IMMERSIVE JOURNALISM, A "NEW FRONTIER" OF INFORMATION EXPERIENCE?

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ABSTRACT – In this paper, we study how journalists use Virtual Reality (VR) technology which started off as a form of entertainment to produce new forms of interactive narratives. The paper presents the context of the emergence of this new form related to news reportings and to VR technology in the light of media history and visual culture. One of the main implications of immersive journalism consists in putting the viewer in an environment she/he can explore. It is often described as a sense of presence. We will focus mainly on the VR reporting The Fight for Falluja (2016) by Ben C. Solomon (*The New York Times*) to study this effect of presence, which is usually associated with entertainment, which becomes a distant presence here, modulated by the writing of the reporting, or by the VR narrative.
Key words: Immersive journalism. Media. Virtual reality. VR storytelling. Sense of presence.

JORNALISMO IMERSIVO, UMA "NOVA FRONTEIRA" DA EXPERIÊNCIA INFORMATIVA?

RESUMO – Neste *paper,* analisamos como os jornalistas usam a tecnologia da Realidade Virtual (RV), inicialmente introduzida como uma forma de entretenimento para produzir novas formas de narrativas interativas. O *paper* apresenta o contexto de emergência dessa forma de relato da reportagem jornalística e da realidade virtual, com base na história da mídia e da cultura visual. Uma das principais implicações do jornalismo imersivo consiste em colocar a/o usuária/o em um ambiente em que ela/ele possa explorar. Isso é frequentemente descrito como sentido de presença. Centralizaremos o nosso interesse particularmente na reportagem RV "The Fight for Falluja" (2016) por Ben C. Solomon (*The New York Times*) com o objetivo de estudar esse efeito de presença, usualmente associado ao entretenimento e que se torna uma presença próxima, modulada pela redação reportagem, ou pela narrativa RV.
Palavras-Chave: Jornalismo imersivo. Meios de comunicação. Realidade virtual. Storytelling VR. Sentido de presença.

**EL JOURNALISME IMMERSIVO, ¿UNA "NUEVA FRONTERA"
DE LA EXPERIENCIA INFORMATIVA?**

RESUMEN – En este artículo, estudiamos cómo los periodistas utilizan la tecnología de Realidad Virtual (RV), que comenzó como una forma de entretenimiento para producir nuevas formas de narrativas interactivas. El documento presenta el contexto de la aparición de esta nueva forma relacionada con la información periodística y la tecnología de la RV a la luz de la historia de los medios de comunicación y la cultura visual. Una de las principales implicaciones del periodismo inmersivo consiste en poner al espectador en un entorno que pueda explorar. A menudo se describe como un sentido de presencia. Nos centraremos principalmente en el reportaje de RV The Fight for Falluja (2016) de Ben C. Solomon (*The New York Times*) para estudiar este efecto de la presencia, que suele asociarse con el entretenimiento, que se convierte en una presencia distante aquí, modulada por la escritura del reportaje, o por la narrativa de la RV.
Palabras clave: Periodismo inmersivo. Medios de comunicación. Realidad virtual. Narración de historias de RV. Sentido de presencia.

1 Introduction

"Journalism underwent a flurry of virtual reality content creation, production and distribution starting in the final months of 2015" (Doyle et al., 2016, p. 3) said the 2016 Knight Foundation report enumerating the U.S. experimentations by *The New York Times*, *The Los Angeles Times*, *USA Today* (Doyle et al., 2016, p.1). We do not know yet if it will be ephemeral or not but it produces effects on the renewal of practices in journalism and it reflects the dynamics of innovation which emerges in the gap between different cultural practices. The Journalism Lecturer Sarah Markewich (Markewich, 2018) has listed a "top VR content to look out for and learn from" which mentions Clouds Over Sidra (Within, United Nations, Samsung…), 6 x 9 (*The Guardian, Google News Lab…*) or The Fight for Falluja (*The New York Times*, *The Pulitzer Center…*). In France, France Television or the TV channel Arte experiment and broadcast VR videos. In the recent past years, VR journalism has emerged from its early experimental phase to become a more integrated part of many newsrooms. At the same time, technological advances have made the medium available to consumers. In 2016, a 360-degree video "Surviving Aleppo" broadcast by CNN was seen by millions of people on *Facebook* (2,8 M in October 2018). In

2017, CNN launched a new CNNVR unit staffed by correspondents in 12 cities around the world. Shortly after, the company released an Android Virtual Reality app and desktop site for anyone interested in exploring its immersive, 360-degree videos. In 2018, the company launched Oculus Rift headsets called CNNVR. So, how to watch Virtual Reality today? We can experience immersive storytelling on a computer using the mouse to guide the view point, on the phone (the app uses a smartphone's accelerometer to follow movements) and on headsets (according to CNN, the best way to watch VR stories).

