IMMERSION AND INTERACTIVITY: A DREAM THAT BEGAN WITH EARLY CINEMA*

ÀNGEL QUINTANA
DANIEL PÉREZ PAMIES

For years, film theorists have been trying to answer the question posed by André Bazin in his collection of articles titled *What Is Cinema?* (1990). Initially, the answer seemed clear and had to do with the foundations of the photographic process: the image as analogy; the image as trace. A photograph was the emanation of its referent, as Roland Barthes (1989) had argued in his day. Today, computer generated imagery (or CGI) has introduced algorithmic functions. Analogy still exists as a result of spatial recognition, but the image has lost an essential part of its moorings as a trace of the world. Thanks to the new digital arts, many visual representations today are, as David N. Rodowick (2007) has demonstrated, based on virtuality. Computer, television and film images are the product of mathematical expressions that transform all signs into something equivalent to their original form. The new media created using digital images "are neither visual, nor textual, nor musical—they are simulations" (Rodowick, 2007: 103).

Despite this process, photographic realism continues to be the holy grail of the digital image. However, this realism, which is celebrated in much of the discourse on the new media, has nothing to do with the need to capture and document events; instead, it is associated with the possibility of building new worlds with the same guarantees once offered by the analogue image. In other words, the digital image, using mathematical algorithms, explores the possibility of creating a multi-layered three-dimensional space with a high degree of simulation. As a result, in the process of image capture, the real world gives way to the virtual world. To understand this process, it is important to consider the concept of "cultural series" proposed by André Gaudreault (2008), when he explores how the new technologies related to digital imaging today effectively continue or extend certain pre-existing cultural subsystems. In view of this debate about the persistence of pre-existing cultural series, we need to question

how new this photographic realism of the digital age really is. From a theoretical perspective, we should be able to identify its essence in the "Frankensteinian" dream of creating living beings or in old myths such as the notion of a "total cinema" capable of creating other possible worlds, posited by René Barjavel (1944) back in the 1940s. To understand where we are and where we are going, we need to investigate the origins of the virtual image.

As Pierre Lévy (1995: 9) suggests, we are witnessing a

> general movement of virtualization [that] has begun to affect not only the fields of information and communication but also our physical presence and economic activities, as well as the collective framework of sensibility and the exercise of intelligence. The process of virtualization has even affected our modalities of being together, the constitution of a collective "we" in the form of virtual communities, virtual corporations, virtual democracy [...].

In this process of collective virtualisation, images play a decisive role. As noted above, the digitalisation of cinema has positioned the medium in a new context of creation of virtual worlds that need to be defined, studied and analysed. However, to be able to identify where this virtualisation process has come from, we must always go back to the origins, to return to that moment described by Lev Manovich (2001: 19-26), when photography and analytical computing began exploring new possibilities.

There is a theoretical problem related to the concepts of virtual reality, augmented reality and (especially) *photorealism*. All these variations on the concept of reality raise a question that will be a key focus of the research process: why has the dream of the animated image turned into a desire to simulate a world whose traces were already captured by the analogue image? To be able to answer this question, we need first to recognise that the longing for cybernetic realism has never contradicted the ideal of classical cinema, based

on the association of the filmic image with the illusory figurative realism that has marked the history of representation in the Western world. The desire to make fiction realistic transformed the story into a double of the world that operated in accordance with its own diegetic laws and that ultimately became a completely autonomous entity whose specific importance resided in its referential value.

In essence, the aim is not a realism of what is represented but a realism of representation, in which the components of the real world function as signs, as elements located inside the space, based on what they represent for the construction of certain reality effects (Quintana, 2011: 106). This realism of representation also sets the boundaries defining the dream of simulation of new images. The objective of this kind of realism is to conquer an imaginary: it is not to imitate the coordinates of the real world, but to bring dreams to life, to create a world without limits that possesses its own plausible coherence. The photorealism of synthetic images is a way of locating the image of cyberspace, an image characterised by its instantaneous nature and its lack of physicality.

