

The Future of Immersive storytelling



Practice research Report

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Preface

This report should be considered as integrative written material to a hands-on research about video immersive technologies and their potential use in terms of storytelling and audiovisual entertainment.

The research, conducted within about one year, focused on exploring, testing and experimenting the complete workflow of the immersive media. Considering the evidence of new technologies such as, panoramic cameras, softwares and goggles, the main challenge of the research was indeed learning and testing the whole pipeline to create an immersive audiovisual product in all his aspect. The researcher had to take in consideration and learn how to manage, from zero, every technical stage of the production and post production.

Furthermore, since the main aim of the research was to understand and adopt the new technology as an innovative tool for storytelling, a series of thorough reasonings around the theoretical framework that could inspire and support the whole production has been conducted since the early stages of the research. Drama, Film and Media studies have been all taken in considerations and put in relation to the immersive media; the most relevant deductions are reported in these pages.

The technical groundwork and the theoretical analysis have finally served as support to the creation of three audiovisual immersive projects.

The last part of this paper will introduce ideas and results concerning the creation of the three projects.

The future aims of the research and the results obtained are to share the newly acquired knowledge with interested academic fields, both through new immersive projects and collaboration with other faculties and through the publication of written extracts contained in the theoretical reasonings outlined in the following pages.

Neither the practice research nor the written report aim to be fully exhaustive; since the early stages of research the Author has been aware that additional developments in term of research design would be absolutely necessary to get a clearer picture of the topics discusse in the following pages.

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1) Exploring the language of a new technology

Since his infancy, cinema has been an art form in constant evolution. From the invention of synchronised sound to the creation of Dolby technologies, from the introduction of VHS to the recent transition to digital cinema, all the main technological innovations that transformed the way movies are produced, distributed and perceived by the audience, have always deeply effected the roots of film language itself.

Audiovisual Technologies should be considered, in other terms, as the first step into the creation and evolution of specific Visual grammars that would eventually become part of a shared and universally recognised mode of representation commonly known as Film Language.

The three key disciplines to study and understand film languages, Psychology, Semiology and Sociology, have clearly outlined that the most disruptive changes effecting the historical evolution of film grammars, based on the misleading assumption “Show, don’t tell”, have always been a direct consequence of the introduction of a radically new, groundbreaking, impacting technology. (*F. Casetti, Inside the gaze*)

Audience and Technologies are indeed the two antipode of this semiotic dichotomy that constantly elaborate, re-discuss and negotiate the narrative rules of the audiovisual language. Understand and deconstruct the mode of representations implemented by a specific technology should be the first step to grasp the essence of formulation of further film grammar.

The main intent of this research is to place this two crucial players, technology and audience at the centre of the research itself by analysing the negotiation of meanings that they constantly undertake end re-discuss. In other terms, this research has been conducted by practice, filming audio-visual projects, with the clear intent of observing and analysing in semiological terms the creation of new visual languages, right in the moment that they are being created.

The concept of immersive storytelling has become reality during the last decade, thanks to slow but resolute introduction of a technology able to both capture and reproduce panoramic, immersive videos. The current status of art, in mid 2018, is showing a growing interest in the topic. Simultaneously, there has been a rising pressure from the audiovisual industry to involve the audience and persuade it that immersive medias are the next, fundamental step into consuming audiovisual representation.

Camera manufacturers, immersive headset manufacturers and online content platform are the key technological industries that these days are pushing consumers to welcome and adopt the new media; on the other hand, the audience is slowly reacting to the innovation thus, probably the immersive media revolution is yet to be started.

Nevertheless, these days virtual reality and immersive medias represent not only a radically new way of recording and reproducing moving pictures but

also a whole new frontier of visual storytelling and consequentially a new field of Studies that needs to be explored from the academic point of view. Dealing with new technologies and innovative form of communication, the analysis on immersive storytelling has been necessarily conducted both by practice and by theoretical speculations.

The two methods of research outlined in this pages, practical and theoretical, have been conducted in parallel and with a constant interdisciplinary approach.

The research has been conducted through the production of three immersive short movies and numerous test clips, among which some are based on more traditional forms of storytelling.

Conjugating ancient form of representation with modern technology is indeed another core assumption of the research and therefore a major part of the Study has been conducted by adapting traditional theatre and performances, with particular attention to Thai cultural heritage, into the immersive media.

The other main element of the study is the audience and in order to get spectators properly involved and to obtain constructive feedback from them, one of the core assumptions of the research is that technically disruptive form of storytelling will still preserve common traits with classical and traditional form of representations.

Among other theories and ideas, the following paragraphs will expose and analyse in dept the postulate that immersive storytelling inherited relevant traits from theatre and other ritualistic form of representations and this idea is crucial to monitoring how an immersive story can be narrated, how the audience, according to his preset code of narrative signs, would react to the revolutionary form of narration and more in general to understand how the whole research was conducted.

The conclusions presented in this paper are nonetheless the result of a transversal work that includes field research on the current status of the industry, practical immersive film production, audience study\testing and formulation of hypothesis in term of semiology and film studies.

All these approaches have been merged since the early steps of the practical work and led to the conclusions that will be presented in the final paragraphs of this paper.

Please note that along the whole paper that the terms Immersive, VR, Virtual reality, 360° and Panoramic are used almost as synonymous and all refer to the same concept.

2) Current status of the Immersive Industry: Market, technologies and future challenges

Before introducing in details the theoretical framework, the way the research was conducted and the results obtained through the research itself, it would be necessary to discuss briefly a few preliminary considerations about the current status of the contemporary VR media industry and the media market related to it. The information outlined in this paragraph are taken from several market researches; all sources are quoted in the bibliography.

First of all, it is important to underline that all the main field researches on immersive technologies conducted until today, mainly focused on the technology itself rather than on the role of audience and almost never undertake the studies with a dedicated semiotic point of view.

Most of the existing researches, actually not very extensive, are basically data analysis that merely focuses on the contemporary market of consumer technologies and do not involve any theoretical considerations in terms of film studies. The concept of storytelling in immersive media is actually in his embryonic stage and a proper discussion concerning the use of panoramic cameras in feature film has yet to be inaugurated.

A recent paper published by iGATE Research and Orbis Research, described the current trends of the virtual reality market and the main forecasts for the upcoming years, showing a rather promising and optimistic attitude shared by all technology giants that rule the contemporary communication and entertainment industry.

As the data and statistics analysis clearly outline in the research, few tech Giants such as Sony, Samsung, Google, and Facebook are not only dominating the virtual reality hardware market (over 50% in 2016) but they are increasing year by year the size of investments in the immersive media market landscape.