In this paper, we study how journalists use VR technology to produce new forms of interactive narratives. VR started off as a form of entertainment. More uses of augmented reality are rising into existence, such as VR journalism. Immersive journalism is a hybrid form which mixes languages of journalism, video games and cinema located at the interface of these social worlds. How has VR become a medium for the journalism field? To what extent does it renew information experience? We will focus mainly on the reporting The Fight for Falluja (2016) by Ben C. Solomon (Pulitzer Prize-winning filmmaker and video journalist for *The New York Times*) which experiments this media. It will be studied more precisely through the viewer figure as is implied by technology (devices and technological environment) and supposed by information design. Many experiments in digital journalism are made to engage audiences. New forms are expected to allow the consumer of news to play an active role in searching for and defining the content: for example, in newsgames (Lamy & Useille, 2012), (Mauco, 2011) or I-Doc (Gantier & Bolka-Tabary, 2011). The medium of the Web generates different formats of the story and new ways to produce and consume news (Blanchard, Lamy & Useille, 2011).

What kind of "promises" of renewing journalism? VR journalism would immerse the viewer in a way that journalistic reporting can't quite achieve. It is a kind of response against standard treatments of news which arouse disinterest of the audience even if it involves human pain. It is expected to create a deeper connection between the subject and the viewer. "VR content if done well is really powerful. It can make you quake with fear, it can make you laugh with joy and it can make you cry", said Zillah Watson, BBC commissioning editor for virtual reality in a 2017 interview. The emotional responses of the viewer play a central role in information experience. Another issue to be addressed is the status of mediation in VR journalism. In this regard, VR -and discourses about it- illustrates the long story of "mediatic comfort" (Marion, 1997, p. 67): a good media should

be "transparent" to give us the illusion of reality. How does VR technology achieve this? Finally, VR is an object to think with: it reflects on the dynamics of transformation, diversification, and innovation of journalism.

This paper is organized as follows. Section 1 contains an explanation of the research background used to analyze immersive journalism and presents the context of the emergence of this new form related to the reporting as a journalistic genre and to VR technology in the light of media history and visual culture. Then, in section 2, we study one of the main implications of immersive journalism according to the discourses of its supporters: to put the viewer in an environment she/he can explore. It is often described as a sense of presence. These two sections serve as a basis for section 3 which proposes an analysis and a discussion about The Fight for Fallujah produced for *The New York Times* in 2016 as a significant sample of a VR reporting

2 Journalism and VR: media attractions

Immersive journalism is studied in this paper in a conceptual framework that gives a central place to "medial" experience as it has been developed at the confluence of various research currents: North American media studies, German Media Theory and media philosophy, Belgian media narratology, French information, and communication sciences.

The specificity of the media called "mediality" (Mersh, 2018) is to ensure a dual function of mediation and communication. "Mediality" plays a central role in understanding knowledge and perception: it allows access to something else (exteriority). It operates "instead of" and in doing so it means something else than what it represents. "Mediality" performs meaning. Philippe Marion's research (Marion, 1997) helps to clarify this operation. The medial experience puts reality at a distance, staging the world while giving the illusion of possible transparency. In the case of VR, this promise is particularly strong: immersion would be achieved using the so-called transparency of the media that delivers it. How does it do this? Does it succeed in doing so? To define it, it is necessary to characterize the technical properties of the support, the semiotic configurations it requires and the communication and relational devices it involves.

This paper questions immersive journalism in terms of the information experience offered to the viewer. The notion of experience goes beyond notions of use and reception to integrate practices and highlight

the sensitive, cognitive and emotional dimensions of the construction of meaning involved in media forms. This notion comes from the field of design and is particularly used when defining User Experience following the founding work of Donald Norman (Norman, 1988). The notion of experience has a heuristic interest because of its polysemy. It connects the senses and cognition, subjective experience, representations, and procedure. "The experience allows us to think dialectically about what is structuring in a situation, a device, a medium and what the subject invents by also experiencing himself in this experience. This notion, therefore, goes beyond those of "use" and "reception" to broaden towards practices and highlight the sensitive, cognitive and emotional dimensions of the construction of meaning" (Leleu-Merviel, Schmitt & Useille, 2018, p. 3). In this paper, "viewer" is chosen instead of "user" or "receiver". Each of these terms belongs to a different scientific tradition: "user" is used by designers of digital devices while "receiver" belongs to the field of media studies. "Viewer" insists on the visual dimension of the VR reporting but overlooks the other sensitive aspects (sound for example). Therefore, this notion is partly appropriate. This approach makes it possible to focus attention not only on the interaction between a subject and an object but also on the transformation of the subject that becomes first in this case. The question of use is thus shifted towards the experiential dynamics of the subject which leads to questioning the lived experience of the world by a subject via an object, here, a media (Bonfils, Collet & Durampart, 2018).

