

“The Martian” (2015) and “Gravity” (2013):

A Comparative Visual Analysis of Elements of the Storytelling Process within Each Film

Introduction:

The 2013 film *Gravity* was directed by Alfonso Cuarón and the screenplay was co-written by Alfonso Cuarón, Jonás Cuarón and actor George Clooney. The film depicts the story of a catastrophic event in outer space that results in the deaths of several U.S. astronauts and the near death of the main character, Dr. Ryan Stone. Stone is a hospital lab scientist who is in outer space for the first time after approximately six months of training through NASA. She is out of her element.

In the film, Russians use a missile to destroy a Russian satellite that is in outer space. The missile strike sends a massive amount of large debris rocketing into orbit directly in the pathway of the astronauts and the space shuttle. The deadly debris path is in orbit. It circles the Earth every 90 minutes within the same orbit pathway being used by international astronauts including the main characters. The space shuttle is destroyed by debris traveling faster than a bullet. Several astronauts are immediately killed or die a short time later. This leaves Dr. Stone alone in

outer space to desperately figure out a way to use the resources around her -- re-entry pods and equipment on an abandoned International Space Station and an abandoned Chinese satellite, to try to get back home safely to earth.

The film *The Martian* (2015), directed by Ridley Scott, and based upon a novel of the same title written by Andy Weir, shares a similar central story line. In *The Martian*, astronaut Mark Watney is left alive on Mars. A powerful storm forces a crew of astronauts, including Watney, to evacuate Mars. The storm has left the team with nearly zero visibility. While attempting to walk to a rocket that would take the crew off of Mars, flying debris from the storm hits Watney and throws him several hundred yards beyond the reach of the crew. Watney is presumed dead when his suit fails to send signals that would indicate he has active vital signs. The remaining astronauts believe Watney's suit was ripped open by the debris and Watney died after a minute of exposure to the harsh, Martian atmosphere. Following a brief search, Commander Melissa Lewis decides the crew must leave without Watney or they all risk dying in the storm. They depart Mars. After the storm clears, the viewer learns Watney is alive. He has some non-life threatening injuries. Watney makes his way to the self-contained habitat where the crew and he had been living while working on Mars. The habitat is designed to mimic atmospheric conditions on earth so that while inside the habitat, the crew does not have to wear space suits. It is stocked with supplies. Due to the several years it takes for NASA to prepare and successfully launch a mission to Mars, Watney soon realizes he will likely starve to death before NASA can conduct a rescue. He also realizes NASA may not know he survived the accident. Watney decides he must use the tools around him to survive for several years on the seemingly uninhabitable planet.

Both films, *Gravity* and *The Martian*, are divided into three settings, which may also be described as actual or metaphysical locations:

- (1) The physical landscape (space),
- (2) The emotional landscape (within this landscape, inner consciousness is explored by the lead character as the character struggles in the following manners: man versus himself, man versus nature and man versus technology), and
- (3) home (or the perception of home) back on Earth.

Within each film, each lead character, Watney and Stone, is forced to overcome seemingly insurmountable odds in order to survive a catastrophic situation. Both characters are astronauts on a Hero's Journey, as defined by Joseph Campbell (Vogler, 2016). Watney and Stone both struggle to differing degrees within each of these settings during their individual quests to survive unusual, life-threatening circumstances.

Visual Storytelling

There are key differences to the cinematic approaches Ridley and Cuarón chose to develop and utilize within each of their respective films. These choices directly informed the viewer about the visual narrative. These choices also either enhanced the credibility of the film by providing the viewer with a deeper understanding of the characters, their circumstances and settings or lessened the viewer's understanding of these important facts.

Cuarón chose to shoot the film in a way that often allows the viewer to feel as if they are experiencing what the main character is experiencing. The overall theme the cinematography seems to convey is vulnerability within the vastness of space. Stone's character is emblematic of that vulnerability. Through each of Stone's hardships, the viewer is visually and literally told Stone is vulnerable and afraid. This approach visually personalizes the narrative in a way that is believable and in a way that the viewer can relate to -- someone in Stone's position is expected to express these emotions and fears as they plow onward hoping to survive.

For example, several shots are taken directly from Stone's POV as she is grasping at the vacuum of space trying to find any handhold to prevent her from floating out into space. In some shots, the camera appears to be placed within Stone's space helmet so the viewer literally sees space from Stone's eyes. This is often done during scenes when Stone is panicking, seems to feel claustrophobic and gadgets stating her vital signs are beeping and blaring at her through her helmet. When Stone is seemingly falling in space, bounding from one piece of equipment to another, the camera follows right next to her as if it was attached to her body so that the camera can record every harsh impact of Stone's astronaut suit up against the vast, metal equipment. If Stone is upside down or twisting due to weightlessness, the camera is right there mimicking that visual experience. These visual choices build upon the illusion the viewer is experiencing what Stone is experiencing, including powerful impacts against satellites while falling through space.

