.40 (see Table 3 for loadings). Only variables that loaded on one—and only one—factor with a loading higher than 0.40 were included in this analysis. Factor one, which will now be referred to as “moved” ($\alpha = 0.89$), includes the anchors “beautiful,” “sensed a deeper meaning,” “was deeply moved,” “melancholic,” “had a sudden insight,” “sentimental,” “indifferent,” “touched,” “sad,” and “surprised.” “Indifferent” loaded negatively, and thus was reverse coded when the

factor “moved” was created. For factor two, also known as “Negative” ($\alpha = 0.84$), the variables “ugly,” “angry,” “confused,” “aggressive,” “oppressive,” “distasteful,” “bored,” “amused,” and “spurred on” all had loadings above 0.40². “Engaged” ($\alpha = 0.82$), the third factor, included “intellectually challenged,” “delight,” “fascinated,” “enchanted”, and “sparked interest.” Lastly, the fourth factor, called “calming” ($\alpha = 0.66$), had “calm,” “relaxed,” “baffled,” “nostalgic,” and “unsettling” all load above the cutoff, with “baffled” and “unsettling” loading negatively. “Baffled” and “unsettling” were thus reverse-coded when generating the “calming” factor.

Figure 1:



Scree plot for factor analysis. One can see that as the elbow flattened out, four factors emerged as the ideal number.

² It is hypothesized by the researchers that the “amused” emotion is included in the negative variable as individuals may have reported this when they felt some level of dismissal or judgment towards the piece. It also may be a weak word for synonyms like “entertaining”, leading to those who didn’t strongly enjoy the piece to report amusement instead.

Table 3: Factor Analysis Loadings

	Moved	Negative	Engaged	Calming
Beautiful	0.75			
Deeper meaning	0.83			
Deeply moved	0.83			
Melancholic	0.61			
Sudden insight	0.69			
Sentimental	0.68			
Indifferent	-0.67			
Touched	0.67			
Sad	0.46			
Surprised	0.46			
Ugly		0.81		
Angry		0.60		
Confused		0.56		
Aggressive		0.84		
Oppressive		0.91		
Distasteful		0.90		
Bored		0.42		
Amused		0.42		
Spurred on		0.45		
Intellectually challenged			0.57	
Delight			0.66	

Table 3: Factor Analysis Loadings (continued)

	Moved	Negative	Engaged	Calming
Fascinated			0.68	
Enchanted			0.59	
Sparked interest			0.77	
Calm				0.75
Relaxed				0.57
Baffled				-0.48
Nostalgic				0.47
Unsettling				-0.46
Proportional Variance	0.16	0.14	0.13	0.08
Cumulative Variance: 0.51				

Hypothesis 1: Affective Scores Compared Between the Two Treatments

A MANOVA was conducted to investigate differences between the AESTHEMOS scale ratings between the two treatments (see Table 4 for means and standard deviations). The analysis indicated a nonsignificant multivariate effect, Wilks's lambda = 0.906 , $F(4,43) = 1.119$, $p = .360$. Another MANOVA was conducted to investigate these same differences in the two week follow up responses (see Table 4 for means and standard deviations). This analysis did indicate a significant multivariate effect, Wilks's lambda = 0.545, $F(4, 15) = 3.129$, $p = 0.047$. To analyze this significant difference further, the univariate ANOVAs for each dependent variable were

examined (see Figures 2 & 3 for boxplots of significant findings). The ANOVA investigating the engaged factor was significant, $F(1, 18) = 8.49, p = 0.009$, as was the ANOVA for the moved factor, $F(1,18) = 12.29, p = 0.003$, with participants in the streaming treatment indicating higher experiences of both affective responses (see Table 4 for means and standard deviations). This indicated that the streaming alone group was significantly higher in their average engaged and moved scores after the two week interval, which was opposite from what was hypothesized to be observed.

