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**Trauma, Resonances, and Transformations: Gaming as Heuristic Mode for Doing History**  
**Traumatismes, résonances et transformations : le jeu comme mode heuristique pour faire l'histoire**  
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Résumé de l'article

Cet article examine le potentiel des jeux vidéo en tant qu'outil heuristique pour aborder l'histoire, en particulier dans le contexte des événements traumatiques et des récits contestés. Traditionnellement, les jeux vidéo ont été rejetés comme un divertissement trivial, inadapté pour traiter de sujets historiques complexes. Cependant, de nouveaux paradigmes remettent en question ces perceptions en explorant comment les ludonarratifs – des récits façonnés par les mécaniques de jeu – peuvent faciliter un apprentissage transformateur. En faisant passer les joueurs de spectateurs passifs à participants actifs, les jeux offrent des expériences immersives qui peuvent encourager un engagement critique avec les événements historiques. L'impact émotionnel de ces expériences, soutenu par des études empiriques, a le potentiel de promouvoir l'empathie, la compréhension et le changement social. S'appuyant sur les théories de la résonance et de l'apprentissage transformateur, cette contribution plaide pour une réévaluation du rôle des jeux vidéo dans l'éducation historique, en soulignant leur capacité à offrir des expériences significatives et multi-perspectives qui approfondissent notre compréhension du passé et de sa pertinence pour les enjeux contemporains.

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# Trauma, Resonances, and Transformations: Gaming as Heuristic Mode for Doing History

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## **Abstract**

This paper examines the potential of video games as a heuristic tool for engaging with history, particularly in the context of traumatic events and contested narratives. Traditionally, video games have been dismissed as trivial entertainment, unsuitable for addressing complex historical topics. However, new paradigms challenge such perceptions by exploring how ludonarratives – stories shaped by game mechanics – can facilitate transformative learning. By shifting players from passive spectators to active participants, games offer immersive experiences that can encourage critical engagement with historical events. The emotional impact of these experiences, supported by empirical studies, has the potential to promote empathy, understanding, and social change. Building on theories of resonance and transformative learning, this contribution advocates for a re-evaluation of video games' role in historical education, emphasising their ability to provide meaningful, multi-perspective experiences that deepen our understanding of the past and its relevance to contemporary issues.

**Keywords:** gaming, ludonarratives, transformative learning, emotions and affect, resonance

## **Trauma, resonancias y transformaciones: el juego como modo heurístico de hacer historia**

### **Resumen**

Este artículo examina el potencial de los videojuegos como una herramienta heurística para interactuar con la historia, particularmente en el contexto de eventos traumáticos y narrativas controvertidas. Tradicionalmente, los videojuegos han sido tachados de entretenimiento trivial, inapropiados para abordar temas históricos complejos. Sin embargo, nuevos paradigmas desafían tales percepciones al explorar cómo las ludonarrativas – historias moldeadas por las mecánicas del juego – pueden facilitar el aprendizaje transformador. Al convertir a los jugadores de espectadores pasivos a participantes activos, los juegos ofrecen experiencias inmersivas que pueden fomentar un compromiso crítico con los eventos históricos. El impacto emocional de estas experiencias, respaldado por estudios empíricos, tiene el potencial de promover la empatía, la comprensión y el cambio social. Basándose en teorías de resonancia y aprendizaje transformador, este texto aboga por una reevaluación del papel de los videojuegos en la educación histórica, destacando su capacidad para proporcionar experiencias significativas y con múltiples perspectivas que profundicen nuestra comprensión del pasado y su relevancia para los problemas contemporáneos.

