

Virtual Reality and Storytelling: How a New Technology is Changing the Way We Experience Stories

Tanishka Bhalerao

Department of Media, Communication and Digital Studies, Ajeenkya DY Patil University

Abstract—Storytelling is one of the oldest things humans have ever done. From cave paintings to cinema, each new technology has changed the way we tell and experience stories. Today, Virtual Reality — or VR — is the newest and perhaps the most powerful storytelling tool ever created. Unlike books or movies, VR does not just show you a story. It puts you inside one.

This research paper explores the relationship between Virtual Reality and storytelling. We look at how storytelling has evolved over time, what makes VR different from other mediums, and how VR is currently being used in films, journalism, education, and social awareness campaigns. We also examine the challenges that creators face when using VR to tell stories — including high costs, motion sickness, and the difficulty of guiding a viewer's attention when they can look anywhere they want.

This paper argues that VR represents a turning point in the history of storytelling. By creating a powerful sense of 'being there,' VR can build empathy and emotional connection far beyond what any previous medium has achieved. At the same time, it comes with new responsibilities that creators and researchers are only beginning to understand.

I. INTRODUCTION

Imagine you are sitting in a movie theatre watching a film about people fleeing war. The explosions are loud. The scenes are heartbreaking. But after two hours, you walk out, get into your car, and drive home. The story touched you — but you were never truly part of it. You always knew you were watching, not living. Now imagine something different. You put on a headset. Suddenly, you are standing in a refugee camp. You can turn your head in every direction. You can see children playing in the mud, families huddled under torn tents, aid workers rushing past you. The sounds surround you. For a few minutes, you are not watching a story about war — you are inside one.

This is the power of Virtual Reality storytelling. And it is changing the way human beings connect with stories, with each other, and with the world.

1.1 What is Virtual Reality?

Virtual Reality, or VR, is a technology that uses a headset — a device you wear over your eyes — to place you inside a fully computer-generated or 360-degree filmed environment. When you move your head, the world around you moves too, creating the feeling that you are physically present somewhere else. Unlike a flat screen, VR removes the frame and surrounds you completely.

The technology has existed in some form since the 1960s, but it was only in the 2010s — with devices like the Oculus Rift, HTC Vive, and PlayStation VR — that it became accessible to regular consumers. Today, millions of people use VR for gaming, training, therapy, and increasingly, for watching stories.

1.2 Why Storytelling Matters

Storytelling is not just entertainment. It is how human beings make sense of the world. From the earliest stories told around fires to today's Netflix series, stories help us understand experiences we have never had, feel emotions we might otherwise never feel, and develop compassion for people whose lives are very different from our own.

Every time a new medium has emerged — print, radio, cinema, television, the internet — it has changed storytelling. VR is the latest in this long line of revolutions. But many researchers and creators believe it may be the most significant one yet, because it does not just deliver a story to you. It puts you inside it.

1.3 Purpose and Objectives of This Paper

This paper sets out to explore the relationship between Virtual Reality and storytelling. Specifically, it aims to:

1. Understand what makes VR fundamentally different from previous storytelling mediums.
2. Examine real-world examples of how VR is being used to tell stories across different fields.
3. Identify the key challenges that creators face when using VR for storytelling.
4. Discuss the ethical responsibilities that come with such an immersive medium.
5. Explore what the future of VR storytelling might look like and why it matters.

II. BACKGROUND: THE HISTORY OF STORYTELLING

2.1 From Oral Stories to Digital Media

Human storytelling is at least 30,000 years old. The cave paintings found in Lascaux, France, are among the earliest known examples — ancient humans recording hunts and animals on stone walls, creating visual narratives for others to experience. From there, storytelling evolved through spoken word traditions, where tribes and communities passed down histories, myths, and moral lessons through oral performance.

The invention of writing around 3,000 BCE changed everything. Stories could now be preserved, shared across distances, and read by people who had never met the original storyteller. The printing press in the 15th century made books accessible to millions, not just the wealthy few. Radio in the early 20th century brought storytelling into people's homes through sound alone. Cinema added images and movement. Television made it possible to receive stories every night without leaving your living room.

Each of these technological revolutions changed not just how stories were told, but also what kinds of stories were possible — and who could tell them. The internet in the 1990s and 2000s was the most recent major shift, allowing anyone with a connection to publish their own stories and reach a global audience instantly.