What is VR journalism? Nowadays, VR and immersive storytelling take several forms in the field of journalism. The Knight Foundation report on the future of VR published in 2016 defines it in these terms (Doyle et al., 2016, p.4):

> (...) "virtual reality", which, properly defined, creates environments that allow people to be "present" in an alternative environment; "augmented reality", which starts with the real world and overlays virtual objects and information; and "spherical" or "360-degree" video, which captures an entire scene in which the viewer can look up, down and around.

The 2018 USC Media Impact project report (Karlin, 2018, p. 5) specifies: "VR is not defined by any single piece of technology (such as a head-mounted display), but by a combination of features that together construct a world where users can take action".

In this paper, Immersive journalism will be considered more especially through the form of 360-degree videos watched with VR headset.

The case of immersive journalism is particularly noteworthy because it involves two categories of mediations: those of news reportings and those specific to VR, which merge into an original media configuration producing an experience of information.

VR reporting is part of the long history of journalistic reporting and pursues its objectives. Reporting is a journalistic genre that is the product of history and a set of professional practices. Thus, after the First World War, the "grand reportage" became in France a "window on society and the world" (Martin, 2005). The journalist goes out to "see, listen, understand" as reported by the journalist Henri Béraud in 1932. Today, professional training manuals emphasize that the journalist is a "mediator of reality" (Agnes, 2002, p. 244) and the basis of the reporting exercise is to see and hear by going into the field, which guarantees the reliability of the reporter's testimony. "It fades away to make people see and hear" (Brabant, 2012, p. 11). This erasure, obtained through the artifacts of journalistic writing, makes it possible to give the "reader-spectator" his or her full place. "Reporting consists in reviving the event, the situation in such a way that the reader has the impression of attending it himself, of participating in it in order to feel concerned" (Agnes, 2002, p. 244). "Successful writing immerses the reader into action". Through his story and descriptions, the journalist will "make people see, hear, smell and even taste or touch" as the same book states. VR journalism tries to do so with VR technology.

Information and communication sciences researchers Florence Le Cam and Denis Ruellan have recently shown that for the war reporter, the immersion of her/his body in the event allows her/him to fully participate in the emotions of others. This emotional feeling is both a powerful reason for attachment to the profession and makes sense of it: "making your body and mind the sensitive plate of the world being made is a condition for achieving a share of rationality" (Le Cam & Ruellan, 2017, p.12). Emotion acts as a filter to guide the construction of the reporting. The reporter's immersion constitutes a kind of experimentation with the reality that has the value of truth in that situation which is experienced in all the emotional aspects it provides. For these same researchers, the reporter then contributes to being the reader's gaze and body, able to reporting "the rationality of an observed world, and the emotionality of a lived world" (Le Cam & Ruellan, 2017, p. 86). If this "intense life" as the philosopher Tristan Garcia (Garcia, 2016) calls it, is particularly pursued by the reporter, the atrocity of war scenes sometimes leads him to voluntarily take distance with the event. Immersed in the action,

using a medium (for example, a camera) between oneself and reality provides the feeling of being protected against this reality, note Florence Le Cam and Denis Ruellan (Le Cam & Ruellan, 2017, p.147). The analysis of the reporting The Fight for Falluja as an example of immersive journalism must take into account this place of the body and emotion in the experience of reality as they are mediated in this war reporting. For example, emotion is seen through the journalist's body in sequence 4 of the reporting (see table below). While he is resting, the journalist has a fearful reaction at 3'50". He hears a loud noise that sounds like an attack. Apart from its referential content, does the image bear the clues of this emotion? How is this emotion communicated and how does the viewer receive it?