David N. Rodowick reminds us that digitally captured images do not create causality or photographic contingency; they only create an illusion. From the idea of image as trace or index, we have moved onto the idea of image as simulacrum. The captured image is immediately transcoded and converted into discrete, modular units (Rodowick, 2007: 10-11). This notion of image as simulacrum points directly to the conception of the image discussed above, as a creator of virtual worlds. How-

---

THE DIGITALISATION OF CINEMA HAS POSITIONED THE MEDIUM IN A NEW CONTEXT OF CREATION OF VIRTUAL WORLDS THAT NEED TO BE DEFINED, STUDIED AND ANALYSED

IN RECENT YEARS, DIGITALISATION HAS EXTENDED INTO EVERY SPHERE OF INFORMATION. WE NO LONGER KNOW WHETHER VIRTUALITY IS LIMITED TO THE MOST FANTASTICAL VIDEO GAMES OR WHETHER IT ALSO EXISTS IN THE WORLDS SHOWN TO US ON THE TELEVISION NEWS, WHICH CLAIM TO BE A REPRESENTATION OF REALITY BUT INVARIABLY AROUSE OUR SUSPICION

---

ever, to understand what these virtual worlds are, we first need to reflect theoretically on the concept of virtuality, and to trace a genealogy based on clear evidence to show that the virtual is not merely a contemporary notion but something with precedents in the past. This approach can be contextualised in the cinematic modernity described by Tom Gunning, which generates continuous cycles of construction and destruction.

To better understand the configuration of virtual worlds, it is essential to establish a precise definition for the term "virtual", together with the idea of virtual reality. The popular meanings of both terms differ from their definitions in the field of philosophy and their subsequent adoption in computer science.

The word "virtual" is derived from the Latin *virtus*, which means "force", "value" or "virtue". In common parlance, virtuality is understood to refer to something illusory and imaginary. However, its etymology reflects a meaning closer to the notion of the possible. In philosophical terms, virtuality refers to potential existence, like the idea of a tree that can be recognised in a seed. But unlike potential, which points to something that will exist in the future, the virtual is present now in a real (albeit concealed, underground and inconspicuous) form. As Pierre Lévy (1995: 11) points out, "the virtual is not opposed to the real, but to the actual, as two ways of being different." Lévy

founds his assertion on an idea posited by Gilles Deleuze (1968: 169-176) in *Différence et Répétition*, when he defines the virtual as a latent phantasmagorical reality. The possible is identical to the real, except that it lacks existence.

In the field of computer science, the idea of virtual reality is envisioned as the existence of a particular digital system that generates controlled, simulated worlds, such as video games, which provide contexts for exchange and communication between users in real time. Real or imaginary environments are simulated in three dimensions¾width, height and depth¾and executed by an individual controlling an interface for the simulated environment or through the use of a keyboard and mouse. The interaction with the virtual image offers the viewer the experience of feeling immersed in a space that is not physical but simulated. The user has the sensation of being in the virtual environment, being able to move around inside it and to handle all the objects present within it.

In recent years, digitalisation has extended into every sphere of information. We no longer know whether virtuality is limited to the most fantastical video games or whether it also exists in the worlds shown to us on the television news, which claim to be a representation of reality but invariably arouse our suspicion. The concept of post-truth is key to the definition of the relationship that audiences have with information in an era characterised by populism and manipulation in the political sphere. The complexity of the issues associated with the concept of "reality" in a world where the importance of truth has become blurred has led some authors, such as Paul Virilio (1988) and Jean Baudrillard (1995), to extend the concept of the "virtual" to include other realms of daily life, raising the question of the extent to which the idea of reality has been altered in the contemporary world.

Jean Baudrillard suggested that virtuality had transcended the relationship established with the

computer environment and taken root in society, and that this was beginning to affect human relations. In the mid-1990s, the French philosopher declared that reality had been examined through the execution of a perfect crime that paved the way for the rise of the virtual. For Baudrillard (1995), reality is a permanently staged world in which the proliferation of meaning has only served to create genuine illusions or *trompe-l'œil*, generating new experiences understood as the manifestation of a hyperreality that has supplanted sensory processes. As Josep Maria Català observes, although over the course of the 20th century the arts attempted to eradicate the myth of the mimetic image, with the development of anti-mimetic movements the scientific technological culture of images (film, television and video)

> has been characterised by an increasing realism that has resulted in the consolidation of a virtual reality in which traditional realism reached its culmination, while at the same time initiating an inevitable decline that would give rise to new creative possibilities of a didactic nature. The image ceases to be mimetic and instead becomes profoundly pedagogical (Català, 2005: 73).

