

Spectator and Screen: The evolution of immersive
cinematic technologies through the lens of Bazinian
classic realist theory

Anna Sheehan

A research paper submitted to the University of Dublin in
partial fulfilment of the requirements for the degree of Master
of Science Interactive Digital Media

May, 2016

Declaration:

I hereby declare that this is entirely my own work and that it has not been submitted as an exercise for the award of a degree at this or any other University. I agree that the Library may lend or copy this dissertation on request.

Signed: _____

Anna Sheehan

Permission to lend or copy:

I agree that Trinity College Library may lend or copy this research paper upon request.

Signed: _____

Anna Sheehan

Date: _____

13th May 2016

Acknowledgements:

I would like to thank my supervisor, Vivienne O'Kelly, for her patience, encouragement and expert guidance throughout the research process. Your passion and extensive knowledge in the field of cinema is absolutely wonderful.

Thank you to my parents for their unwavering support, and my fellow IDM classmates for the tea, chats and, most importantly, laughs, especially when things got tough.

MSc Interactive Digital Media

2016

**Spectator and Screen: The evolution of immersive cinematic technologies
through the lens of Bazinian classic realist theory**

Abstract

Since the advent of the film industry, the way cinematic text has been captured, processed and exhibited has changed dramatically as the corresponding technology has developed, from the very first motion picture filmed by the Lumière Brothers, to more recent innovations in virtual reality cinema (VR). As a result, the wide range of interpretations surrounding current modes of spectatorship and the nature of exhibition begs the question: What is cinema, really? Is it inextricably linked to the presence or absence of celluloid, or is it an all-encompassing term that includes the new and varied developments in cinematic technology? At the heart of cinema lies the human desire to understand the world and recreate an alternate reality, but with the move towards digital film, the definition of the 'real' and 'realism' has also evolved to create a more active and participatory form of film consumption, particularly with 3D cinema and VR. The pioneering film critic and theorist, André Bazin, asserted that only through an honest depiction of flawed humanity and the harsh realities of life could an *authentic* truth be realised in film and so, taking this into consideration, the primary aim of the research paper is to explore the changing definition of cinema in line with the technological developments of the last century, through the lens of the Bazinian theory of classical realism in order to demonstrate not a regression to traditional cinematic practices, but the evolution of a medium that is, by its very nature, immersive.

Candidate: Anna Sheehan

Supervisor: Vivienne O'Kelly

Table of Contents

Introduction.....	1
Chapter One: Recreating Reality in Cinematic History	3
Chapter Two: Bridging the gap between new cinematic technology and André Bazin’s theories of cinematic realism.....	16
Chapter Three: Investigating the mode of Virtual Reality through the lens of classical realism.....	30
Conclusion	43
Endnotes.....	45
Works Cited	46

Table of Figures

Fig. 1. The original 360 degree experience. <i>Panorama</i> by Robert Barker. [Retrieved from: http://facweb.cs.depaul.edu/sgrais/images/Panorama/BARKER_EDINBURGH_500.jpg]	4
Fig. 2. Early motion pictures. <i>Sortie de l'usine à Lyon (1895)</i> . [Retrieved from: https://www.youtube.com/watch?v=NwRAUniWJPY	6
Fig. 3. Pathécolor. <i>Passion du Christ (1912)</i> . [Retrieved from : http://www.afrhc.fr/]	8
Fig. 4. Technicolor. <i>The Quiet Man (1952)</i> . [Retrieved from: www.irishcentral.com]	8
Fig. 5. The first documentary film. <i>Nanook of the North (1922)</i> [Retrieved from: http://www.openculture.com/2015/07/watch-the-very-first-feature-documentary-nanook-of-the-north-by-robert-j-flaherty-1922.html]	10
Fig. 6. Gritty realism and moral ambiguity. <i>The Bicycle Thief (1948)</i> [Retrieved from: http://www.jonathanrosenbaum.net/2016/04/the-bicycle-thief-2/].....	13
Fig. 7. In touch with nature. <i>The Revenant (2015)</i> . [Retrieved from: http://www.telegraph.co.uk/film/the-revenant/review/]	21
Fig. 8. Working from the ground up. <i>The Revenant (2015)</i> . [Retrieved from: http://collider.com/oscar-winners-2016/].....	24
Fig. 9. Connecting with reality. <i>The Revenant (2015)</i> . [Retrieved from: http://www.cinespective.com/the-revenant-2015-review/].....	2
Fig. 10. Immersive aspirations. <i>Phenakistoscope</i> . [Retrieved from: https://groundupfilmguide.wordpress.com/firstmpmachines/]	26
Fig. 11. The new age of virtual reality. [Retrieved from: http://vrsorce.com/oculus-rift-release-date-price-games-features-46/].....	34
Fig. 12. Locomotion. <i>Arrival of a train at Ciotat (1895)</i> . [Retrieved from: https://www.youtube.com/watch?v=1dgLEDdFddk]	38
Fig. 13. 360 degree Locomotion. <i>Evolution of Verse (2015)</i> . [Retrieved from: http://www.recode.net/2015/10/1/11619088/virtual-reality-is-the-last-medium-says-filmmaker-and-vrse-ceo-chris]	38
Fig. 14. New Frontiers in filmmaking. <i>Collisions (2016)</i> . [Retrieved from: http://www.smh.com.au/entertainment/art-and-design/australian-filmmaker-lynette-wallworth-uses-virtualreality-technology-to-take-indigenous-story-to-sundance-film-festival-20160115-gm5x7o.html]	41

Introduction

If one is to subscribe the traditional notion of ‘cinema,’ the Oxford English dictionary simply describes it as follows:

cinema

Pronunciation: /'sɪmɪə/ /'sɪmɪɑː/

Noun

Chiefly *British*

1A theatre where films are shown for public entertainment.

1.1[*MASS NOUN*] The production of films as an art or industry.

However, since the advent of the film industry, the way cinematic text has been captured, processed and exhibited has changed dramatically as technology has developed, from the very first motion picture filmed by the Lumière Brothers, *The Arrival of a Train at La Ciotat* (1895), to more recent innovations in virtual reality cinema, such as *The Evolution of Verse* (2015). Where once the projection of film was a widely public event, films in the digital era have often been driven by the mass production of media which, in turn, has impacted the modes through which we consume film, be that outdoor projection, the theatre, on a television screen, computer or mobile phone. Consequently, the wide range of interpretations surrounding spectatorship and the nature of exhibition begs the question: What is cinema, really? Is it inextricably linked to the presence or absence of celluloid, or is it an all-encompassing term that includes the new and varied developments in cinematic technology?

At the heart of cinema lies the human desire to understand the world and recreate an alternate reality, the yearning to temporarily escape from one, absolute truth to seek out another, perceived truth for entertainment. The pioneering film critic and theorist, André Bazin, asserted that only through an honest depiction of flawed humanity and the harsh realities of life could an *authentic* truth be realised in film, and, for him, it was the gritty neo-realism of post-World War II Italy which embodied all the characteristics of the purest form of cinema. Bazin’s theories continue to be applied in modern cinema techniques, in more innovative ways with the aid of improved technology, but with the move towards

digital film, the definition of the 'real' and 'realism' has also evolved to create a more active and participatory form of film consumption, particularly with 3D cinema and VR (virtual reality). Not only has the way we consume film changed, but the very definition of cinema is now being called into question as the scope of cinematic technology expands and becomes increasingly more accessible.

The primary aim of this research paper is to explore the changing definition of cinema in line with the technological developments of the last century through the lens of the Bazinian theory of classical realism. Chapter One will address the pursuit of the 'real' in early cinema, Chapter Two is a case study of *The Revenant* (2015) as a piece of immersive filmmaking which combines recent innovations in camera and lens technology with classic realist techniques, and Chapter Three investigates the pursuit of the 'real' in new modes of virtual reality technology. Although using academic discourse as a framework for such research could be seen as problematic, particularly when considering the speed at which digital cinematic technology is advancing in the 21st century, this paper will argue that despite the vast changes in the film industry, Bazin's theories of realist cinema are simultaneously robust and comprehensive enough to translate to the language of modern film in order to achieve the quintessence of 'pure' cinema: authentic reality.

Chapter 1

Recreating reality in cinematic history

From the earliest artistic depictions known, humankind has sought to recreate ‘reality’ as part of the art of storytelling, to capture the essence of humanity. Before the birth of photography and, more specifically, moving pictures, the presence of subjectivity was largely unavoidable, but film granted the power of permanence without the malleability of memory or the introspective eye. The basis of cinematic entertainment has been the desire to transport viewers to an alternative reality and the pursuit of an authentic, immersive experience has been the driving force behind technological developments in the field. André Bazin argued that the cinema is “of its essence a dramaturgy of Nature” (Bazin 1967, p 110), and from the developments in cinematic technology in the 18th and 19th centuries to the Italian neorealist movement, the grimness of *human* nature and society has been exposed in ways that are still reflected in 21st century film. Whether film aimed to enhance the real or reveal its truth, the central objective for filmmakers has been to recreate a particular version of ‘reality.’

