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Postdoctoral research project: Digital Holocaust Commemorative Practices After 2000: Field Differentiation

(General overview presentation delivered at the FMS Fellow's workshop in January 2026)

Introduction

In his article *Genocide Memory, Digital Cultures, and the Aestheticization of Violence*, Wulf Kansteiner argues that projects preserving the memory of the Holocaust created in "linear media," such as print or film, inevitably age alongside the survivors themselves. Because of their limited interactivity and static nature, these formats gradually lose both their immediacy and cultural relevance. A response to this problem of media obsolescence has been the search for new ways of recording and transmitting historical testimonies. In this context, a particularly important role has been played by the USC Shoah Foundation, especially through the creation of its Visual History Archive (VHA), which marked a breakthrough shift from analog to digital memory. Significantly, the establishment of the VHA coincided with the widespread adoption of the Internet, signaling the beginning of a new era in media practices. As a result, this transformation reshaped not only the storage and cataloguing of information but also its dissemination and modes of engagement. Digital archives now enable not only the preservation of testimonies but also their dynamic searchability, reinterpretation, and integration into new educational and research contexts. Moreover, in recent years, media companies, social media platforms, creators, and above all private individuals have proposed many innovative solutions, which have often gained and continue to gain a wide audience.

At the same time, the gradual passing of the survivor generation prompts a search for new ways to represent and commemorate both individuals and their testimonies, as well as former camp areas and historical events. In other words, as Holocaust narratives move beyond the horizon of living memory and enter an era defined by mediated forms of remembrance ("mediated memory," to cite James E. Young), and, perhaps more aptly in this context, into an era of 'learned memory'— no longer spontaneous but constructed, and shaped through mediated representations (Mack), where digital technologies have become central instruments for preserving, transmitting, and reactivating historical knowledge.

Accordingly, a "digital ecosystem of Holocaust memory" is emerging—dynamic, co-created, and relational, yet also vulnerable to distortion and abuse. While time cannot be stopped, new paths of transmission can be sought, with the understanding that the goal is not technology itself but responsibility toward history. Therefore, this transformation brings both significant opportunities and notable limitations. On the one hand, digitization promises to improve access to Holocaust narratives; on the other, it raises growing ethical concerns regarding the handling and interpretation of newly created recordings. In this sense, we are witnessing a shift from digital memory toward forms of virtual memory structured by embodied experience and affective participation. Against this background, the study critically examines the emergent experiential turn in digital memory practices, in which immersive environments, interactivity, and sensory engagement increasingly function as primary modes through which the past is accessed and understood. Drawing on the framework of "Digital Holocaust Memory" (Walden), the research advances a monographic analysis of digital Holocaust remembrance as a heterogeneous, dynamic, and rapidly evolving field shaped by technological affordances, cultural memory regimes, and moral responsibility.

As Stefania Manca notes: "*As technological progress enables people to access a wide range of information, it becomes difficult to determine which information is credible and relevant from an educational perspective, as well as to develop a coherent pedagogical approach. One of the challenges is finding ways to ensure that teaching about the Holocaust is meaningful and reliable, while recognizing that digital media can be used to disseminate misinformation or distorted information*" (Manca 2023). This does not change the fact that digital attempts at commemoration are undeniably significant contemporary practices for preserving access to the past. Indeed, tracing selected projects points to the direction of development of contemporary Holocaust memory archives, which increasingly engage audiences and encourage their critical involvement. Moreover, they demonstrate how closely the production of knowledge today is intertwined with the dimension of emotional experience in relation to specific historical events.

The main assumption of the study is that VR, AR, 3D reconstruction, and AI-driven systems—does not represent a rupture with earlier practices but rather an intensification of longstanding concerns: how to secure historical knowledge for future generations.

Considering the above, the study seeks precisely to map the contemporary landscape of Holocaust commemorative practices by identifying key themes, narratives, and methods of historical representation. I try to consider their chronology, dominant trends and stories, opportunities, and risks associated with implementing digital commemoration initiatives. I

explore how new media can support Holocaust remembrance, enhance historical awareness, and educate future generations.