VR journalism uses a technology that is not so new. The foundational experiments were made by the American computer scientist Ivan Sutherland in the 1960s. He built in 1968 a device named "head-mounted three-dimensional display" that would generalize the flight simulator. The HMD purpose was to "present the user with a perspective image which changes as he moves" (Lister et al., 2009, p. 114). VR technology caught the attention and interest of researchers and artists in the 1980s and 1990s, but it was not mature enough to enter the market. Now, the available technologies are faster and lightweight, and further researches into perception can be drawn upon.

In this way, VR technology must be understood in the light of media history and visual culture. For example, the Sutherland experience – being "in" rather than "before" an image – is part of a long tradition of immersive experience, stepping through Alberti's window". The baroque ceiling paintings invite the spectator to enter a virtual space. Later, the nineteenth century saw the installation of 360-degree images known as "panorama". The spectator was positioned in the middle of an illusionistic painting of a landscape or a historical event. VR technology belongs to a continuum technological development which developed outside of the journalistic field.

Why is VR used in the newsroom? Chris Milk, one of authors of Clouds of Sidra (2015), which depicts the daily life of a twelve-year-old girl named Sidra living in the Za'atari Refugee Camp for over a year, declared that VR shows "raw" reality, without filters, which allows the immersion of the viewer and the identification with the reporter or another character concerned by the events.

This is why immersive journalism using VR appears to be a natural extension of reporting, fulfilling its promise: to allow the

receiver to experience the information as closely as possible by transporting it to the field so that she/he is "concerned" by what is happening elsewhere. The encounter between this type of journalistic narrative and VR seems obvious because of shared objectives but with a new experience configuration. From 2016 onwards, mainly, new stories meet this form of mediatization suitable to its expression. If "mediality" performs meaning, then it must be considered in the interaction of plural, journalistic and technological mediations, which are at the heart of the viewer's experience of information. What would be the "médiagénie" of VR reportings (Marion, 1997, p. 86)? What kind of viewer reception emerges from such a medial configuration?

3 What is the "médiagénie" of VR journalism?

Its main features are described in many discourses as a sense of presence and also a sense of agency. VR is one of the many interactive technologies used by newsrooms as "a new opportunity to connect with audiences" (Karlin, 2018, p. 5).

The VR pioneer Nonny de la Peña defined in 2010 it as "the production of news in a form in which people can gain first-person experiences of the events or situation described in news stories" (De la Peña, 2010, p.291). More than the representation of the user by an avatar, it is the possibility of acting that promotes the experience in the first person.

Sharing the basic elements of interactive journalism, deep immersive journalism goes further in the immersion by generating a sense of presence in the user. Also, in the same paper, and quoting Slater's work (Slater, 2009), De La Peña identifies several conditions necessary for the emergence of this sense of presence. The first, the place of illusion, is above all a quality of the experience itself. The sensorimotor contingencies must be similar to that of physical reality to create this place of illusion conceived as "the illusion of being in the virtual rendered space even though you know that you are not". The second condition is the plausibility, and it concerns the dynamics of the event and the situation. These two conditions together are sufficient to produce a RAIR (Response-as-if-real) in the subject. A third condition, a representation of the body, favours the other two conditions and therefore also the involvement of the experimenter in the action. Thus, the stakes of this sense of presence are important in

the field of news: it facilitates access to the gaze, to the sound, and perhaps even to the feelings and emotions, which – as we have seen – is sought in the writing of the reporting.

Immersive Journalism is more realistic because it "shows everything", but as H. Kool notes, it no longer shows, and this is essential, mediation: the journalist's print disappears, it is no longer exposed (Kool, 2016). The deletion of the journalist is the condition for the presence of the reader/viewer. Immersive journalism thus oscillates between two poles: the amplification of the sense of presence and the absence of mediation. This point deserves to be discussed by comparing it to our case study.

On the other hand, the presence effect mentioned by De La Peña raises questions. If there is a presence effect, how does the subject experience it? This presence effect makes sense in the particular field of VR, which is above all a technology. However, a technology carries with it a set of speeches, lexicon and new words. Indeed, a technique is not only applied or conceived, but it is also told through speeches that help to expose it and make it known. The etymology of the term reminds us of: a techno-logy is conceived, in its authentic sense, as a discourse on the technique, i.e. the *logos* of the *tekhnê* (Carnino, 2010). The scientific aim of our analyses requires us to question the status of this lexicon that appears in these techno-logies, in order to ensure that the meaning of words is sufficiently elucidated not to make dogmatic or meaningless use of them. The use of philosophy is necessary because the specificity of this discipline is to conceptualize (Deleuze, 2005, p. 10), that is to bring out or construct the meaning of notions. Through this conceptualization work, what was only a vague idea has become a defined concept, which can be used as an object and tool of thought.

