



## DOSSIER TECHNOLOGICAL & CULTURAL CHANGES IN THE DIGITAL ERA

# The Ethics of Realism as a New Media Language in Immersive Media

*La ética del realismo como lenguaje de los nuevos medios en medios inmersivos*  
*A Ética do Realismo como uma Nova Linguagem de Mídia em mídia imersiva*

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**Abstract:** This work explores the ethical and moral limits of practicing realism in immersive nonfiction. To establish these practices, the nonfiction media ecosystem is analyzed from traditional to emerging immersive forms. Four significant forms of nonfiction works are discussed that reflect different ethics of realism: documentary, journalism, education, and cultural heritage. Through the description and presentation of each form, a provisional set of elements, variables, indicators and parameters that impact practices and ethics of realism are presented. These compositional elements can be implemented in the design, development and production of experiences for audiences that respect social, cultural, political, physical, and material realities.

**Keywords:** Nonfiction. Immersion. Realism. Ethics. Practices.

**Resumen:** Este trabajo cuestiona los límites éticos y morales a la hora de representar el realismo en entornos inmersivos de no ficción. Para establecer estas prácticas, se analiza el ecosistema mediático de no ficción, desde las formas más tradicionales hasta las formas inmersivas emergentes. Con el fin de ilustrar las diferentes éticas aplicadas al realismo, se analizan cuatro formas significativas de no ficción: documental, periodismo, educación y patrimonio cultural. A través de la descripción y presentación de cada forma, se presenta un conjunto provisional de elementos, variables, indicadores y parámetros que inciden a nivel de impacto en las prácticas y éticas en relación con el realismo. Estos elementos compositivos pueden implementarse en el diseño, desarrollo y producción de experiencias para audiencias que respeten las realidades sociales, culturales, políticas, físicas y materiales.

**Palabras clave:** No ficción. Inmersión. Realismo. Ética. Prácticas.

**Resumo:** Este trabalho questiona os limites éticos e morais da prática do realismo na não ficção imersiva. Para estabelecer essas práticas, o ecossistema midiático de não ficção é analisado das formas imersivas tradicionais às emergentes. São discutidas quatro formas significativas de obras narrativas de não ficção que refletem diferentes éticas do realismo: documentário, jornalismo, educação e patrimônio cultural. Através da descrição e apresentação de cada formato, apresenta-se um conjunto provisório de elementos, variáveis, indicadores e parâmetros que impactam as práticas e a ética do realismo. Esses elementos compositivos podem ser implementados na concepção, desenvolvimento e produção de experiências para públicos que respeitem as realidades sociais, culturais, políticas, físicas e materiais.

**Palavras-chave:** Não ficção. Imersão. Realismo. Ética. Prácticas.



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## Introduction

This work explores the ethical and moral limits of practicing realism in

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immersive nonfiction. We analyze the nonfiction media ecosystem from traditional to emerging immersive forms to establish these practices. We discuss four significant forms of nonfiction work that reflect different ethics of realism: documentary, journalism, education, and cultural heritage. Through the description and presentation of each form, we present a provisional set of elements that impact practices and ethics of realism. Producers can address these elements in the design, development, and production of experiences for audiences that respect social, cultural, political, physical, and material realities.

## 1 Approach to the concept of Realism in Nonfiction

The term nonfiction has been used in film language to illustrate movies that are not in the domain of fictional cinema. However, authors that argue that many factual works use fictional devices dispute the boundaries between fiction and nonfiction. Michael Renov (1993) questions these blurred boundaries, using as examples the first movie in history defined as documentary, *Nanook of the North* (ROBERT FLAHERTY, 1922) and the big city symphonies such as *Man with a Movie Camera* (DZIGA VERTOV, 1929), *Berlin: Symphonie der Grosstadt* (WALTER RUTTMAN, 1927) or *A Propós de Nice* (JEAN VIGO, 1930). Questioning the boundaries between fiction and nonfiction draws our attention to works that represent reality with different fidelities. When produced well, such films can surpass fictional artifacts in their social, political, and cultural impacts.