In more recent history, it was photography which aimed to capture and preserve a moment in time and to depict authenticity. In *Cinema and Technology: Image, Sound and Colour*, Steve Neale outlines the origins of moving pictures and the pursuit of realistic art in some detail: the late 18th and 19th centuries saw the creation and development of ‘machines’ whose main purpose was to provide entertainment by creating exciting and realistic experiences for people. This use of pictures for entertainment evolved with the invention of the ‘magic box’, particularly successful examples of which included the *Phantasmagoria* and the

Panorama. The former utilized image slides which were then projected onto a translucent screen, and artificial light and sounds were then used to enhance the experience and give the illusion of a supernatural presence. The *Panorama*, which was invented by Robert Barker in 1787, used a similar method of lighting giant canvasses that would then encircle the spectator to create an immersive experience of his panorama paintings and exhibit, in his own terms, “la nature à coup d’œil” (Neale 1985, p 26). Both inventions carefully manipulated light, lighting effects and perspective to “lure, reflect and process the spectator’s gaze” (Neale 1985, p 24) to create a realistic entertainment experience, the central motivations including themes of light, ‘reality’, the natural world, vision and perspective.



Fig. 1. The original 360 degree experience. *Panorama* by Robert Barker.

Following this, the discovery of ‘persistence of vision’ led the way for the development of moving pictures as interest in the area of science and vision saw a significant resurgence. During this period there was considerable progress made in the development of lens technology – the microscope, telescope and the optical glass used in lenses were all greatly improved. Persistence of vision as an optical illusion was researched extensively in the 19th century and involved the blending of multiple images to create the illusion of one singular image, and Neale (1985, p 30) describes the process whereby “the retina in the eye retains an image of the impression it receives for a short but distinct period of time... a set of discrete images with a number of minimal differences in sequence, interspersed with a series of gaps, thus appears as

one continual, moving image.” Similar to this, the Phénakistiscope, invented by Joseph Plateau in 1832, was crucial to the development of early cinema and was essentially a rotating disc containing a number of slots which would give the illusion of containing moving images when turned in front of a mirror. It was this particular invention which paved the way for the progression of cinematic technology in which more sophisticated machines could project images at a greater speed to accurately depict motion to immerse the spectator to greater effect.

These phenomena formed the foundation of cinematic technology whereby still images are passed through a projector at a fixed speed, and the mechanics of this invention were then refined to create the first cinematic experiences which use the illusion of motion to recreate real movement. Neale (1985, p 40) describes the yearning for realism in this period: “When the cinema arrived it inscribed indelibly – in its technology as much as in its films – the hegemony of vision, spectacle, reality, life and movement across the complex and contradictory societies of the late nineteenth century.” As a result of this progress, by 1895 the basic cinema technology had been developed to such a standard that the Lumière brothers showcased their first film projections that same year, including *Sortie de l’usine à Lyon*, at the Grand Café in Paris. The newly created Cinématographe, which included a projector, improved upon the Kinetograph, a moving picture camera which was invented by WKL Dickson at Thomas Edison’s research lab at West Orange in the United States (Neale 1985, p 41). Following the demonstration of this invention in Paris, Louis and Auguste Lumière were inspired to develop their own, upgraded version of the machine; the pioneering Cinématographe took scale, depth and nature into consideration more so than its predecessor to create a more realistic and entertaining experience for viewers, to embrace the fact that “cinema is an illusion of the real. But more, it is a spectacle of movement. And as such it seems at times to exceed reality itself. To be more than the real” (Neale 1985, p 50).



Fig. 2. Early motion pictures. *Sortie de l'usine à Lyon (1895)*.

As audiences sought realism in film, technology began to adapt accordingly with the advent of colour technologies; "...a new technology cannot be successful unless it fulfils some kind of need. The specific form of this need will be ideologically determined; in the case of cinema the ideological determinant most frequently identified has been realism... theorists appear to agree that realism indeed dictates the formation of the needs which technology satisfies" (Buscombe 1978, pp23-25). Thus, the desire to represent a world with colour to represent the vibrant reality became apparent. Initially, colour films were either painted or tinted by hand when demand for output was quite low, but as the length of films increased over time, so too did the demand for colour reels and hand painting methods became less economically viable. In response to this, Pathé developed a particular stencilling technique, Pathécolor, which was utilized from the 1910s through to the 1930s. Technicolor's two- and three-colour systems followed shortly after from the 1930s onwards in a bid to recreate more

authentic colour palettes onscreen (Neale 1985, pp 109 – 116). However, the use of colour in film was initially restricted to themes of fantasy, e.g. animation and costume/romance dramas and critics of this new technique alleged it to be a distraction which diminished the effect of the action onscreen. The use of colour was ultimately seen as a threat to the authenticity of the narrative, which is a fundamental element of realist film, and as a direct result of this perceived incompatibility the progression was somewhat impeded (Buscombe 1978, pp 23-25).

Colour technologies were used and adapted throughout the first half of the 20th Century to make films more realistic with varying degrees of success and this reconstructed reality in the earliest days of cinema was primarily for escapism from the ordinary, but because of its association with pictures that were more ‘unrealistic’ and fanciful it may have been more difficult to equate colour in cinema with fidelity to real life. This changed somewhat when producers began to use the new advances in colour technology to highlight the femininity of their female stars, whereby the actress’ hair, clothes and makeup had to complement her complexion which, in turn, had to complement the background colours (Buscombe 1978, pp 23-25). In fact, Max Factor developed specialised multi-tonal makeup to enhance the natural beauty of the silver screen stars (Neale 1985, p 153). Yet, despite these digressions, there remains no doubt that the introduction of colour to moving pictures, albeit unsuccessfully at first, was ultimately guided by the pursuit of realism.



Fig. 3. Pathécolor. Passion du Christ (1912)



Fig. 4. Technicolor. The Quiet Man (1952)

In direct contrast to the success of glamourized Hollywood film a new realism began to emerge, one which predicated authenticity and a sense of immediacy. Marcus (1986, p 4) accurately asserts that realism emerges in opposition to something else, as a reaction to certain circumstances and that “[i]n film, realism is set against expressionism, aestheticism, or more generally, against illusionism.” In a time when the more successful films were dependent on their ability to convey artifice as poorly constructed realism, even so-called ‘documentary’ films were carefully engineered in order to appeal to audiences. For example *Nanook of the North: A story of life and love in the actual Arctic* (1922) created by Robert J. Flaherty, a unique and pioneering piece of filmmaking, is interspersed with snippets of pictorial information between scenes in which the participating Inuit community are very much aware of the presence of the cameras and behave in a sufficiently self-conscious manner. In this way, Flaherty recreated the authentic life of Nanook’s family in Hopewell Sound, Northern Ungava to such a degree that it evolves into a more polished reality than the truth itself; “Far from being the faithful depiction of reality it is assumed to be, realism, through the various forms it has taken throughout its history, shows itself to be neither window nor mirror but a set of conventions” (Lapsley & Westlake 2013, p 158).



Fig. 5. The first documentary film. *Nanook of the North* (1922)

At the height of the fascist regime in Italy, film was predominantly used as a means of emphasising the positive aspects of Italian life, to celebrate success and stability, and, in response to this attempt to place a veneer over the harsh life of post-WWI Italy, a movement emerged. This was, in itself, a resistance of sorts which ultimately rejected the self-promotion of the government in favour of depicting the harsh truth of life for the ordinary people of the country, those who would otherwise not have a voice. This authenticity was usually portrayed through the use of natural lighting and location shooting, long takes with continuity of time and restrained editing, realistic subjects, subject matter and characters who speak in the vernacular dialogue, and finally, a sense of ambiguity that combined an open-ended plot with the implicit demand for viewer participation to engage in a social critique (Marcus 1986, pp 21-22). In this new school of film, reality was essentially reconstructed to reflect the lives of the people in that particular period in history who would subsequently be viewing the same films for entertainment. Italian neorealism served as an exploration of the ordinary lives of a

vulnerable population, “film that was free form artifice, without fixed screenplays and that would be inspired by real-life subjects telling a truthful story” (Marcus 1986, p 19). However, given the era in which these films were created and depicted, the truth was particularly difficult to swallow, and the extent of poverty and unemployment of the fascist state in the period leading up to WWII meant the films of the neorealist movement were largely unsuccessful (Haaland 2012, p 24).