Figure 2:

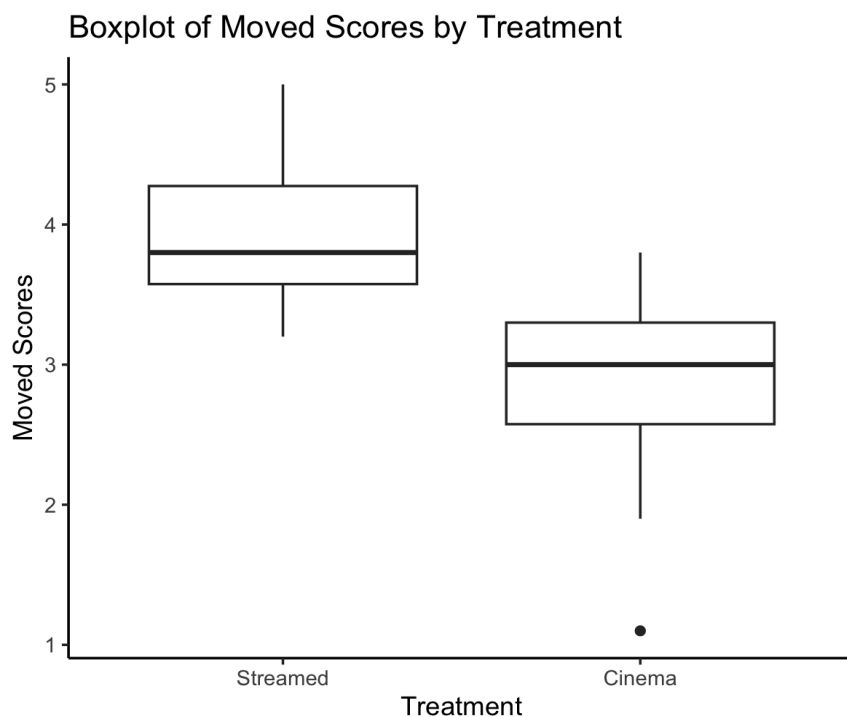


Figure 3:

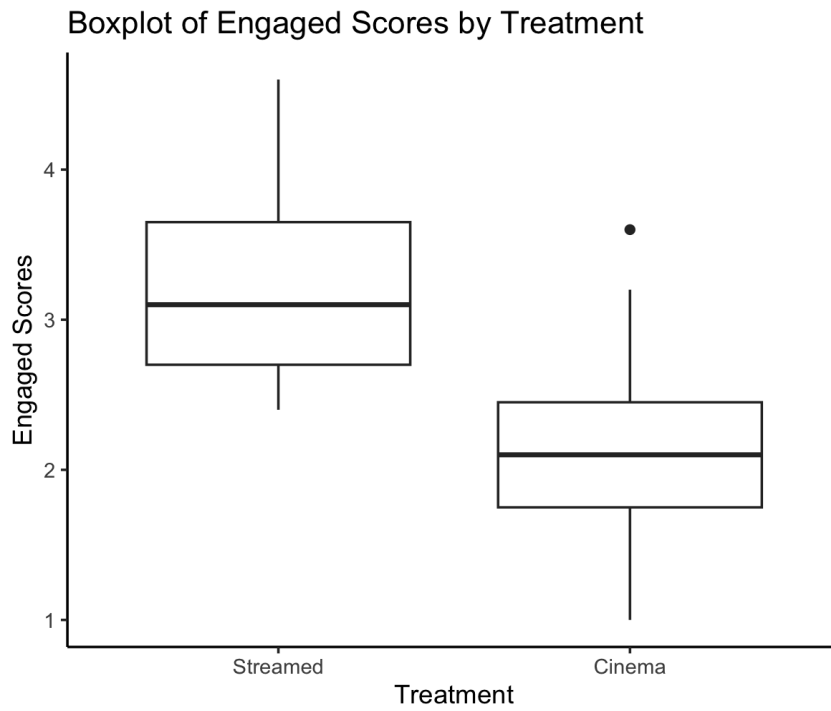


Table 4: Four Aesthetic Response Variables From Immediately After Viewing and Two-Week Follow-Up

	Cinema ($n = 21$)	Streaming ($n = 28$)
	M(SD)	M(SD)
Moved	3.71 (0.85)	3.79(0.59)
Negative	1.66 (0.46)	1.67 (0.54)
Engaged	3.25 (0.81)	2.91 (0.82)
Calming	3.15 (0.70)	3.15 (0.75)

Two-Week Follow-Up

	Cinema ($n = 9$)	Streaming ($n = 12$)
	M(SD)	M(SD)
Moved*	2.80 (0.89)	3.93 (0.56)
Negative	1.63 (0.38)	1.63 (0.30)
Engaged*	2.20 (0.84)	3.22 (0.71)
Calming	2.73 (0.78)	3.15 (0.60)

These factors were measured on a Likert scale of 1 to 5. Participants were asked how intensely they personally experienced the emotions listed, with one indicating “not at all” and five indicating “very”.