Representing reality today is a radical media practice for nonfiction practitioners and storytellers. The approach creates a symbolic space beyond the comforts and control of fiction through representational conventions and technology-determined affordances. There is both more significant political and creative risk in this practice. The two are deeply intertwined. However, since Georges Méliès demonstrated the power of fictional cinema, nonfiction seems to have been relegated to the background. In a sense, nonfiction has suffered from its negative prefix,

as if it indicated subordination and a lack of creativity. However, this negative prefix alludes to a territory neither delimited, colonized, nor invaded (WEINRICHTER, 2004). It is a space of possibility with ethical risk.

This unknown and uninhabited land of representation that Weinrichter describes is an uncategorized discipline that producers and academics can explore in our media ecosystem's contemporary convergence and hybridization (COBO-DURAN, 2010). The industry's focus on eXtended Reality (XR) and other immersive media grammars encourages us to believe that nonfiction practitioners can experiment, construct and deconstruct discourses, formats, and media languages to achieve long-term creative and social impact. Although authors have indeed advanced the study of nonfiction theories and modes of audiovisual expression (BARNOUW, 1996; CATALÀ 2008; COCK, 2009; MERAN BARSAM, 1992; NICHOLS, 1994, 2001; RENOV, 1993; WEINRICHTER, 2004, etc.), little research has explored the ethics of realism for factual immersive media. As part of XR's maturation, the immersive factual narrative provides a new potential language, both technological and cultural, that should be studied, analyzed, and canonized.

Practitioners' experimentations with nonfiction representations involve achieving works that have varied fidelity to reality (ENGBERG; BOLTER, 2020). Immersive media's technical and aesthetic affordances enable emergent modes that shape this representational fidelity (MURRAY, 2020). This media practice has ethical consequences. By analyzing several immersive nonfiction forms we elucidate parameters that impact this practice. Through this understanding, an approach to the ethics of realism in immersive factual media is presented. Producers can implement these ethics in the design, development, and composition of experiences for audiences.

## 2 Immersive Nonfiction Forms and the Ethics of Realism

During the last decade, immersive media has begun maturing as a discipline that uses a broad

spectrum of technologies such as Augmented Reality (AR), Augmented Virtuality (AV), Mixed Reality (MR), and Virtual Reality (VR). The reality-virtuality continuum, a concept presented by Paul Milgram and Fumio Kishino in 1994, is a paradigm that extends linearly from left to right, from physical reality to complete virtuality (MILGRAM; KISHINO, 1994). XR is a concept that describes that entire spectrum of reality media, from the virtual to the physical, from AR to VR and everything in between.

### 2.1 The Ethics of Realism

Several scholars discuss immersive media's novel impacts on traditional conceptions of journalistic ethics and realism (KOOL, 2016; LAWS; UTNE, 2019; PAVLIK, 2019; USKALI *et al.*, 2021). Each unique immersive technology has a different impact (LAWS; UTNE, 2019). For example, 360-degree stereoscopic video, in many ways, parallels existing photojournalism. A camera is set on a tripod, and the photographer shoots the scene. Without editing, the act of inscription is scaled to the 360-degree scene and captures more of reality with immediacy than a photographer framing a subject. It appears that immersive technology provides an opportunity for a more robust ethics of realism. However, such work is rarely presented without editing. Most commonly, in 360-degree video and photography, the tripod is edited out, and the photographer's presence is obfuscated.

Claims of evidentiary authority reflecting an ethics of realism in immersive media are informed by how audiences understand the social responsibility of journalists and nonfiction practitioners (LAWS; UTNE, 2019). Audiences who view journalism and nonfiction production as a bastion of ethical knowledge production would likely accept the co-constructed actualities of Nonny de la Peña as authoritative on their subject. That such works are complete reconstructions of factual material rendered by an artist in a game engine might not impact this perspective. However, existing ethics of realism related to photojournalism at the New York Times, Reuters, and AP would imply that

such reconstructions are not ethical unless the audience is made aware of the aesthetic choices inherent in their composition (LAWS; UTNE, 2019). Since all artifacts presented in XR are modified, this level of transparency is necessary, and respect's an audience's capacity for criticality and deliberation. This approach is necessary because audiences of immersive nonfiction tend to believe that their "virtual proximity to people and places that they couldn't experience directly, as well as by the spatial qualities of virtual environments" (GREEN *et al.*, 2021) enhanced their knowledge of the nonfiction subject.