VR is the next step in this long journey. But unlike every previous medium, it does something none of them could do: it removes the distance between the story and the person experiencing it.

2.2 The Limits of Traditional Storytelling Mediums

Every storytelling medium before VR has one thing in common: the audience remains on the outside, looking in. When you watch a film, you are separated from the story by the frame of the screen. When you read a book, you imagine the world in your mind, but you do not inhabit it. Even the most thrilling, emotionally powerful stories — the greatest films ever made, the most beautiful novels ever written — keep you at a distance.

This distance is not always a bad thing. It gives the storyteller control. A film director can choose exactly what you see, when you see it, and how long you look at it. A novelist can control the pace at which you receive information, building tension, releasing it, and rebuilding it exactly as planned.

But this control also has a cost: you never fully forget that you are watching or reading. Some part of your brain always knows it is fiction, always knows the screen is in front of you. And this distance limits how deeply a story can affect you.

VR begins to dissolve this distance. And that changes everything about the storytelling experience.

III. WHAT MAKES VR DIFFERENT: THE CONCEPT OF PRESENCE

3.1 Immersion and Presence Explained

The most important concept in VR storytelling is something researchers call presence. Presence does not just mean that you are physically in a place — it means that your brain genuinely believes, at least partially, that you are there. It is the feeling of 'being inside' the virtual world rather than watching it from the outside.

Presence is not the same as immersion, though the two are related. Immersion refers to the technical quality of the VR experience — how realistic the graphics are, how good the sound is, how well the headset tracks your head movements. Presence is the psychological result of a good immersive experience: the sensation that this is real.

Research has shown that when people feel genuine presence in a VR experience, their bodies and minds respond as if the experience is actually happening. Their heart rate increases when they are in a dangerous virtual situation. They feel genuine emotion when something sad occurs around them. They flinch, they

laugh, they cry — even though they know on some level that none of it is physically real.

This is what makes VR storytelling so different from everything that came before. A film can make you cry. A book can make your heart race. But VR can make your body believe — even briefly — that it is truly somewhere else, experiencing something real. And that opens up storytelling possibilities that were simply not possible before.

3.2 Empathy in VR vs. Other Mediums

One of the most powerful uses of presence in storytelling is building empathy — the ability to understand and share the feelings of another person. Empathy is what makes us care about characters in stories, and caring about characters is what makes stories powerful.

Traditional storytelling builds empathy through identification — you relate to a character because you recognize something of yourself in them, or because the writing is so skilled that you imagine yourself in their position. This is powerful, but it is still a mental exercise.

VR builds empathy differently. When you are placed inside the perspective of another person — when you are, for a few minutes, literally seeing the world through their eyes — empathy becomes experiential rather than intellectual. You do not just understand what it might feel like to be a refugee. You stand in a refugee camp, surrounded by its sounds and sights, and feel something close to what being there actually feels like.

Studies conducted by researchers at Stanford University's Virtual Human Interaction Lab have found that people who experience difficult situations through VR — such as being homeless, or facing racial discrimination — show significantly higher levels of empathy and are more likely to take action to help compared to people who simply read about or watched a video of the same situation. This finding has profound implications for how we use stories to create change in the world.

IV. VR STORYTELLING IN PRACTICE

VR storytelling is not a theoretical concept for the future. It is happening right now, across many different fields. Below, we look at how VR is being used to tell stories in cinema, journalism, education,

and social impact work — with real examples from around the world.

4.1 VR in Cinema and Film

The film industry was one of the first to recognize VR's storytelling potential. Traditional filmmakers have the challenge of adapting their craft to a medium where the audience controls where they look — meaning the director can no longer force you to focus on a particular thing at a particular moment.

One of the most celebrated examples of VR cinema is 'Carne y Arena' (Flesh and Sand), created by Mexican-American director Alejandro Gonzalez Inarritu in 2017. This experience placed the viewer in the middle of a group of Central American immigrants crossing the US-Mexico desert border. You stood on real sand. Border patrol vehicles drove around you. Helicopters circled overhead. People ran, fell, and pleaded with guards.

The experience lasted only six minutes — but viewers reported feeling deeply shaken, profoundly moved, and significantly more empathetic toward migrants than before. The work was so groundbreaking that it received a special Honorary Academy Award — the first time in Oscar history that a VR work had been recognized. This was a defining moment that legitimized VR as a serious artistic and storytelling medium.