The post-2000 period has produced a particularly rich variety of digital initiatives and a multitude of diverse distribution methods. These developments have accelerated significantly, with institutions increasingly experimenting with immersive technologies, interactive testimony, and AI-driven tools. My research to date has identified a number of key projects and thematic clusters that require further systematic analysis in order for the map of digital Holocaust commemoration to become truly comprehensive. Methodologically, it combines theoretical reflection with field-based methodologies. It adopts an interdisciplinary framework, integrates qualitative methods such as field research in museums and memorial sites, direct testing of digital tools, archival research, interviews with project creators and curators content analysis of digital environments, and participatory observation
Putting all this method together enabling an analysis of digital Holocaust commemorations not only as representational practices but also as embodied, spatial, and affective experiences.

The research focuses on the multi-layered issue of narrative inclusion, mechanisms of immersion, and questions of exclusion and cognitive diversity. For analytical purposes, the project distinguishes three interrelated working categories that structure contemporary digital Holocaust memory practices based on their primary focus and mode of representation. 1) The first category is human-centered, which includes projects focused on survivors and survivor testimonies and their remediation through digital, interactive, or immersive formats emphasizing the personal dimension of memory through recorded narratives, 2) The second category is space-centered, encompassing projects that reconstruct historically significant locations, such as former camps, ghettos, or destroyed urban spaces, using technologies like 3D modeling, VR, or digital mapping. 3) The third category is hybrid, brings together both perspectives by integrating reconstructed witnesses with digitally modeled spatial environments, thereby producing complex, relational memory experiences that intertwine embodied testimony with navigable historical space.

In studying digital Holocaust-related projects, I focus on several key aspects. First, the mode of narrative construction, including the use of oral history research, which shapes how survivor testimonies are presented. I trace which histories, individuals, and events are most represented in the digital sphere. I also examine the archival documents utilized—such as photographs, written records, and data sources—and the nature and style of the content conveyed, with particular attention to which stories and places are most frequently presented and recalled. The

importance of sensory immersion is considered, particularly how engaging multiple senses (sight, sound, and sometimes touch) contributes to creating a credible and emotionally resonant experience of history. Equally central is the focus on user presence, where the audience experiences a sense of "being there" or following the witness, and the ethical implications this entails, such as treating materials as historical sources versus tools of potential secondary traumatization. I analyze the technology implemented, including recording methods, technological solutions, and their scope, as well as interactivity and agency, considering the degree to which users can influence the narrative. Finally, I assess the vulnerability to distortion and risk of denial, highlighting the challenges inherent in representing traumatic history through digital media. Here are some more precise thematic frameworks and questions that I am asking:

- Which institutions, organizations, and research teams dominate the production of digital Holocaust commemoration projects?
- What roles do museums and cultural institutions play in creating, distributing, and legitimizing digital commemorative initiatives?
- How have visual materials been produced? Which technologies (AR, VR, XR, 3D reconstructions, audioguides, videoguides) dominate in digital Holocaust commemoration, and what are their defining characteristics?
- How do immersive technologies (AR, VR, XR, 3D) influence historical narratives and the ways Holocaust memory is conveyed?
- Who/what is being recorded, and from which social, geographical position?
- Which Holocaust related sites are reconstructed?
- Which historical events are most frequently represented, and which sites dominate the narrative landscape?
- How is testimony (witness/material witness) constructed as a historical source—including narrative conventions, temporal structures, and retrospective interpretation
- What engagement mechanisms are used in digital educational projects about the Holocaust?
- Are there digital strategies reserved or used only for representing the Holocaust?
- Are similar projects being created to commemorate other genocides such as the Armenian Genocide or the Rwandan Genocide?

- What ethical issues arise, such as 'secondary traumatization,' the posthumous use of images, or the digital reanimation of victims, in the reconstruction and representation of Holocaust testimonies?"
- How and if can artificial intelligence and machine learning contribute to Holocaust education and remembrance?

Case studies

The following projects constitute the core empirical and analytical material of my research to date:

- **3D Human Body Reconstruction as a practice for Holocaust memory and commemoration.**

I finished examining the entire strand of projects focused on 3D Human Body Reconstructions, encompassing both initiatives centered on the digital modeling of witnesses and more complex forms of interactive presence in which the body functions as a carrier of memory, affect, and relationality. This analysis enabled me to trace how 3D technologies transform the status of the witness—from archival record to modes of simulated presence—and how they reshape reception, engagement, and interpretation of testimony in the post-witness era. These projects reveal both the potential of new modes of memory transmission and the ethical, epistemological, and affective tensions they generate, particularly regarding authenticity, the representation of the body, technological agency, and the relationship between lived experience and its digital reconstruction. Beyond the *Dimensions in Testimony* project (USC Shoah Foundation) examined in my doctoral work. I expanded this research to include *Interactive Digital Testimonies "LediT"* (2018, Ludwig-Maximilians-Universität München, TU Chemnitz), *The Forever Project* (2016), and *Testimony 360: People and Places of the Holocaust* (2024, Holocaust Educational Trust). While I have gathered information on the last project, testing, experiencing, and observing it in use is scheduled for 2026, pending the travel schedule of the coordinating team in the UK. This project aligns closely with my VR research.