In addition, immersive media enable the audience to be embodied within a scene where they might experience a Response-as-if-Real effect (DE LA PEÑA *et al.*, 2010). This can cause vicarious trauma and profoundly impact the capacity of audiences to meaningfully respond (FISHER; SCHOENMANN, 2019; GREEN *et al.*, 2021). On the other hand, it can also heighten the impact of the viewed material (GREEN *et al.*, 2021). Further, due to an audience's dramatic agency – the capacity to interact within the experience and change the narrative – there is a greater risk that a presented story is abstracted from reality. This creates a double bind wherein the effect of "being there" in the report can fundamentally alter the representation of the story. Immersive media seem to create a structure where this ethical trespass is easier to make. Communicating to the user what choices result in representing an opinion, and which represent a factual perspective, might be one solution. Again, transparency in production is key to the ethics (GREEN *et al.*, 2021).

Audiences also currently view VR nonfiction with reservation and feel like the experience is weird, strange, and bizarre (GREEN *et al.*, 2021). Emerging media often evoke this response. However, concerning the ethics of realism, the question of whether these reservations lead to a more critical approach to the nonfiction experience or simply reframe it as entertainment is worth consideration. Indeed, the Swayze Effect, wherein the audience feels present but is unacknowledged in the scene, may interrupt their engagement with

the nonfiction subject. Worse, it may encourage a narcissistic response (NASH, 2018). In some instances, the co-creation or representation of a real space in VR may lead to distorted expectations regarding the subject in relation to the interactor (KABHA, 2019; SLATER *et al.*, 2020).

Slater and colleagues state, "In a hypothetical superrealism we require first that sensory rendering becomes of such high quality that it becomes indistinguishable from reality." (SLATER *et al.*, 2020). While high-quality rendering does not impact the audience's responses, dynamic elements such as shadows and light do. They also note that such superrealism is more possible for AR in the short term. In the same article, Slater and colleagues distinguish psychological and physical realism. While it is unlikely that audiences will believe the XR spaces are physically real, many studies are showing that users will respond psychologically as if they were. This potentially increases the risk that audiences may experience trauma from a realistic experience. Furthermore, unlike journalists, a mainstream audience does not receive special training in experiencing a conflict zone or other traumatic space. We can summarize these ethical issues with realism below. Each of these summarized guidelines for the ethics of realism is enacted differently through the conventions of existing nonfiction forms.

a) All immersive media provide different degrees of augmentation or immersion, and so have different, media-specific ethics of realism that a nonfiction production team can operationalize.

b) Transparency regarding the production process – how the material was sourced, altered, and presented – creates a more ethical relationship with the audience and helps inform their critical stance related to the material.

c) Immersive media are more persuasive than previous forms of media, and a producer has a greater responsibility to produce an experience that has fidelity with reality and is guided by an ethics of care.

d) Limiting dramatic agency within immersive nonfiction experiences can help maintain an

ethics of realism by maintaining authorial control over the subject.

## 2.2 Immersive Nonfiction Forms

The term nonfiction, as opposed to fiction, has been introduced as a macro-genre that encompasses very diverse forms of expression. Typical examples include documentaries, journalism, cultural heritage pieces, political works, film essays, scientific or research films, educational materials, exhibitions and museum curations. In this work, we have limited the analysis to four types of discourse within the field of nonfiction, documentary, journalism, education, and cultural heritage.

a) Documentary: a genre that has historically always worked on critical approaches and looking for the truth.

b) Investigative and social journalism: a genre that explores and works to explain specific issues by providing transparency for opaque processes and subjects.

c) Education: a series of practices and initiatives whose objective is learning, reflection, and improvement of human knowledge.

d) Cultural heritage: a genre that shows certain transparency practices concerning public and private organizations and institutions representing cultural knowledge.

### 2.2.1 Documentary

In the case of the documentary genre, we have chosen as a case study the project *The Changing Same* (ELAYAT; BREWSTER; STEPHENSON, 2021), the fourth VR production from the production company Scatter (*Clouds, Zero Days VR & Blackout*). It is an immersive, room-scale magical-realist VR factual narrative where the participant travels through time and space to explore the last 400 years of American history of racial injustice. The experience contributes to our understanding of the history of the United States. Further, reflection on this history allows healing and growth through a respectful, poetic, magical realism in the Afrofuturist narrative. This project also demonstrates how America's stories



need to be re-told in the context of confronting an oppressive past so that we might re-imagine it to

realize an Afrofuturist world where an equitable future is possible for all (THE CHANGING..., 2022).