In the late 19th and early 20th century the specific term "virtual" did not exist; however, immersive images gave rise to the idea of creating images that could overcome death by creating parallel living systems, an idea that implied the resurgence of the mimetic. Over the course of history, the idea of substituting life has gone hand in hand with the creation of virtual spaces in which the viewer does not actually overcome death but travels to other possible worlds, different from our own. These immersive spaces have been developing with various degrees of success since the 19th century, but they have been essential to the emergence of a notion of travelling to other cognitive spheres marked by the different relationship that individuals have with today's world.

From its inception, cinema was destined to expand beyond its own limits because in essence the concept of virtuality was already present in many viewing devices created in the late 19th and early 20th centuries. To study how the virtual worlds of early cinema were created, it is therefore essential to consider the devices that created them and the places where they were produced. At the same time, it is also important to identify the aesthetic challenges that cinema took on, beyond the simple act of projecting moving images on a screen. In the early years of the medium, there were spectacles like Hale's Tours, which simulated the movement of a mode of transport while projecting images of a journey, and the Mareorama, which offered a kind of immersive experience of travelling on a ship. All these innovations proposed aesthetic elements similar to those of cinema and that reflected a desire to virtualise experience. But they also created a particular type of audience: one that managed to find a correlation between the virtual experience offered by the spectacles and the new perceptual experiences created in real life, at a time when modernity was giving rise to major changes. The introduction of new modes of transport also gave rise to a new relationship with time and space, which was reflected in early films and their attempts to create new kinds of viewing attractions.

Identifying the connection between the virtual worlds¾of both sight and sound¾created in the late 19th and early 20th centuries and the technologies of today should not be limited merely to compiling a list of devices that reveal the precedents of virtuality; it should also involve a consideration of how technologies are being reused in contemporary society.

This issue of *L'Atalante. Revista de estudios cinematográficos* is subtitled *Immersive Cinema: Devices, Stories and Virtual Worlds* because the general theme of the issue reflects an obvious debate between the current application of the concepts of immersion and interaction¾both of which are key to understanding the development of the emotional responses to the new diegetic worlds

formed by the images¾and the idea of rethinking the present of immersive images from a perspective far removed from the attitude of technological euphoria that views the innovations of the present as discoveries with no connection to the past. In Daniel Pitarch's interview with Tom Gunning, titled "The Changing Face of the Past", the film historian from the University of Chicago points out that the idea of finding "a kind of distant mirror" in the technological advances of the late 19th and early 20th centuries is important because essentially it "involves that sense of wanting to be able to define an era."

On the other hand, Marcos Jiménez González uses one of the most familiar notions of Tom Gunning's theoretical work, the concept of the "cinema of attractions", to demonstrate the parallels between a film model of the past that eschewed storytelling in favour of generating an emotional impact and the approaches of the present day. In the article titled "Non-narrative Typologies: The Hermetic-Metaphoric Model and the Cinema of Attractions United by the Aesthetic Experience", Jiménez González shows how the phenomenon of the viewing attraction has manifested in different eras right up to the present, where "the absence of a narrative and the sensationalism of the images is the shared experience." If we want to understand immersive cinema, it seems obvious that we need to pay attention to this idea of attraction.

When taking a historiographic approach to immersive cinema it is important to analyse certain experimental and visionary practices located in what could be called the "pre-digital" era, when the immersion was the product of an analogue image and of experimentation with other forms that could enhance the experience of watching a film in a traditional cinema. In the 1920s, in the Weimar Republic, Erwin Piscator experimented with immersive systems through the integration of cinema with theatre. Ramón Girona and Carolina Martínez-López's article, titled "Erwin Pisca-