VR projects:

- ***Walk to Westerbork*** (Illinois Holocaust Museum & Education Center, East City Film, 2023)

This VR project reconstructs Rodi Glass's history using 360-degree video. I experienced the project in two radically different contexts—during an academic conference and in a dedicated

museum installation—allowing me to analyze how spatial framing, institutional mediation, and viewing conditions shape reception, affect, and interpretation. These markedly different settings enabled me to capture the technological nuances and the impact of presentation modalities on audience reception.

- ***The Lost Time*** (Film University Babelsberg KONRAD WOLF, 2024)

It is a immersive experience presenting Margot Friedländer's story combines biographical storytelling with reconstructed spaces, offering a hybrid narrative model that blurs the boundaries between documentary testimony and experiential simulation. I tested it and I met with Christian Zipfel from the project *"For Real? – Virtual Encounters with Witnesses of the Nazi Era"* with whom I subsequently conducted an interview on the production process—from pre-production to post-production—of the VR series featuring Holocaust survivors. I was also invited by the team to participate in recordings scheduled for mid-2026, which will take place in Kraków and Warsaw, providing me with the opportunity to conduct field research and observations on the construction of a "Holocaust VR experience."

- ***"Auschwitz in Front of Your Eyes"*** (2023)

It is the first time: the new Auschwitz-Birkenau Museum tool – online guided tours on site. The platform *"Auschwitz in Front of Your Eyes"* allows visitors to explore the former Nazi German concentration and extermination camp Auschwitz-Birkenau online with a guide. I also had the opportunity to talk with few guides who conduct these guided tours.

- ***Anne Frank House VR*** (Anne Frank House, Amsterdam, 2018)

I examined this project immediately after visiting the physical hiding place of the Frank family. This juxtaposition provided a unique perspective on how virtual reconstruction interacts with authentic sites, material absence, and visitor expectations, raising questions about authenticity, substitution, and spatial imagination.

- ***Ernst Grube – The Legacy*** (UFA GmbH, Fraunhofer Heinrich Hertz Institute, 2022)

This project represents an advanced form of interactive testimony, enabling dialogic engagement with a virtual survivor. This VR project explores immersive storytelling as a tool for education and memory. Using virtual reality, users are placed inside a carefully reconstructed environment. My analysis focuses on mediation, and the role of technological

“intermediaries” in shaping testimony. The experience has a staged nature and has been divided into scenes.

A central concern for first part of the project was the way VR technologies blur the boundary between lived reality and simulated worlds—visually, acoustically, and in some cases haptically—and how this blurring reshapes users’ perceptions of historical presence and authenticity. Through comparative analysis of multiple VR and 3D testimony projects, the research so far identifies distinct models of immersive commemoration, including witness reconstruction–based experiences, narrative embodiment models, and dialogic testimonial systems. All the virtual reality projects I have examined still the moment illustrate distinct strategies of working with memory, ranging from spatial immersion and narrative embodiment to interactive testimonial models. Analyzing them helps to capture a key tension between the category of testimony—rooted in the singular and immediate experience of the individual (Felman, Laub 1992; Agamben 1999)—and simulation, which, through technological mediation, reconstructs and extends the presence of the witness beyond the limits of their physical existence (Landsberg 2004). *The Lost Time* presents the story of Margot Friedländer, combining biographical narration with immersive spatial experience. *Walk to Westerbork* retraces Rodi Glass’s journey through places of childhood, deportation, and imprisonment, using 360-degree video technology to embed memories within the material topography of the Holocaust. Meanwhile, *Ernst Grube – The Legacy* develops an interactive testimonial model, in which technology enables dialogue with a virtual witness. *Anne Frank House VR* reconstructs both Anne Frank’s biography and the space where she hid, allowing users to explore her story through interactive narratives, photographs, documents, and audio accounts. I examined these works in terms of implemented style (animation, illustration, 3D, photogrammetry, etc.), production method, content type, level of simulation, emphasis on the recipient’s presence and agency (how they can interact and influence the experience), degree of sensory immersion, language and contextual barriers, as well as authenticity and ethical considerations. The analysis of these projects makes it possible to distinguish three fundamental forms of immersive narrative. First, the reconstruction of sites of memory (Nora 1989; Young 1993), where VR space becomes a stage for topographical experience and embodied immersion. Second, the modes of presenting and mediating the presence of witnesses, whose stories acquire a performative dimension within the digital environment. Third, the attribution of agency to the viewer, whose active participation shapes the narrative, creating a new form of engagement with testimony—one marked by empathy, but also burdened with the risk of secondary