One particularly striking example of neorealist film is Vittorio de Sica’s bleak account of one man’s struggle to provide for his poverty-stricken family in *Ladri di Biciclette* (The Bicycle Thief, 1948). The opening credits sets the premise for the entire film, which sees the protagonist, Antonio Ricci, finally given a job as a bill poster following two years of unemployment only to have his previously pawned bicycle stolen on his first day of work, leaving him too poor to buy a replacement but simultaneously ineligible for the post without a mode of transport. The view of the apartment blocks on the outskirts of Rome paint a grim picture of life for the residents and the mix of diegetic and non-diegetic sounds, like the screaming baby, adds an element of chaos and, evidently, realism. The viewer, if disengaged from the difficulties of fascist Italy, cannot now escape the truth of the situation as de Sica demonstrates the endless piles of dowry bedsheets that have been pawned by desperate families in the depths of poverty. The brutality of life is also presented in the form of an unacknowledged paedophile that approaches young Bruno as he searches the market for his father’s bicycle bell, and were it not for its inclusion in the narrative, one might mistake it for a scene of little importance. In this way there is a clear sense of the film being a part of *reality*, not merely a rigid reconstruction as it was very much reflective of real people and real life experiences. There are many occasions when Antonio enters scenes that have already been established giving the impression of a world within the screen, and in one particular instance,

the storm scene in which passers-by seek shelter from a sudden rain shower, the audience observes the characters as they observe the onscreen world and the two realities become almost indistinguishable. The use of the long take and depth of focus is particularly evident in *The Bicycle Thief*, and the chronological narrative coupled with a singular perspective certainly meet the criteria of a neorealist piece. The end of the film presents both the viewer and Antonio with a moral dilemma – is it wrong, now, to steal from another man like him to continue the vicious cycle – and such a question will have real implications, especially for his son who desperately wants to see the return of a strong patriarchal figure.

However, the final outcome is a dispiriting one which does not grant a neat resolution to the unfortunate events but, conversely, leaves the finale open-ended and ambiguous with an almost cyclical feel as father and son solemnly traipse through the crowd. The elements of ambiguity and choice were fundamental in neorealist cinema to ensure the spectators actively engaged with the onscreen action, and it is ultimately doubt which underpinned many of the films as a mean of reflecting the ambiguity of life with *The Bicycle Thief* as “a pessimistic acknowledgement of the ambiguity of reality” (Haaland 2012, p 128). De Sica applied the aforementioned generally accepted traits of neorealism to engage the viewer and recreate the feeling of grave social injustice, and the insignificance of Antonio, a motif for the working class man, is demonstrated as he posts the image of Rita Haworth; here in one frame are two distinct branches of cinema, one for pure escapist entertainment and the other a dark social commentary, both aspiring to portray ‘reality’. This film undoubtedly offers a dreary alternative to the glamour of Hollywood movies, a working class tragedy with a tangible verisimilitude that is evident in the exchange with the police officer who declares the theft as “just a bicycle”, when the audience knows that, for the Ricci’s, the bicycle is a lifeline.



Fig. 6. Gritty realism and moral ambiguity. *The Bicycle Thief* (1948)

André Bazin took his passion for realist cinema a step further in his profound publication *What is Cinema? Volume I*, claiming that a truthful depiction of life onscreen was a *moral obligation* and that it was necessary to depict “an affirmation of the objectivity of the cinema in the same way as all geometry is centred on the properties of a straight line” (Bazin 1967, p 3). Through the art of film, he intended to tell stories that *revealed* the truth instead of manipulating it, and he argues in ‘The Evolution of the Language of Cinema’ that an image should be evaluated with regard to what it reveals *about* reality, rather than what it adds to it – he wants cinema to confront the ugly truths of life. However, this idea in itself seems contradictory, given that an element of subjectivity is inevitable in the act of (re)creation and cinema has the ability “to impose its interpretation of an event on the spectator” (p 26). Bazin argues that cinema is a language in itself and his reference to the ‘plastic arts’ also rings true for film: “No matter how skilful the painter, his work was always in fee to an inescapable

subjectivity. The fact that a human hand intervened cast a shadow of doubt over the image” (pp 12 -16). The role of depth of field is integral to the neorealist movement as a means of communicating with the audience, and Bazin praises Orson Welles’ masterpiece *Citizen Kane* for creating suitably dramatic effects with many scenes completed in one take (p 33). In fact, Bazin wanted to create a reality that was more realistic than the truth and he believed depth of field was the best way to achieve this, whereby the viewer would be brought closer to reality and was compelled to actively engage with and interpret the action onscreen (p 35). Bazin strongly advocated for a deeply engaging experience: “What is important here is for the spectator to have a feeling of being totally present at what is going on... the camera is at last a spectator and nothing else. The drama is once more a spectacle” (pp 91 – 92).

Bazin also endorses the concept of ‘presence’ in cinema (p 96 - 97) whereby the audience is placed in the perspective of the protagonist and the screen becomes a mirror; each viewer brings their own life experience and could potentially interpret the fictitious onscreen narrative in varying ways. Here it can be assumed that by ‘presence’, Bazin recommended the immersion of the viewer in a perspective – one dependent upon unique interpretations of the text. “Alone, hidden in a dark room, we watch through half-open blinds a spectacle that is unaware of our existence and which is part of the universe. There is nothing to prevent us from identifying ourselves in imagination with the moving world before us, which becomes *the* world” (p 102). He aimed to immerse the viewer in the film world, to merge the reality of the audience with that of the film, and it was essential for the reality onscreen to be a part of the reality off-screen with enough ambiguity to create a credible world. For Bazin, the screen space was a centrifugal force (p 105) with the onscreen world *becoming* the new reality for spectators, and neorealist film, *The Bicycle Thief* as a clear example, effectively utilizes mise-en-scène to create this illusion – there are no decorative sets, no famous lead actors, illusions of grandeur

and certainly no romanticizing a life of poverty. For viewers at the time, this would have been merely an extension of reality.

While there has been much divergence relating to the pursuit of realism in the early history of cinema, be that to augment reality via the use of colour, improved lens technology and surrounding canvasses or to unmask it in the vain of neorealism using camera techniques and authentic *mise-en-scène*, there is no doubt that it was the demand for a realistic entertainment experience that inspired the subsequent advancements in the cinematic experience. Bazin argues that “[t]he cinema calms the spectator, the theatre excites him” (Bazin 1967, p 99) and, equating immersive cinematic technology with a developed combination of these two emotional characteristics, cinema of the 21st century and beyond is being granted significant power in the pursuit of the ‘real.’

Chapter 2

Bridging the gap between new cinematic technology and André Bazin's theories of cinematic realism

Case Study: *The Revenant* (2015), dir. Alejandro González Iñárritu

As seen in the previous chapter, the ways of recreating reality onscreen developed with a combination of sound and colour, and new filming and editing techniques that were motivated by developments or limitations of the technology available. Today, with the move from traditional celluloid film to digital there has been a significant resurgence in a more humanist approach to cinema (Rombes 2009, p 8), as observed in de Sica's gritty depiction of fascist Italy in *The Bicycle Thief*. André Bazin, a renowned film theorist, was unique in his vision for the cinematic experience, believing that the spectator should be granted the power to interpret the story as it unfolds. He was an advocate for true continuity, objective reality and deep focus photography for a more immersive, raw and captivating viewing experience. In fact, Bazin attested that a true representation of the truth was the moral *obligation* of filmmakers, and that so-called 'filmed theatre' was ultimately a sin against the spirit of cinema (Bazin 1967, p 114). However, with the advent of the digital age, there has been an increasing push to engage viewers by means of computerized graphics, special effects and other post-production techniques in order to both recreate and enhance reality for entertainment. However, digital technology has also eliminated a long standing problem with traditional filmmaking, and that is the limitation of celluloid which demands a roll of film to be changed at regular intervals, thus breaking any continuity. The introduction of digital film has meant "the deep storage, long-take possibilities of digital media cultivate a more active, sustained gaze (Rombes p 30)

for which Bazin strongly advocated, as well as the development of more advanced lens and camera technology to capture reality in greater detail toward hyperreality.

Particularly in big-budget, Hollywood blockbusters, Bazin's theories can be observed in today's filmmaking, though now used concurrently with other filming and post production techniques that the technology allows, such as CGI. A key example of this is the work of famed Mexican director Alejandro González Iñárritu, and his epic film of loss, survival and the strength of the human condition, *The Revenant* (2015). This film is a clear example of realist cinema in which Bazin's influences are clearly observed and adapted to modern filmmaking as a means of immersing the viewer in the visceral onscreen world which is, in turn, part of the audience's 'reality.' While the 21st century audience is growing accustomed to the excess of technology in digital storytelling and a move towards virtual reality in particular, this director foregoes excessive digital manipulation, and instead utilizes the natural environment as central to the *mise-en-scène*, and employs both traditional and modern filming techniques to captivate the viewer. Bazin advocated strongly for the audience being brought closer to the truth above all else, and, in many ways, *The Revenant* echoes these ideas: Iñárritu employs the natural environment instead of a formalist set to exhibit the brutality of life in the wild, deep focus photography, the long-shot, diegetic sound and realistic sound effects, actors who are fully immersed in their roles as well as the inclusion of some Native American tribesmen. In a similar way to *The Bicycle Thief*, *The Revenant* is constructed around a simple plot to provide the audience with a more profound engagement with the narrative, thereby minimizing the screen's role as mediator between the spectator and the onscreen world, and most significantly, the overarching 'truths' that are demonstrated by Iñárritu and De Sica are that the ambiguity of life and the flawed nature of humanity have the potential to be exposed

and explored onscreen on the merit of their own inherent beauty. This chapter will compare Iñárritu's 'naturalist' approach to filmmaking with the theories proposed by Bazin in his seminal work, *What is Cinema?* (1967).