The sound effects at these moments contribute to the sensation the viewer is experiencing what Stone is experiencing in space. Several times during key moments within the film when Stone narrowly escapes danger or is in danger, the musical score, NASA radio sounds, and room tone give way to the singular sound of Stone breathing inside her helmet. This approach with the

sound, coupled with the dramatic, point of view camera shots, is very effective at conveying Stone's personal, emotional and vulnerable experience in space.

In several scenes, Stone's vulnerability and search for security and safety is expressed through allusions to the womb. In one scene, Stone is connected to Kowalski (in a jet pack) by a 20 – 30 foot tether. The two power through outer space and a wide shot of the large, circular earth provides a backdrop that makes it appear as if Stone is inside a circular womb. She looks as if she is connected to Kowalski by an umbilical cord. The tether is a metaphorical umbilical cord for Stone in this scene and others. Within an escape pod, Stone curls up into a ball and floats in the air with the tether also floating nearby. Against the circular backdrop of the escape hatch, the shot creates the illusion Stone is again in a warm, safe womb where all of her needs are cared for.

Conversely, the cinematic choices within *The Martian* are more traditional, cinematic choices that also seem to reflect a machismo-driven narrative. Wide shots, medium shots, close ups and low angle shots emphasize Watney's grandness, his sense of power and the sense Watney is cinematically an equal with this vastly unknown Martian landscape. Watney rarely demonstrates his vulnerability in this world. In fact, instead of being visibly bothered by being left-for-dead on Mars, Watney appears to act as if he is inside the "*Big Brother*" house recording video diaries for an expectant audience. Watney largely does not express the vulnerabilities and fears expected of someone left for dead on Mars. Instead of emotionally embracing his environment as Stone does, Watney hides his emotions and attempts to conquer the environment repeatedly. Low angle shots of Watney make Watney appear as if he is larger-than-life and undefeatable. In a scene in which Watney grows a potato plant, Watney's hand dips to the

ground to touch the small leaf of the plant. The scene is shot level to the ground with a macro lens. This makes Watney's hand appear as if Watney's hand is the hand of "God" and is a clear allusion to Michelangelo's *Creation of Adam*. (Katz, 2009)

Discussion and Analysis of Pivotal Scenes:

In both *Gravity* and *The Martian*, an unexpected disaster occurs which leaves the main characters stranded and fighting for survival. This struggle and the lingering question of whether the main character will survive creates the plot, tension and a solid reason for a viewer to continue watching the film.

Gravity begins by alerting the viewer to the exact conditions of outer space, which is where the main character currently resides. Within the two minutes of the film, through lower-third titling, the filmmakers of *Gravity* tell the viewer the main characters are 600 kilometers above Earth where the temperature fluctuates between +258 and -148 degrees Fahrenheit. The viewer is also told there is no air pressure, oxygen nor sound, and that "life in space is impossible." Armed with this information, the viewer is immediately acutely aware of the dangers of space. Visual clues aid in this perception. These clues include the deep black surrounding the astronauts with a large Earth in the background (this points out the astronauts are far from Earth), the frosted breath that hits the inside of the astronauts' helmets as they breath, the heavy suits and breathing equipment each astronaut wears to keep themselves alive outside the shuttle, rope tethers and harnesses attaching the astronauts to the space shuttle and to the Hubble which prevent the astronauts from quickly drifting into outer space, jets on one

character's spacewalk machine which propels the character against the pull of orbit and allows him to steer where he wants to go, as well as loosened nuts and bolts that threaten to quickly float away into space as the astronauts conduct experiments outside of the shuttle. Due to these visual clues, it becomes abundantly clear to the viewer the astronauts are not stationary but are in a fast-moving orbit around the earth. The viewer is given a solid demonstration of the way gravity (and the lack of a gravitational pull) and centripetal force works in outer space, which is quite different from how it works on Earth. It is visually demonstrated to the viewer that the characters must clothe themselves differently than they do on earth and that they must behave differently than they do on earth within this environment. In outer space, the viewer is shown that the astronauts – tethered and harnessed to the shuttle or Hubble – are in an orbit around the earth and that orbit is powerful like a tide in an ocean, and it is dangerous.