*= $p < 0.05$

Upon assessing the means and standard deviations between these two MANOVAs, it was concluded that a paired t test should be conducted to compare the factors from before and after the two week period, using only the individuals who responded to the initial survey and the two week follow up. No significant difference was found between the reported four factors before and after the two weeks collapsed across the sample. The analysis for the calming factor was not significant, $t(17) = 0.353$, $p = 0.729$, the t-test for the engaged factor was not significant, $t(17) = 0.413$, $p = 0.685$, as was the test for the moved factor, $t(17) = 1.763$, $p = 0.96$, and the negative factor, $t(17) = -0.5$, $p = 0.624$. This indicates that, within the sample as a whole, no statistically significant change was seen in the factors due to the time apart from the film and participants’ initial responses.

Hypothesis 2: Strength of Recollection in Follow-Up Between Cinema and Streaming

This hypothesis analyzed the responses to the prompt asking participants to summarize the film in two or three sentences. Although there are many different ways that an individual can discuss a film, the indication of investment in the piece that researchers decided to focus on was whether or not the theme of the piece was mentioned. To measure the change in recollection between the two treatments after the two week period, a Chi Square analysis was conducted. The Chi Square test of the difference in theme presence between the treatments in the initial data collection was not significant, $X^2(1, N = 49) = .19, p = 0.665$, nor was the follow-up, $X^2(1, N = 22) = .016, p = 0.899$.

Hypothesis 3: Cinema Viewers More Likely to Report Desire to Rewatch or Discuss

Participants were asked after the viewing and in the two week follow-up if they would rewatch the film in a cinema, stream it again at home, or if they would recommend the film to a friend. These responses were then each broken down into a yes or no binary, with 0 for no and 1 as yes. These three questions were then investigated via three Chi Square Tests. One was conducted to investigate whether those in the cinema group were more likely to report a desire to rewatch the film or discuss and recommend it to others (see Table 5 for Chi Square distributions). The Chi-Square test of whether participants would recommend the film to a friend was not significant, $X^2(1, N = 45) = 0.643$. Whether participants would rewatch the film was asked for both methods; they were asked whether or not they would rewatch the short film in a movie theater or by streaming it at home. The Chi Square test for rewatching the film in a cinema was not significant, $X^2(1, N = 45) = 0.262$, nor was the Chi Square test for rewatching the film via streaming at home, $X^2(1, N = 46) = 1.992, p = 0.1582$.

Table 5: Responses (Categorized by Yes or No) to Questions Asked Immediately After Viewing

	Cinema Condition ($n = 21$)		Streaming Condition ($n = 28$)	
	n	%	n	%
Yes Recommend	18	85.7%	24	85.7%
No Recommend	2	09.5%	1	03.6%
No response	1	04.8%	3	10.7%
Yes Movie Theater Rewatch	11	52.4%	17	60.7%
No Movie Theater Rewatch	8	38.1%	9	32.1%
No response	2	09.5%	2	07.1%
Yes Streaming Rewatch	15	71.4%	22	78.6%
No Streaming Rewatch	6	28.6%	3	10.7%
No response	0	0%	3	10.7%
Yes Elicited Personal Memories	7	33.3%	12	42.9%
No Elicited Personal Memories	14	66.7%	13	46.4%
No response	0	0%	3	10.7%

Hypothesis 4: Correlations Between Viewing Habits and Above Questions

Correlations were conducted to compare responses to the five-point Likert scale questions about viewing habits and each of the four AESTHEMOS factors, collapsed across the

conditions to analyze the whole sample as one. Only two correlations were significant: the positive correlation between electronic viewing habits and the moved factor, $r(47) = 0.295, p = 0.039$, as well as the streaming with others habit and the engaged factor, $r(46) = 0.301, p = 0.038$. In both cases, there was a positive correlation between the watching habit and the AESTHEMOS score.