**Figure 1** – Image capture of the project *The Changing Same*



**Source:** Screenshot taken by the authors (2022).

This factual VR experience is 'one of the most ambitious volumetric filmmaking projects ever produced. It combines volumetric capture techniques with Scatter's new Depthkit Studio multi-depth sensor set up, photogrammetry, and a fusion of rigged avatars and volumetric capture' (Voices in VR, 2022). Volumetric filmmaking combines the artistry of cinema with the interactivity of gaming and allows users to capture real people, real stories, and real places. Volumetric producers invite audiences inside the virtual worlds where they create to experience the story taking place (Scatter website, 2022). *The Changing Same* has scenes with multiple volumetric captures, innovative spatial storytelling techniques, and the use of symbolic and visual metaphors. Through these spatial affordances, the producers present archetypal patterns of oppression, systemic racism, and white supremacy that repeat throughout history (Voices in VR, 2022). The project Premiered at the 2021 Sundance Film Festival in the New Frontiers section.

The producers of *The Changing Same* showed sensitivity to the ethics of realism in their work. Joe Brewster and Michèle Stephenson are nationally recognized documentarians who previously had created a PBS documentary on Claude Neal, the victim of a spectacle lynching in Marianna, Florida. *The Changing Same* revisits that story and uses it

as the foundation to explore 400 years of racial injustice in the United States. The producers focused on using volumetric capture and photogrammetry to achieve a level of realism that 3D rendering and modeling could not alone. The captured material was edited, but the artifacting that occurs does inform the captured-and-rendered nature of the material. It has a real source but has been clearly modified. Further, magical realism and fictional elements denote the constructed nature of the reality being presented.

Regarding scaffolding within the experience for the user, *The Changing Same* begins with an Octavia Butler quote and then a scene in which the audience is introduced to their guide throughout the experience. The presented character, Lamar Wheaton, is a composite of Lamar Wilson – a real person who has been attempting to draw attention to the history of the lynching by running a marathon every year. Wheaton is a volumetrically captured actor that provides scaffolding for the entire experience. The character explains where you will be going and what the journey will be about. This provides the necessary ethics of care for the experience.

There are two versions of *The Changing Same*. One is a 3-Degrees-of-Freedom (3DoF) experience, and the other is 6-Degrees-of-Freedom (6DoF). In the 3DoF experience, the user can only

look around. They cannot freely move their body. In the 6DoF experience, the user can move freely about the space. Dramatic agency then is actively constrained in the 3DoF but, through movement in the scene, extended in the 6DoF. An interactor cannot actively change the nonfiction experience in this version. Still, in the 6DoF experience, the interactor can feasibly miss or interpret the content differently because they are not present where the inciting action is. This might cause them to interpret the experience differently.

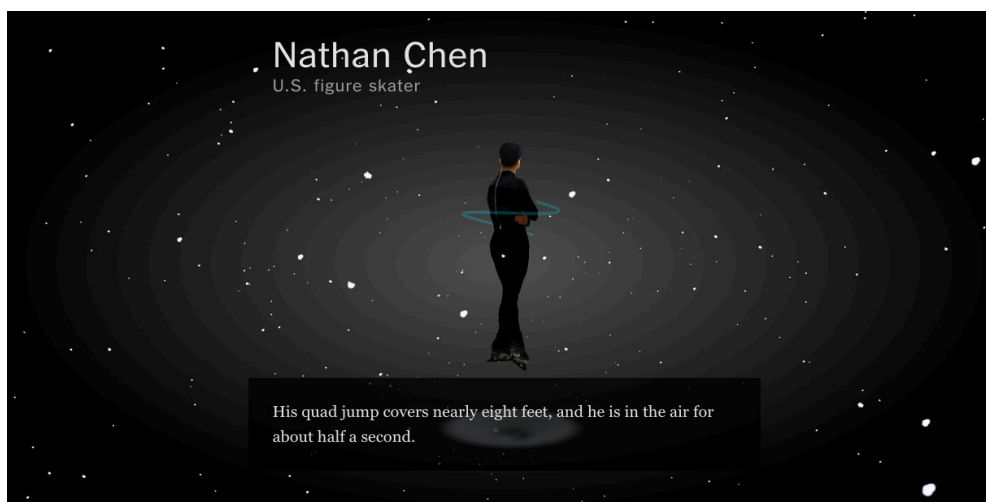
The ethics of realism in *The Changing Same* is supported by capturing and presenting volumetric content, scaffolding the experience with

an appropriate preamble and guide, and limited dramatic agency.