The research, considering a forecasting period of time between 2016 and 2020, clearly states that “The major growth driver of virtual reality market includes growing digitisation, advancement of technology, increasing demand for head mounted displays in gaming and entertainment industries, and rising investment in virtual reality market among others. However, high cost of devices and lack of technical expertise are the factors among others which are hindering the growth of Virtual Reality Market”.

This brief market overview seems to clearly expose the general trend of a hardware market which is growing with few criticality originated mainly by the lack of technical expertise (the cost of consumer devices is actually progressively decreasing).

Technology market researches do not necessarily represent a complete review of the actual status of art. Omitting the participatory role of the audience in the rise of a new media is a classic “omissis” of tech market

researches and the main reason is, probably, that in order to discuss the negotiating role of the audience into the Advent of a new media it would be necessary to include many other disciplines related to cultural studies rather than pure data analysis.

Regardless of the different possible approaches to analyse the phenomenon, what emerges here is that the tech industry has created and is actively trying to sell the whole technology but the audience is reacting to it slower than probably expected by the industry.

The reasons that are causing scarce interest and limited excitement from spectators could be described by outlining several main shortcomings of the industry.

The first, is the already mentioned lack of technical expertise.

This idea involves both the industry and consumers: undoubtedly, we finally have access to the complete technology, allowing us to create and enjoy immersive audiovisual productions but it also seems that we are not yet sure about how to properly use it and control it.

In this regard, the contemporaneity of immersive media appears to be a huge testing ground where all the players are invited to discover together what would come next. Hi-tech companies are definitely aware of it and with the support of social medias, they are all desperately trying to create communities of users and obtain feedbacks from them.

In other terms, rather than say that consumers lack technical expertise we can say that the audience is simply unfamiliar with it and optimistically it is just a matter of time before all the main tools of the new media will be fully assimilated.

The second main cause that is slowing down the public acceptance of panoramic media is the lack of contents. Even though nowadays it is extremely easy and affordable to buy a VR headset to enjoy immersive content, consumers are easily disappointed when they find out that there is actually not much to watch within the viewer. The industry have indeed created the technology but haven't create the proper content for it, or at least, not yet. All the giant online companies and audiovisual distributors, Facebook, Youtube and Google above all, are aware of the problem and are trying to involve consumers to create and share original content on their platform but at the time this research is being written the online immersive material is extremely limited.

The film industry doesn't seem to be, up to now, interested in seriously investing in the production of immersive features, documentaries or animated movies; there are several film festival, including Cannes film festival, that promote the distribution of immersive videos but the projects that reach festivals hardly find an audience elsewhere. Spectators seem to approve and enjoy the media but the scarce distribution of content is a major negative factor for the real diffusion of the media.

Also concerning this point, we are probably facing a transitory period into which producers and creatives are still experiencing and experimenting

various solutions in order to move forward on a larger scale only in the moment they retain full creative and commercial control over the media. In my opinion, the lack of contents is a major problem in this precise moment because the technological boom enthusiasm that can be observed on many fronts could easily wane if not supported with properly distributed creative content.

The third and last cause that is delaying the booming of immersive media is supposedly the lack of a shared language and more specifically the lack of artistic skills to produce, understand and enjoy VR films.

The immersive media still requires artists to learn how to express themselves through it and still requires audiences to get familiar with the new modes of storytelling and representing the reality. Immersive storytelling is not yet recognised as a shared language because it cannot be even considered a language yet and it cannot be considered a shared language either because it still lacks a basic common grammar that can be understood by the two terms of communication, artists and audience.

The uniqueness of immersive storytelling, the way it could engage the audience and the peculiar visual grammar that the media is currently developing are the core of this research.

The next chapters will outline what makes immersive storytelling unique when compared to other visual narrative medias, cinema and theatre above all, and will discuss how these classic media could influence and borrow narrative tools from the new immersive way of tell stories.

To conclude, I would add a significant a final, personal, short observation. This research has been conducted for about one year, 2018; it went through several stages, from theoretical research to film production; during the whole time of processing, we constantly monitored the market and the development of the immersive film industry and what has been observed is that no considerable steps have been taken in the whole immersive landscape. In the early 2018 the expectations were frankly higher compared to what can be observed at the end of the same year and considering everything said before and the fact that nowadays technologies do not usually require long period of gestation before flourishing and being assimilated by wide segments of audience, immersive media should have been bigger now. It is probably just a matter of time but the general impression is that the time is not ripe for the boom of immersive media.

3) The deconstruction of Film language

The first, necessary series of considerations concerns the idea that immersive technologies are on one hand the natural evolution of traditional cinematographic techniques and, on the other hand, are eradicating the basic film grammar as we knew it.

As a new art form, immersive storytelling faces many challenges but above all it has to deal with the loss of those basic narrative structures that, accordingly to film theories, are the backbone of the cinematic art itself.

What becomes immediately evident when approaching, both practically and theoretically, immersive media is that all the basic tools of film-making, such as changes in camera angles and editing, are no longer available.

For decades film directors relied on two main creative tools to articulate and control audiovisual productions: the ability of freely moving the camera in space and the authority of controlling time, narrative pace and creation of symbolic meanings through the power of editing; all the modes of storytelling and of visual representation of the narration in cinema are necessarily organised around those two tools, immersive storytelling can no longer rely on.

Camera angles and camera movements are the main instruments that every director would depend on when creating a movie. Directing is, after all, the art of turning a written script into a movie, a visual representation, by moving the camera around space.

Reality is manipulated by Directors thanks to different lenses and different type of camera movements and “ framing” the shoot can be nevertheless considered the art of film directing itself.

At first glance, immersive film making seems not to allow the same creative freedom. Framing becomes not relevant anymore. The surrounding environment, real or reconstructed, is captured as it is, in his totality. There are no more chances to change the angle of view and there is no more need to frame the shoot, the visual narration becomes surrounding, panoramic, enclosing and, indeed, immersive.

Immersive cameras deprive directors of their power of controlling, modifying and aestheticise the space. There are no camera angles, the reality is captured as a whole.

The camera loses the extreme flexibility that characterises the classic mode of narration within the art of film making. The artists by losing the founding elements of their syntax, are forced to seek in other directions to define how they can articulate their own visual language.

Film is a visual language into which the audience needs and wants to be guided frame by frame. The work of the Director is nonetheless to critically select portions of reality and show them to the audience.

Immersive cameras are deprived of all this.

The other fundamental element of film language that seems to be no longer available to immersive film-makers is Editing.