WHEN TAKING A HISTORIOGRAPHIC APPROACH TO IMMERSIVE CINEMA IT IS IMPORTANT TO ANALYSE CERTAIN EXPERIMENTAL AND VISIONARY PRACTICES LOCATED IN WHAT COULD BE CALLED THE "PRE-DIGITAL" ERA, WHEN THE IMMERSION WAS THE PRODUCT OF AN ANALOGUE IMAGE AND OF EXPERIMENTATION WITH OTHER FORMS THAT COULD ENHANCE THE EXPERIENCE OF WATCHING A FILM IN A TRADITIONAL CINEMA

tor's Total Theatre as a Revolutionary Immersive Audiovisual Tool: The Paradigm of *Hoppla, Wir Leben!* (1927)", reveals how Piscator systematised the use of the film as a cohesive element, based on an ideal of total theatre that was profoundly linked to historical avant-garde movements and placed at the service of Marxist ideology. The evolution towards the "pre-digital" is also present in Alan Salvadó Romero's study of the age of electronic imaging, when video was the predominant technology. In his article, "Virtual Entry into a Landscape in the Pre-digital Age: From the Picturesque Journeys of the 19th Century to the Immersive Journey in Akira Kurosawa's *Dreams* (1990)", Salvadó Romero considers Vincent van Gogh's paintings and Akira Kurosawa's filmmaking in an analysis of an episode from his film *Dreams* (1990) to explore the role played by virtuality in landscape historiography.

One of the big questions common to all the articles included here is how contemporary film and television facilitates forms of interaction between the audience and the narrative worlds of the story. To explore this issue, the authors of the various articles consider very different examples, ranging from the blockbusters of contemporary cinema to current series and cinematic virtual reality (CVR) (Bonilla & Galán Fajardo, 2020). In

all cases, the question of the role of the body and the problem of the emotional impact constitute key points for reflection. Marta Lopera-Mármol, Iván Pintor and Manel Jiménez analyse an interactive experience in a television series in the article "Choose Your Own Adventure: Immersive Audiences, *Black Mirror: Bandersnatch* as a Case Study." The Netflix platform released an episode of the series *Black Mirror* that depends on a series of decisions to be made by the viewer in response to the story, altering the construction of the series by opening it up to non-linear narratives. On the other hand, in his article "Fiction as a Skylight: Self-Reference, Irony and Distance in *The Matrix Resurrections* (Lana Wachowski, 2021)", José Antonio Palao analyses the final instalment in the *Matrix* saga after the original trilogy, based on the idea that *The Matrix* constitutes a key point of reference for reconsidering the evolution of film fiction towards the virtual and towards a redefinition of the filmic in the nascent digital culture. Through a textual analysis, the article examines how this latest instalment, released many years after the first three films, distances itself from its predecessors.

ONE OF THE BIG QUESTIONS COMMON TO ALL THE ARTICLES INCLUDED HERE IS HOW CONTEMPORARY FILM AND TELEVISION FACILITATES FORMS OF INTERACTION BETWEEN THE AUDIENCE AND THE NARRATIVE WORLDS OF THE STORY

Some years ago, the position of the film spectator was viewed as being halfway between the sleeping and waking worlds, trapped by the darkness of the movie theatre. Javier Luri explores other ways of viewing, contrasting the cinematic magic of the all-encompassing models already present in the 19th century in the form of panora-mas and dioramas against contemporary immersive forms in 360-degree environments. His article, titled "The Spectator's Seat: Movement and Body in Immersive Cinema", reconsiders the position of the body and the impact that virtual environments generated by images have on it. Luri's analysis shares some points in common with Cristina Ruiz-Poveda and Julia Sabina Gutiérrez's article, titled "The Blurred Lines between Spectator and Character: Narrative Integration of the User in Cinematic Virtual Reality", although rather than immersive sensations, this article focuses on Cinematic Virtual Reality (CVR) with the aim of studying the systems it uses to achieve narrative integration. The authors consider various examples of virtual reality models to draw some conclusions, as Javier Luri does in his article, about the place the spectator's body occupies in relation to the images.