Other notable VR film projects include 'Notes on Blindness: Into Darkness' — which allowed sighted users to experience the world as a blind person does, using sound and touch — and 'The Limit' by Robert Rodriguez, one of the first interactive VR films where the viewer could make choices that affected the story's outcome.

What these projects share is the recognition that VR filmmaking requires a completely new set of storytelling skills. Directors cannot cut away to a different angle. They cannot control where you look. Instead, they must design an entire world that tells the story from every direction simultaneously — using sound, movement, and spatial design to guide attention rather than a camera lens.

4.2 VR in Journalism

Perhaps no field has embraced VR storytelling with more ambition than journalism. Journalists have always worked to bring audiences closer to the events they cover — to make distant, abstract realities feel

immediate and personal. VR takes this to its logical extreme.

The New York Times launched its NYT VR app in November 2015 and distributed over 1.3 million Google Cardboard VR viewers to its subscribers. The first film produced — 'The Displaced' — took viewers inside the lives of three child refugees from South Sudan, Ukraine, and Syria. Instead of reading statistics about the global refugee crisis, viewers stood in refugee camps, sat beside children in makeshift schools, and walked through destroyed villages.

The Guardian, BBC, and Al Jazeera have all produced their own VR journalism pieces, covering topics from the Syrian civil war to climate change to the lives of people on death row. These pieces have been shown at film festivals, in museums, and in schools — reaching audiences who would never have read a long-form news article on the same subject.

Nonny de la Pena, often called the 'Godmother of Immersive Journalism,' pioneered this field with her 2012 project 'Hunger in Los Angeles,' which placed viewers inside a scene at a food bank where a diabetic man collapsed while waiting for food. It was one of the first examples of VR being used to tell a journalistic story, and it sparked a wave of interest in the field.

The core insight behind VR journalism is simple but powerful: when you feel like you are there, you cannot look away. You cannot scroll past. You cannot dismiss it as 'something happening far away.' It is happening right here, all around you. And that changes how you process and respond to the information.

4.3 VR in Education

Education is one of the areas where VR storytelling shows the most exciting potential. The challenge of teaching has always been the same: how do you make students genuinely care about and understand things they have never experienced?

Google Expeditions, launched in 2015, was one of the first large-scale uses of VR in education. It allowed students to go on virtual field trips to locations that would be physically or financially impossible to visit — including the Great Wall of China, the International Space Station, the Amazon Rainforest, ancient Rome, and the bottom of the ocean. By 2019, Google Expeditions had taken over five million students on virtual trips to over 900 destinations around the world.

Research from the University of Maryland found that people learn and remember things better when they experience them in VR compared to watching a flat video or reading about them. The sense of presence appears to create stronger memory formation — the brain treats the VR experience more like a real memory than a piece of information received from a screen.

VR is also being used to teach empathy and social awareness in schools. The 'A Mile in My Shoes' project in the UK invited museum visitors to literally walk in the shoes of another person — experiencing life through the eyes of a nurse, a refugee child, or a homeless person. Students who participated reported significant changes in how they thought about people different from themselves.

Medical and professional training has also embraced VR storytelling. Medical students can practice surgical procedures in VR. Pilots practice emergency landings. Firefighters experience virtual infernos. In each case, the story being told is an educational one — and VR tells it more powerfully than any textbook could.

4.4 VR in Social Impact and Awareness Campaigns

Non-profit organizations, activist groups, and international bodies have been some of the most innovative users of VR storytelling. They recognized early on that VR's empathy-building power could be used to motivate people to care about — and donate to — causes they had never personally experienced.

The United Nations produced a series of VR experiences called 'Waves of Grace,' 'Clouds Over Sidra,' and 'My Mother's Wing' as part of its effort to raise awareness and funding for the global refugee crisis. 'Clouds Over Sidra' told the story of a 12-year-old Syrian girl named Sidra living in the Za'atari refugee camp in Jordan. It was shown to world leaders and donors at the World Economic Forum in Davos. After experiencing the film, donations to the UN refugee agency increased significantly compared to traditional fundraising presentations.

Charities working on issues ranging from ocean pollution to poverty have since produced their own VR experiences. The pattern is consistent: people who experience a cause through VR are more emotionally engaged and more likely to donate money, volunteer time, or change their behavior than people who receive the same information through text or traditional video.