Hypothesis 5: Differences in Between Groups and Mention of Personal Memories, Immediately After Viewing and in the Follow-Up

After watching the film, participants were asked whether *The Neighbors' Window* sparked any personal memories. A Chi Square test was conducted to investigate whether there were any differences in reporting a personal memory between those who streamed the film and those that watched it in the “cinema” setting. This Chi Square was not significant, $X^2(1, N = 46) = 1.013$. Of the 19 reported memories, a further analysis was conducted to see if there were themes in the personal memories that matched the film’s take-away message of the short film. This did not yield significant results, $X^2(1, N = 19) = 0.652$.

These analyses were conducted again for the responses to the follow-up, where participants were asked after two weeks whether the short film sparked any personal memories. The Chi Square test of whether or not individuals reported a personal memory was significant, $X^2(1, N = 22) = 4.073, p = 0.044$ (see Table 6 for Chi Square distributions and Figure 4 for Bar Plot of percentages). However the Chi Square analysis of the themes was not, $X^2(1, N = 11) = 0.104$. This significant difference indicates that, after two weeks, there is a higher percentage of personal memories elicited amongst those who streamed the short film than those who watched in the cinema condition.

Figure 4:



Table 6: Responses (Categorized by Yes or No) to Questions Asked in the Two Week Follow-Up

	Cinema Condition (<i>n</i> = 9)		Streaming Condition (<i>n</i> = 12)	
	<i>n</i>	%	<i>n</i>	%
Yes Recommend	5	55.6%	9	75%
No Recommend	4	44.4%	3	25%
Yes Movie Theater Rewatch	4	44.4%	9	75%
No Movie Theater Rewatch	5	55.6%	3	25%

Yes Streaming Rewatch	5	55.6%	11	91.7%
No Streaming Rewatch	3	33.3%	1	08.3%
No response	1	11.1%	0	0%
Yes Elicited Personal Memories*	2	22.2%	8	66.7%
No Elicited Personal Memories	6	66.7%	4	33.3%
No response	1	11.1%	0	0%

*= $p < 0.05$ for the section's Chi Square analysis

Discussion

This study aimed to understand the reception and recollection of a short film when viewed privately or in the presence of an audience. Participants were randomly assigned to one of two groups, one in which participants viewed *The Neighbors' Window*—an Oscar-nominated short film—in a cinema setting with others and the other in which they streamed it at home by themselves. The only exception of this random assignment was for those who were invited to watch it in an afternoon psychology class. Participants were asked questions immediately following the viewing to measure their affective response and personal understanding of the film. These questions were then asked again two weeks after their viewing. It was hypothesized that there would be a significant difference in the affective responses between the participants watching the short film with others in an auditorium and the participants streaming it by themselves, with those in the cinema treatment reporting more intense affective scores. This

hypothesis was not supported by the data. The data in fact indicated the opposite may be true; in the two week follow up, those who viewed *The Neighbors' Window* streaming by themselves reported statistically significantly higher scores for both the moved and engaged affective variables. This indicates that, although there was no statistically significant difference immediately following the viewing between the two groups, those who experienced the film by themselves recalled being more moved by the story and felt they had been more engaged with the narrative.

The second hypothesis, that individuals in the cinema group would have a stronger recollection of the film and its message, was also not supported by the data. There was no statistically significant difference between the groups and their discussion of the film's themes in their summaries. The third hypothesis investigating whether cinema participants would be more likely to report discussing the movie or wishing to rewatch it was similarly not supported by the data, and all statistical analyses yielded non-significant results. However, when examining the whole sample, those who reported viewing TV shows or films using electronic devices more frequently were significantly more likely to provide higher reports of the moved factor. Similarly, responses to the demographic question about how frequently individuals streamed film and television with others was significantly correlated with the engaged factor.

The last hypothesis was that there would be a difference between the two groups and the mention of personal memories sparked by the film. The initial responses post-viewing did not yield any statistically significant differences, but the data from the two-week follow-up did. After two weeks, there was a difference in memory recollection, with those who streamed reporting that the short film elicited personal memories more frequently than those in the cinema

treatment. There was not, however, any significant difference in whether the themes they discussed in their memories matched the ones explored in *The Neighbors' Window*.