traumatization (Kaplan 2005). I analyze these above-mentioned projects through a set of interrelated criteria that address both their representational and experiential dimensions. These include the character of the content, in which virtual environments may range from historically realistic to partially speculative or interpretative; the level of simulation and immersion, understood not merely as visual representation but as the extent to which an environment is technologically and perceptually simulated; and the degree of user presence, referring to the user's subjective sense of "being there" within the virtual or augmented space. Further analytical attention is given to the role of sensory immersion, which mobilizes multiple senses—such as sight, sound, and in some cases touch—to produce a credible and affectively charged experience. The analysis also considers levels of interactivity and user agency, examining whether and how users can move through and interact with the virtual environment, as well as the specific technologies employed, including recording methods, implemented technical solutions, and the overall scope and limitations of the technological framework.

The corpus of material includes also: *Inside Kristallnacht* (Claims Conference), *AuschwitzVR, Eva Umlauf: Her Testimony* (Fraunhofer Heinrich Hertz Institute (HHI)) and *Hanna's Story* (Żanis Lipke Memorial), *other Journey Back* projects (Illinois Holocaust Museum & Education Center). These cases would function as comparative material, allowing me to identify broader trends and divergences within the field.

What remains to be systematically addressed, and what I consider essential in the next step of my research, are augmented reality (AR) and mixed reality (MR) projects, as well as audio and video guide-based initiatives. This rapidly expanding field of commemorative practices requires further analytical attention, particularly because these formats focus on reconstructing Holocaust spaces and mediating interactions between the past of these sites and their present-day material and experiential conditions. In this context, in the second year of the fellowship I would like to examine initiatives as: *Auschwitz in Front of Your Eyes*, AR initiatives including *Bergen-Belsen AR*, *The Liberation AR*, the *Dachau Concentration Camp Virtual Tour*, *Eishishok AR*, and *Sobibor AR*, and some new additional apps. The study will critically interrogate the ongoing *experiential turn* in digital memory practices. Particular emphasis will be placed on the risk that AR-based memorial projects may aestheticize absence, violence, and trauma, transforming sites of genocide into stages for technologically enhanced experience rather than spaces of critical reflection. By simulating presence and restoring lost materiality, AR may produce an illusion of immediacy and access to the past, thereby obscuring the epistemological limits of representation and undermining the mediated nature of Holocaust

testimony and evidence. Addressing these examples is crucial for understanding how digital technologies shape contemporary engagements with Holocaust memory sites, both *in situ* and beyond. Moreover, I am tracing is whether there are any shared practices in commemorating the Holocaust and other genocides. What strategies can encompass initiatives which demonstrate a global effort to document various acts of genocide—efforts that go beyond the Holocaust narrative and contribute to building broader historical awareness and preventing future crimes against humanity. And finally, I am closely and critically collecting projects that implement AI—including generative AI—and their impact on public consciousness. These projects are only just beginning to emerge and, unfortunately, often operate to the detriment of memory.

To summarize, VR and interactive 3D testimonies projects that engage with the Holocaust raise numerous ethical concerns, particularly due to the risk of gamification or commercialization of genocide. At the same time, however, VR is a spatial technology which, when combined with historical subject matter, is often promoted by its creators as an educational tool for "time travel." As Kazlauskaite observes, "By building an embodied and affectively charged connection with the past, immersive digital media constitute a powerful vehicle for historical knowledge." The spatial logic of these projects places users "inside" the narrative, generating a sense of presence and immediacy. Ultimately, this research affirms that digital technologies, when carefully and critically employed, can enrich the transmission of Holocaust memory, extending the presence of witnesses and historical sites into new forms of mediated experience. Yet this potential must always be balanced against the moral imperative to preserve the integrity, dignity, and interpretive complexity of lived historical realities. The ongoing challenge lies in ensuring that technological innovation serves not as an end, but as a responsible and reflective vehicle for sustaining memory in the post-witness era.

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