Much like *The Bicycle Thief*, *The Revenant* documents the journey of a father and son in the search for redemption, to reclaim what was unjustly taken. However, while in the poverty of post-war Rome the bicycle is a saving grace for the Ricci family, on the American frontier it is Hawk, Glass' only son, who is the lifeline to his father; Antonio desperately searches for the bicycle, essential for the family's continued survival, but Hugh Glass cannot search for what is lost when his son is murdered, so, instead, he seeks his revenge. Iñárritu makes exceptional use of deep focus cinematography to engage the viewer in the events that unfold in both the foreground and background of the scene. While this is executed with great subtlety, it becomes evident throughout the film that it is the innovative use of long shots, deep focus, and agile camera techniques which are essential to create this immersive viewing experience. In the early fight scene between Glass and his comrades and the Native Americans, the director implements deep focus photography to allow the viewer to focus on several points in the frame and there is action on all fronts. According to Iñárritu, recreating this scene required the cast and 200 extras to rehearse for a month (Segal, 2015), which reiterates Bazin's theory of manipulating the action only insofar as the onscreen action becomes more real than the truth (Bazin p 35) and, as Mullarkey (2012, p 45) argues, "[d]epth brings and uncertainty or openness to the image that allows for numerous perspectives... In neo-realist cinema especially... numerous perspectives are possible." The result is an intense scene in which the viewer has a choice of which aspect of the action to follow. Similarly, many of the campfire scenes are also shot in deep focus, an example being when some of the frontiersmen gather around the fire while other activity continues in the background of the frame, reminiscent of Orson Welle's *Citizen Kane* (1941). In instances like this, there is a real sense of involvement for the viewer

as the characters simply *be* in their onscreen world, giving the viewer the opportunity to connect with this reality. It is the element of the ordinary in the midst of the troubling story and, at times, overwhelming landscape, that anchors the spectator to the realism of the piece. This technique also adds to the sense of visceral reality, as seen when Glass watches helplessly as the lifeless body of his son is dragged away by Fitzgerald while he, too injured to speak or move, communicates his inner turmoil through pained facial expressions.

In a similar way, the avalanche reminds the spectator of the devastating power of nature which simultaneously reflects reality on both sides of the screen. This is an uninterrupted, deep focus shot which showcases the cascading torrent of snow in the background as well as a close-up of Glass' reaction for a visually arresting scene; "The cinema being of its essence a dramaturgy of Nature, there can be no cinema without the setting up of an open space in place of the universe rather than as part of it. The screen cannot give us the illusion of this feeling of space without calling on certain natural guarantees" (Bazin p 110-111). Bazin believed that realism of space was fundamental to the depiction of the *truth* onscreen (Bazin p 112), and while this avalanche may have been constructed and carefully planned, by recreating this natural phenomenon within the natural landscape, Iñárritu ultimately immerses the viewer in the narrative and strengthens the connection to the characters therein. This also conforms to Bazin's notion of denying any frontiers to action; he argues that the screen "is a mask which allows only a part of the action to be seen... when a character moves off-screen, we accept the fact that he is out of sight, but he continues to exist in his own capacity at some other place in the décor which is hidden to us (Bazin p 105). This constructed onscreen reality is inherently more real than what the actual reality may have been.

Bazin's realist theory also demands the use of wide shots and 'true continuity' using the camera to create an objective reality and to achieve "the real unity of time and space" (Bazin p 91). *Īñárritu* demonstrates both in this film through the exceptional cinematography. The audience is immersed in the sweeping landscape of American frontier from the outset and the wide angled shots seem to defy even the limits of the limited cinema screen. The camera crew used wide lenses, "from a 12mm to a 21mm, including the equivalent field of view in 65mm. Movement is exaggerated in a wide lens so camera moves were slow, graceful, and exact" (Sakamoto, 2015) with the aim of creating a realistic and immersive viewing experience, and the film was shot entirely in chronological order using only natural light to achieve this continuity. "We're used to seeing a lot of close-ups and extreme close-ups, but in reality the view a person has is this wide POV [point of view]. The scope of the scene and the land it encompassed defines the 240:1 aspect that *The Revenant* utilized" (Sakamoto 2015). As well as many of the landscape scenes, another key example of the implementation of this wide-shot occurs when Fitzgerald and Bridger investigate the destruction of the Native campsite, where the audience is given such a large field of view that the scope of the frame almost surrounds the viewer, a trope reminiscent of Robert Barker's aforementioned *Panorama*, and ideally suited to an IMAX screen. The extreme wide angle lens gives the spectator the illusion of a 360 degree effect without actually granting the power to move independently within the scene, and in this instance *Īñárritu* achieves a sense of immersion in the onscreen world using only a camera and the natural environment.



Fig. 7. In touch with nature. *The Revenant* (2015)

Similarly, the minimal use of cuts lies at the core of *The Revenant* and strengthens its realism. Every scene of the film was choreographed and rehearsed in advance of filming to allow for these longer shots and to aid the sense of continuity (Sakamoto, 2015), some particular examples being the first fight between the fur trappers and the Native Americans, as well as the final fight scene between Glass and Fitzgerald. This uninterrupted action builds tension early in the film as the camera weaves around the characters and trees and, furthermore, the final scene weighs in at just over two and a half minutes without cuts. In reference to Orson Welle's *The Magnificent Ambersons*, Bazin notes the importance of the long take over editing; "... his refusal to break up the action, to analyse the dramatic field in time, is a positive action the results of which are far superior to anything that could be achieved by the classical 'cut'" (Bazin p 34). Even when considering some less action-packed sequences, like the meeting in Captain Henry's house, the minimal use of cuts allows the viewer to gauge the emotion of the scene, to discern the characters' reactions, thoughts and motivations, a point which demonstrates Bazin's idea of democratic cinema: "equalisation... is central to Bazin's realism, a democratic realism... Bazin wants to end the observer status of the spectator and replace it with "participating perception"" (Mullarkey p 44). The viewer is given a choice as to how they

should decrypt the minimal narrative and silences. Coupled with this realist technique, Iñárritu implements an authentic perspective in which the viewer experiences the journey from the point-of view of the main characters via immersive camera angles, reinforcing the importance of ‘presence.’ Iñárritu employs some unconventional shots as a means of immersing the spectator in the cinematic experience – Bridger’s view down the barrel of the gun as he questions Fitzgerald’s honesty, the mirrored position of the viewer to that of Glass as he angles himself to the earth beside the body of his son. In two separate scenes the viewer even experiences the horse’s perspective, his eye visible at close range on the right side of the frame and then the left for a subtle sense of balance.

In a similar vein, *The Revenant* displays a particular preference for a ‘grounded perspective’ whereby the viewer experiences the action from Glass’ point of view with fidelity to the true human perspective – the audience is under the illusion of running and hiding alongside the protagonist, not always seeing whole figures but legs, torsos and trees quite low to the ground. Likewise, the frame is often partially blocked either by other characters or objects which further reflects reality. The bear scene in particular is jarring and erratic, and allows the viewer to experience some of Glass’ fear; while the bear itself was created using special effects, it is one of the most realistic uses of CGI to portray an animal onscreen and, short of using a real bear for the vicious attack scene, it supports the brutal realism of the event - Iñárritu succeeds in immersing the viewer in the experience of the violence of the attack. The sense of visceral reality is also heightened by the use of camera shake; the viewer, much like the characters in the scene, are involved in the action and often unsteady on their feet in times of danger; “ “[t]he shaky camera has transformed from a technique to a way of seeing the world” (Rombes 2009, p 105). Throughout the film there is a sense of constant movement *through* the landscape and the onscreen reality. The camera is often in motion *before* the

characters enter the frame or the action begins which echoes Bazin's theory of creating a vast, believable world within the screen in order to allow viewers to directly connect the two truths; "Essential cinema, seen for once in its pure state, on the contrary, is to be found in straightforward photographic respect for the unity of space" (Bazin 1967, p 46). This technique can be observed from the opening scene as the viewer visually moves upstream, the hunting pack following closely behind. Similarly, another scene sees the camera guiding the viewer's perspective across the hilltop, moving forward, as the fur-trappers reach the summit from the other side seconds after, allowing the cinemagoer to feel like they too are in motion and experiencing the journey. In addition, it is the camera movement complementing the real-life action which eliminates any potential need for montage editing which would disrupt the action, preserving the "state of unreality demanded by the spectacle" (Bazin 1967, p 45) Furthermore, *Iñárritu* approaches the film in a way that exposes the grimness of the human experience. As Brinton (1947, p.361) argues, "[t]he relationship of human vision to the camera is a variable one, determined not by the eye itself, but by the human mind behind its retina," and the depth of this experience can be determined only by the viewer's own choice of engagement with the narrative.