The most notable findings of this research, therefore, are that individuals who streamed the short film on their own reported being more moved and engaged by the film after two weeks of the viewing, indicating that there was a stronger lasting impact left on them than those who watched it with others in a cinema setting. This was contradictory to the initial hypotheses, as well as the findings of previous studies.

These results seem contradictory to previous literature findings, particularly those of Fröber and Thomaschke (2021). Their investigation indicated that watching a film with others in a cinema setting led to higher aesthetic emotional responses, while watching alone at home led to heightened boredom levels. There are a few limitations to the present study that may account for these conflicting findings. First, and possibly most importantly, the cinema setting did not actually occur at a movie theater. Students viewed the film in a classroom auditorium on weekday nights, and thus there was a lack of ecological validity that may not have been at play with the streaming at home condition. Beyond the environmental differences, this research was conducted at a small college, where student participants were thus watching in a familiar space amongst a crowd of fellow students with whom they may at least had passing acquaintance. In your average movie theater, there's more varying demographics as well as more anonymity. These ecological concerns were exacerbated by one group of individuals in the cinema setting who all watched the film as part of one of their classes. Although they were under no obligation to participate, the context of a collegiate classroom in the afternoon differs greatly from a movie theater at night. Participants, as seen in the demographic question responses, often watch TV shows and films at their own convenience, using mobile technology such as cell phones or

laptops. The streaming group, therefore, may have had more of an ecologically valid experience than those who watched the film in a classroom setting.

Another notable limitation of this study is the number of participants, particularly in the two week follow-up. With a small sample size it is more difficult to find strong statistical evidence of differences between the variables at hand. It is also possible that those who did respond to the two week follow-up were more likely to have been participants that enjoyed the first part, skewing their responses to the film and their recollection. Furthermore, as mentioned earlier, some participants had the opportunity to choose this research, and may have in fact gravitated to it due to the film element, while others viewed it as a courtesy for the researcher and professor involved with the project. Lastly, for the sake of both ease and reducing the time demands of the study, a short film was chosen. However, as some participants noted in their reactions, it is less common for people to watch a short film, particularly in a cinema setting. Future research may invest in a recently released full-length film, possibly even a blockbuster movie that participants would be excited to see, to avoid both familiarity through past viewings and to maintain ecological validity.

There are many different ways in which continued research could expand the literature and mitigate such limitations. Future directions may include investigating the differences between these two contexts with a different affective measure and by utilizing an accurate movie cinema space. Furthermore, differing and diversifying demographics beyond underclass undergraduate psychology students would be key. In this research, an inclusion of identities representative of society was not achieved, particularly within the gender demographic. Lastly, a study with a larger sample size could also investigate the recollection element on a longer time line than just two weeks post viewing, to see if more time changes their memory in any notable

ways. Exploring on a longer timeline could allow for more focus on the relationship between the time that passes and the recollection of the affective responses, particularly engagement and being moved.

Despite the above limitations, these findings may be indicative of a change in viewing habits and involvement in group experiences that follows along historic trends of technology encouraging isolated viewing. The most notable third factor that may have come into play in this research that would not have been observed in previous literature is that this research was conducted after the COVID-19 pandemic. All but one investigation from the literature review, including the Fröber and Thomaschke (2021) work, occurred before society spent a year or more only consuming the arts from the confines of their own home. The two affective responses that were significantly higher in the two week recollection amongst those who streamed at home were the feeling of being moved and of being engaged with the narrative. This indicates that, in the time after the experience and the formation of a memory of the event, those who streamed it felt more naturally drawn into the film, while those in the cinema were less likely to feel that way. The role of time is notable; the two weeks may have allowed for memory networks to integrate the experience. The individuals in the cinema were also, then, less likely to report personal memories that were sparked by the story, suggesting less integration of or personal association with the narrative.