### 2.2.2 Journalism

In 2018, the New York Times launched an iOS-based mobile AR visualization of four Olympic athletes entitled *Augmented Reality: Four of the Best Olympians, as You've Never Seen Them* (JOHN BRANCH, 2018). Using an iPhone and the Times mobile app, users will see 3D models of figure skater Nathan Chen, speedskater J.R. Celski, ice hockey goalie Alex Rigsby and snowboarder Anna Gasser overlaid on the real world.

**Figure 2** – Image capture of the project *Augmented Reality: Four of the Best Olympians, as You've Never Seen Them*



**Source:** Screenshot taken by the authors (2022).

The New York Times has been active in the XR space for longer than most journalistic institutions. They were the first to send out Google Cardboard headsets for 360-degree journalism. In addition, the New York Times has dealt historically with ethics and honesty in journalism practices and has developed important work in XR journalism. For this project, they used AR to create a bridge between the digital world and the physical one to showcase athletes in a user's home. In this specific case, combining text, photo, audio, and video in AR contribute to the narrative allowing flat images to become three-dimensional (The Verge, 2018). To create the AR scenes, each athlete was scanned three-dimensionally in a static

pose, a process that included photogrammetry and traditional photography. The model was then repositioned and edited (project website, 2022). Since the project is transparent in its production process, it aligns with our proposed ethics of realism.

The project offers a faithful approach and intimate portrait of Olympic Athletes through AR. It presents their daily training regiments and other in-depth content that helps users empathize and identify with athletes. The project also features female athletes in traditionally-viewed male sports and provides valuable information on progress and achievements in gender equity. In one specific case, the story of ice hockey goalie Alex Rigsby is

presented. From the project site, 'With the National Hockey League sitting out the Olympics, the women's game may finally get equal billing to the men's event, and the United States is looking for its first gold medal since 1998. A key to success lies with Alex Rigsby, a 26-year-old goalie who has backstopped the United States to four world championships' (project website, 2022).

The project's AR enables users to immediately access these volumetrically captured athletes to appreciate their feats of athleticism. Visualized with greater fidelity than in previous media, the AR models make analyzing the physical prowess of these athletes more accessible. It also serves the article's goal of validating the athleticism of female athletes. The unique UI of the app relies on the user's proximity to the models of the athletes. Contextual information is then presented to the user based on where they are looking. This presentation of immediate information makes previously opaque information accessible. This ease of access facilitates an ethics of realism because information that is harder to comprehend on a 2D screen is made understandable in 3D.

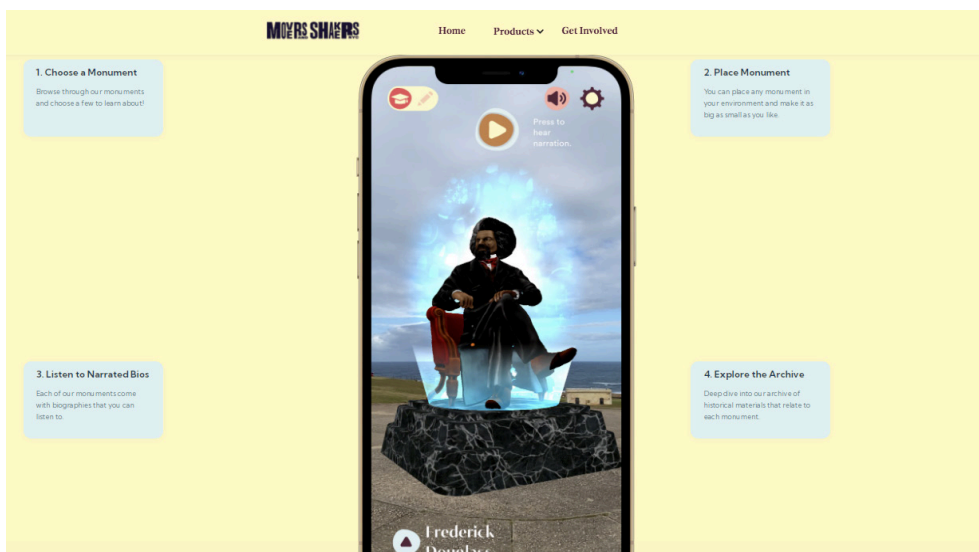
Lastly, the experience does not provide any

dramatic agency. The athletes are presented with their contextual information and how they were captured. Users cannot change their shape or modify their postures. Accordingly, the athletes are presented as static artifacts through the AR, even if the information around them is dynamic.