This technology of immersive journalism thus formulates a promise of a sense of presence. However, this is only a sense, not a truly full and complete presence: is it only a substitute for presence, or an incomplete presence, or some other kind of presence? In *L'image virtuelle*, the French philosopher Jean-Clet Martin questions the status of reality proposed by the virtual image. For him, there is no opposition between the real and virtual in VR: the virtual image is real "for our perception capable of entering or immersing it" (Martin, 1996, p. 31). The sense of presence is thus aroused by our perception which is introduced, immersed in the *lieu* of the image. This *lieu* (from the Latin *locus*), refers to a view point, a perspective modeled

from the material reality of a *site*, (from the Latin *situs*) which in the case of immersive journalism is what was filmed. A presence is realized in the materiality of a *situs*, but a sense of presence is realized in the *locus* of the virtual image, and refers to a perception, an ideality, of the same order as that which the memory produces: "the view point will not be touched, felt like a stone or a brick. It is the whole difference between the world as it consists and the world as it is experienced, crossed by a perspective cut that persists in the memory" (Martin, 1996, p. 20). So, the sense of presence in VR is a non-material experience of presence and therefore possibly disembodied, reduced to a disembodied gaze and listening (because the perception of the VR is reduced to these two modalities) but nevertheless real for the subject who experiences it. The place of illusion, identified as a condition of VR journalism by Nonny de la Peña, can only be an illusion in relation to material reality and not in relation to the virtual image. The *locus* of the virtual image in which the subject is immersed is actually perceived, it is not an illusion.

Transport to a place of illusion is done at the cost of disembodiment and at the same time by the wearing of heavy equipment (headset) which makes the presence curious. The subject's physical body feels the technical device weighing on it on one side, while it is undergoing the effects of VR or acting within it on the other side. A promise of the reporting is to transport. What immersive journalism proposes is an act of uprooting: it transports us into other reference planes that lead us to interrogate this world of stable meaning. As the French sociologist David Le Breton notes, the "technosciences" currently developed tend to consider the lived body as "an accessory of the person, an artifact of presence" and tend to dematerialize it (Le Breton, 2013, p. 16).

We would now like to clarify what this experience of the sense of presence can mean for a subject in the light of a recent production of immersive journalism. This must be understood focusing on the materiality of the object and to the subjective experience of a viewer who is informed in this way. How is this immersive and media experience structured?

VR belongs to the family of interactive images that have common properties due to their digital nature (Gardies, 2007). This kind of image is incomplete: it only shows a state at a given time *t* of its display, which varies according to the viewer's requests. This image awaits an intervention from the user to be updated. This is

why this image leads the viewer to question its meaning and invites him to reflect on his position as a viewer, as a "spectator-actor" (Weissberg, 1999), forcing him to adopt an attentive meta-gaze in order to understand how to circulate in the image

4 Analysis of The Fight for Falluja

We will answer this question by studying the experience of The Fight for Falluja (11'08), produced by Ben C. Solomon (Pulitzer Prize-winning filmmaker and video journalist for *The New York Times*) and by Jenna Pirog. Broadcast in December 2016, it has been "viewed over 3 million times across Youtube (2018) and featured in 6 film festivals to date. The Fight for Falluja was released in August 2016 in conjunction with *The New York Times Magazine*'s epic 40,000 words narrative". Recognized for his journalistic and realization skills, he was awarded the "Excellence in immersive storytelling in 2017" prize.

The analysis focuses on the study of the experience of sequence 1. It will be based on a cross-fertilization methodological approach that allows the understanding of the viewer experience of VR reporting as spect-actor and the experiential dynamics of the subject. It is based on

> – Semio-pragmatic analysis: it starts from the analysis of the writing of the reporting, which provides instructions for the viewer, who is ultimately a maker of meaning. This approach focuses on the context of "receiving" the "texts" (Odin, 2011). The reporting The Fight for Falluja will be approached in the broader context of media communication, which supposes a mechanism in which multiple mediations interact to determine "reception".
> – phenomenological analysis: it highlights the constitution of meaning for a subject, in particular, the experience of the sense of presence. This investigation focuses on the contents of consciousness. The subject of phenomenology is located in time and space, from which the world unfolds. "It is therefore by starting from this phenomenon that the thing represents, in a way reversing this thing, that we go back to subjectivity in its modes of constituting the object" (Meyor, 2007, p. 110). The phenomenological approach accounts how a phenomenon appears to a subject. In this experiment, the researcher is the subject who experiences the VR reporting.