Lastly, the potential impacts from COVID can be seen in the correlation between viewing habits and these two affective factors. Across the sample, there was a significantly positive relationship between streaming media on electronic devices and streaming with others with the moved and engaged reports. This significant result was discovered in the initial data collected immediately after viewing the short film. It may be that this is what skewed the streaming group

enough to have a significant difference in being moved and engaged in the two week follow up, but it also indicates that people have become more comfortable with watching movies and TV shows at home and are able to engage with pieces in that context. Considering that the sample consisted of younger individuals, this may indicate that the generations currently growing up have not been able to develop a habit of going to the cinema. Researchers assumed that movie theaters, and movie-theater like settings, would be familiar, but with COVID and a trend in watching shows at home, this may no longer be true. Even in the brief demographic data that was collected, the average participant reported that they went to the movies almost never (see Table 2). Therefore future research that looks at this relationship in older and younger individuals is even more important. Although "Barbenheimer" can be seen as an indication that attending the cinema has not become a thing of the past, it could also signal that attending movie theaters is only reserved for special occasions to celebrate with friends, not the weekly life of modern day individuals. It is also a possible avenue for research to consider how individuals, particularly younger individuals, are able to maintain focus on shows that are not on the smaller screens that we are able to carry with us everywhere we go. Are individuals decreasing in ability to stay engaged with a viewing experience in a group for an extended period of time?

The present research did yield, along with significant findings, nuanced ways in which an individual could respond to a piece of performance art through the AESTHEMOS factor analysis. The measure originally called for many levels that consisted of only two variables, but the process that present researchers went through produced four levels of aesthetic response that allowed for more depth than a negative and positive binary. The factor analysis created efficient yet meaningful categories, further encouraging a conceptualization of affective reception that is holistic and concise.

These findings, as well as this area of research, have many real life implications and applications for the entertainment industry. The main goal of many artistic endeavors is to create something that people will connect with. The significant findings in the research at hand involving feeling engaged, feeling moved, and reporting personal memories that were elicited by the film, all relate to connecting with the film's narrative. If people don't connect, they have less motivation to engage with the piece again or talk about it with others. Furthermore, the increased engagement and affective movement with those who streamed at home confirms that the direction many corporations have taken of releasing new material online as well as, or instead of, to movie theaters is not detrimental to the success of a piece. Future research directions centering on other entertainment industries—such as music, dance, and theater—could indicate whether this is a phenomenon only applicable to film and television, or if it is a new shift in how society enjoys experiencing all performed artistic endeavors. Another variable to explore is the role of social media in our connection with others over art. Referring back to the “Barbenheimer” phenomenon during the summer of 2023, one avenue for sharing the experience was to post about anything, from people's takeaways to their outfits. During and after COVID, is social media filling in the gap created by social isolation in the sharing of cinema experiences?

There may have been benefits that participants in the cinema group experienced that those streaming did not, as well as a notable nonsignificant difference in their initial reporting of the viewing experience. The significant difference occurred only when measuring their recollection of the moment; if the prompts were focused less on the art and more in the connection with other people, there may have been different findings. Ultimately, the discussion of the relationship between gathering and receiving art is still developing. As a social species, it's key to research what avenues we have in modern day life to spend time with each other and

connect with both the people in the room with us as well as the stories of people being portrayed through art. If there is a removal of the gathering effect that art has, what does this mean for its place in society?

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Appendix A

Watching Together and Watching Alone

Principal Investigator (PI): Madalena Rathgeber
Study Title: Movie Cinema Experience Versus Streaming
Address: Box 4698
Connecticut College
270 Mohegan Avenue
New London, CT 06320

We are asking you to choose whether or not to volunteer in the research described below. The text below provides key information that may help you to make this decision.

Why is this research being done and what is involved?

The purpose of the study is to better understand the impact of movie theater settings versus streaming at home.

You will be asked to answer questions about your viewing habits, then will be randomly assigned to view a short film in one of two settings. The content of the film you will be asked to watch includes nudity, death from a terminal illness, and grief from the loss of a loved one. After this viewing, you will be asked to respond to questions about your experience. We will be in contact again two weeks after the viewing with further questions.

You are also being asked to consent to publication of the study results as long as the identity of all participants is protected (identifying information will consist of a randomly generated number associated with your survey responses and will be excluded from publication and protected).

This study should take approximately one hour and you will receive one hour of research credit for participating in all stages of the study.

It is anticipated that about 100 people will be involved in this study.

Do I have to participate?

Participation in this research study is completely voluntary and you are free to withdraw from the research at any time by closing your browser window or by leaving the room in which the viewing will take place.