During the first ten minutes of the film, a tone of calm is established as the camera follows the astronauts as they conduct routine work while jovially bantering back and forth with each other. For the first ten minutes of the film, NASA Mission Control talks back and forth with the astronauts in non-alarming tones. The filmmakers use voice over to demonstrate this conversation. Mission Control is able to give information about the setting which the main characters are not aware of yet -- This is a crucial tool that led to the development of a credible narrative. The viewer is also given information about the expectations of the location and setting, which add to the construction of a solid narrative. Through Mission Control, major plot points are developed and foreshadowed. For example, about four minutes into the film, through the dialogue with Mission Control, the viewer learns crucial information about the characters' setting: a Russian satellite was destroyed but the debris is expected to come nowhere near the astronauts. The astronauts react calmly and continue working. They visually let the viewer know

there is nothing to be alarmed about by behaving this way. As a result of this scene, which foreshadows future events, the viewer has one more bit of information tucked away within the viewer's bank of knowledge: in space, flying debris, if it's in your orbit, can be deadly. Subsequently, when, approximately six minutes later Mission Control gives an urgent update instructing the astronauts to abort the mission due to flying debris, the audience understands that this is possible in space. This chain of events is believable.

Mission Control tells the astronauts the flying debris from the Russian satellite created an uncontrolled, destructive chain reaction with nearby satellites and a new debris cloud is headed directly toward the astronauts. The astronauts are visibly rattled. They shout back and forth at each other. The lead commander is no longer friendly, he is abrupt and short with the astronauts while yelling orders to drop everything and get inside the shuttle. The tone has shifted. Without seeing the debris, the astronauts' radically different behavior visually clues the viewers to the fact danger is lurking nearby. The astronauts believed Mission Control when it told them they were safe, and now the astronauts believe Mission Control when it tells them they are in danger. The urgency is heard in Mission Control's voice over and in lead astronaut Matt Kowalski's voice as he rushes Stone. Dr. Stone can be heard breathing fast and showing signs of panic and distress. When the debris cloud reaches the astronauts and proceeds to destroy the shuttle by piercing the vehicle with large chunks of fast-moving metal, and killing fellow astronauts with chunks that act like bullets, the visual narrative is believable. The scene has been well-established through the use of setting, foreshadowing, dialogue, sound and tone.

Conversely, *The Martian* failed to produce a successful visual narrative within its opening scene. The viewer is not given a guide to the parameters within this world: they are not

told the temperature, the air quality, what elements the air is composed up, what type of weather to expect, the type of gravity on the Martian ground or the potential dangers within the climate. Mission Control and lower-thirds are not used to fill the viewer into these important details that could foreshadow events within the plot in a meaningful way. In *The Martian*, the astronauts are on the Martian surface working on a plot of land near the habitat where the astronauts live. The astronauts are in communication with NASA through emails and visual updates sent by computer. Unlike *Gravity*, in this film, Mission Control is not in constant audio communication with the team providing real-time updates about the setting and the conditions on Mars.

The film begins with sweeping wide shots and stunning ariel shots that show the skies are clear from all points of view for hundreds if not thousands of miles. There is no indication of a storm coming across the vast, largely flat landscape. The astronauts in the field on the ground are in their space suits. The astronauts inside the livable habit are wearing sweat suits without any space suits on. The astronauts spend the first two minutes and thirty seconds of the film working while making friendly banter. They smile and laugh easily as they conduct research on the Martian surface and within the habitat. They are casual and their faces do not show distress or any causes for alarm. They are not in constant communication with Mission Control through radio (voice over), nor are they in communication with each other about what is going on around them in the natural world within their immediate surroundings. Their behavior tells the viewer that all is calm in their world on Mars. Commander Melissa Lewis and another astronaut are in the field working together. Lewis looks up toward the sky and down to the dirt as she pokes the dirt and conducts experiments. Lead character Mark Watney examines dirt while looking both up towards the sky and while looking at the ground. Martinez has one of the most advantageous views for seeing an approaching storm: he drives a rover long distances along the ground and is

able to see the vast horizon. Martinez is also driving in the direction of the storm. Once Martinez arrives at his destination, he is within sight of the storm. But, the sky is clear around Martinez. The most subtle indications of some weather are tassels on equipment Martinez is inspecting that blow slightly in the wind.

Two astronauts located within the habitat get a status update from NASA that says a bad storm is coming. Within seconds, the skies go from being clear for miles to being filled with a storm the size of a Mount St. Helens eruption. Martinez turns around and the storm is now directly behind him. He is visibly shaken.

With no visual, auditory or other narrative warning or foreshadowing, a huge storm hits the location where astronauts are working. Within seconds, the sky goes from being clear to pitch black and full of debris. It appears as if the winds are well over 100 mph and the sky is raining huge chunks of coal-like hail. The visual narrative offers no explanation as to why the astronauts would not have seen the storm coming for miles given the clear skies they were each working in. The visual narrative also does not give an explanation for why NASA wasn't aware this dangerous storm had developed and was going to land right on top of the most important real estate in Mars.