### 2.2.3 Education

*Movers and Shakers* (CANTAVE; BREWSTER; MILNER; MAZE; V HO; FAN; ROMERO, 2017) is an Ed-Tech Non-Profit based in NYC working to make underrepresented histories available to everyone in the world to catalyze change and movement toward racial equity. In April of 2017, the Movers and Shakers Foundation started as a collective of artists and activists who were focused on using immersive technology to challenge the inequitable distribution of monuments in NYC. The founders of the proposal began hosting teach-ins and performance protests throughout the city to advocate for the removal of racist statues, including those of genocidal slaveholders such as Christopher Columbus (Movers and Shakers website, 2022).

Figure 3 – Image capture of the project *Movers and shakers*



Source: Screenshot taken by the authors (2022).

The project's primary goal is to show the parts of US history that have been left out of textbooks and lesson plans. Using AR makes this hidden history visible to educate the public through

narratives of the underrepresented in the American History Curriculum. In addition, their project seeks to achieve an ethical realism through a multipronged approach (Movers and Shakers

website, 2022).

a) 'Bring history to life': With a smartphone, anyone can place an AR monument right in their own living room.

b) 'Web archive': Once in the application, the user can access the web archive that serves as a tool to analyze primary and secondary source documents, providing contextual information about each icon.

c) 'Juneteenth Curriculum': Implements a Mini-Unit lesson plan in the classroom. The lesson is up to Common Core Standards and available for use.

d) 'Multiplayer classroom experience': UNSUNG allows students to work together and build a sense of community in their classroom. This results in the students being more engaged in school and excited to learn.

e) 'Teacher Dashboard': desktop portal where teachers can assign teams and keep track of real-time student progress.

f) 'Experiential Learning': Students will be immersed in the period of the figure they are learning about. UNSUNG encourages students to experience history firsthand through AR on their mobile devices.

Critical to the work that The Movers and Shakers are doing is their broad approach to integrating XR into a more extensive curriculum. The experiences are not one-off consumables but built into a deeper engagement with an audience of learners. The recreations, situated in physical reality, do not exemplify a trespass on the ethics

of realism. Further, they are direct and forward with the history they present through AR and its connection to a broader curriculum. This transparency enables the audience to inhabit a critical position in the work. Further it shows respect for the audience and their capacity to discern, reflect, and deliberate on reality.

The pedagogical project seeks to uncover and elevate the buried histories of BIPOC individuals in the United States. In many ways, this process is guided by an ethics of care that attempts to align the representation of history with the reality that has been denied. The work succeeds at achieving an ethics of realism that operationally is empowering and potentially emancipating.

#### 2.2.4 Cultural Heritage

*Parliament: The Virtual Experience* (GRENIER; DRURY; POIRIER, 2021) is a transmedia immersive experience which leads the user through Centre Block's most iconic spaces: the Senate, House of Commons, Library of Parliament, and Peace Tower of Canada. Parliament is the heart of Canada's federal democracy. For more than 100 years, its seat was Centre Block, best recognized by the iconic Peace Tower. Each year, it welcomes thousands of visitors to discover the significance of the space's work, people, and architecture. In 2022, this historic building is closed for long-term renovations. However, the public can experience a visit through an immersive cultural heritage experience (NFB website, 2022).