There is no penalty for withdrawing from the study. Your decision to volunteer for this study will not affect your current or future relationship with Connecticut College.

What are the risks and benefits?

There are no anticipated risks in participating. The content of the film you will be asked to watch includes nudity, death from a terminal illness, and grief from the loss of a loved one. If after taking this study you were to find that you have experienced any discomfort or distress and

would like to talk to a professional about these issues, please contact Student Counseling Services at scs@conncoll.edu, at (860)-439-4587 or ext. 4587, or the after hours Student Support Specialists at studentsupport@conncoll.edu, (860)-439-2412, or (860)-439-2222.

There are no direct benefits to you, however we hope this research will improve our understanding of film viewing habits.

Data Security

The data collected will be kept as secure as possible and identifying information will be protected and kept from any publication.

Whom can I talk to if I have questions or concerns?

If you have any questions or concerns about this research, you can contact Madalena Rathgeber, the lead researcher at mrathgeber@conncoll.edu in the Department of Psychology at Connecticut College, Professor Singer at jasin@conncoll.edu, or Professor Nier, Chair of the CC IRB, at janie@conncoll.edu.

Statement of Consent

If you have read the above information, consent to take part in the study, and are at least 18 years of age, please click the submit button below to confirm your consent. This research has been approved by the Connecticut College IRB.

To access a copy of the informed consent, please download the following file:

Appendix B

Debriefing Statement After Viewing

Thank you for participating in this research investigating the differences in movie cinema versus home streaming experiences. We will be in contact with you in two weeks with the second part of this research.

If you have any questions or concerns about the manner in which this study is being conducted, please contact the IRB Chairperson Professor Jason Nier at janie@conncoll.edu.

If participating in this research was upsetting to you in any way, please contact Student Counseling Services at scs@conncoll.edu, (860)-439-4587 or ext. 4587, or the after hours Student Support Specialists at studentsupport@conncoll.edu, (860)-439-2412, or (860)-439-2222.

If you have any comments, questions, or concerns you may contact the researchers Madalena Rathgeber at mrathgebe@conncoll.edu and Professor Jefferson Singer at jasin@conncoll.edu.

Appendix C

Debriefing Statement After 2-Week Second Phase

First of all, thank you for participating in this research investigating the differences in movie cinema versus home streaming experiences. In this research, I am comparing the memory of these two settings to look at how the shared experience in a social context informs our recollection of a film. In addition to Introductory Psychology students at Connecticut College, students from the general Connecticut College population, accessed via Instagram, completed this experiment. One of the issues in the literature on comparing these two viewing methods is the difference in memory. A key change from viewing movies in a theater to streaming at home is the diminished sense of an audience; watching films at home may involve friends and families, or just one individual watching the movie on their own. Our interest is investigating how that change from a big audience in a theater space to a solo spectator at home may influence the reception and recollection of a short film.

If you have any questions or concerns about the manner in which this study was conducted, please contact the IRB Chairperson Professor Jason Nier at janie@conncoll.edu.

If participating in this study was upsetting to you in any way, please contact Student Counseling Services at scs@conncoll.edu, at (860)-439-4587 or ext. 4587, or the after hours Student Support Specialists at studentsupport@conncoll.edu, (860)-439-2412, or (860)-439-2222.

If you are interested in this topic and want to read the literature in this area, you might enjoy the following articles:

Resources:

Fröber, K. & Thomaschke, R. (2021). In the dark cube: Movie theater context enhances the valuation and aesthetic experience of watching films. *Psychology of Aesthetics, Creativity, and the Arts, 15*(3), 528-544. <https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,sso&db=pdh&AN=2019-78455-001&authtype=shib&site=eds-live&custid=s8986602>

Hanich, J. (2018). *The audience effect: On the collective cinema experience*. Edinburgh University Press. <https://www.jstor.org/stable/10.3366/j.ctt1tqxtz7>

You may also contact Madalena Rathgeber at mrathgebe@conncoll.edu for additional resources.

