Chornobyl Exclusion Zone.

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The zone of **memory**

by **Magdalena Banaszkiewicz**

There are places that continue to haunt me. What they share is the impossibility of return, of confronting the spirit of the place after so many years. The loss of physical access to a field site gives rise to place-bound memory-making: a process of sustaining and negotiating memory that remains inseparable from a specific location. Memory does not exist solely as a record in the mind or as a narrative; it is anchored in the physical site – in its materiality, landscape, atmosphere, traces of the past, and in the practices repeatedly enacted within it. Memory that reinforces our relationship with a place sometimes appears unexpectedly, on the bodily level.

In the age of mediated and virtual experience, does each of us become a witness to the past? I ask myself this question in relation to myself and to Chornobyl. I was fortunate to experience the singularity of the Zone's landscape many times and to meet witnesses directly connected to the catastrophe. Does virtual representation merely simulate immersion, or does it produce new forms of memory phantoms?

abstract

This article explores the transformation of the Chornobyl Exclusion Zone into a contemporary "zone of memory" shaped by physical inaccessibility and digital mediation. Drawing on memory studies and cultural heritage research, it analyzes how virtual tourism, social media, and virtual reality (VR) technologies influence the ways in which the catastrophe is remembered and experienced. Special attention is given to the role of immersive media, particularly VR applications, in producing affective and experiential forms of memory that differ from traditional narrative remembrance. The study argues that digital environments reorganize temporal perception and enable users to encounter the past as a sensory and emotional event, generating what may be described as immersive memory.

KEYWORDS: Chornobyl, virtual reality, immersive memory, digital heritage, Chornobyl Exclusion Zone.

Chornobyl as a site of memory

Today, it hardly needs to be argued that Chornobyl is simultaneously a site of memory[1] – understood in the sense proposed by Pierre Nora,[2] as a symbolic anchoring of collective identity in a historical event – and a form of cultural heritage, both symbolic and material (the Chornobyl Exclusion Zone), as a space representing the past. Chornobyl thus functions not only as a historical event, but as a node of memory in which the past becomes entangled with the present. Its looping reveals a cultural process in which a society marked by traumatic catastrophe and subjected to the repression of state secrecy gradually emancipated itself from the regime of a monolithic narrative, deconstructing it as one of the dimensions of the decolonization unfolding in Ukraine in recent years.

Forty years constitute a temporal perspective in which communicative memory (direct, transmitted as testimony) becomes increasingly overlaid with cultural memory.[3] This occurs through the canonization of official discourse produced by state institutions and non-state international actors oriented toward specific memory politics, as well as through informal communication and bottom-up processes, largely driven by circulation within popular culture. The spectacular popularity of the HBO series *Chernobyl* (2019) is undoubtedly the result of an excellent script and outstanding performances, yet this does not preclude recognizing in the story of the catastrophe a contemporary version of ancient tragedy, in which the protagonists appear merely as pawns in a struggle for power among distant gods. In this sense, the series can be read as yet another attempt to expose the tragic consequences of informational terror, which – together with an extensive system of repression – functioned as a mechanism for maintaining totalitarian power.

Place as heterotopia

In recent years, the Chornobyl Exclusion Zone has become a double heterotopia,[4] a place that represents an event frozen in time. It is a contemporary Pompeii: a witness to tragedy, a stage set without actors. From the perspective of four decades after the catastrophe, it was in fact only between 2011 and 2022 that the Zone truly came to life. Of course, I do not mean the continuous work of teams of experts employed in the Zone on a daily basis. What I have in mind is the revival resulting from opening the Zone to tourism on a scale unseen both before and after.

Towards the end of the 2010s the interest of the media, digital creators, artists, researchers and above all tourists in the catastrophe and its consequences became a phenomenon in its own right. Just before the outbreak of the COVID-19 pandemic, during the high tourist season between April and October, the Zone witnessed queues of minibuses at the Dytiatky checkpoint, groups of several dozen people treading routes designated by the State Agency of Ukraine on Exclusion Zone Management, and the din of voices of visitors simultaneously having lunch in one of the canteens. Visitor statistics grew year after year, reaching a record level of over 124,000 tourists in 2019. It seemed then that the Zone would share the fate of other places incorporated into the map of global mobility – becoming a tourist product, gradually overgrown with interpretive schemes and narratives shaping the mass experience of visitors from around the world.