The reporting is divided into 7 parts which are described according to the methodology of sequence analysis. Here is the chronology of the events of the story reported.

Table 1 – Sequence analysis of The Fight for Falluja

Sequence	Timeline	Events	Observation
Sequence 1: With a sniper 0'00" to 0'28"	0'00" to 0'28"	A fixed shot, on the roof of a building. A sniper fires from this roof, riposting shots come from the outside. Five men are present: coalition soldiers and 2 journalists, all squatting or lying down so as not to be in sight of enemy fire.	Voice-over
	0'22"	A change of camera shot. The camera is approaching the sniper.	
	0'23"	The sniper fires a shot.	
Interlude +title	0'28" to 0'33"	Video title appears in white on a completely black background.	
Sequence 2: Through Falluja, in an armored vehicle 0'34" to 1'04"	0'34" to 1'04"	Subsequence 2.1: A tracking shot. A camera placed on the hood, outside an armored vehicle driving through the devastated city and emptied of its population (except for a man clinging to the front of the vehicle).	Voice-over: « Falluja is a ghost town ».
	0'35" to 1'30"	Subsequence 2.2: A fixed camera shot inside the vehicle (the driver's movements indicate that he is driving). Five men: soldiers, the journalist and his translator. One of the men is holding a weapon, ready to fire.	Voice-over: belongs to the journalist because he introduces himself.
Interlude +title	1'31" to 1'34"	Title in white on a black background: "Part I: Taking the city" appears in fade.	
Sequence 3: The soldiers in action 1'35" to 3'31"	1'35" to 1'47"	Subsequence 3.1: A fixed camera shot, on the front line, with the coalition army at the center of the battle. Numerous exchanges of fire (mortar fire and Kalashnikov fire).	Voice-over: « my first trip on the front line »
	1'48"	A change of camera shot. The enemy ripostes with Kalashnikov fire that creates a panic movement: everybody lowers.	
	2'59" to 3'31"	Subsequence 3.2: A fixed camera shot, in a military base, many soldiers and armored vehicles.	
Interlude	3'32" to 3'33"	Black screen.	
Sequence 4: The soldiers at rest 3'34" to 4'09"	3'34" to 4'09"	A fixed camera shot, in a restroom with the soldiers.	Voice-over
	3'50"	Deafening noise, everybody jumps, thinking they hear the sound of an attack.	

Interlude	4'10" to 4'11"	Black screen.	
Sequence 5: On the way to victory	4'12" to 4'25"	Subsequence 5.1: A tracking shot, a camera placed on the roof of a vehicle driving along a concrete wall.	Voice-over
4:12 to 6:02	4'26 " to 4'27"	Black screen.	
	4'28" to 6'02"	Subsequence 5.2: A fixed camera shot, in Falluja, in the middle of a battle. A camera placed on the roof of a vehicle.	
	4'50"	A change of camera shot: the camera is placed on the ground. The soldiers march.	
	4'56"	A change of camera: view of soldiers advancing slowly in the city.	
	5'10"	A black screen then a change of camera shot.	
	5'35"	A black screen then a change of camera shot.	
	5'35"	The winning coalition soldiers pose with their enemy's ISIS flag upside down ("sign of disrespect").	
	5'45"	A change of camera shot.	
Interlude+ title	6'03" to 6'06"	Title in white on a black background: « Part II: The Aftermath »	

Sequence 6: The consequences of the conflict 6'07" to 7'16"	6'07" to 7'16" 6'01" 6'29" 6'55" 7'17" to 7'19" 7'20" to 8'07" 7'20" 7'50" 8'08" to 10'05" 8'28" 8'57" 9'37"	Subsequence 6.1: A fixed camera shot. The camera is placed in the center of the devastated city, of collapsed houses. No human beings. A black screen, then a change of camera shot. A camera inside the remains of a house. In the picture, two cages in which the ISIS soldiers locked their prisoners. A change of camera shot. A camera inside one of the cages, the door closes. A black screen. Subsequence 6.2: A fixed camera shot, a camera located by a roadside. In the distance a corpse abandoned by the ISIS soldiers. A change of camera shot: a camera is placed back in town. Subsequence 6.3: A fixed camera shot, a camera placed on a crane, allows to see the immensity of the refugee camp in the middle of the desert, away from the city of Falluja. A change of camera shot: a view of the dilapidated refugee shelters, a sandstorm. A change of camera shot: a camera in front of a refugee family. A change of camera shot: inside a shelter, with another family.	Voice-over Voice-over, talk about the corpse. Refugees talk in front of the camera.
Interlude	10'06" to 10'07"	A black screen.	
Sequence 7: Through Falluja, in an armored vehicle 10'08" to 10'49"	10'08" to 10'49"	A Tracking shot. A camera is placed on the hood, outside an armored vehicle driving through the devastated city of Falluja (exactly like sequence 2, but this time, no human presence).	Voice-over
Video end credits	10'50" to 11'08"		