The articles featured in this issue of *L'Atalante. Revista de estudios cinematográficos* foster a dialogue between past and present, while also establishing a connection with the research conducted by the Origins of Cinema Research Group (GROC) at Universitat de Girona, in a research project sponsored by the Spanish Ministry of Science and Innovation, titled "Virtual Worlds in Early Cinema: Aesthetics and Audiences" (PGC2018-096633-B-I00). This project was launched three years ago based on the idea that to understand the emergence of virtual worlds in our digital culture, we need to examine why and how some of the spectacles of the 19th century were already proposing certain forms of immersion, and that to understand how new three-dimensional forms of depth of field are created, it is also necessary to consider the emergence of stereoscopic pictures in parallel with the birth of photography, as well as the existence of 3D cinema in the 1910s. This research project has sought to demonstrate in various academic forums that from the outset cinema was destined to expand beyond its own limits. This issue complements the research with explorations

of immersive models of analogue culture, offering a full view and analysis of the pre-existence in past eras of the contemporary idea of immersive cinema and virtual reality. ∎

NOTES

REFERENCES

Barjavel, R. (1944). *Cinéma total. Essai sur les formes futures.* Paris: Denöel.

Barthes, R. (1989). *La cámara lúcida. Nota sobre la fotografía*. Barcelona: Paidós.

Baudrillard, J. (1995). *Le crime parfait*. Paris: Galilée.

Bazin, A. (1990). *¿Qué es el cine?* Madrid: Rialp.

Bonilla, D., Galán Fajardo, H. (2020). El cine sin encuadre: propuesta de Escala de Implicación Narrativa en Realidad Virtual. *Anuario Electrónico De Estudios En Comunicación Social «Disertaciones»*, *13*(2), 1-16. https://doi.org/10.12804/revistas.urosario.edu.co/disertaciones/a.8252

Català, J. M. (2005). *La imagen compleja. La fenomenología de las imágenes en la era de la cultura visual*. Barcelona: Servei de Publicacions de la UAB.

Deleuze, G. (1968). *Différence et Répétition*. Paris: Presses Universitaires de France.

Gaudreault, A. (2008). *Cinéma et attraction. Pour une nouvelle histoire du cinématographe*. Paris: CNRS.

Lévy, P. (1995). *Qu'est-ce que le virtuel?* Paris: La Découverte.

Manovich L. (2001). *The Language of New Media*. Cambridge, MA: MIT Press.

Quintana, À. (2011). Después del cine. Imagen y realidad en la era digital. Barcelona: Acantilado.

Rodowick, D. N. (2007). *The Virtual Life of Film*. Cambridge: Harvard University Press.

Virilio, P. (1988). *La machine de vision*. Paris: Galilée,

IMMERSION AND INTERACTIVITY, A DREAM THAT BEGAN WITH EARLY CINEMA

Abstract

The present article explores the relationship between cinema and the production of virtual worlds. Following a historiographical analysis, which takes as a starting point the concepts of "virtuality" and "cultural series", the following text proposes to analyze the current immersive strategies of the cinematographic medium in relation to the past ones. So that, this historiographical approach leads us to point out the existence of certain pre-digital practices which are based on the search for immersive experiences. The starting hypothesis is that the creation of virtual worlds was already present in the origins of cinema, which was born to expand beyond itself. In this sense, the advance of digital technology has served to promote the development and the creation of these virtual worlds, while it has turned them more complex by altering the relation among the image and its referent. The main goal of this text is to demonstrate that, beyond the technological revolution enabled by the digital's development, it is essential to understand the implications and the functioning of virtual worlds from the past in order to get to understand the immersive strategies of the virtual worlds from the present.

Authors

Àngel Quintana is Professor of Film History and Theory and dean of the Universitat de Girona's Faculty of Arts. He holds a PhD in Communication Sciences from the Universitat Autònoma de Barcelona, and he fulfilled postdoctoral studies in the Université Sorbonne Nouvelle – Paris 3. He has been guest professor in the Universities of Los Andes, Paris 3 and the Teheran's Iranian National School of Cinema. He has been coordinator of the magazine *Cahiers du cinéma*, currently *Caimán, cuadernos de cine*, and he is the author of the books *Fábulas de lo visible* (2003), *Después del cine* (2011), *Lorca et le cinéma* (2019) and *Dylan et le cinéma* (2021). He is also codirector of the Seminario on the Origins and History of Cinema, coordinator of GROC – the Research Unit on Early Cinema, and he has leaded the R&D funded projects «The Construction of News in Early Cinema (1896-1914)», «Presences and Representations of Women in Early Cinema», «Virtual Worlds in Early Cinema: Devices, Aesthetic and Audiences» and «Sick body visions in cinema and photography: physical and mental pathologies». Contact: angel.quintana@udg.edu