Measuring radiation at reactor 4 in Chornobyl. PHOTO: WIKIMEDIA COMMONS

This, however, did not happen. The three-year project to develop the Zone as a "revival zone," presented in 2021 by President Zelensky at the All-Ukrainian Forum "Ukraine 30. Ecology", remained at the level of a proposal because of the full-scale invasion of the Russian Federation on February 24, 2022. The Chornobyl Exclusion Zone once again appeared on the front pages of newspapers and news portals, not because of another record number of visitors, but due to the incursion of Russian troops into it and the fear of another nuclear disaster. Russian soldiers, the "rashists" (a Ukrainian neologism combining "Russian" with "fascists") fell into the trap of heterotopia. Demolishing buildings and digging trenches in the heavily radioactive Red Forest, they resembled an army of post-apocalyptic zombies condemned to senseless aggression, as if in a video game. After their withdrawal, the Zone was once again depopulated – lying on the border between Ukraine and Belarus, exposed to drone attacks and mined by Russian troops, it froze as a space of emptiness and fear. Yet, in a classical butterfly-effect logic, the freezing of physical access to the Zone translated into an intensification of storytelling about the catastrophe and its consequences in virtual space, especially on social media. Their dynamics, although stimulated by hashtag-driven trends, resist being fully controlled by any authority.

Social media and the aesthetics of stalking

Virtual tourism, largely defined as tourist-like experiences without spatial displacement, took on various forms in relation to the Chornobyl Exclusion Zone, developing in parallel with the growth of physical tourism. It began with Google Street View, which appeared in the Zone in October 2015, on the occasion of the approaching thirtieth anniversary of the catastrophe. Other forms of exploration included (and continue to include) vlogs and reportages, primarily published on YouTube, as well as accounts shared on other social media platforms, such as Instagram. The virtual and the real worlds strongly interpenetrated,

mutually stimulating one another. The Spanish-language two-part film by Luisito Comunica, *EXPLORANDO CHERNOBYL: Zona de Exclusión*, published in 2019, amassed 46 million views on YouTube within six years (the "wow" effect is further amplified by 1.4 million reactions and over 57,000 comments). This result surpasses even the official trailer of the HBO series *Chernobyl* (41 million views). For those who have ever visited the Zone, the film offers little that is surprising. There are hundreds of similar materials – personal reports from the Zone, narratives of the explorer's experience, in which movement through space becomes a journey through time.

Many of the films available online, especially those produced before the Russian invasion, were created within what might be described as a stalker aesthetic – an aesthetic of uncovering secrets and overcoming obstacles to reach places that are particularly intriguing, though also dangerous. The figure draws symbolically on Andrei Tarkovsky's film *Stalker* and has evolved into a cultural practice of post-Chornobyl appropriation, in which explorers who call themselves "stalkers" illegally trespass into the Zone. They reinterpret the past transgressive, experiential engagement with the disaster landscape.[5] In many films posted on social media, the dramatization of exploration was closely linked to the hazard of radiation. The narration was typically dynamic, often whispered due to haste and the difficult acoustic conditions inside abandoned buildings. The imagery was raw, with handheld cameras intensifying the impression of participating in a risky undertaking. The soundtrack played a crucial role in stimulating anxiety and a sense of escalating threat. A key aesthetic element was often the piercing beep of dosimeters signaling radiation levels exceeding safety norms.

The conspiratorial landscape

A particular strand of Zone-related media production emerged in the form of materials created by the stalkers themselves. These productions did not merely document exploration; they actively performed the Zone as a space of secrecy, danger, and forbidden access. Vika and Stas Polessky (back in the time: a married couple of stalker-influencers) reconstructed a room in a private apartment for the 35th anniversary of the disaster in 2021 so that its décor corresponded to the design of 1986. Their YouTube channel documented the renovation process, prepared together with friends over the course of a year. An earlier project involved painting and reconstructing a room in a kindergarten in Prypiat in order to reenact its pre-disaster state.

