

Visualising Disease Through Lens: Camera Shot as Visual Storytelling in Transforming Reality to Art Cinematic in Disease Film

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DOI: <https://doi.org/10.47772/IJRISS.2026.1013COM0030>

Received: 02 June 2026; Accepted: 07 June 2026; Published: 29 June 2026

ABSTRACT

The directors used visual storytelling to show the viewer how a physical or psychological diseases may significantly alter the world. In order to turn invisible diseases into visceral, visual experiences, this article explores how camera operation can actively externalize interior by transforming unseen dangers into a visual narrative. This study uses cinematic analysis to find comparable camera patterns in five disease films, including *The Craziest* (dir. Breck Eisner), *Contagion* (dir. Steven Soderbergh's), *Cabin Fever* (dir. Eli Roth's), *Carrier* (dir. Alex and David Pastor's) and *The Happening* (dir. M. Night Shyamalan's). The result shows all five films used similar camera shots pattern to manipulate the disease victims and the situation during pandemic. The resulting camera work traps the audience in the character's subjective physical reality, eliciting profound empathy and discomfort. In conclusion, the camera work does translate the pathology of disease directly into the language of visual storytelling, altering the audience's physical and emotional perception of the narrative.

Keywords: Visual Disease, Camera Shots, Visual Storytelling and Cinematic Art

INTRODUCTION

The history of viruses was believed to have existed for hundreds of millions of years. The ancient Egypt and Greek described plague of unknown origin. The earliest known viruses, such as insect-infecting nudiviruses, a family of large, double-stranded DNA viruses affecting insects and marine crustaceans transmitted through contaminated food sources Petersen et al(2024). Since then, they have developed alongside all living things, leading to the emergence of modern virology, medical advances, and widespread human pandemics.

BACKGROUND OF STUDY/LITERATURE REVIEW

Knowledge about viruses is shared among the virologist or medical or scientific specialist who focuses on studying viruses and to create diagnostic tools, vaccines, and antiviral therapies and also concentrate on comprehending how viruses proliferate, change, and impact hosts. However, due to the global pandemic, it is important to force the hidden and disclosed biological pathogen to be shared. Using a movie to explain the dangers of pathogens is a highly effective strategy because it transforms mise-en-scene that drives the narrative to look practical and sensible. Camera works or shots and Average Shot Length (ASL) creates a mood for the story, as each shot serves different purpose or meaning and also transformed perspective. The non-medical community cannot see pathogens, which are minute bacteria, fungus, and viruses. Therefore, a cinematography, computer-generated imagery, and visual effects are used in movies to bring these intangible dangers to life. Bordwell defines the art cinema as a realistic cinema because 'the art cinema motivates its narrative by two principles: realism and authorial expressively'. The researchers agree as a film presents a real situation, through director's eye. In film we are able to see real situation although it was aesthetically fictional. A good mise-en-scene would make a scene significant or vice-versa. In *Contagion* (2011), the "Spillover" effect visibly demonstrating the precise movement of a virus from a glass to a phone to a face, making the mechanisms of

transmission immediately clear. This study intends to explore how the virus reality is transformed to cinematic art and why sharing the dangers of pathogens through cinema is so important.

METHODOLOGY

This study used "Cinematic analysis" which is a quantitative method for measuring, analyzing, and visualizing a film's stylistic trends. The method examines a film's formal components, such as shot durations, camera movements, color schemes, framing patterns and editing rhythms. Previous researchers used this method to study photography and cinema graphic (Sarti,2022), film apparatus (Leggett, 2016) and cutting structure (Baxter, 2015). This study use cinematic to analyse shot scale of five films by different directors, to identify how the camera shot was used to transform reality for making the mechanics of transmission instantly understandable. The first step was to identify the stylistic evolution of disease film by analysing the whole five films using shot scale metric to find out the similarity of shots and ASL. The second step was to collect data using frame by frame logging. The third step was organised the data into structured format using data base to find out the types and the number of camera shot used in five films. The last step was to identify pattern of repeated stylistic motifs found in five films and reveal the genre specific camera shots in all five films.

Shots Analysis

Contagion (2008)

Contagion was the first pandemic film related to raise the issue of global pandemic because it shows the locations of pandemic in different countries. The film setting of winter unlike the other four that of summer suggests that a gloomy weather is where the virus is most active and becomes contagious. The film exhibits the pandemic travelled around the world through the mobility of human and killed millions of people in less than a month.