Numerous film theorist would agree with the statement that “Editing is the film language and Films create meanings through the editing”. (*Eisenstein S.M. The Film Form*)

The Russian formalist film theory introduced this concepts almost a Century ago and, even though contemporary film production does not uniquely rely on formalist film language and mode of expression, it is undeniable that is in the editing room that movies are structured and visual meanings are created. For most of the Directors it would be unthinkable to create a movie without the ability of cutting sequences and edit them.

Movies as a performative form of art require narration in time and Editing has proved to be the most effective tool to control time and space to shape visual stories as directors imagine them. Even during the script writing phase, Directors imagine and write their movies by planning how they will later cut and organise single shots into edited sequences. By doing so, filmmakers are able to manipulate time, by contracting or expanding it, are able to control space, by parallel or sequentially showing locations extremely distant one from the other, and are able to create new meanings in their narration, by juxtaposing different moving pictures according to the Formalist ideas of symbolic editing (*Eisenstein S.M. The Film Style*).

Immersive media has no editing and it necessarily reproduces the reality in his temporal continuity and spacial immobility.

When using immersive cameras the gaze of the audience necessarily coincides with the point of view of the camera itself depriving the Director, as artist and author, of one of his main roles: shaping the story by controlling time and space.

By losing Editing and Camera movements, the immersive media loses the fundamentals of film grammar.

Consequentially, shaping and organising a visual narration becomes extremely challenging for Directors that move to the new form of storytelling. Furthermore, to understand the peculiarities of immersive storytelling and the modes of using them it would be necessary to extend the research to other forms of art.

Immersive media is nevertheless a form of communication based on performance and narration in time and therefore, we might suppose that there are other artistic instruments that can be used to create a narration with it.

In other terms, we can suppose that immersive storytelling has common traits with other traditional Arts and those traits could make us understand how immersive media organises his own language and could be adopted as narrative tools to create a specific immersive mode of narration.

In order to explore these traits as potential narrative instruments, it would be useful to understand the peculiarities and the limits of immersive storytelling.

We already described how framing with immersive cameras totally differs from the traditional modes of film making; there is another relevant trait that differs completely between immersive storytelling and traditional filmmaking and it is the discrepancy between motion and gaze.

In traditional filmmaking, the distance between the spectator and the screen is clearly defined: the observer and the object observed are two separate entity in two separate locations. The gaze of the spectator is directed by the Authors of the movie with cameras and editing while the body of the spectator is comfortably sitting in the dark, consciously separated from the screen and mostly static.

In immersive media, audience's gaze necessarily coincides with the camera angle creating the illusion of participation: the spectator has the misimpression of physically being within the action, the illusion of being located in the set, immersed in the performance and involved in it.

The critical issue is that while the gaze is illusorily coinciding with the virtual reality created by the immersive device, the body is motionless and this results into an unpleasant discrepancy between what is observed, perceived as real, and the feeling of not being able to move into the environment virtually recreated.

Unless the media is explicitly interactive, as would be in the case of virtual reality gaming or augmented reality application, the discrepancy between motion and perception is undeniable and whoever would try to watch an immersive video for the first time could experience that feeling.

Experiencing immersive storytelling means only participating to the story in a visually immersive way and does not mean been an active part of it.

The Audience is placed within the action but is not directly interacting with it; as long as the camera keeps a static position, and audience with it, the illusion of participation proceeds rather smoothly but in the moment the 360 camera moves, while the spectator is not, the discrepancy become evident and, in some cases, rather disturbing.

The classic example of this unpleasant discrepancy is the "Rollercoaster experience", the most famous immersive video that whoever tried VR goggles at least once has experienced.

In the Rollercoaster experience the immersive camera is mounted on a Rollercoaster and the spectator moves on the tracks along with vehicle and experiences a panoramic vision of it. While the visual experience of it is effectively impressive, audience can observe the whole experience of the ride as if it was on it, the physical experience is slightly disturbing and can cause un-pleasant feelings and even nausea.

The main reason for this displeasing side effect is the, as we said, while the immersive point of view constantly changes, the body of the spectator is static in its original position.

Apparently, there are no technical solutions or gimmicks to avoid this discrepancy to be experienced by spectators and filmmakers thus, adopting the new immersive media has to be carefully considered before filming.

This argument leads us to a fundamental and not too obvious conclusion: immersive storytelling is necessarily an observational media, a mode of art into which the audience maintains its passive role and cannot directly interact with the story.

This final consideration that must be discussed in relation to basic film grammar as a missing tool in immersive media and that will help us looking behind the film language alone, is the development in terms of time of the storytelling itself.

The lack of film Editing forces the narration to be linear.

The chronological development of immersive stories must necessarily be simultaneous to the time of fruition by spectators. In immersive stories every event must be presented as it would be in its real chronological development. No cuts and no jumps in time can be functional to a mode of storytelling that assumes that what we see is really what is happening. By interrupting, with cuts, the linear narration we would break the illusion of being immerse into a diverse reality and contradict the peculiarity of the media itself.

Immersive storytelling is ontologically a Long take.

The main challenge for immersive filmmakers is arguably to accept the limits imposed by the technology and to make the best creative use out of it. In order to make the best creative use of immersive media it would be necessary to keep reflecting on which other forms of art have common traits with it.

The following chapters will discuss more in details these ideas and in particular will explain how VR storytelling has lots in common with an ancient form of representation, Theatre.

Chronological linearity of narration and participation of the audience are the key elements that will be taken into consideration and analysed in the following paragraphs.

4) From Ancient Rituals to Contemporary Theatre

Exploring old representations to redefine the immersive language

From the semiological point of view, excluding standard Film language as a primary source of inspiration to define how visual grammars in immersive storytelling could articulate this peculiar narration, leads to the necessity of exploring other forms of art and finding alternative narrative tools; the creation of meanings through 360° video devices, presents indeed certain characteristics that could be researched and analysed within more ancient forms of communication; by considering how those forms of communication relate to the narrative contents they need to convey to the audience, we could probably find inspiration to better understand how the audiovisual virtual reality language can articulate its own content.

Two main characteristics of immersive storytelling and of the immersive media itself can support the idea that 360° narrations have elements in common with other, more ancient, forms of art.

First, the idea that the audience is physically present and participating in the representation and second, the idea that time develops linearly along the narration and the sequence of events is inevitably synchronous with real life chronology.

Audience's participation in immersive narration is only partially true.

Numerous forms of art and representations search for a direct emotional involvement of their spectators without directly and physically involve them into the representation itself.