The virtual presence and activity of individuals associated with the Zone became particularly significant during the pandemic period, when these materials were published. Forced immobility, combined with the vulnerability of material heritage to destruction, gave new causality to the dissemination of previously collected content by admirers of the Zone. Vika's concluding speech, delivered in costumes stylized after the 1980s, resonated with particular force:

> **I want to greet all the residents of Prypiat and say that I feel great sympathy with you, as you have lost your family homes. Please accept our small contribution to memory – your memory of your life here.**[6]

After 2022, however, even stalker expeditions into the Zone were radically curtailed. In one of her later posts from 2024, Vika describes areas near the border of the Zone, maintaining the tone of stalker exploration while simultaneously noting between the lines, that the territory of the Zone has become doubly dangerous. Not only because of areas of elevated radiation, which stalkers had learned how to avoid, but also because of landmines buried by Russian forces.

"VIRTUAL REPRESENTATIONS OF THE CHORNOBYL LANDSCAPE ACCUMULATE IMAGE AND SOUND IN AN AHISTORICAL MANNER."

Today, Chornobyl functions as a conspiratorial landscape in which historical knowledge, speculation, and post-apocalyptic aesthetics intertwine within virtual experience. Once again rendered inaccessible, the Zone becomes subject to arbitrary transformation. The Zone has broken free from the Zone, acquiring an autonomous virtual existence.

Virtual and authentic encounters

The landscape of the Chornobyl Exclusion Zone presented through virtual exploration and the authentic landscape differ fundamentally in their persuasive function. The virtual world operates according to the logic of postmodern bricolage, in which aesthetics are mobilized to generate emotion. The Chornobyl landscape itself is ordinary and uneventful: abandoned buildings slowly collapsing into ruin, forest, field. It resists spectacle.

Virtual representations of the Chornobyl landscape accumulate image and sound in an ahistorical manner. Recordings are edited together with historical photographs, graphic simulations, or infographics explaining technical aspects, such as the spread of the radioactive cloud. The final chord is done with soundtracks added in post-production. In most cases, the viewer is unable to distinguish what is authentic from what is imagined. Only the author of the film, often positioned as a guide-narrator, holds the power of authentication, yet who is able to verify whether the creator is telling the truth?

The more physically inaccessible the Zone becomes, the more powerfully its virtual representations act upon the imagination, modifying memory of the catastrophe. This occurs because the representation of cultural heritage in virtual reality transcends both space and time. On the one hand, users can visit places that are inaccessible or too distant; on the other, they can encounter places as they existed at different historical moments through digital preservation of past settings.

In this sense, VR produces not memory of an event, but memory of immersion. The past is no longer approached through

narrative sequencing or temporal distance, but through bodily co-presence with its traces. The experience of time is reorganized: what once functioned as "then" is activated as "now," not as reconstruction, but as situated experience. This raises the question of whether one should accept the creative otherness of virtual heritage. Its aim is not authenticity or the faithful reproduction of presence, but a carefully constructed interpretation. One that enables the user not so much to feel as if they were there, but to engage with the past in a qualitatively different way.

The Chernobyl VR Project

One of the forms of exploration that currently allows to a limited extent engagement with the Zone is the *Chernobyl VR* application, released in 2016 by The Farm 51, a company known for producing the popular survival horror RPG *Chernobylite*. Through the use of photogrammetry, the reality of the Zone was reconstructed with considerable care in order to achieve an impression as close as possible to individual exploration of the space. Wojciech Pazdur, creative director and co-founder of The Farm 51, described the project as a "virtual museum of Chernobyl" arguing, that "this place is amazing because of its history, especially the stories of the people".[7]

Chernobyl VR has been designed as a prototype of virtual reality. Although the terms virtual world and virtual reality share a common component, their semantic scope is not the same. A virtual world is a computer-simulated environment, whereas virtual reality can be defined as a simulated experience. It is a technology that enables users to experience a computer-generated world in an immersive way – that is, in a manner that produces a sense of "being immersed" in another environment: a three-dimensional digital setting that either reproduces the real world or presents a fictional one.

THE MOST IMPORTANT feature of VR is the sense of presence in the virtual world, although the degree of immersion may vary and depends on the tools employed. Fully immersive VR is generally understood as virtual reality experienced through a head-mounted display (HMD). This configuration gives users the impression that they are inside the virtual world rather than merely observing it. Through the use of headsets, motion controllers, or haptic gloves, the experienced three-dimensional image responds to head movement; the user hears sound, moves within virtual space, and interacts with objects – touching, lifting, or activating them.