Fig. 8. Working from the ground up. *The Revenant* (2015)

Iñárritu's use of natural light for the duration of filming *The Revenant* demonstrates his particular commitment to the realism of the piece. Not only is the film set in the wilderness of the American plains, but the scenes are ultimately dictated by the weather and natural elements, and he relies heavily on more traditional cinematic approaches. Using only one camera to shoot, either handheld, Steadicam or using a crane (Sakamoto, 2015), Iñárritu erodes the barrier between the audience and the film content. Much like Bazin, he favours a less affected approach to the mise-en-scène in a bid to remain faithful to the truth, and, in this case, the terrifying wilderness which lies at the heart of the film. The spectator experiences the story with the characters in these natural surroundings, and without the artifice of a studio setting and a controlled environment, the viewer has nowhere to hide – they must *experience* the hardship, *feel* the emotion and confront reality; “The cinema is capable, in the right hands, of playing an increasingly important role in this confrontation” (Gray 1967, p 7). In fact, the director takes his pursuit for realism to new heights as he demonstrates the grotesque nature of survival on the frontier; the audience witnesses the protagonist as he captures and eats a fish

straight out of the icy freshwater, consumes raw bison liver and climbs inside the carcass of his horse for warmth and shelter. These scenes all play out with Iñárritu's signature minimal cuts for an almost documentary-like experience and, while it could be considered quite an extremist form of cinema, it is undoubtedly inspired by more classic techniques, such as those used in Italian neo-realist cinema. The viewer is given an insight into the harsh reality of the wilderness of 1820s frontier country; "... cinema reveals reality... the continuity of space and time... reveals a reality of cruelty and ugliness in which it is also a participant." (p.49) In this way, a distinct parallel can be drawn here between Iñárritu's epic tale of survival and revenge in the harsh North American landscape with a tragedy of a different kind in the form of the gritty, urban realism of a film such as *The Bicycle Thief*. By immersing the film process itself in the world in which it takes place, be it the poverty of post-war Rome or the untamed wilderness, the film transcends that which was previously not possible in the realm of cinematic realism. Iñárritu defends his controversial approach in conversation with David Segal (2015): "... there is no gratuitous violence. These guys were eating animals, wearing animals; they were threatened by accidents, diseases, tribes, wars. This is the real world. This isn't pasteurized." Thus, the spectator is brought closer to reality as Bazin would have demanded (Bazin p 35).



Fig. 9. Connecting with reality. *The Revenant* (2015)

Indeed, while Iñárritu favours such realist techniques, he does not forego the use of montage entirely, and, due to the sparse amount of dialogue in the film, the use of montage here serves a more practical purpose as “montage by its very nature rules out ambiguity of expression,” (Bazin, p. 35) so it is used mainly during the moments of conversation between characters. A similar mix of realism and montage editing can be seen in Orson Welles’ powerful *Citizen Kane* (1941) which Bazin refers to with much admiration (), as well as *La Règle du Jeu* (1939) by Jean Renoir which was made in dedication to Bazin’s theories. Iñárritu’s use of montage is much less obvious on a first viewing of the piece, but demonstrates his more unique approach to realism; the striking image of the carved spiral on the water can cuts to a shot of the rippling lake, and, similarly, Glass’ breath on the camera lens fades to a cloud sequence which, in turn, cuts to an image of smoke. These symbolic shots do not strictly adhere to Bazin’s realist ideology, rather this demonstrates a new era of realism, one in which

there is a combination of techniques used: the added dream-like quality gives the audience a glimpse into the subconscious of the protagonist, immersing them in the character's state of mind, for example the dreams of his Native American wife. While the dream sequences themselves are surreal in form, they allow the viewer to engage with Glass on a deeper level, as his dreams and innermost fears are exposed. Furthermore, the choice to show Glass' breath on the camera lens, while in one way highlights the artifice of the filmmaking process, gives the audience the impression of their observing a viscerally real scene, one in which they have been unknowingly inserted. Bazin argues that the director is of equal importance to the novelist (Bazin p 39), and this is a creative way for Iñárritu to define his own realist storytelling technique for the digital era, to bridge the gap between the elements of documentary, gritty realism and aesthetically pleasing cinematography.

Iñárritu's dream sequences, which Glass experiences numerous times throughout the film, both awake and asleep, are reminiscent of the art of Salvador Dali – the church bell rings but no sound is heard except for slow, squelching footfall, Glass' Pawnee son stands among the ruins of a Christian church, (a jarring paradox) all in slow motion. In fact, this sequence could be considered a glimpse into his subconscious. In one sense DiCaprio's character mourns the loss of his only son, his reason for living, and alternatively, it could represent a view of Glass' own internal struggle, being at once acutely attuned to and respectful of the Native American people, and also an active participant in their marginalisation. The bell represents the death knell for the undisturbed traditions of the Natives, the young Pawnee visibly trapped within the bounds of both an invading and indigenous culture which is representative of his own parentage, only to take the form of the natural landscape that was forcibly taken from his people. Bazin remarks that cinema/photography “rank(s) high in the order of surrealist creativity because it produces an image that is a reality of nature, namely, an hallucination that

is also a fact” (p16), and while these dream segments are a contrast to the rest of the film, whereby “the basis of cinematographic realism is the everyday world” (Tröhler, 2014) it distinguishes a more humanist approach to film using digital technology. Iñárritu also uses sound to great effect, including a mixture of diegetic and non-diegetic sound, similar to De Sica. The distinctive ‘whirring’ sound of the dream sequences makes the audience aware that they are about to enter the subconscious of the protagonist. An orchestral soundtrack serves as a backdrop to the narrative to create an atmosphere and to enhance the emotional intensity, but the use of interspersed diegetic sound throughout be that conversations among the characters and simultaneous dialogue, or the sounds of the wilderness, re-establish the realism of the film as a faithful depiction of the authentic natural world on both sides of the screen.

While *The Revenant* deviates slightly from the more strict interpretations of realist cinema, there is undoubtedly a strong link between the theorized realism of Bazin and Iñárritu’s directorial style, employing deep focus cinematography, minimal cuts, and extended shots through a wide angled lens. The narrative is raw, honest and at times makes for difficult viewing, yet this has been achieved with the minimal use of special effects and in this way Iñárritu redefines realism for the digital era by combining a traditional approach to filming with new lens and cinematic technology. In the final moments of the film, Hugh Glass looks directly into the lens, making a direct and unnerving connection with the viewer to finally eliminate the barrier between the spectator and the onscreen action, reminding the viewer of the link between the two ‘realities’. As Phillips (2012) appropriately states, “[c]inema can teach humility. The incongruous revelation of cinema is that as an advanced industrial art it furnishes proof of both human mastery and powerlessness.” Ultimately, Iñárritu successfully creates an authentic, immersive and unforgettable piece of film by combining the gritty realism promoted by

Bazinian theory with the new developments in cinematic technology in order to present the viewer with the world as it was, as it is, in all its terrifying beauty.

Chapter 3

Investigating the mode of Virtual Reality through the lens of classical realism

As discussed in Chapter Two, Mexican auteur Alejandro González Iñárritu has utilized new lens and camera technology but has taken a classic realist approach to filmmaking, particularly in his seminal work, *The Revenant*. However, at the same time a new movement in cinema has emerged, a new cinematic form which wholly embraces technology – the emergence of 360 video and virtual reality. The results of such technological advancements could potentially be seen as being in conflict with the basic principles of cinema, but through further investigation it is clear that the advent of the new virtual reality can be analyzed from a Bazinian theoretical perspective.