If this assumption is generically true for any form of art, there would be no artistic representation without an emotional connection between the work of art represented and his spectator. Certain forms of narration are founded on the proximity of those elements that convey the story and those elements that capture the content of it.

Performative arts are hinged around these assumption: bodies move, dance and indeed perform for and in front of other bodies.

Humans perform narrations through movements of their bodies to establish communication with other observing humans. Spectators of performing arts are passive participants, they do not take active part into the representation but they need to be present otherwise the performance itself would have no reason to exist.

Traditional forms of art such as theatre and dance are, as a matter of fact, the evolution of ancient rituals into which peculiar narrations of a certain society were represented through physical performances to evoke and celebrate certain pagan and religious events during religious festivities.

Theatre, as rituals, needs the presence of spectators to share narration and emotional charge of the event itself.

As Aristotle, the great greek philosopher and dramaturg, wrote in his master piece *Poetics*, theatre originated from the festivities and ritual celebration in honour of god Dionysus when performers start to include narration into the singing and dancing. Performance is the narration and it requires an audience to emotionally participate without taking part in the action.

“A tragedy is the imitation of an act that is significant and complete, of a certain magnitude, using a pleasing language with ornaments, using action and narrative form; managing through pity and fear to accomplish the catharsis of such emotions” (Aristotle Poetics, VI, 1449b)

Even though, rituals and theatre performances differ in many aspects, “ritual is a mode of action and theatre a kind of medium” as academic Eli Rozik states, ancient forms of ritual drama and rituals have one main element in common, that can be adopted as foundation for this research: performers and spectators are all emotional and intellectual participants.

Theatre evolved from ancient greek drama into stage performances as we know them today and this long and complex evolution is matter of history of theatre itself; as far as this research concerns it is key to remark that immersive storytelling, as we will see more in details later on, inevitably inherited the physically detached but emotionally involved participation of the audience from ancient dramatic performances.

The idea of detached but necessary participation is reinforced by the second peculiar characteristic of both ancient dramatic theatre and modern immersive storytelling: the linearity of narrative time.

Live performances, whether be rituals, dances or dramas, necessarily happen synchronously with the real development of time that audiences are living in. This idea probably defines the main difference with movies language: films can elaborate and transform space and time at their will while theatre is rigidly bounded by the physical limits of the stage and by chronological ties of simultaneity.

As we have previously seen, film language elaborated all its visual grammar, both in terms of camera movement and editing because of its freedom to expand and contract time and space at its will. Movies, over the average of 90 minutes, can show as many locations as they need, worldwide or even around imaginary universes, and can elaborate time without any chronological and historical boundary.

Theatre happens “*In praesentia*”. Events are performed linearly, synchronically with audience’s experience and this is probably the ontological difference with film language; the audience is with performers and follows the natural development of events on stage simultaneously with them. Immersive language shares the same postulate. Events happen around the

audience without chronological interruptions and preserve the same physical location, or at least this is how the media has been used until now.

Immersive technologies and panoramic cameras have been, so far, used uniquely in that direction: to represent real events by respecting their natural order and, from the narrative point of view, by merely providing additional points of view to the eventual audience without really taking into consideration the idea of a peculiar visual language.

It is interesting to denote that until today, early 2018, the main use of immersive cameras has been limited by its ontological nature and has been used in the same way that early prototypes of film cameras at the beginning of last century were used; film history, or better pre-historic film history, shows us that at first cameras have been used uniquely to capture reality, avoiding any form of movement and above all ignoring completely the idea of film editing.

Cinema as a narrative media, in its early stages, had a lot in common with theatre and historically it was even considered as a simple machine to capture staged performances. Let's consider as an example the pioneering production of George Melies's "Magical theatre".

G. Melies, universally recognised as one of the founding fathers of film language, approached movie making in early 1900, when camera's technology was in his infancy and thanks to his theatre skills and to his unrestrained creativity, he conjugated the ancient art of Theatre with the new, disrupting by that time, technology of film cameras.

As we mentioned, contemporary panoramic cameras haven't even reached that point yet; they are basically only used to capture reality, whether it is a sport event, a live music concert or simply a personal event to share on social medias. Experimentation and language exploration around immersive media, as we will see, is still extremely limited but philosophically, we can assume that we are facing now the same challenges that George Melies was facing at the begin of the 20th century: create a film language using tools loaned by traditional stage theatre.

The semiological metamorphic adaptation and the experimental field trail that every new media have to go through before they find their own language is what this whole research is about and pioneering masters, like Melies, is probably where the research could find inspirations and supportive ideas. Analysing and reconsidering how, historically, ancient and modern medias evolved and influenced each other is a fundamental step to formulate the new language.

5) From Immersive Theatre to Immersive Video

The ritualistic component of Theatre, in particular if we consider it from the historical fact that ancient Greek tragedies evolved from Dionysian rituals, give us a great perspective on immersive media.

Greek Theatre is the foundation of Western narrative culture, a mode of storytelling that places the spectator at the centre of the action; the representation on stage becomes totally functional to the fruition of the audience, audience that is progressively located out of the stage until it turns into a passive receiver of the performance and no longer an active component of it. In other terms, in rituals spectators is physically at the centre of the narration while in theatre they are observing it from a distance. An identical physical separation between those who observe and those who are observed can be found in movie screens and film audience: spectators are placed in the dark and have no direct interaction with what happens on the screen, they are physically and ontologically separated.

At first glance, immersive media seems to eliminate this separation and it repositions the audience where it used to be in rituals namely not participating in it but observing the performance within it.

The roles of audience in dramatic and ritualistic representations have been widely explored and researched by prominent Philosophers, Academics and Artists including Antonine Artaud and Friedrich Nietzsche.

The speculations and the practices of the french dramaturg, actor and director Antonine Artaud seem particularly pertinent to what we are discussing in these pages.

A. Artaud was one of the main theatre director of the last century, one of the main contributor on theatre performances and drama studies and above all he should be considered a pioneer of immersive theatre.

Artaud explored and experimented the relationship between performers and the audience by avoiding the physical constriction of the stage and by placing spectators at the centre of the stage itself with the performance surrounding them, trapping the audience inside the action.

In his well known 1938's essays "The Theatre and his double", for the first time ever, Antonine Artaud introduced the concept of Virtual reality (*Realité Virtuelle*) into drama studies and more generically into the cultural debate concerning media and human communication.

The core idea of *Realité Virtuelle* as Artaud intended was to differentiate the way that real life and theatre represent reality and the way that these two are perceived by the spectator. For Artaud, only life is real and should be perceived as it is, while theatre is only a representation of it and consequently it should be always considered fake, recreated, illusory and, in layman's terms, Virtual.