The project employs a first-person perspective, allowing users to "land" in specific locations and move freely through them. Exploration is further enriched by access to archival materials, for example through testimonies of individuals directly connected to the tragedy, as well as of such famous witnesses as the former mayor of Kyiv, Vitali Klitschko, whose father was a liquidator, or the Nobel Prize-winning writer Svetlana Alexievich, author of the book *Chernobyl Prayer*.

Full immersion differs from approaches based on non-immersive VR, which operate on a computer screen (such as 3D games), as well as from semi-immersive VR, typically realized

Screenshots from the *Chernobyl VR Project*.

through large-scale projection systems such as CAVE (Cave Automatic Virtual Environment), for example in so-called immersive exhibitions. Virtual museums and art galleries constitute one of the most common applications of VR within the field of cultural heritage. They allow users to appreciate objects at their actual scale within realistic environments, aiming to reproduce the museum experience. However, when speaking of VR experiences more broadly, this places experience at an entirely different level. At present, embodiment, which is a key component of physically visiting a place remains difficult to access in VR due to the lack of tools capable of extending the full range of sensory experience. Temperature and smell, for instance, continue to represent some of the most significant technological limitations of virtual reality. That is why the *Chernobyl VR Project* experience is conducted using special goggles, which make immersion provide completely different physical sensations than watching an image on a computer screen.

THE QUESTION OF what kind of representation technology produces concerns not only space, but also time. Virtual reality does not simply extend existing modes of representation; it reorganizes temporal experience itself. Rather than situating the past at a distance, VR allows users to encounter it in the mode of the present.

User reviews published on the Steam platform (68 reviews posted between September 2016 and July 2025, written in multiple languages – 34 of them in English) present the project as generating ambivalent responses. Reviewers emphasize the educational value of the experience, praising the realistic photogrammetric scans and the unique opportunity to visit a closed zone without leaving home. Analyses of *The Chernobyl VR Project* reviews indicate that VR experience produces strong yet ambivalent affective reactions, arising from the tension between the emotional weight of the place and the limitations of immersive technology.

Users describe the VR experience primarily in emotional terms. Dominant descriptors include "sad," "moving," and "overwhelming," suggesting that affect precedes historical interpretation. VR does not so much transmit knowledge about the catastrophe as it initiates an emotional encounter with its traces. A key element of this affective experience is the uneven quality of sensory input. Users complain about low resolution and a "blurry" image in 360-degree videos, which undermines realism. By contrast, photogrammetric scenes (3D scans) are evaluated as highly realistic and visually impressive. The narrator's voice is generally assessed positively as clear and comprehensible, although some users mention background noise during the listening experience and a stylization marked by a "russian-vodka-balalaika" accent. The sound of the Geiger counter functions as a warning signal and contributes to atmosphere, responding dynamically to rising radiation levels in the virtual environment.

An important aspect of the reviews concerns descriptions of bodily reactions, revealing the limitations of VR. Poorly optimized camera work and movement mechanics cause some users to experience dizziness and nausea typical of motion sickness. Errors in object scaling sometimes make users feel like "giants or ants," disrupting natural spatial perception. The user's body becomes a site of negotiation between affect and physiology. Instead of a coherent sense of "being in the world," the experience oscillates between presence and technological frustration. This dissonance leads to a rupture of immersion and, consequently, to a weakening of the affective continuity of the experience. However, as Pazdur points out, VR, as a relatively new technology, "has not really reached the stage yet where one could say that it is good, or that VR experiences are good".[8]

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Immersive memory

Immersion in VR operates not through representing the past, but through the synchronization of perception, movement, and affect, which produces a sense of presence and leads to the formation of experiential memory. VR is not a medium for displaying the past, but an environment in which the past becomes a "sensory event." The immersive experience – the subjective sensation of "being there" – facilitates the production of affective memory, intense emotional responses, and individual interpretations. In a situation where direct experience of the Zone is impossible, the question arises as to whether the emotions experiences by tourists or stalkers can be recreated. Put differently, what conditions or elements would need to be put in place to approximate such an experience as closely as possible? What allows the user not so much to feel as if they were there, but to experience a new mode of engagement with the past.