This has led some researchers to call VR the 'empathy machine' — a tool not just for telling stories, but for genuinely shifting how people feel about the world and what they are willing to do to change it.

V. CHALLENGES IN VR STORYTELLING

Despite its enormous potential, VR storytelling faces a number of serious and practical challenges. Understanding these challenges is important, both for creators working in this space today and for researchers thinking about where the medium needs to develop.

1. **High Cost of Production:** Creating a high-quality VR experience is expensive. It requires specialist cameras capable of filming in 360 degrees, powerful computers for rendering, skilled technical teams, and expensive software for editing and post-production. While the cost has come down significantly in recent years, it is still far beyond what most independent filmmakers, journalists, or educators can afford. A professional VR film can cost anywhere from tens of thousands to millions of dollars to produce — compared to a regular short film that might be made for a fraction of that.

2. **Motion Sickness:** One of the most significant technical challenges in VR is cybersickness — a form of motion sickness triggered when what your eyes see in VR does not perfectly match what your body feels in the real world. When you move in VR and there is even a slight lag or mismatch, your brain receives conflicting signals, and many people experience nausea, dizziness, and headaches. This can ruin the storytelling experience completely and limits how long people can stay inside a VR environment. Solving this problem requires both better hardware and more thoughtful storytelling design.

3. **Narrative Control:** In a traditional film, the director controls exactly what you see and when. In VR, the audience can look anywhere at any time — which means they might turn away from the most important moment of the story and miss it entirely. This is one of the fundamental challenges of VR storytelling: how do you guide a viewer's attention without taking away their freedom to look where they want? Creators have developed various techniques — using sound to draw the eye, placing important events directly in front of

the viewer, or using movement — but there is no perfect solution yet.

4. **Limited Access and Inequality:** VR headsets are still relatively expensive, and not everyone has access to them. This creates a significant inequality in who can experience VR stories. A VR experience designed to build empathy for rural poverty is, ironically, most likely to be experienced by wealthy, urban technology users — not the people who most need to understand the issue. Until VR technology becomes truly affordable and widespread, this will remain a barrier to its impact as a storytelling medium.

5. **Short Experiences:** Most VR storytelling experiences are very short — typically between five and twenty minutes. This is partly a technical limitation (longer experiences increase cybersickness) and partly a creative challenge (maintaining presence and attention for longer periods is difficult). Traditional stories — novels, films, TV series — can unfold over hours, days, or years of engagement. VR storytelling has not yet found a way to create that kind of depth and sustained engagement.

6. **Isolation:** Using a VR headset is, by its nature, an isolating experience. You are cut off from the people around you. You cannot share a glance with a friend at a moving moment, or discuss what you are experiencing in real time. Storytelling has always been a social activity — even watching a film in a cinema together creates a shared emotional experience. VR, at least in its current form, strips that away. Researchers and creators are working on social VR solutions, but they are not yet widely available or affordable.

VI. ETHICAL CONSIDERATIONS IN VR STORYTELLING

With any powerful storytelling tool comes ethical responsibility. VR is no different — in fact, because of how deeply it can affect people, it demands even greater ethical care than traditional mediums.

6.1 The Risk of Trauma

Because VR creates such a strong sense of presence, experiences that are designed to be intense — such as VR films about war, violence, or disaster — can feel genuinely traumatic to viewers. Unlike watching a

distressing film, where some part of your brain always knows you are watching a screen, VR can trick your mind into responding as though events are actually happening to you.

This raises serious questions about consent and care. VR creators have a responsibility to warn viewers about disturbing content, to provide ways to exit an experience easily, and to consider whether some content is too disturbing to present in VR format at all. The same story that might be powerful and moving in a documentary film could be genuinely harmful in a VR experience.

6.2 Representation and Exploitation

VR journalism and documentary filmmaking often involves placing privileged viewers inside the experiences of marginalized or vulnerable people — refugees, disaster survivors, people in poverty. While this can build empathy, it also raises difficult questions: Who gave consent? Who benefits from the story being told? Are the subjects being represented with dignity, or are they being reduced to objects of pity and curiosity for a wealthy audience?

These questions are not new — they have been asked of documentary filmmaking and photojournalism for decades. But VR makes them more urgent, because the level of intimacy and presence is so much greater. Being virtually placed inside someone's refugee tent or hospital room without their meaningful consent is a significant ethical violation.