The virtual reality theorised by Artaud was nevertheless a new form of immersive theatre, a performative representation that requires the audience

to be at the centre of the stage and the theatrical action that happens all around it.

The conceptual proposal of Artaud considers Immersive Theatre as an “experience machine” into which Theatre audience should be treated as productive participants through their own emotions, aroused by the physical proximity to performers, rather than through actions.

The idea of proto-immersive Theatre suggested by Artaud was meant to be a way to facilitate the audience’s realisation that fiction is not what they encounter within the ritual of theatre rather, it is what they have to deal with in the social-culturally coded world outside of the theatre itself.

Theatre is always an illusory representation of reality, in order to be fully understood and perceived as it is, it would require to become immersive and let audience become aware of that virtuality.

“It is introspection that ultimately gives rise to the aestheticisation of experience, as aesthetically constitutive audience attention is diverted from a more typical art object – be it is a sculpture in an installation or a performer on a stage – to the experiences that arise from audience immersion and participation” (A. Alston, *Beyond Immersive Theatre*).

Artaud, with his thinkings and his theatrical productions, inaugurated a new season of Theatre history and drama studies; after his experiences numerous theatre companies and artists explored, with more or less success, the concept of Immersive representation.

Since the early 70s, with a production boom in the mid 80s, numerous contemporary theatre companies experimented new solutions to immerse the audience into fictional and ethereal spaces and they did it mostly following Artaud’s assumptions: eliminate the fiscal separation from the scenic action and deconstruct the proscenium in order to let spectators feel and live the action. La Fura Dels Baus, Dotdotdot, CoLab Theatre, Punchdrunk Theatre, De la Guarda company, Cart macabre Theatre, among others, are all renowned worldwide theatre companies that are still producing successful theatre pieces based on the premises suggested by the master Antonin Artaud.

There are several interesting points that we can inherit from all the rich and creative debates around the immersive productions of the theatre companies mentioned above and their experience of working with spectators surrounded by the action. Furthermore, there are traits that can be adopted as inspiration for immersive video productions I.

First, if Theatre is proscenium based and rituals are immersive, immersive performances should be considered to a certain extent, ritualistic experiences rather than classic staged performances.

The ritual stage of Greek drama, originally intended to celebrate the god Dionysus, re-becomes an immersive form of ritual into which the spectator is replaced on the stage, within the action and without being part of the action. To some extent we can suppose that every form of theatrical representation is ritualistic and immersive but there is one main factor that has been the

linchpin of every single immersive theatre experience: deconstruct the distance with the audience or in other terms breaking the fourth wall.

Immersive media adopts the same physical proximity to the spectator that normally would be found only in ritualistic kind of performances. This doesn't mean that immersive media implies a religious or spiritual connection between the performer and the spectator. Rather, It means that the mode of representations typical of rituals and immersive media, including blocking, proxemics and rhythms, could inspire how narrations in immersive media are structured.

The second, consequential, consideration is the idea of stage as an empty space that needs to disappear and overcome the distance between performers and spectators. In other terms, as immersive filmmakers can no longer rely on classic film language, they cannot either rely not theatrical separation between stage and audience.

The performance of actors is the main part of the representation that would be influenced by the disruption of classic modes of narration.

Closer and further simultaneously, the spectators are placed on the stage with actors but they are not really with them. Actors involved in an immersive performance should carefully study, practice and learn how to handle this radically new proxemic.

Virtual reality merged with theatre could create the experience of "remote embodied liveness" and the main tool to make an immersive experience lively, believable and engaging should definitely be the performance of the actors and the blocking that directors would impose them in relation to the position of the single, immersed, spectator.

The last consideration that will be shortly presented here, concerns the concept of Anxiety in a performative context.

Discarding the physical separation audience/performers will force them to deal with a new, closer, form of intimacy, at least on the narrative level.

As we mentioned, spectators of immersive media are not really involved in what happens around them: as spectators their participation is limited to their status of observers. The idea of plunging audiences into a new setting and limit their ability of interacting with it, might cause unexpected reactions and unpleasant emotions into the audience itself, even on a psych-cognitivist level.

The anxiety of being trapped in a single place without the ability neither of moving or getting closer to the performance is a substantial limitations that directly effect immersive audience.

How spectators would react to prolonged exposition to immersive media is not yet known and would require more attention and studies.

The aim of this research is not to explore the relation between immersive media and the cognitive processes of the spectator it is nevertheless important to underline how those elements would be absolutely relevant also to further understand the deep structures of the storytelling architecture of the new media.

6) Immersive storytelling in the context of Thai traditional theatre: seeking inspiration for a semiological mashups

As emerged in the previous paragraphs, one of the main intent of the research is to conjugate ancient forms of representation with modern technologies.

In order to do so, it would be necessary to restrict the field of work to a more specific and limited area of interest. The cultural background chosen to explore and experiment these new forms of narration is the rich and articulated cultural heritage of Thai Theatre.

Thai theatrical productions and folktales present many characteristics that could perfectly match with immersive storytelling. In the previous chapters we have seen how both theatre language and film language can be used to understand and elaborate the semiology of the new immersive media but, because of the peculiarities of the new media itself, their main tools cannot be directly adopted to elaborate immersive narration grammar.

In this part, we are now going to explore how the visual grammars of immersive theatre can be applied to a specific form of art i.e., Thai stage representations, and how the dynamics of narration between performers, audience and media are defined on a semiological level.

In particular, we are going to focus on an ancient form of Thai theatrical art survived until today and still performed on national stages, the “Khon” alias the traditional masked drama.

Khon representations present peculiar characteristics that could later on inspire and reinforce the whole practical research.

One of the main characteristics of ancient Thai theatre is its rooted performative nature. Dance, postures and codified body movements are the main visual grammars adopted to convey messages on the stage.

“Thai Khon consists of three elements: vigorous dancing, narration and dialogues by an offstage chorus” (*J.R. Brandon, Cambridge Guide to Asian Theatre*)

In Khon theatre, messages are vehiculated on a multitude of levels; dances, musics, oral narrations, chorus, masks, costumes, and above all body gestures, constantly interact to recreate on stage few ancient tales derived from the *Ramayana* (Ramakien) that are basically the main and only content of Khon representations.

The two major forms of Thai classical dance drama, Khon and Lakon Thai, separate the narration on two levels, the visual representation and the oral narration.

The formalised movements of Khon performance make the acting and dancing inseparable. Each step has a meaning that is emphasised by the

appropriate music, narration and song. In Khon performance each character is identified by the appropriate mask or costume.