**Figure 4** – Image capture of the project *Parliament: The Virtual Experience*



**Source:** Screenshot taken by the authors (2022).



The project is divided into three separate parts:

a) The Immersive experience: available in 360° video on Oculus, YouTube, and Facebook for mobile-based headsets, this is an immersive journey into the heart of Parliament, where historic spaces spring to life with magic realism combining photorealism, sound, color, and light (Parliament: The Virtual Experience website, 2022). The voiceover invites users to explore each space as it is described. Though not related to the ethics of realism discussed in this article, providing the experience through multiple platforms creates an accessible, immersive experience. However, given the emerging nature of immersive media, access is often an issue.

b) The Online Experience: an illustrated experience through the 'scrollytelling technique' combining animation with voices from Canada's past. The experience is divided into five separate chapters which can be navigated freely: Confederation Hall (Chapter 1), House of Commons (Chapter 2), Library of Parliament (Chapter 3), Senate (Chapter 4), and Peace Tower (Chapter 5). (Parliament: The Virtual Experience website, 2022). The navigation of the 5 blocks is similar. There is a mix between animation and voiceover during moments when the user must scroll to continue. This simple navigation linearly presents ideas and concepts. Interactivity is minimal and does not compete with the display of content, which is clear, simple, and has the effect that the project seeks: to provide some transparency to show audiences the existence and functions of Parliament and, by extension, of the Canadian government and politicians.

c) The Classroom Experience: an immersive experience adapted to classroom or online uses the same strategy. There is a journey through a 360° video that explores iconic spaces and learning how Canadian democracy works. The experience is suitable for in-class and remote learning and makes knowledge accessible through four supporting lesson plans (Parliament: The Virtual Experience website, 2022).

This case study reflects how the Canadian government's desire for transparency and public

service is manifested in its XR initiative. By closing the Parliament's physical space for long-term renovation, the Library of Parliament and the National Film Board of Canada joined forces to make areas critical to the representation of their democracy accessible.

## Conclusion

In this proposal, we presented a discussion on the ethics of realism through four different artifacts of immersive nonfiction. Each of the forms – documentary, journalism, education, and cultural heritage – requires different ethical considerations because of the uniquely situated affordances of immersive media along the reality-virtuality continuum.

In the case of documentary and the project *The Changing Same*, the ethics of realism are represented through the capture and presentation of volumetric content, scaffolding of the experience with an appropriate preamble, guide, and limited dramatic agency. The use of volumetric capture and photogrammetry enables the producers to present subjects with greater fidelity than if they had been constructed 3D models. The produced nature of the models, and how they have been edited for use in the VR experience denotes the constructed nature of the material. While the stakes to trespass the ethics of realism is possible in VR, the framing of the experience as magical realism affords the user a distance that enables a critical posture.

Regarding journalism, the project *Augmented Reality: Four of the Best Olympians, as You've Never Seen Them*, achieves an ethics of realism through a transparent approach to the production process, intimate portraits of the athletes, enabling greater fidelity of representation through space and scale, and no dramatic agency. Further, text, photos, and interviews add in-depth content that helps the user empathize and identify with the athletes. AR enables audiences to appreciate the success of female athletes in traditionally viewed male sports. The medium provides a lens that informs equity.

Due to the nature of their project – to uncover

and elevate the buried histories of BIPOC individuals in the United States –The Movers and Shakers achieve an ethics of realism by elevating and uncovering histories that have been obfuscated. They accomplish this work by including AR in a broad curriculum and their community of learners. Further, by positioning these AR works in physical reality, their experiences enable the audience to inhabit a critical position to discern, reflect, and deliberate on reality.

In the cultural heritage project, *Parliament: The Virtual Experience*, the Canadian government has sought to make the representations and functions of the Canadian Parliament, government, and politicians accessible during construction and renovation. The project engages multiple platforms to make the immersive experience accessible. Further, each platform is grounded in a broader experience wherein guides and additional information are available. Since much of the material is rendered as a construction of the future renovation, the experience achieves an ethics of realism by establishing that what users are seeing is a possibility. However, as with all large-scale and government-funded cultural heritage efforts, it is appropriate to ask what is not being presented or discussed. The ethics of realism would demand, at the very least, the presentation of multiple perspectives, some of which may be critical of Parliament and the First Nations peoples' land upon which it sits.

Future work should explore what storytelling, didactic, and epistemological grammars are used by practitioners in specific forms of immersive nonfiction artifacts. Additionally, usability studies should be done to evaluate the effectiveness of those grammars in communicating information about the subject. Finally, as nonfiction immersive media forms mature, approaches to ethics of realism will need to evolve. The more significant sensory and representational fidelity provided in these experiences, the greater the ethical, political, and social risks or effects.

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