6.3 Manipulation and Propaganda

The very thing that makes VR so powerful for building empathy — its ability to make you feel that something is real — also makes it a potentially dangerous tool for manipulation. A VR experience can be designed to create a false impression of what a place or situation looks or feels like. It can be used to spread propaganda, to distort the truth, or to manipulate emotions in ways that benefit the creator rather than inform the viewer. As VR storytelling becomes more widespread, media literacy will become increasingly important. Audiences will need to develop new skills to critically evaluate VR experiences — to ask who made this, why, and what they might be trying to make you feel or believe.

VII. ANALYSIS AND DISCUSSION

Looking at all the evidence — from research studies, from real-world examples, from the challenges and ethical questions we have examined — what can we conclude about VR storytelling?

First, it is clear that VR represents a genuinely new kind of storytelling, not just a technically improved version of something that already existed. The sense of presence that VR creates changes the storytelling experience at a fundamental level. It is not just that stories feel more vivid in VR — it is that they are processed differently by the brain, creating stronger emotional responses, deeper empathy, and more lasting memories.

Second, the evidence suggests that VR storytelling is particularly powerful for specific purposes: building empathy for unfamiliar experiences, creating awareness of distant issues, and helping people understand situations they would otherwise never encounter. These are areas where traditional storytelling mediums have always struggled — and where VR offers a genuine breakthrough.

Third, it is important to recognize that VR is a medium, not a magic solution. A poorly told story in VR is still a poorly told story. The technology does not automatically make a narrative powerful — it amplifies what is already there. A VR experience about climate change will only move people if the underlying storytelling is strong, the characters are real, and the emotional journey is well-crafted.

Fourth, the challenges we have identified — cost, cybersickness, narrative control, limited access — are real but not permanent. Technology improves rapidly. The cost of VR production has already fallen dramatically since 2016, and it will continue to fall. Solutions to cybersickness are improving. As more creators work in VR, the storytelling language of the medium is developing, and new techniques for guiding attention and creating narrative are emerging.

Finally, the ethical questions raised by VR storytelling are not a reason to avoid the medium. They are a reason to engage with it thoughtfully, carefully, and with genuine respect for the people whose stories are being told. Every powerful storytelling medium — from photography to cinema — has raised ethical challenges. The response has always been to develop better practices, stronger ethical frameworks, and

more sophisticated media literacy. VR will be no different.

VIII. THE FUTURE OF VR STORYTELLING

VR storytelling is still in its early stages. The experiences available today are impressive, but they are nothing compared to what will be possible in ten or twenty years. Several emerging technologies are set to transform the field even further.

8.1 Haptic Technology

Haptic technology refers to devices that allow you to feel physical sensations in VR — the texture of a surface, the warmth of sunlight, the weight of an object in your hand. Gloves, vests, and even full-body suits are being developed that can recreate these physical sensations. When haptics becomes widely available, VR stories will not just be seen and heard — they will be felt. This will create a level of presence that is almost indistinguishable from physical reality.

8.2 Artificial Intelligence and Interactive Narratives

Artificial intelligence is beginning to transform what is possible in VR storytelling. AI-driven characters — who can see, hear, and respond to you naturally in real time — will allow VR stories to be truly interactive and personalized. Instead of following a fixed narrative, the story will respond to your choices, your movements, and even your emotional state, creating a unique experience for every viewer.

This will blur the line between storytelling and gaming even further, and raise fascinating new questions about authorship, narrative, and what we mean by a 'story' in the first place.

8.3 Social VR

One of the most significant limitations of current VR is its isolation — you are alone inside the headset. Social VR platforms like Meta Horizon, AltspaceVR, and VRChat are beginning to address this by allowing multiple people to share VR spaces simultaneously, represented by avatars. In the future, experiencing a VR story with friends or strangers — being moved by the same moments, responding to the same events — will create a new kind of shared emotional experience.

8.4 Wider Accessibility

As VR headsets become cheaper and more comfortable, and as mobile phones become capable of

running high-quality VR experiences, the audience for VR storytelling will expand dramatically. What is currently a medium for a relatively small number of technology enthusiasts and early adopters will become as common as watching a YouTube video or reading an online article. When that happens, the potential impact of VR storytelling on how society understands itself will be immense.