(J.O. Miettinen, *Classical Dance and Theater in South-East Asia*)

The Khon masked drama could be defined as a performing art into which the visual representation and the oral narration continuously interact but are practically separated; performers dance and move on stage, singers comment and narrate offstage.

The visual representation is developed around the dance performance; dancers and actors constantly move on the stage reproducing scenes of battles, action, love encounters and even dialogues by uniquely moving their bodies. Most of the times not a single world is pronounced by actors on stage while the content of story itself is transmitted through gestures, poses and codified body movements.

“actors on stage do not speak; an offstage chorus speaks their lines in a rhythmic manner describing the action of the play being danced and pantomimed by the actors” (J.R. Brandon, *Camb. Guide to Asian Theatre*).

The visual performance is indeed supported acoustically by music, singing and above all by one or two narrators that function both as omniscient narrators and as voice over for the actors.

“Khon plays are accompanied by a piphad orchestra, chorus, singers, and narrators at the side of the stage. The narrators describe the events of the plot and recite the lines of the characters on stage with extreme expressiveness. As in many other Asian theatre traditions, the narrators in Khon have a crucial role. They are as vital to the success of the performance as the dancer-actors, who move on stage according to the distinctly recited lines. Dancing in Thai dance-drama can be divided into two types: gestures illustrating the text, and dance proper accompanied by music. Both types are fully used in Khon drama” (J.O. Miettinen, *Classical Dance and Theater in South-East Asia*).

The narrators, in fact, alternate the regular storytelling of Khon's events with live dubbing actors, in a kind of live effect into which spoken words off-stage are coordinated with body movements organised in a form of physical alphabet able to visually recreate and convey the narration.

“Dance is used in Southeast Asian Theatre in three important ways: battle scene staged as choreographed dances, dance movements used by actors during dialogues and songs as a kind of conventionalised gesture language and segments of the story told through dance scenes” (J.R. Brandon, *Camb. Guide to Asian Theatre*)

The visual nature of Khon performances, based on their complex and beautiful alphabet of codified poses and dances, is definitely the main characteristic that could function as starting point to analyse the potential convergences with immersive VR media and can be transformed around the peculiarities of 360° cameras semiology.

The second essential characteristic of Khon performances, and more generically speaking about Thai theatre, that should be analysed in this pages is its ritualistic component and heritage.

“Lakorn jatri is the older form of Thai theatre and its origins almost certainly lie in animistic rituals (*J.R. Brandon, Camb. Guide to Asian Theatre*)

As most of the form of theatrical representation, rethinking about Aristotele’s *poetica*, Thai Theatre have its roots in ritualistic events. “Another approach to try to decipher the birth of Khon (Thai drama representation) is connected to ancient ritual performances which were performed in connection with coronation ceremonies; similar kinds of rituals were also performed at other Southeast Asian courts” (*J.O. Mietinen, Classical Dance and Theater in South-East Asia*).

As most of the theatre performances around the world, Thai Khon most probably have its own roots into some form of celebration rather than rituals; those kind of performances were originally performed into royal courts for a restricted number of spectators mostly belonging to the Thai aristocracy of the time. A historical evidence of it is the main content of Khon itself: stories are directly taken from classic Myths (Indian *Ramayana*, *Ramakien* in Thai tradition) rather than folktales.

“Rama I, first king of the present dynasty of Thailand wrote and edited the *Ramakien*. His chief aim, no doubt, was to include within the story state ceremonies and traditions as pertaining to the royal palace” (*Phraya Anuman Rajadon, Essays on Thai Folklore*)

Studying in dept the ceremonial, and supposedly even ritualistic, roots of Khon Theatre is not the scope of this research so we will consider these ideas and previous academic contributions as sort of philosophical inspirations for generating the immersive audiovisual productions.

What does concern the argumentations around rituals and theatre is idea of audience placement during the representation; if theatre is proscenium staged, ritual is immersive.

We have exposed these ideas concerning contemporary theatre productions under the everlasting influence and teaching of A.Artaud; the intent of this research is to conjugate Thai Khon theatre and immersive medias using exactly those ideas and practices as inspiration.

The modern versions of Thai Khon are stage based, audience is physically separated by the performance that happens in front of it, on the proscenium. Rituals and theatre ontologically differ in this: the separation between audience and the performers is not only a matter of physically being involved into the action but it mainly involves distances between the observer and the object observed and the definition of predefined point of view.

As ancient rituals, immersive storytelling is ontologically participatory. The audience is not separated from the action, the audience is located within the action. If Theatre is proscenium based, rituals are immersive and, as we seen, immersive performances are ritualistic.

Thai Khon, as Theatre in general, has naturally lost his ritualistic components but considering and learning from the experiences of the immersive theatre avant-garde productions, merging old form of Thai Khon performances and immersive storytelling could somehow bring back those ritualistic, centred based, participatory dynamics between the audience and the narration i.e., Immersing and repositioning audience's point of view within the action in order to re-establish a primitive ritualistic engagement through the artistic representation.



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7) The immersive projects

The whole theoretical reflexion outlined in the previous paragraphs function as framework for the production of three immersive short films.

The three short features are very different among them and are indeed produced, both artistically and technically, reflecting the peculiarities and the challenges that immersive storytelling must face in relation to film, theatre and drama studies.

In order to put in practice the theoretical framework, the three immersive projects realised are: a classic Khon theatre performance, a contemporary theatre dance performance and a short feature film.

The first project is a traditional Thai Khon piece performed by four actors of the “ Baan Silapin” theatre company. The performance lasts for about 8 minutes and stages the battle between Anuman, the monkey god, and Maiyarap, his gigantic adversary. In the show, while the giant is performed by a real actor, Anuman is a puppet, moved by the three puppeteers simultaneously.

The action represented in the piece is relatively simple: the two characters chase each other, run in circles and battle until Anuman defeats the giant; the whole sequence of movements, hits and poses is harmoniously choreographed accordingly to the body movements that reflect the unique physical alphabet of Thai traditional theatre.

The ritualistic component and the challenge of adapting it from the stage to an immersive media, are the reasons why this specific piece was chosen.

The battle between the two characters traces a ritualistic confrontation between the hero and the villain; this kind of staged duel is basically present in any form of storytelling, ancient and contemporary, and it usually represents the main climax of every story told. The final duel is the moment when the hero faces his main opponent and overcomes his main fear.

As classic studies on storytelling, from Vladimir Propp to Joseph Campbell, clearly explain, the ritualistic element of this main “function” of plot is evident: the ritual passage from childhood to adulthood.