Due to the storm, the astronauts cannot see much further beyond their hands. The astronauts have difficulty walking and standing upright in the bad weather. Ultimately, a large chunk of debris hits Mark Watney, lifts him about 20 feet off the ground and hurls him several hundred yards away from the other astronauts. This storm visually looks like what it might look like to be inside a volcano erupting rock and shrapnel.

There was no warning for both the viewer and the astronauts to expect these types of conditions on Mars. Through visual clues, narration or dialogue, the viewer was not fed information that would allow the viewer to believe such a catastrophic event was possible on Mars. Given the viewer's awareness that NASA is a reputable organization with billions of dollars at its disposal, the viewer is not adequately cautioned as to why NASA and the astronauts were not prepared for such an event. The result is the opening scene does not feel plausible or adequately developed.

Conclusions

There are three primary, visual elements which, as implemented by the producers of *Gravity*, led to the success of the film. These elements are:

- Visual foreshadowing,
- A visual exploration of the main character's inner landscape and inner turmoil as that character struggled to overcome insurmountable odds to survive,
- Providing the viewer with a clear and visibly comprehensible definition of the physical surroundings and how those surroundings directly affected the main character.





The Martian failed to use these key visual tools throughout the film. Most importantly, the filmmakers of *The Martian* failed to implement these key visual techniques within the crucial opening scenes of the film. The beginning of a film establishes the ground rules for the narrative

and also sets the audience expectation for the “rules” of the environment and setting within which the film is taking place. Within this important information, the audience is not adequately informed about the emotional, visual and narrative landscape. Subsequently, this led to a less successful and less believable visual narrative within *The Martian*.





References

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Final Project Visual Component

<p>Karen Mitchell</p>	<p>Side By Side Visual Comparison of Moments in “The Martian” and “Gravity”</p>	
		
<p>(1) Opening Titles for <i>The Martian</i>. Visual image is warm, beautiful and inviting, which does not accurately portray Mars and the ability to sustain human life on Mars.</p>		<p>(1) Opening Titles for <i>Gravity</i>. Image is reminiscent of space. It feels cold, stark, uninviting. The kerning demonstrates the letters are floating away uncontrollable from each other, which is reflective of the dangers in outer space for human life.</p>
		
<p>(2) Lower-thirds provide information about the location on Mars where the astronauts have landed. Text and dialogue do not give viewers a strong sense for the nature of what the astronauts are enduring. The story is weakened without this information.</p>		<p>(2) Both the text and audio give the audience key material regarding the conditions in outer space and the landscape the characters are dealing with in <i>Gravity</i>. This is crucial information for advancing the story.</p>

Final Project Visual Component

		
<p>(3) The moments before disaster strikes in <i>The Martian</i>. There is no visual or audio foreshadowing.</p>		<p>(3)The moment before disaster strikes in <i>Gravity</i>. Two separate times, the audio foreshadowed the event. The dangerous debris field rapidly approaching the astronauts also foreshadows the event.</p>
		
<p>(4) One of Watney’s few vulnerable moments in <i>The Martian</i> occurs when Watney is swept off his feet and knocked unconscious by debris. This results in Watney being left-for-dead on Mars.</p>		<p>(4) One of several of Stone’s vulnerable moments in <i>Gravity</i>. Here, Stone has been knocked off a satellite array and she is desperately grasping for purchase so she is not lost within the void of outer space.</p>

Final Project Visual Component

		
<p>(5) Final shot of <i>The Martian</i> demonstrates Watney back on earth as a man who is still just as control of his environment as he seemingly was in outer space. The high angle shot places Watney in the center in a position of power. The series of adoring students that surrounds him in a circle emphasizes Watney’s elevated position of importance on Earth as a rare, unique being who has “conquered” Mars. Watney does not appear to have that great of an internal transformation due to his experiences.</p>		<p>(5)Final shot of <i>Gravity</i> is a clear allusion to <i>Planet of the Apes (1968)</i>. Stone was transformed internally by outer space. She has returned to earth a stronger woman who has overcome many personal earth-bound demons while almost losing her life several times in outer space. This is one of the only low angle shots of Stone. It makes her appear powerful, strong and unafraid – these are new traits in Stone’s character that are appearing now for one of few incidents. Stone has completely shed her skin of vulnerability and the need for protective, womb-like spaces. She appears somewhat like Eve in the Garden of Eden. Internally, Stone has come of age. Stone is in a position of exquisitely earned power.</p>