Figure 1: A scene of Leonara and her teammates discussing about the outbreak situation in Hong Kong.

The scene in figure 1 occurs at 46:58 to 50:11, explained how the virus is transmitted within three days through contact. All the victims who in contact with Beth, the virus host died in three days after they reached their home country. All the victims were at the same casino at the same time in Hong Kong. MCU was used quite extensively with 147 shots suggesting that there is a strong connection between a character and its background. MCU focused on the facial expression which intended to show off the actors suffering of the disease. The shot also focuses on the object to indicate the effects that the object might be infected with and it becomes a medium to spread the virus. For example, the CU of Beth card was swiped by a café waitress and the glass she drank from was cleared by the waiter at the casino suggesting the object was already contaminated by the pathogen. Interestingly, the same shot was applied to focus on a Russian lady in a cab travelling to work and appeared sick. Earlier on she had contact with Beth's card in a casino. The same shot also appeared from 3:45 to 3:56 (location was in Tokyo where a man was travelling in a train and suddenly collapsed). Similarly, the MCU was used from 23:58 to 26:55 when Dr Mears was investigating the Alderson staffs that have contact with Beth before she died and then discovered that Bates had and run to rescue Bates that was on the bus to work. Unfortunately, he was already

infected and died at the bus stop. The frequent use of MCU in situations that pandemic is highly possible to occur and necessitated to allow the audience to focus on characters facial expression and to highlight the narrative point. As noted, the MCU is characterised by cropping the head of a character in a frame. The sequence of MCU can be seen scattered throughout the film. The MCU shots in *Contagion* helps the audience conceptualize the speed and scale of microscopic warfare. For example, in a few scenes throughout the film, shows how the victims are feeling uneasy and sweaty which suggests that they are being infected and soon will die.



Figure 2: Medium Shots were used mostly in indoor scene

The most used of MS sequence took place indoor such as at the scene inside the buildings, casino, houses, offices, schools and the meeting room between 3:09 and 6:46. MS also mostly appeared between 41:27 and 1:34:33 when the virus became contagious. The shots showed how the authorities, doctors, virologists and scientists discussed, investigated and worked together to combat the virus. For example, in the stadium scene, a MS of Dr Mears giving her blanket to the patient beside her suggesting that even though at death door she still sacrifices her needs to help others. Other usage of MS sequence was from 33:34 to 36:33 found in a laboratory and a restaurant scene. For example, in the lab scenes where two scientists are working in the lab suggests the intensity the characters felt in doing their jobs and the relationship with their surroundings. This shot used by the director has creating a psychological urgency that creating a vaccine is an obligatory to preserve human race and also to ensure the sustainability of future health care to combat future disease.



Figure 3: Long shots of the havoc situation during outbreak.

A Long Shot(LS) was used to show how disastrous the virus can be such as the mass grave in figure 3 above, indicated the mass death during the havoc. Similarly, the runaway scene suggesting that the systemic collapse nationwide caused by biological threat that crash healthcare systems, disrupt supply chains, and cause social unrest (e.g., panic buying, quarantine breaches). These scenes display how serious the impact of pandemic to the public.

For example, in *Contagion*, in many scenes, such as the morgue lab scene shows how autopsy procedure was done, a lab test to create a vaccine, cities turned chaotic, a mass grave, reflects pandemic situation. *Contagion* director, Steven Soderbergh explained in the interview with Reuters, said that *Contagion* was inspired by real virus. Therefore, the film engaged with many consultants (Kit, 2011) to make it looks realistic.

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In conclusion, a MS was structured for scenes to look intense such as making crucial decisions, investigating unknowns and clueless virus and when a Centre Disease Control (CDC) was under pressure of hiding information. . The *Contagion* used a Medium Shot (MS) extensively with 233 shots out of 919 shots throughout 6423s movie length and followed by Close Up (CU) which recorded 147 shots.