An analysis of virtual worlds, including virtual reality, demonstrates that categories developed within memory studies – communicative memory, cultural memory, and postmemory – now require substantial revision. Virtual reality, in particular, does not merely constitute a new medium of memory transmission, but introduces a radically different regime of temporality. This regime shifts the analytical focus from the question of what is remembered to the question of how past time is experienced. VR enables users to encounter the past in the mode of the present Although the Chornobyl Exclusion Zone is often described as "frozen in time," this notion should be understood as a metaphor reflecting the semiotics of ruins as carriers of their past forms. Visiting an abandoned swimming pool or theatre allowed tourists to draw on their imagination and reconstruct a vision of these spaces when they were still full of life. In virtual reality, however, it may

become possible not merely to observe the ruins of the pool but to enter the pool itself: immersing in the water as it might have been experienced when the facility was still fully operational.

VR DOES NOT RELY on temporal distance or narrative sequencing. Instead, it enables the synchronous coexistence of multiple temporal orders: the present of the user's body, the historical "once," and the time of archival media. The result is an atemporal experience whose outcome is not the memory of an event, but the memory of one's own immersion within a complex temporality. Immersive memory, therefore, is neither a record of the past nor its representation, but a situated experience of time in which the past is lived as present through affective engagement. This has far-reaching implications for understanding virtual reality as another medium of public history. The television series *Chernobyl* enabled many viewers to "see" the disaster for the first time and to grasp the dramatic consequences of radiation exposure. At the same time, the creators moved beyond individual stories, embedding personal fates within a broader narrative about the disintegration of a totalitarian system and the mechanisms of violence, dependence, and responsibility that emerge in situations of extreme crisis. Similarly, virtual environments– constructed through narrative design and shaped by the agency of those immersed in them – may serve important educational and cognitive functions.

The future of Chornobyl memory

While personal and cultural memory have become a hybrid assemblage of digital practices,[9] the digital realm has increasingly reshaped contemporary mnemonic culture. An article by Andrew Hoskins advances the argument that the development of generative and agentic artificial intelligence leads to the end of "collective memory" as previously understood, irreversibly transforming our relationship with the past. According to Hoskins, the proliferation of autonomous AI agents and chatbots, that labels as "agentic turn," makes the formation of shared group memory increasingly impossible. Collective memory, once grounded in shared generational or media-based experiences (the era of broadcast transmission), is fragmented into individualized and synthetic versions of the past. People lose control over how the past is shaped, as it becomes difficult to determine what constitutes an authentic memory and what is the result of algorithmic remixing. Technology already enables the creation of so-called deadbots – memory robots of the deceased – as well as digital twins (AI twins) that emulate the behaviors and voices of both living and dead individuals. On the basis of archival materials, it would therefore be possible to recreate deadbots of witnesses to the disaster and walk with them through Prypiat, perhaps even through the city as it existed before the catastrophe. Although this remains a largely futuristic vision, contemporary technological developments are opening an entirely new future for engaging with the past.

The desire to revive the dead is among the oldest and most unsettling human longings. Forty years after the Chornobyl catastrophe, the question of memory strategies and tools – in the plural – stimulated by the development of new technologies of virtualization and artificial intelligence and activated in response to a geopolitical order straining at the seams, appears more urgent than ever.

Today, the Zone functioning primarily as a digitally imagined landscape, has not lost its role as a zone of memory. On the contrary, being a zone of memory, it continues to actualize our anxieties about the future.

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references

1 I deliberately use the spelling Chornobyl rather than Chernobyl, following the Ukrainian linguistic and cultural context of the disaster – an approach I elaborate on in my book *Heritage and Tourism in the Chornobyl Exclusion Zone* (2022). This choice reflects a conscious distancing from Russian-derived nomenclature that has long framed the catastrophe through a Soviet lens, despite its location in Ukraine. The shift gained formal recognition in December 2025, when the United Nations General Assembly adopted a resolution endorsing the Ukrainian transliteration Chornobyl instead of Chernobyl, a change increasingly adopted by international media and organizations in acknowledgment of linguistic accuracy and solidarity with Ukraine.

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