The ritual passage of “killing your demons” and become a full grown hero has been the core of every form of narration known so far and long before becoming the climax of the Hero’s journey, it has been a traditional form of ritual in many different cultures worldwide. (*J.Campbell, The hero with a Thousand faces*).

The stage representation of the battle between the Hero and The Villain is, in other terms, an archetypical representation of a ritualistic and educational passage to which every spectator can relate to.

Even though we can presume that ancient ritual battles involved the spectators as part of the action, the performed duel between Anuman and Maiyarap as we know it today, has been performed for centuries in accordance with the pro-scenic separation of audience and performers.

In order to adapt and capture in video the staged piece to the immersive media, few adjustments have been necessary.

The performance didn't require any adjustment in terms of temporal development and editing: the chronological linearity of the scene fits perfectly with the narrative mode of immersive media storytelling. The action is filmed without interruptions from beginning to end; technically it consists into placing the camera within the action and let it film the performance. On the other hand, the mode of performing of the actor and the three puppeteers required some preliminary adaptation.

The traditional proscenium setting of the piece needed to be rethought to match the 360 degrees angle of the camera point of view and therefore the movements of the performers needed to be bent around the camera itself. If traditionally, the performers would act around an angle of 180 degrees facing the audience in front of them, filming with immersive cameras required to yaw the point of view and consequentially readjust the whole performance around this 360° immersive angle.

The actor and the puppeteers transformed the piece in a sort of circular dance that places the spectator at the centre of the action and they easily modified few passages of the piece in order to interact more directly with the camera and render the whole performance more interactive and compelling. The result is fascinating and it restated the feeling of being part of a performed ritual rather than a staged piece.

Audience will partially gain the perception of being involved in the action, to be indeed immersed, and therefore we can finally endorse the hypothesis previously stated that immersive media and ritualistic forms of representation include very similar semiological modes of representation.

The second project realised is a short performance, about five minutes, is a contemporary theatre-dance executed by two professional dancers.

The performance is contemporary in terms of visual style and design; two young dancers display, through choreographed body movements, a turbulent relationship between a man and a woman with a dramatic ending. The main intent of shooting this piece was to analyse the creative interaction between contemporary theatre and immersive media by adopting as guideline the theoretical framework of Antonin Artaud and in particular the concepts of "experience machine" and "Realité Virtuelle".

The idea was to force the audience to immerse into an unpleasant and intimate situation performed by a couple, and force the spectator to be a direct witness of other people emotions with an unconventional point of view. In the scene the panoramic camera is placed at the centre of a dining table of an ordinary dining room; the two actors perform and express their feelings dancing around the table without touching each other and, considering the angle of view, they constantly avoid to be in the same portion of space filmed.

The final result is surprising, puzzling and slightly sinister.

Being immersed in a situation of intimacy into which we actually do not fit in and being forced to observe the private dynamics of a crumbling marriage is, on one side, rather disturbing and unpleasant but on the other side, is also unconventional and consequentially compelling.

The spectator is forced to observe what happens between the two lovers but he is still able to select which one of the two dancers observe with more scrutiny. The representation of events performed to the passively observing spectator correspond almost exactly to the “Experience machine” conceived by Artaud: the audience is so close to the performance that can feel and experience their feelings.

The third and last project realised is a short feature film.

The screenplay of the short immersive movie, that lasts about 5 minutes, is original and it was written expressly with the intention of elaborating an immersive storytelling experience. This last project has therefore been the most challenging one, in technical and creative terms, and it has been the production that more than the others allowed the researcher to explore the potential of immersive filmmaking.

The narration in the movie is rather simple and the whole project mainly focuses on making a creative use of the immersive camera. The movie basically has no dialogues and develops the whole narration around two characters acting in a bizarre location; the blocking of the scene has been carefully designed around the two actors in order to let the action flow mainly through their movements and interactions.

Being the movie a sort of short “Irony thriller”, the screenplay contains a final plot twist and an ultimate jump scare; these elements might seem not too relevant if analysed uniquely in terms of storytelling but they are crucial if considering the use of the immersive camera with a narrative intent.

As mentioned, the movie is extremely simple but it represents a potential way of using the immersive media narratively and it should be approached as an experiment realised specifically for this research.

The entire workflow of the production has been the main focus of interest of the research and it allowed the researcher to define and contextualise core matters and issues related to immersive storytelling.

The next and last chapter will expose all the elements and thoughts emerged from the creation of the three production and in particular the feature one.

8) Conclusions and Speculations on the future of Immersive media

The theoretical reflexion and the production of the three short films leads us to few final considerations about what it means to produce, as authors, and enjoy, as spectators, immersive storytelling.

The first general conclusion is that somehow short feature films, those that focus on storytelling rather than the innovative user experience, result to be less involving and appealing to the audience.

The main reason for this lack of engagement is rather simple: the media is still dominating over the content.

We observed this peculiar issue in every stage of developing the practical research: the theoretical framework was elaborated mainly around semiological considerations on how to transform traditional visual language to something mediated by a disruptive technology. The script writing process of every single project started off considering how to adopt the new media in the story before considering the content itself. The feedbacks received from test audiences (after the projects were completed they were screened for a whole day to a group of 20 spectators that provided comments on the experience) were mainly about the impressions gained by using the new media rather than about the story told.

The results were predictable. Immersive media, especially considering the spectator experience that is necessarily mediated by wearable VR visor (t goggles), are still perceived as an entertaining experience rather than a media to tell stories. “ The rollercoaster effect” seems to be an integral part of immersive storytelling, both for what concerns the creation of contents and the expectations of spectators.

In the projects realised, we tried to explore the immersive media accordingly to the panoramic point of view and the original form of storytelling.

The innovative way of observing the video contents seem to dominate over the story itself.

Some passages of the project realised resulted particularly hard to be followed: the spectator has to choose what to look at and cannot be guided through this process as it used to be in traditional filmmaking. In other terms, the main duty of film directors is to choose and frame a selected portion of space, to choose specific events happening in the story and provide a specific angle of view to the spectator to observe the story. Immersive media doesn't display this pre-framed selection of events and forces the spectators to select which part of the set to look at and consequentially which part of the story to follow.

In immersive media spectators are forced to engage in an artistic operation that is traditionally and exclusively realised by the director.

The crux of the matter is that spectators are not prepared to do so and probably are not even willing to do so. The common deal in film making is that audience can simply enjoy the story by letting be guided into it while immersive medias require the audience to guide themselves. In other terms, there is a huge difference between been entertained and be part of the entertainment, which is the same difference between attending a theatre piece and enjoying a ride on rollercoaster: in the first case audience passively watch a series of events, in the second case audience actively interact.