Developed on the back of successful Kickstarter campaigns which have since seen investments from industry powerhouses such as Mark Zuckerberg of Facebook (Oculus Rift), virtual reality technology (VR) was initially aimed at the gaming community for a totally immersive gaming experience, but the nature of the technology only served to hinder gameplay as the player is unable to accurately see the controller. For film, on the other hand, placing the viewer in a space designated for a short but meaningful interaction has the potential to create an entirely different cinematic experience (Aron 2015). 360 video involves the arrangement of a number of cameras in a sphere and stitching the resulting videos together to create an immersive, all-encompassing film experience. Alternatively, a 3D world can be rendered in a high quality format on computer and then it would be possible to ‘film’ inside them, replacing

real photographic images with convincing CGI. Correspondingly, for the exhibition of images, the processor and high definition screen of a mobile phone is combined with a VR headset containing two slightly convex lenses to give the illusion of depth. The accelerometer of the phone matches the visual track to the viewer's head movements to simulate the 360 panorama, and given the widespread availability of smartphones, adapting to the technology has become largely simplified (Fowler 2015). On the other hand, despite the normalization of such advanced technology, some problems have clearly been identified, particularly with cinematic VR, namely the expense (the cost of more sophisticated VR headsets range from \$500-800), the limited viewing time as two hours would be a significantly long time to wear such bulky head gear, the technical challenge of creating a sufficiently high quality product to match, and the need to develop ways to hold the attention of the audience given the lack of a traditional plot.

While attempts have been made before to create a 3D cinematic experience following the immense popularity of 'spectacle' cinema, VR is altogether different. The rise in popularity of digital cinema can be attributed to the new wave of American cinema which began in the mid-1970s with Steven Spielberg's *Jaws* (1975). With this new cinema of spectacle also came a new excess in terms of image scale, size and use of colour which aimed to shock and astonish audiences much like early cinema (Isaacs 2014, p 138), and there is a distinct correlation between the increasing popularity of the blockbuster movie and digital enhancement and special effects at the expense of a quality narrative; "[s]pectacle resounds in the display of the image of excess... bereft of the aura of a once sacred aesthetic and cultural identity" (Isaacs, p 112). During this phase there was a move towards post-production effects rather than location shoots with classical camera techniques, particularly in adventure and action films like the *Star Wars* series in which director George Lucas employed motion-controlled cinematography to

facilitate a new method of production as well as exhibition of the image to propel cinema into the digital age (Isaacs 2014, p 221; Kiwitt 2012, p 15). In a similar move, James Cameron re-released *Titanic* (1999) in 2012 as a 3D cinematic experience, and while the narrative and aesthetic structure remained generally unchanged, the addition of the updated cinematic technology served to change the overall experience of the film resulting in a changed relationship between screen and spectator (Isaacs, p 224), with critics praising the “subtle... natural and immersive experience” of the revamped version of the classic (Kendrick 2014).

In a similar way, the development of the IMAX theatre has also pushed the boundaries of cinema, whereby the traditional celluloid film is still used but its quality significantly improved in a technique that merges traditional filmmaking with improved technology to providing high quality images. This, along with HFR (high frame-rate) cinema, as seen in Peter Jackson’s *The Hobbit* (2012), aim for a purity of image capture and processing to create more believable special effects but, particularly with *The Hobbit*, the resulting effect was more jarring than credible. Herein lie some of the difficulties of digital cinema, and it is a point of contention for many auteurs, such as James Cameron and Christopher Nolan, who diverge somewhat on the subject. Nolan argues that digitally acquired images are inherently inferior to those achieved with traditional celluloid or IMAX, and Cameron equates digital film to reality and immersion (p 234 – 244). This undoubtedly raises questions about the identity of ‘authentic’ cinema; it is possible to view this addition of digital technology as a move towards film in its most pure form, being part of the standard evolution of the medium in line with technological developments, or the emergence of an entirely new art form. However, while 3D cinema has historically been used to normalize the perception of the fantastical onscreen, i.e. *Avatar* (2009), the central idea was immersion in a ‘real’ and engaging experience. James Cameron, himself an outspoken advocate for the virtues of 3D cinema, argued that “the

immersive 3D experience should be a hermetic, interior phenomenon. It should naturalize rather than hyperbolize perception, cognition and affect; it should realize the mythic potential of cinema to manifest new worlds, and new perceptual and psychological experiences” (Isaacs, p 246), which is a difficult task when portraying a dramatically alien species on a far off planet. Yet, Cameron does achieve this to great effect by inserting the spectator within layers of narrative whereby the onscreen characters are themselves inserted in a virtual world of sorts, and with the combined use of stereoscopic cameras and 3D glasses the audience was transported to an alternate ‘reality’ on Pandora.

Isaacs also goes on to argue that 3D is not cinema because the audience is “projected into a technologically created space, reflecting on a new simulcral (avatar) identity, as we recall the ordinariness, and potential obsolescence, of 2D perception and affect” (p 226), but more sophisticated virtual reality has bypassed this issue by virtue of its design – the VR gear, such as the original Oculus Rift, HTC Vive and Samsung Gear VR, has been devised in such a way that when the headset is strapped to the viewer their line of vision is limited to that of the internal viewfinder through the two lenses, each with a different image to give the illusion of depth, blocking out the external world. This more solitary viewing experience is reminiscent of the ‘magic box’ that offered an immersive cinematic experience for viewers in the late 19th century, but VR goes beyond this, using 360 degree immersive images to “[approach] a method of representation that achieves a one-to-one correlation with what is being presented” (Rombes 2009, p 32). However, seeking more advanced cinematic experiences has not been a recent innovation: even in 1894 when the first Kinetoscope parlour was launched, a multi-viewer film projector was already being developed by young inventor C. Francis Jenkins, and with the construction of the first purpose-built cinemas from 1896 onwards, kinetoscopes were already falling out of fashion (Kiwitt 2012, pp12 – 13). The rate of technological advancements in

cinematic technology has not abated, and now, with recent developments in 3D technology, audiences are not merely viewing the onscreen action from an enhanced perspective but, true to Bazin's theory of classic realism (Bazin 1967), are under the illusion of being *inserted in* the virtual world. Yet, this virtual reality is more reminiscent of the solitary viewing experience of the pre-cinema era than the shared experiential spectacle of cinema's golden age.



Fig. 10. Immersive aspirations. *Phenakistiscope*.

<https://groundupfilmguide.wordpress.com/firstmpmachines/>



Fig. 11. The new age of virtual reality. <http://vrsource.com/oculus-rift-release-date-price-games-features-46/>

However, given the vast changes that have taken place within the film industry in line with new innovations in filmmaking, it would not be unwarranted to question the impact VR has had on the storytelling process as well as its depiction of ‘reality’ in relation to classical realism. With regard to the former, the effect on the creation and reception of the film narrative has been quite clear with the added feature of *choice* for the viewer; while traditional cinema is “inherently oppressive to the viewer” due to the manipulative power of the camera (Pogue 2016), VR allows for a 360 view of the cinematic space and an option of where to look within the virtual world. However, this can lead to possible divergences from the intended narrative, and if the viewer chooses not to engage with the relevant action they may become disengaged from the story. Where once the director played an integral role in the communication process between screen and spectator and could exercise absolute control over the film, the emergence of VR film has transformed this role to one in which a good portion of this power is relinquished to the audience. Directors can no longer use the frame to focus the viewer’s attention on certain details but instead offer only a guiding hand. Moreover, considering the evolution of the storytelling process in line with advancements in VR technology, it can also be argued that this new era of digital cinema has been the catalyst for positive creative output; Andrew (2010, p 52) asserts that “the advent of digital [film] has only increased the number of directors worth attending to, and working on a host of new subjects through the different filters of their style.”^{vi}

Thus far, VR has been used in many capacities, one of the most striking being the pursuit of immersive journalism as pioneered by Nonny de la Peña, the so-called ‘godmother of virtual reality.’ She has combined her knowledge and work experience in the field of journalism with an acute insight into the power of emerging technologies to bring the viewer - an insightful, informative and, for the most part, objective view of world events. She puts viewers in the perspective of the oft-ignored ordinary people in distant countries and scenarios

and forces viewers to confront their apathy to global events (Cite: ‘The new grammar of virtual reality’): *Project Syria* recreates a particular scene in Aleppo, *Hunger in Los Angeles* depicts the prevalence of food poverty and *Use of Force* recreates the fatal beating of Anastacio Hernandez Rojas by US border control. (Cite) Each of these projects utilizes real audiovisual footage to immerse the viewer in the objective truth of the events, to transport the user to a different ‘reality’ (Cite), and Steele (2014) asserts that *Use of Force* “transported participants to an emotional place they might not have [otherwise] visited.” But, beyond the technological advancements that have paved the way for more participatory journalism, VR has the capability to immerse the viewer in an equally realistic piece of fiction. While it can be said that “[t]raditionally, natural perception is what is taken to be real... whereas what is presented to us onscreen is taken to be a degradation of reality, a copy, representation or reproduction” (Rushton 2011), new advancements in VR have ultimately subverted this notion as many directors apply this new technology to produce a new, convincing kind of filmic reality.