INMERSIÓN E INTERACTIVIDAD, UN SUEÑO QUE EMPIEZA CON EL CINE DE LOS ORÍGENES

Resumen

El presente artículo explora la relación entre el medio cinematográfico y la producción de mundos virtuales. A través de un análisis historiográfico, que toma como punto de partida los conceptos de «virtualidad» y de «series culturales», el siguiente texto propone analizar las estrategias inmersivas actuales del medio cinematográfico en vinculación con las del pasado. Así pues, esta perspectiva historiográfica nos lleva a señalar la presencia de determinadas prácticas pre-digitales que se fundamentan en la búsqueda de experiencias inmersivas. La hipótesis de partida es que la creación de mundos virtuales ya estaba presente en los orígenes del cine, que nació para expandirse más allá de sí mismo. En este sentido, el avance la tecnología digital ha servido para impulsar el desarrollo y la creación de estos mundos virtuales, a la vez que los ha vuelto más complejos al alterar la relación entre la imagen y su referente. El principal objetivo del texto es demostrar que, más allá de la revolución tecnológica habilitada por el avance del digital, resulta fundamental entender las implicaciones y el funcionamiento de los mundos virtuales del pasado para poder llegar a comprender las estrategias inmersivas de los mundos virtuales del presente.

Autores

Àngel Quintana es catedrático de Historia y Teoría del Cine y decano de la Facultad de Letras de la Universitat de Girona. Es doctor en Ciencias de la Comunicación por la Universitat Autònoma de Barcelona y realizó estudios postdoctorales en la Université Sorbonne Nouvelle – Paris 3. Ha sido profesor invitado en las Universidades de los Andes, Paris 3 y la Iranian School of Cinema de Teherán. Ha coordinado la revista *Cahiers du cinéma*, actual *Caimán, cuadernos de cine* y es autor de los libros *Fábulas de lo visible* (2003), *Después del cine* (2011), *Lorca et le cinéma* (2019) y *Dylan et le cinéma* (2021). También es codirector del Seminario sobre Antecedentes y Orígenes del Cine, coordinador del GROC - Grupo de Investigación en los Orígenes del Cine, y ha liderado los proyectos de investigación «La construcción de la actualidad en el cine de los orígenes (1896-1914)», «Presencias y representaciones de la mujer en el cine de los orígenes», «Mundos virtuales en el cine de los orígenes: dispositivos, estética y públicos» y «Visiones del cuerpo enfermo en el cine y la fotografía: patologías físicas y psíquicas». Contacto: angel.quintana@udg.edu.

INTRODUCTION

Daniel Pérez Pamies is a Predoctoral Fellow (PRE2019-087535) at the R&D project «Virtual Worlds in Early Cinema: Devices, Aesthetic and Audiences» and he undertakes the Doctoral Programme in Humanities, Heritage and Cultural Studies at the Universitat de Girona, with a thesis focused on the works of David Lynch. He holds a Degree in Audiovisual Communication from the Universitat de València, a Master in Filmmaking from ESCAC and a Master in Contemporary Film and Audiovisual Studies from the Universitat Pompeu Fabra, where he has worked as Graduate Teaching Assistant and he has collaborated with the research group CINEMA. He has also delivered lessons on Introduction to Cinematography, and he has worked as a film critic. His research lines include digital cinema aesthetics and early cinema. Contact: daniel.perez@udg.edu.

Article reference

Daniel Pérez Pamies es investigador en formación (PRE2019-087535) en el proyecto «Mundos virtuales en el cine de los orígenes: dispositivos, estética y públicos» y cursa el doctorado en Ciencias Humanas, del Patrimonio y de la Cultura en la Universitat de Girona, con una tesis en torno a la obra de David Lynch. Es graduado en Comunicación Audiovisual por la Universitat de València, Máster en Dirección Cinematográfica por la ESCAC y Máster en Estudios de Cine y Audiovisual Contemporáneos por la Universitat Pompeu Fabra, donde ha trabajado como asistente de docencia y de grado. También ha impartido clases de Introducción a la imagen cinematográfica y alterna su labor con el ejercicio de la crítica de cine. Contacto: daniel.perez@udg.edu.

Referencia de este artículo