The practical creation of the projects proved that immersive media still ontologically suffers this bivalent status.

Watching an immersive story cannot be compared to watching a regular feature film and probably the two should not even be compared.

The hypothetical discrepancies in the mode of representation between immersive and non-immersive films have been demonstrated by the projects and the response that they arouse in the target audience.

The media itself still dominates the mode of representation and it becomes prevalent over the content itself; so far it is not easy to predict when and how this divergence will end.

As we described in the previous paragraphs, the tech market seems to be pushing all the necessary items of immersive technology but, unfortunately, the content market is moving slower. We can suppose that immersive filmmakers are facing all the previously described difficulties but as long as new contents are not created, filmmakers will not upgrade their knowledge and the audience will not get familiar with the new modes of storytelling. It is a vicious cycle.

We can, in conclusion, try to predict what the close future of immersive media will be and how the entertainment industry could potentially adopt it to create new contents.

Gaming seems the most obvious one. The video games industry has been growing uninterruptedly since decades and the immersive goggles match perfectly the storytelling and the imperative interaction that video games require. To be fair, the gaming industry has been successfully exploring the immersive media for years and on the market there are already many VR games available. So far, it seems this specific market is the only one with a bright future ahead.

Another potential use of immersive media could be art installations and museum applications. For such applications it would be interesting to expand the field of research and practice to Augmented Reality; this type of technology actually involves a live reproduction of the surrounding environment and several elements added to it and interacting with it.

This potential application can produce many unexpected and creative results and it might even explore new solutions for what concerns experimental storytelling and interactive forms of ritual.

The potential future application of immersive media that more than any other could include storytelling and that definitely has common traits with what the focus of this research is documentary filmmaking.

Considering the fact that immersive shooting should be approached as an experience machine, documentary filmmakers might find in panoramic cameras a new great tool to narrate their stories and capture the world around us. Documentary films are, as feature films, produced around a solid narrative structure but they visually rely on real locations and practical locations more than any other form of visual storytelling.

The technical and artistic peculiarities of immersive storytelling let us speculate on the idea that documenting real life stories with panoramic cameras might produce extremely engaging results. Wild nature documentaries, for example, could be a great field of research and practice for immersive shooters, some small production companies are actually already moving in that direction.

Also from a journalistic point of view, 360 cameras could implement the classic workflow of recording news: filming in panoramic mode means filming more events simultaneously and provide a unique and ubiquitous point of view on events and real life stories.

If immersive media will become popular to the mass, documentaries and tv news might greatly benefit from this new visual language.

What paradoxically remains more uncertain is the destiny of long feature films in immersive mode.

We have seen that short audiovisual formats of various contents seems to entertain the audience but producing a feature film entirely in virtual reality would presents many hurdles.

Above all, it is really hard to conceive spectators could stand the immersive experience for a time span of over one hour; to many factors make us conclude that both the audience and the technology are not ready for it.

Firstly, the goggles are not comfortable enough. They are still too heavy, slightly uncomfortable to wear and not really practical, and this is a major factor of distraction for spectators eventually watching a feature film.

Secondly, even though modern medias are more and more an individual experience, films still remain a form of art that is mainly consumed collectively, both in theatre and at home. This concept is secondary to none to the hypothesis formulated above; for a long time film and audience studies focused precisely around the experience of watching films as a collective art. Immersive media represents exactly the opposite: a form of fruition that places individuality at his essence. It is hard to predict if spectators will happily embrace the new self-serving media and abdicate the traditional collective and shared experience of watching a movie. This field of research is crucial and in the future, when immersive experiences will be more common and the availability of datas sufficient, it would need more indepth researches.

Third and last critical point, that more than any others might delay of few years the booming of feature films produced through immersive media, is the previously discussed discrepancy of motion and perception.

The fact that while enjoying an immersive film, the body of the spectator is not able to move along with the movements of the camera itself, is the cause of undesired and unpleasant perceptive side effect.

This effect should be experienced fist hand to be properly understood. It can be described as light vertigo or some kind of dizziness that will immediately stop the moment when the goggles are removed and the immersive experience ends.

The light dizziness caused by the goggles can be held for few minutes, therefore when experiencing a short format is still bearable. However, spending an hour and half watching a long feature immersive movie with a constant light vertigo is almost unthinkable; the audience is simply not ready to bare that kind of feeling and consequentially to accept it.

The discrepancy of motion is entirely caused by the use of the technology itself and is directly connected with the content of immersive stories or their narratives. Nevertheless, because of this discrepancy the creation of immersive stories is also affected.

The production of the three immersive projects has been also influenced and constrained by this side effect and several narrative passages of the short immersive feature films have been modified because of it.

this is something that both immersive film directors and immersive spectators have to deal with.

In this very moment, all the small technical issues, including the motion discrepancy, are part of the media and it is only a matter of time until we can define how and when the whole immersive experience will be improved.

For now we cannot predict the next step in the development of this technology and it is hard to forecast if the industry will evolve in that direction.

As a temporary conclusion, at least for this research, we can finally affirm that immersive storytelling presents huge and unexplored potentials, both for what does concern the production of content and related theoretical/ academic researches. On the other hand, the technology is not fully developed and consequentially the audience is not yet ready to assimilate the new media. Until those two elements are not sufficiently developed, it is hard to imagine how the industry will produce properly structured immersive feature films and consequently, we can not fully predict what the future of immersive storytelling in film will be.

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Clarifications and future developments of the research

The preliminary research can be considered concluded but, considering the practical and productive nature of the work itself, there will be several academic developments and further applications of the work.

The following bullets intend to provide additional informations about it.

- Introduce Immersive Video Tecnology to students.

Immersive cameras, Post-production workflow and Storytelling for VR will be included in syllabus of already existing courses (such as Tv production and Film Production).

- Academic articles.

Several passages of the written report will be deepen, rewritten and improved with the intend of publish them in form of articles on international Academic Journals.

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- Distribution of the projects.

The three feature shorts produced will be distributed to immersive film festival and showcases worldwide.

- Future collaborations with other Universities and Departments.

Considering the innovative nature of the media and the technology, other Univesities are developing similar researches and there seems to be many opportunities to collaborate on the topic.

Lasalle College (Singapore), RMIT Vietnam (Ho Chi Min City) and Yunnan Art Univesity (Kunming) already expressed their sincere interest to develop joint productions, workshops, and partnerships on field researches.