One such example is Chris Milk, who founded the VR technology and production company Vrse and has harnessed the power of immersive technology to craft a new means of digital storytelling. Milk himself makes it clear that even with the new technology available, it is not just the story which lies at the core of his filmmaking process, but the amplification of that story through the increased sense of empathy that is generated by a more personalized perspective; “Behind the bells and whistles, we’re creating *stories*... [and] the goal from the outset was to create a sharper and more intimate form of empathy” (Milk quoted in Grandon 2016). *The Evolution of Verse* (2015) is one of the more striking examples of VR filmmaking created by Milk that is easily accessible to anyone with a smartphone and Google Cardboard. This is a short, but visually arresting piece in which the spectator is inserted in the middle of a lake in the virtual world to look around, admire the dragonflies, fading sunset and ambient,

orchestral soundtrack, only to be disturbed by the sound of an oncoming steam engine. At this stage it is clear that the audio cue is the sign of the oncoming train, but it is the responsibility of the participant to find the source of the noise. The train speeds closer and closer, showing no signs of stopping until it gives the illusion of driving *into* the viewer before transforming into a spectacular display of birds in murmuration and an explosion of delicate ribbon. Finally, the viewer is transported to the inside of a uterus to come face-to-face with a smiling, unborn foetus which engages directly with the viewer in a bid to break the fourth wall; although it is possible to look around the virtual surroundings at all times as normal, Milk gently guides the viewer's focus and serves to transport them to a reality that is ordinarily scientifically impossible, perhaps also a symbol of the renaissance of cinema in light of the more advanced immersive technology. The appearance of the train, on the other hand, is undoubtedly an homage to the first known recorded film, *Arrival of a Train at La Ciotat* (1895) by the Lumière Brothers, which, at the time, would have elicited similar responses from audiences to those experienced by first-time VR users today: astonishment and mild anxiety at the convincing capture of motion.

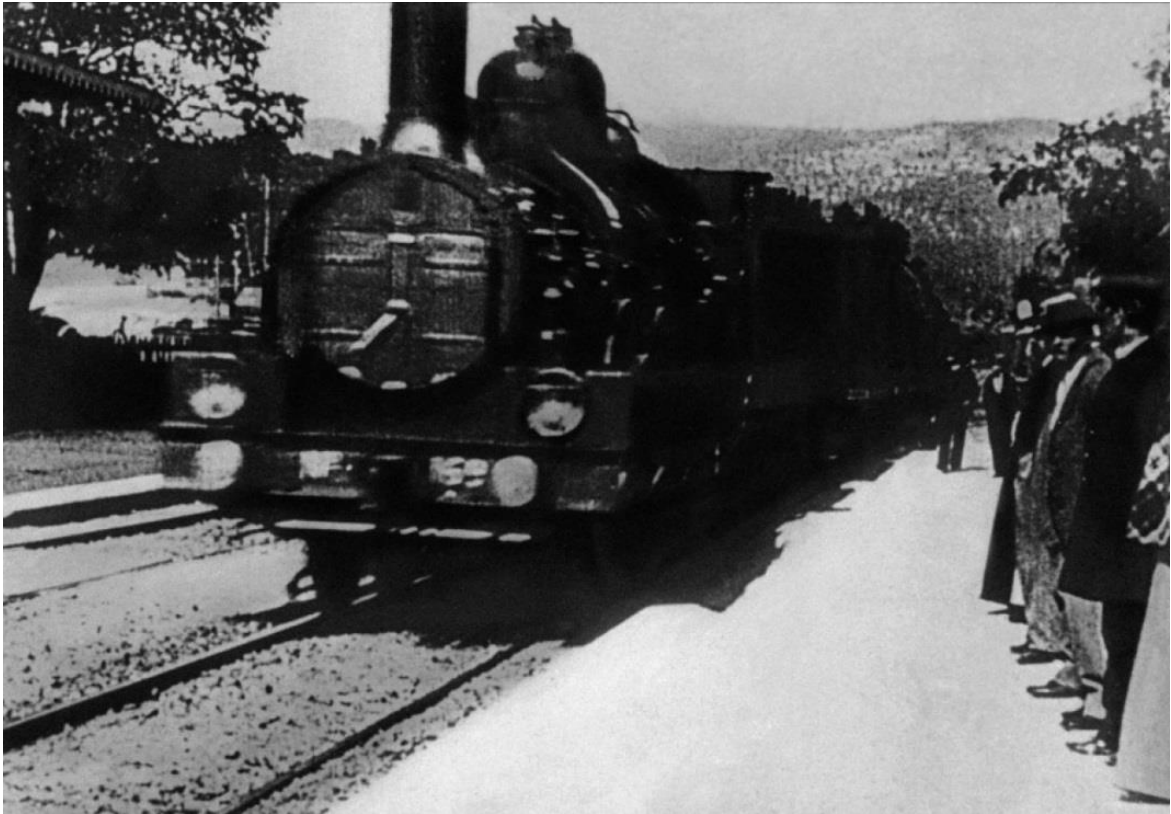


Fig. 12. Locomotion. *Arrival of a train at Ciotat (1895)*



Fig. 13. 360 degree Locomotion. *Evolution of Verse (2015)*

In terms of cinematic realism, there is an obvious link between classical realist theory from a Bazinian perspective and the immersive qualities of virtual reality. Rushton (2011, p 176) argues that “cinema should not distort the world by imposing stories upon it, but rather should use its capacities to put us directly in touch with the real: cinema’s destiny is to provide an aesthetic of sensibility by means of which one can touch the world,” a statement with which Bazin himself would wholeheartedly agree (Cite page in Bazin). While VR cinema heightens the illusion of reality, it simultaneously brings the participant closer to the truth by recreating authentic scenes with uninterrupted narrative and no traditional ‘cuts.’ The earliest films were usually shot entirely in one take by default, so this method sees a return to a more ‘pure’ form of cinema; “While it is true that spectators still have little or no control over the content of a particular film (yet, at least), their control over the temporal unfolding of the film suggests that film’s origination in the photographic image is being revisited in the digital era” (Rombes 2009, p 36). In this instance, the ‘yet’ to which Rombes refers is now, in fact, a very accessible mode of entertainment, the spectators can assert limited control over the occurrence of temporal events, and the use of one seamless image to recreate reality is a return to early cinema, much like the VR headset as a more technologically advanced version of the ‘magic box.’ In fact, given the absence of traditional editing formats, VR offers a depiction of more natural time processes which are only broken by the blink of the participant, which consequently strengthens the illusion of absolute reality (Rombes 2009, p 70).

Furthermore, the ability to capture reality on high definition cameras and binaural microphones has led to a resurgence in the depiction of the raw human experience, as seen in Lynette Wallworth’s provocative *Collisions* (2016), which combines 360 degree camera footage with some CGI to tell the story of injustice in the Australian outback when an indigenous nomad bears witness to a morally unsound nuclear test. The story is told from the

nomad, Nyarri's, perspective to illuminate the lack of understanding around the testing of weapons on aboriginal land, and the introduction to his family, dogs and humble home as 'normal' virtual life surrounds the participant - and brings a distinctive sense of human connection to the piece that would not have been possible with traditional flat screen cinema. In this way, the screen no longer mediates between the viewer and the onscreen action, but is instead a participant in the narrative of the film, watching the story unfold side-by-side with the other virtual characters. The mise-en-scène is authentic, unaffected and demonstrates the true way of life of this nomadic family; "haunted by the spectre of perfection, there is a tendency in digital media – and cinema especially – to reassert *imperfection*, flaws, an aura of human mistakes to counterbalance the perfection that pervades the digital" (Rombes 2009, p 2). Wallworth forfeits a formal set and instead utilizes the natural light of the barren desert, the central characters are dressed in their usual 'off screen' attire, and there is a general sense throughout the film that the participant is merely a part of a normal day in the life of an indigenous family. However, despite the fact that is the banal, perhaps unsavoury aspects of the characters' lives that are portrayed, the unaltered illustration of human foibles that goes hand-in-hand with VR is also a powerful, and now more technologically sound, tool for empathy to bring the art of cinema closer to its most authentic form according to Bazin's theories of realist cinema.



Fig. 14. New Frontiers in filmmaking. *Collisions* (2016).