The Crazies (2010)

The Crazies was about a small-town Ogden Marsh which was infected by a mysterious toxin from a military plane crash. The toxin from the lake had turned the town people into murderous maniacs. The dominant shot activity in *The Crazies* was a CU with 368 frequencies of CUs shots or 28% which appeared in one third of the film length. Despite the length, the film has the shortest scenes compared to others. The sequences of CU shots used were scattered throughout the film regardless whether the scenes took place indoors such as in a house, cars or a camps or buildings.



Figure 4: Series of CU used to show emotions of intensity and terrify.

CUs shots can be seen between 14:00 and 16:02. It started at scene of a barn house belonging to William. His wife and son were terrified of strange things happening in their barn and the wife investigated and discovered the mower was running and she turned off the engine and ran to the house when she heard her son screaming. The son informed about his father's dangerous behaviour and both hide themselves in the closet. A CU on William's hand when he locked them in a closet indicates the insanity that possesses him. The frequent used of CUs indicated that these shots style dominates the film. The usage of CUs in the middle of the film length which started at 32:52 until 54:33 was related to the feeling of anxiety and uncertainty about the next person to get infected. In this sequence a CU provides a feeling of fear, distress and edginess faced by the four protagonists: A sheriff, his assistant, sheriff wife and a medical assistant. All four struggled to discover the cause of pandemic after seeing a series of men become lunatic and their extremely dangerous behaviour.

The beginning of the film started with LS of the raging fire that burnt the town and as the film progresses it shows the beautiful, serene and unoccupied town with people enjoying themselves. LS of a town team playing baseball game was disturbed by a man with a shotgun walking to the field with bloody nose raised his gun to shoot at the sheriff who asked him to drop the gun. His strange behaviour made the sheriff shoot him in self-defence. The scene was made as LS to concentrate on the body and what it reveals. In addition, the usage of LS on the town people when the government had ordered the town to be under quarantine and kill anyone who tried to escape suggesting the danger of virus that can't be cured.



Figure 4: Long shot used to show the situation before the outbreak and during the outbreak.

LS of the spotlight shines down to the quarantined area creates a panic situation indicates that the town people have been infected. Despite LS only count for 8% of total shots but it conveyed a dramatic tone because it contained many details and visual elements. For example, the scene where the sheriff assistant surrender to the authority, a LS was used by the director to show how army are brutally burnt or killed the people who was infected suggested that the protocol was imposed the importance of patient isolation, contact tracing and personal protective equipment (PPE). Similarly, a LS used at 1:32:28 LS in the last scene explained how pandemic can vanish if the town is destroyed by fire.



Figure 5: MCU shot was used in escape scenes

Meanwhile, a MCU was equally important and used with 242 shots or approximately 18% in total of the film length. The film progressively showed the couple tried to escape from the town with lots of MCUs from scene at 1:16:15 to 1:32:27. The sequence of MCU was used from the middle to almost the end of the film to show body language of characters that were placed in the composition. The MCUs are often used for two shots or group shots especially in conversation (Mercado, 2010) so that the audience can connect with the characters. While for characters, the MCU shots displayed feelings of fretful, anxiety and clueless of the situation that they were in.



Figure 6: MS of the sheriff and his friend finding out the cause of pandemic and on the right is the scene of authorities in chemical suits.

The minimum shot used in this film was MS which appear in a few scenes. Among the scenes are during the outbreak, and a shot on contaminated drinking water reservoir. The MS was used to showcase how was the process of virus transmission from a person who was infected to another person through contact or airborne and became contagious. As noted, the used of abundant MS, MCU and CU are significant this film.

The Happening (2008)

Similar to *The Crazies*, CU was dominating in *The Happening* with 172 shots or 24%. Meanwhile MCU was only 158 in total shots.



Figure 7: CU was used in various scenes throughout the movie

The film was about an inexplicable pandemic which started in Central Park New York and ends at Arundel County the next day. A short but dangerous pandemic has made a person behaves, strangely like getting confused, repeating words or worst, killing themselves. Most of the outdoor scenes were of LS or MS. Hence, the director used this type of shots to cover the scenes until something important took place. Furthermore, most of the scenes in the film took place in bright sunny day in which these shots were not ideal to showcase facial expressions.