The test took place in our research laboratory DeVisu (Université Polytechnique Hauts-de-France) in October 2018 in a space arranged as a private individual's living room with TV, sofa, and living room furniture. It is large enough to allow movements. The spectator is equipped with a PSVR headset (PS4 console headset). The PS4 is connected to a TV. The video is broadcast on YouTube. The analysis follows the flow of consciousness of the viewer in order to reproduce the specific nature of his/her experience that unfolds over time.

The viewer is first surprised by her/his inclusion (direct and without transition, as if she/he were opening his eyes to a new reality after a trip) in the space of the image. In the first sequence, he/she is on the terrace in the middle of the soldiers and next to the two journalists who are protecting themselves behind the walls surrounding the terrace. Like them, she/he doesn't see what's beyond the walls. Only a minaret emerges. A sniper is lying down and taking the time to adjust his shot. He's firing. The spectator is inside the scene. People and things are distributed in space and offer themselves to the viewer at its scale. If there is any presence, it is first of all that of this out of reach world that she/he now seems to inhabit. With the 360-degree VR, the afilmic reality (Souriau, 1951), i.e. the real and ordinary world that exists independently of this reporting, becomes iconic because of the dissolution of the frame as a space of representation. The purpose of the frame is to delimit the surface of the image and thus to distinguish the field from the off-camera. With the 360-degree VR video, no more off-screen: reality is a spherical plane without edges that cannot escape the eyes that scan it.

The "mediativity" of VR operates through its pragmatic effects: the spectator stands at the middle of the stage and sees the fights (sub-sequence 3.1) as moments of respite (sequence 4). The real seems to be perceived without mediation, in the "monstration", in the absence – at first sight – of an organizing principle (Gaudreault & Jost, 2005, p. 25) that would guide the gaze. The reality effect seems to be maximum, i.e. the degree of analogy that the viewer can establish between what the image represents and reality. The test of reality allows us to access its truth.

But, as in reality, the viewer can get lost in the image, in search of what deserves attention. Here, in this first sequence of The Fight for Falluja, the shooter and, around him, the characters who observe him, attract the viewer's attention: they structure the space of the image in a horizontal plane oriented by vanishing lines (drawn by the shooter's elongated body).

However, the feeling of freedom that animates this gaze quickly coexists with the feeling of being attached to a fixed point. One of the cameras whose location defines the coordinates of "ocularization", i.e. from the view point, in the strictly visual sense (Jost, 1987). The viewer's presence is part of this point of reference where the body usually plays a central role because it is on the basis of this that we build our reference frame of meanings, our lived world. However, here the gaze is disembodied and as if suspended in the air. Moreover, even if she/he stands next to the other characters, the viewer is invisible and cannot communicate with them. He/she is reduced to this look of omniscience and impotence. Her/his presence in the image is that of a ghost. Present, concerned perhaps, but full of absence.

In this sequence, the "monstrateur" of the reporting is disempowered: it is reduced to the mechanical role of capturing reality (Gaudreault & Marion, 1994). In VR journalism, this role is no longer given to an operator, to the reporter, but to the 360-degree camera which embodies the choice of a non-intentionality of "monstration", a condition of the analog transparency of the reporting. The deletion of the journalist is the condition for the presence of the reader/viewer, which is obtained thanks to the analog transparency of the image.

However, this first impression will not last as it would in a video game. The "mediativity" of VR is revealed in these details. In the first sequence, at 22", the point of view changes. No focal length change but simply moving the camera on the terrace. The viewer was now placed very close to the shooter who fired (22"). At 25", a computer graphic appears on the image above the shooter: "The Fight for Falluja", the title of the reporting. At 30", a fade to black gives way to the next sequence. Then, the spectator clearly perceives the music, the voice-over of the commentary, which turns out to be that of the journalist (sequence 2), the editing that allows the user to move on to the next sequence. All these elements are traces of the intervention of the narrative instance whose task is to structure the profilmic material transmitted by the monstrator (the camera in this case) and in order to make a story: this instance is manifested in the traces left by the post-production operations (editing, computer graphics, titling, music) or, during the capture, in the simple placement of the camera. This was also a key issue in the first 360-degree/VR journalism productions in 2015, as Clàudia Prat, Media Innovation & Producer - 360-degree video / Associated Press / *New York Times* / Univision (Prat, 2018) notes. The trend was

bringing the camera inside locations that were difficult to access, like prisons or refugee camps.