Bazin asserted that “[t]he essence of film from the very start... has been the realism of the image. One could say this realism is implied by the automatic genesis of the cinematographic image, and that it aims at giving this image the greatest number of characteristics in common with natural perception” (Bazin, 1997 quoted in Rushton 2011), so it would be safe to assume that despite the developed cinematic technology, Bazin’s theories of classical realism stand firm, considering his own admission that “cinema must adapt to conditions around it, sacrificing its putative self-identity (its ontology) as it matures into the shape it takes on in history (its adaptations). Along the way it acquires affiliations and vocations, just as people do” (André Bazin quoted in Andrew 2010). Bazin regarded film as a flexible medium, provided its narrative structure adhered to the tropes of classical realism that is, and VR film, in its current form, still adheres to his basic principles and aesthetic model, even in a more modern capacity. Bazin’s passion for the pursuit of the truth is echoed in VR by virtue of the creation of a realistic alternate reality as well as the fact that, rendered animation

aside, the images exhibited in the virtual reality are largely composed of authentic imagery that reflects real life, real settings and people, thus *inserting* the viewer in an authentic depiction of the truth. The affirmation of objectivity is also explicitly linked to this pursuit of the truth, for with the depiction of authentic life comes the coordinating presentation of objective reality, or as close to it as the current technology will allow. The technique of deep focus photography, while revelatory in the early days of cinema, has now reached its zenith with the uninhibited power of high definition cameras that can so easily capture 360 degrees of cinematic action with relative fidelity to human vision. Bazin also argues that the image should be evaluated in terms of what it reveals about reality, not what it adds to it, and virtual reality cinema has the technological capability to achieve this so long as its creator also seeks the same truth (Bazin 1967, pp 3 – 7). But conversely, the ability to manipulate a person’s reality imbues the director with great power in the digital age. Ultimately, much like traditional cinema, the depiction of reality is as ambiguous as life itself, and as long as an image involves some human intervention, it remains to be seen whether virtual reality cinema can escape what Bazin himself (1967, p 12) described as “inescapable subjectivity.”

Conclusion

Since the first instances of recorded film, audiences have been astounded and often mystified by the seemingly impossible feats achieved with just a camera and projector. The driving force behind the move from still images to moving pictures was largely based around the desire to somehow capture and preserve temporal reality, to immortalize the present, and developments in lens technology made this possible by the late 19th century. As film began to thrive as a medium, the cinematic space soon became well established, evolving from the more solitary ‘magic’ light boxes, such as the Phantasmagoria, to the shared viewing experience enjoyed by spectators in newly developed cinema theatres. Equipment and technology became more accessible, resulting in a significant increase in the number of films being produced, and filmmakers began to develop their own distinct style in accordance with how they wished to communicate with audiences. However, with the expanding definitions of cinema, one critic in particular was keen to preserve what he deemed as the only ‘true’ cinema: André Bazin was the foremost thinker in film theory and he strongly defended cinematic realism and the depiction of the absolute truth onscreen, something he deemed to be a moral obligation on the part of filmmakers.

Recreating reality has always been at the heart of cinema, be that truthful or enhanced, and Bazin argued for a cinematic tradition that *revealed* the authentic truth rather than constructed it. His core ideas can still be observed in contemporary cinema, with deep focus cinematography, the long take, location shoots, realistic subject matter and a sense of inherent ambiguity all being essential components. For him, Italian neorealist cinema of the post-WWII period epitomized all these elements to create a viewing experience which unflinchingly focused on humanity, the human condition and the often harsh realities of life. However, as cinematic technology began to develop and the industry became a success, the

definition of cinematic realism soon evolved as the ‘spectacle’ increased in popularity and showed more lucrative potential – there was, evidently, more money in grandeur than moral ambiguity. As a new medium, cinema has been in a state of evolution for over a century, and both Alejandro González Iñárritu and Chris Milk have provided pioneering examples of the ways in which traditional approaches to filmmaking can be combined with new cinematic technologies.

While fast-changing technology continues to redefine the very notion of representing reality, the viewer now has the choice of the type of cinema with which they want to engage: it can now be a participatory activity in the traditional ‘flat’ form, or a more intense, individual experience powered the advancements in 360 degree and VR technology. Although the emergence of more sophisticated hardware could have signalled the end for conventional modes of cinema and filmmaking, the immersive experiences provided by recent advancements in immersive technology have brought the spectator even closer to the objective reality that Bazin valued so highly. Virtual reality cinema furthers the pursuit of authenticity and fidelity to real life, and almost entirely eliminates the barrier between the spectator and screen – although even with the most sophisticated technology there will always be an element of subjectivity in film when humans are involved in its creation. Ultimately, Bazin would have approved of these new innovations which return the viewer to the essence of cinema (Bazin 1967, p 21), ‘authentic reality,’ for, even in the digital era, it is true that “cinema has not yet been invented!”

Endnotes:

ⁱ See Chris Milk (Vrse), Nonny de la Peña (Emblematic Group), Lynette Wallworth, Doug Liman, Janicza Bravo.

Works Cited:

1. Andrew, Dudley. *What Cinema Is!: Bazin's Quest and Its Charge*. Chichester, West Sussex, U.K.: Wiley-Blackwell, 2010. Print.
2. Anonymous. "The New Grammar of Virtual Reality." *Workflow* (November 2014). Web.
3. Aron, Jacob. "Enter the Reel World." *New Scientist*, 2015. Web.
4. Bazin, André, and Hugh Gray. *What Is Cinema?* Berkeley: U of California, 1967. Print.
5. Brinton, Joseph P. "Subjective Camera or Subjective Audience?" *Hollywood Quarterly* 2.4 (1947): 359-66. Web.
6. Buscombe, Edward. "Jump Cut: A Review of Contemporary Media. Sound and Color." *Books on Film Sound, Text Version*. Web. 01 May 2016.
7. "Collisions VR." *Collisions*. Web. 12 May 2016. <<http://www.collisionsvr.com/>>.
8. "Emblematic Group." *RSS*. Web. 12 May 2016. <<http://www.emblematicgroup.com/>>.
9. Fowler, William. "Watch This Space: A Postcard from Virtual Reality." *Creative Review*. 2015. Web.
10. Fox, Emily Jane. "Director Chris Milk Wants to Be Virtual Reality's First Auteur." *Vanity Fair*. 9 Nov. 2015. Web. 12 May 2016. <<http://www.vanityfair.com/news/2015/11/director-chris-milk-virtual-reality>>.
11. Grandon, Marisol. "Fantastic Voyages: How VR Became a Reality." *Sight and Sound* (May 2016): 26-29. Web.
12. Haaland, Torunn. *Italian Neorealist Cinema*. Edinburgh: Edinburgh UP, 2012. Print.
13. "Immerse Yourself in Cinematic VR." *Jaunt*. Web. 12 May 2016. <<https://www.jauntvr.com/>>.
14. Isaacs, Bruce. *The Orientation of Future Cinema: Technology, Aesthetics, Spectacle*. New York: Bloomsbury Academic, 2013. Print.
15. Kendrick, Ben, and <https://plus.google.com/112890575995866026573/>. "'Titanic 3D' Review." *Screen Rant*. 2012. Web. 12 May 2016. <<http://screenrant.com/titanic-3d-reviews-benk-163258/>>.
16. Kiwitt, Peter. "What Is Cinema in a Digital Age? Divergent Definitions from a Production Perspective." *Journal of Film and Video* 64.4 (2012): 3-22. Web.
17. Lapsley, Robert, and Michael Westlake. *Film Theory, an Introduction*. Manchester and New York: Manchester UP, 2013. Print.
18. Marcus, Millicent Joy. *Italian Film in the Light of Neorealism*. Princeton, NJ: Princeton UP, 1986. Print.
19. Mullarkey, John, "The Tragedy of the Object: Democracy of Vision and the Terrorism of Things in Bazin's Cinematic Realism." *The Journal of Theoretical Humanities* 17.4 (2012): 39-59. Web.
20. Neale, Stephen. *Cinema and Technology: Image, Sound, Colour*. Bloomington: Indiana UP, 1985. Print.
21. "New Frontier at Sundance Film Festival." *Sundance Institute*. Web. 12 May 2016. <<http://www.sundance.org/programs/new-frontier>>.
22. Phillips, John. "The Fates of Flesh: Cinematic Realism following Bazin and Mizoguchi." *The Journal of Theoretical Humanities* 17.4 (2012): 9-22. Web.
23. Pogue, David. "In the Movies." *Scientific American*, 2016. Web.
24. Rombes, Nicholas. *Cinema in the Digital Age*. London: Wallflower, 2009. Print.

-
25. Rushton, Richard. "The Reality of Film." (2010). Web.
 26. Segal, David. "About That Bear: Alejandro G. Iñárritu Discusses Making 'The Revenant'." *The New York Times*. The New York Times, 2015. Web. 09 May 2016.
 27. Steele, Chandra. "Bringing the Action from the Movie Screen to the Audience." *PC Magazine*, 2014. Web.
 28. "Storyscapes | Tribeca." *Tribeca Film Festival*. Web. 12 May 2016. <<https://tribecafilm.com/festival/storyscapes>>.
 29. Tröhler, Margrit. "Film – Movement and the Contagious Power of Analogies: On André Bazin's Conception of the Cinematic Spectator." *Studies in French Cinema* 14.1 (2014): 33-47. Web.
 30. "Vrse Works." *Vrse.works*. Web. 12 May 2016. <<http://vrse.works/creators/chris-milk/work/>>.