Appendix D**Demographic and Screening Questions**

“Please indicate your gender identity”

“Please indicate your major(s) and minor(s), pathways and centers”

“Please indicate your class year”

“Please indicate your race”

“Please indicate your ethnicity”

“Please indicate your age”

“In 50 words or less, please describe your usual TV and film viewing habits”

“On a scale of 1-5, how often do you watch TV shows or films using an electronic device (laptop, television, phone, etc)” (with 1 being never and 5 being every day)

“On a scale of 1-5, how often do you watch TV shows or films alone on streaming services?” (with 1 being never and 5 being every day)

“On a scale of 1-5, how often do you watch TV shows or films with others on streaming services?” (with 1 being never and 5 being every day)

“On a scale of 1-5, how often do you go to the movie theater?” (with 1 being never and 5 being once a week)

“Have you ever seen the short film *The Neighbors' Window*?”

Appendix E

Instructions After Random Assignment

For those who are randomly assigned to watch the film alone:

“You have been randomly assigned to stream this short film by yourself. We request that you watch the movie the same evening of receiving the link, as you would typically watch a film, without anyone else watching it actively or passively with you. It is alright if there are other people in the room, such as roommates, but we ask that they do not join you in the viewing experience.”

For those who are randomly assigned to watch the film at the “theater”:

“You have been randomly assigned to view this short film in a movie cinema setting. The viewing will be occurring at 7:30 pm in Silfen Auditorium (Bill Hall) on Thursday, October 19th. You will need to be able to bring a phone or laptop to answer some more questions. We request that you bring at least one friend to watch this movie with you. It can be another person who’s been assigned to the cinema condition, but it doesn’t have to be. If you are unable to bring someone, we unfortunately will not be able to use your data. You are still invited to the viewing, but will be unable to complete the surveys.”

(The instructions for the movie cinema will change with each cohort to properly reflect the date and location of the viewing. The two other date options are November 8th and November 28th the other location is Silfen).

Appendix F

The Aesthetic Emotion Scale (AESTHEMOS)

Which emotional effect did *The Neighbors' Window* have on you?

For each emotion listed below, please mark the response category that best matches your personal experience. Please only indicate how **you** actually felt. Do not characterize the emotions expressed in *The Neighbors' Window* if you did not feel them yourself.

Emotional feeling	1 Not at all	2	3	4	5 very
I found it beautiful					
Challenged me intellectually					
Delighted me					
Calmed me					
Made me curious					
Liked it					
Fascinated me					
Felt something wonderful					
Invigorated me					
Was mentally engaged					
Baffled me					
I found it ugly					
Sensed a deeper meaning					
Felt deeply moved					
Made me feel melancholic					
Energized me					
Made me angry					

Was enchanted					
Bored me					
Relaxed me					
Felt a sudden insight					
Amused me					
Made me sad					
Felt confused					
Made me aggressive					
Made me feel sentimental					
Worried me					
Made me feel nostalgic					
Surprised me					
Felt oppressive					
I found it sublime					
Spurred me on					
Felt indifferent					
Was impressed					
I found it distasteful					
Touched me					
Was unsettling to me					
Sparked my interest					
Made me happy					
Felt awe					
Motivated me to act					
Was funny to me					

Appendix G

Qualitative Questions About Film

“In under 50 words, please summarize the plot of this short film.”

“Please list your three top moments from this short film.”

“Would you recommend this film to a friend?”

“Would you watch this film again in a movie theater setting?”

“Would you watch this film again by streaming it at home?”

“Did this story spark any personal memories? If so, please describe.”

For those who watched it alone:

“Please describe in under 50 words the context in which you watched this film. For example, what day of the week and time of day was it, did you watch it in your dorm room, was there other people in the room with you, did you sit at your desk, etc”

For those who watched it with others:

“Did you take note of the reactions of others in the room to the film? If so, please describe.”

Appendix H

Recruitment Poster



**RESEARCH
PARTICIPATION
OPPORTUNITY!**

SCAN THE QR CODE BELOW TO
PARTICIPATE IN THE SURVEY!

We are investigating differences between short film viewing environments. The research will include a survey and watching a 20 minute film.

This is anticipated to take 60 minutes total, and you will earn one credit hour for participating in the full study.



Thank you for your time and participation!

Appendix I

The Neighbors' Window

Link to view on YouTube: <https://www.youtube.com/watch?v=k1vCrsZ80M4>