The voice-over is common in an audiovisual reporting. "It is the complementary oral narrative, the explanation of what the reporter witnessed", according to Stéphanie Brabant (Brabant, 2012, p. 179). "The voice-over serves as a revealer for the image, it tells what we must understand beyond the appearances", she writes later in her manual (Brabant, 2012, p. 181). In audiovisual reporting, it is as if the "monstration" itself were deficient and that this deficit had to be filled by saying something, contrary to what is practiced in documentaries (for example those of Frederick Wiseman). This voice expresses the rationality of the observed world when the emotions of the lived world permeate the virtual image. In reporting, audiovisual remains a means of "demonstrating and illustrating a journalistic discourse" that is intended to be "objective" (Niney, 2009, p. 120). If VR is used to reinforce the effect of reality, the voice-over and other traces of the narrative instance also contribute to the effect of reality (Aumont & Marie, 2016); they induce in the viewer a "judgment of existence" on what is represented, leading him to believe that what he sees is not reality itself but has indeed existed in reality, has been the subject of journalistic treatment which complies with the codes and standards of journalism. It is indeed a reality captured, shown, represented, treated by the reporting, put at a distance by the journalistic mediations of the narrative. The viewer is free to explore the space of the proposed spherical plane, but this freedom of movement is subject to the "homochromous" framework of the reporting designed to be consumed in an intrinsically programmed time (Marion, 1997, p. 82) due to the constraints of producing and broadcasting the reporting. The Fight for Falluja generates well "the illusion of being in the virtual rendered space even though you know that you are not" as we mentioned earlier.

How is this immersive and media experience structured? Basically, the reporting must reconcile the transparency of the media with the distance of mediation. VR journalism production achieves this transparency by including the viewer in the image and a reinforced reality effect. On the one hand, the viewer seems to experience the "real" world without mediation, as the reporter himself has experienced it, in the truth of emotion. We found that the emotion already appears in the journalist's visible body in sequence 4. But here, the reporter is no longer the look and body of the receiver. He abandoned it in favour

of a neutral "monstrateur", the camera. By his/her presence in the image at the camera place, the viewer lives the reporter's emotions, whose clues do not appear in the shots (no effects of camera shake for example: the camera is fixed and cannot express any feelings of the cameraman). Has the spectator become in the VR the avatar of the reporter? On the other hand, the distance of the mediation is assumed by the narrative instance which configures the space-time of the reporting and comments it in voice-over, in a calm and controlled voice. Two dimensions interact: transparency is embedded in the distance. The presence of the spectator is therefore justified as the organizing vector of these two dimensions, as a ghost invited into a world offered to his sight but out of reach, an explorer of spaces but a prisoner of a bygone era unfolded by the reporter's monotone voice. The shooter could fire, no bullet would hit the spectator.

5 Conclusion

This paper has investigated the question of the junction of VR technologies and journalism through immersive journalism and the prism of the information experience. To what extent is it still journalism? What does this bring to journalism and the information experience? We hypothesized that both VR and journalistic reporting pursue a common objective: to transport the viewer to the field so that he or she feels concerned. This promise finds favorable ground for its realization in immersive journalism. The original medial configuration it proposes was interrogated from its reception by the viewer, by means of an analysis based on phenomenology and semio-pragmatic.

The main results of our analysis are the following:

The combination of journalism and immersive technologies leads to the development of new information practices. These practices are not only understood through technological innovation but also through the unique viewer experience that it makes possible. Immersive journalism borrows and reconfigures mediation effects specific to each of these fields. Our study focused on the presence effect, which is interrogated from the point of view of media. This effect, which is usually associated with entertainment, becomes a distant presence here, modulated by the writing of the reporting, or by the narrative which remains very present. This study of a particular case could be extended to a broader corpus to generalize

our conclusions. Moreover, even if we observe an instability of journalistic and mediatic forms, we observe on the contrary a lexical permanence in the discourses of innovation through terms such as "agency", "transport", or "first-person experience". Finally, this study raises new questions about the quality of the information experience: to what extent does this experience modify the information process? How can it be observed?

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