The film began with pandemic started in Central Park New York where the virus from trees infected the people at the park when they started to repeat words and killed themselves. The virus from the trees then spread to the whole city carried by the wind from 5:12 to 6:43 and the camera tilt up to capture images of construction workers jumping off the building willingly. The contagious virus was getting worst when a camera panning to Philadelphia to show a breezy weather that carried the virus started infecting the people. MCU was used greatly between 17:46 to 41:56 which shows the protagonists', Elliot, Alma his wife, Jessie their adopted daughter and a few strangers facial expression when they were running to a safe county.



Figure 8: MCU was used in escape scenes to show group facial expressions.

Unfortunately, all the states that they were heading to were infected as well. While, three of them managed to escape from the madness of people that were infected, the aggressive virus continued to spread to another county. The ending of the film was LS of a park in Paris. A camera panned to two men who were talking and suddenly one of them started to repeat the sentence and the camera moves to show people stopping at their trail and the LS of breezy weather suggesting that the pandemic has travelled to other continents.

Similar to the other two films, MCU was used mostly on characters and in indoor locations to gives the idea that the danger is out there, and might attack. The shot was applied on each actor to make the scenes look tense and mysterious. Overall, these shots speak about how the film language bypasses the text language and making critical public health concepts accessible to non-scientific audiences worldwide. For example, at 9:23 to 9:40, when a principal and Elliot were walking at the school corridor, MCU on them suggests that something bizarre was happening and the school has to dismiss the students.

In conclusion, MS is associated with the outbreak that spreads through airborne and the societal disruption that follows. The character’s reaction and emotion were display to present despair of the situation. MCU is related to how characters respond to the pandemic and what would they do to control its spread.

Cabin Fever (2002)

Cabin Fever was relatively different from the other four films, since the film did not display any societal infected by virus except of five friends. The longest running time of 5534s, the narrative was about a group of friends (Jeff, Karen, Paul, Bert and Marcy) were vacationing in the mountains and with four of them ended up infected by a mysterious virus. Karen, the first victim was sick after drinking the contaminated water from the lake. She then fell ill and later discovered that her skin started to bubble and burn. Her friends then locked her in a tool shed to avoid being infected. As the film progresses, the other three (Paul, Bert and Marcy) were infected too and then they realised there was no cure for the virus. Jeff, their friend leaves the cabin and when he returned he was shot to death and burn by the authority that assumed he was infected too. The ending of the film shows two kids collecting water from the stream that was infected by Paul’s body. This could be the beginning of a possible pandemic.

The first section of the film applied MCU to a great used with 286 shots or 25%. The shot was applied to showcase the excitement on the face of four friends holidaying in woods. The bright sun adding concretises feeling of carefree and ease at the prospect of spending time with their love ones.



Figure 9: MCU was used in most horrific scenes.

MCU was used in scenes such as above. The first is a scene the host of the virus follows by scene of Marcy’s and a dog, both already infected by the virus and the last is the scene of Paul’s dead body in the river.



Figure 10: A scene where the group isolated Karen in a tool shed after she was infected.

As the film progresses, MCU shots change to opposite feeling of grief, wary, upset and overburden faced by the group when Karen was infected by the virus. The MCU shots were used to display the feelings of worrisome and troublesome on the characters as well as guilt feeling to isolate her. A cabin interior gives the sense of danger and tension. The shot continues to display other characters that were infected such as the mysterious man whom appeared suddenly at their cabin as well as Bert and Marcy. The repeated use of MCU in the film suggesting that the suffering endured if an individual gets infected. At the same time, a MS was dominant with 369 shots or 33% with the purpose to display 'some facial nuances of behaviour and emotions (Mercado, 2010). For example, the scenes when Bert gets infected, a camera focuses on his body that covers with reddishness and blood and the camera then shifts to his face that display panicky and distress at the situation. Similarly, the scene when Bert travels to town suggests that he is trying to get some help from the town people.

In addition, a CU was almost equally applied after MCU with 123 shots in total or 11%. The shot is considered an intimate shot because it prevented anything that distracts the audience (Mercado, 2010) such as the emotion of characters or importance of the objects. CU appears in most scenes to emphasise the details.



Figure 11: CU of Karen already infected by rabbi's virus and on the right is CU of Marcy's infected leg and in the middle is CU of a dog, the cause of the virus.

For example, a camera focuses on the infected victims to generate a threatening virus such as bleeding noses or legs or necks that bag the question what actually this virus is and where it comes from and does it have a cure. Despite CU frequently used after MS, it suggests suffering effects that surround a pandemic film. The sequence of CU emphasises on how dangerous pandemic is and the effect it has on society.