8.5 Mixed Reality Storytelling

The next frontier beyond VR is Mixed Reality (MR) — technology that overlays digital elements onto the physical world around you, rather than replacing it entirely. With MR, a story could unfold in your own living room, with virtual characters appearing in your real space and narrative events triggered by your physical movements. This could create storytelling experiences that are even more intimate and personal than VR, because the story happens in your world, not a virtual one.

IX. CONCLUSION

We started this paper with a simple question: how is Virtual Reality changing storytelling? The answer, as we have explored, is profound and far-reaching.

VR changes storytelling by removing the distance between the audience and the story. For the first time in the history of human communication, we can place someone inside another person's experience — not just describe it to them, not just show it to them, but let them feel what it is like to be there. This is a revolution in empathy, and empathy is the heart of every great story.

We have seen how VR is already being used — in cinema, in journalism, in education, in social impact campaigns — to build understanding in ways that were previously impossible. We have examined the real challenges that must be overcome: cost, cybersickness, narrative control, and limited access. We have confronted the ethical responsibilities that come with such a powerful tool.

And we have looked ahead to a future where VR storytelling will be even more powerful, more accessible, and more integrated into daily life — a future where sharing someone's experience, even if they live on the other side of the world, is as easy as putting on a pair of glasses.

The history of storytelling is the history of humanity's attempt to understand itself and connect with others across time and space. Every new medium that has emerged — the printing press, cinema, radio, television, the internet — has expanded that attempt. VR is the latest chapter. And it may be the most powerful one yet.

The technology is still young. The storytelling language of VR is still being invented. The ethical frameworks are still being written. But the potential is clear. In the hands of skilled, responsible, and empathetic storytellers, Virtual Reality has the power to do something that has always been at the heart of the very best stories: to make us feel less alone, more connected, and more fully human.

REFERENCES

- [1] Bailenson, J. N. (2018). Experience on demand: What virtual reality is, how it works, and what it can do. W. W. Norton & Company.
- [2] de la Pena, N., Weil, P., Llobera, J., Giannopoulos, E., Pomés, A., Spanlang, B., & Slater, M. (2010). Immersive journalism: Immersive virtual reality for the first-person experience of news. *Presence: Teleoperators and Virtual Environments*, 19(4), 291–301.
- [3] Gonzalez Inarritu, A. (2017). *Carne y Arena* [Virtual reality installation]. Academy of Motion Picture Arts and Sciences & Legendary Entertainment.
- [4] Herrera, F., Bailenson, J., Weisz, E., Ogle, E., & Zaki, J. (2018). Building long-term empathy: A large-scale comparison of traditional and virtual reality perspective-taking. *PLOS ONE*, 13(10), e0204494.
- [5] Martingano, A. J., Herrera, F., & Konrath, S. (2021). Virtual reality improves emotional but not cognitive empathy: A meta-analysis. *Technology, Mind, and Behavior*, 2(1).
- [6] Milk, C. (2015, March). How virtual reality can create the ultimate empathy machine [Video]. TED Conferences. https://www.ted.com/talks/chris_milk_how_virtual_reality_can_create_the_ultimate_empathy_machine
- [7] Parong, J., & Mayer, R. E. (2018). Learning science in immersive virtual reality. *Journal of Educational Psychology*, 110(6), 785–797.
- [8] Ryan, M.-L. (2001). *Narrative as virtual reality: Immersion and interactivity in literature and electronic media*. Johns Hopkins University Press.
- [9] Schubert, T., Friedmann, F., & Regenbrecht, H. (2001). The experience of presence: Factor analytic insights. *Presence: Teleoperators and Virtual Environments*, 10(3), 266–281.
- [10] Slater, M. (2009). Place illusion and plausibility can lead to realistic behaviour in immersive virtual environments. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1535), 3549–3557.
- [11] The New York Times. (2015). *The displaced* [Virtual reality film]. New York Times Company.
- [12] United Nations. (2015). *Clouds over Sidra* [Virtual reality film]. UNICEF & Samsung VR.
- [13] Visch, V. T., Tan, E. S., & Hediger, V. (2010). Responding to fiction and nonfiction: Does the narrative mode make a difference? *Poetics*, 38(3), 336–353.
- [14] Zhao, J., Papangelis, A., & Lazar, J. (2019). Towards a deeper understanding of the role of immersive VR for empathy development. *CHI Conference on Human Factors in Computing Systems*.
- [15] Zillmann, D. (1994). Mechanisms of emotional involvement with drama. *Poetics*, 23(1–2), 33–51.