Figure 12: MS was used in a few scenes to exhibit the behaviour and body language of the actors.

In the scene above, at 48:20-49:43, everyone except Karen, panics and checked their bodies to find out if they were infected too. MS on them was associated with the tough decision, worries, and uncertainty as well as fretfulness that the group faced. Their decision in isolating Karen explained the medical protocol that emphasis character dialogue where its importance of patient isolation, contact tracing, personal protective equipment (PPE), and vaccine development. The Final section of the film had similarity with *The Happening* were, the ending shows LS of Paul's dead body floating in a stream suggesting possibility of the next outbreak.

Carriers (2009)

Similar to *Cabin Fever*, *Carriers* tells a story about four friends (Danny, his brother Brian, Bobby and Kate) journey to the beach as the brothers believe safe place from the virus. Like other films MCU was mostly used throughout the film with 221 or 23.3% of total shots. MCU in this film focused on four main characters to highlight the scenes between them. Most scenes showed conversations between them that take place in a car.



Figure 13: Scenes in a car mostly used MCU.

The Figure 13 above exhibits scenes in the car of two couples traveling together but with different purposes. As the film progresses, the film use CU to show the detail of the character's face especially after Bobby was infected after trying to help Jodie who accidently cough blood on her. Jodie is Frank's daughter who was infected by virus whom they were forced to help when their car broke down. The emotions of four friends were frequently displayed in the film. This can be seen as CU was the second shot that was frequently used with 174 shots or 18.35%.



Figure 14: A series of CU in the car scene that exhibit their characters.

The virus that showed no sign of mercy infected from one person to another through contact and airborne. This created tension between them which was shown in a series of CU in the car.

The third shot that was frequently used by the director is MS which counting 155 shots in total. MS was used mostly in outdoor scenes especially outdoor to show visceral fear such as the breakdown of health and panic among the public.



Figure 5.38: Scenes at the hotel. Left: MS of Brian almost slipping into a pool and right: MS of Bobby and Kate asked to strip their clothes by the uniform men.

For example, in the scene at 28:33 to 29:23 MS was used when Brian was almost slipping into a pool after discovering a dead body while clearing it. On the other hand, a LS was used in most road scenes to show they were alone on the road leading to nowhere. LS was also applied to show an abandoned town as the car passing by. As the film ends, LS of a car driven by Danny was passing a prairie between 1:02:46 and 1:04:53 leaving only him and Kate before they reached the beach.

CONCLUSION

In conclusion, the array of choices in camera works by the five directors coincides with the real event off screen (the sickness, the dying, the empty cities and the feeling of hopeful) in which the shots were staged to give viewers a specific experience as well as possibly giving status to a film. The camera shots used was CU,MCU, and MS that applied stillness, discomfort, tension, and contemplation functions. This result supports the views of few researchers on camera shots. Bordwell (2013) stated that a camera shot is central to visual storytelling because it emphasises an important detail. For example the repetitions of certain shots may associate with a character or situation. Rob in Bordwell (2013) described the constant use of shots such as Extreme Close up (ECU), CU, Tracking Shot and Medium Shot (MS) in comedy genre films are to define a status such as a bully or a victim. In contrast, the similarities of shots used in pandemic films were exhibited through the massive used of Close Up (CU), Medium Close-Up(MCU) and Medium Shot(MS). These static shots used in all films gave three functions. The first function was to show contemplation in which the directors used these shots to make audience think deeply and at length and focused their attention into a subject of pandemic without necessarily rushing to a quick conclusion. The second function was to show stillness where these camera shots remains perfectly still to force attention, so the audience was able to focus deeply on character expressions, suffering,

emotion and the situation. The third, was to make audience feel unsettled by imposing discomfort and tension in watching the viruses killed thousands people in a short of time. This could be translated to visually two specific psychological type. One is passive cluster such as fear, emotional distress and anxiety. Second is the antagonised cluster which showcase frustration to safety guidelines or risk-taking behaviours such as trying to escape. For the non-medical community, these camera shots function to trigger empathy, tension or connection and gauge emotional responses on how viewers feel about what they are seeing.

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