**Palabras clave:** videojuegos, ludonarrativas, aprendizaje transformativo, emociones y afectos, resonancia

## **Traumatismes, résonances et transformations : le jeu comme mode heuristique pour faire l'histoire**

### **Résumé**

Cet article examine le potentiel des jeux vidéo en tant qu'outil heuristique pour aborder l'histoire, en particulier dans le contexte des événements traumatiques et des récits contestés. Traditionnellement, les jeux vidéo ont été rejetés comme un divertissement trivial, inadapté pour traiter de sujets historiques complexes. Cependant, de nouveaux paradigmes remettent en question ces perceptions en explorant comment les ludonarratifs – des récits façonnés par les mécaniques de jeu – peuvent faciliter un apprentissage transformateur. En faisant passer les joueurs de spectateurs passifs à participants actifs, les jeux offrent des expériences immersives qui peuvent encourager un engagement critique avec les événements historiques. L'impact émotionnel de ces expériences, soutenu par des études empiriques, a le potentiel de promouvoir l'empathie, la compréhension et le changement social. S'appuyant sur les théories de la résonance et de l'apprentissage transformateur, cette contribution plaide pour une

réévaluation du rôle des jeux vidéo dans l'éducation historique, en soulignant leur capacité à offrir des expériences significatives et multi-perspectives qui approfondissent notre compréhension du passé et de sa pertinence pour les enjeux contemporains.

**Mots-clés** : jeu vidéo, ludonarrations, apprentissage transformationnel, émotions et affects, résonance

## Introduction

In recent years, video games have emerged as a powerful medium for engaging with history, especially in the context of traumatic events and contested narratives. Once dismissed as mere entertainment unfit to tackle serious subjects, video games are increasingly recognised as meaningful tools for exploring complex historical themes such as war, genocide, and social injustice. This shift in perception represents a significant change in both game design and academic discourse. Where video games were once seen as trivial distractions, today they are increasingly acknowledged for their ability to create immersive interactive experiences that promote critical thinking and emotional engagement.

The term “ludonarratives” refers to the way in which stories are shaped by game mechanics, where the gameplay itself contributes to the narrative experience. Unlike linear storytelling, ludonarratives engage the player by intertwining plot development with player actions, making the player an active participant in shaping the story. These mechanics allow games to convey historical events and traumas in ways that other media cannot. Through the combination of narrative structure and gameplay, video games offer a unique avenue for transformative learning and emotional engagement with historical content.

The evolution of video games mirrors broader changes in how we approach public history and memory. Traditionally, historical trauma and dark heritage were reserved for more established forms of media such as literature, film, and museum exhibitions. These media, while effective, often limited the audience to passive consumption. In contrast, video games offer a unique space where players are not only spectators but active participants. Through mechanics like procedural rhetoric and narrative agency, players can engage with history in ways that encourage reflection, empathy, and understanding.

This paper explores how this changing paradigm has allowed video games to be reimagined as heuristic tools for historical inquiry. Focusing on their affordances – interactivity, immersion, and multiperspectivity – it argues that video games are well-suited to tackling difficult histories and furthering transformative learning. Case studies such as *Attentat 1942*, or *Papers, Please* demonstrate how the medium can handle

sensitive historical content with nuance, encouraging players to confront moral dilemmas and engage critically with the past.

By analysing the emotional and cognitive effects of these games, this study highlights the potential for video games to deepen our understanding of history's complexities. This new paradigm positions games not just as educational tools but as important cultural artefacts that challenge traditional ways of experiencing history. As the video game industry continues to grow, so too does the opportunity to reshape how we remember, represent, and interact with difficult histories.

## Theoretical Playgrounds: Video Games as Field of Inquiry

Closely linked to the development of information technology, video games emerged in the second half of the 20th century, gradually evolving in complexity, visual sophistication, and expressive depth.<sup>1</sup> The medium gained widespread popularity in the late 1970s and 1980s, marking a significant cultural shift. Today, nearly half of the global population across all demographic strata engages in some form of gaming,<sup>2</sup> with revenues surpassing those of the film and music industries combined, making it the largest entertainment sector.<sup>3</sup>

Following its growing acceptance and cultural relevance, the interest of academics in video games as an object of scholarly inquiry started gaining traction in the late 1990s and early 2000s.<sup>4</sup> The expansion of the gaming demographic and the medium's increased representational power contributed to an increased awareness of its potential beyond entertainment. Scholars from various disciplines began to explore the social, cultural, psychological, and aesthetic aspects of video games, recognising their value as tools for education, social interaction, and cultural expression.<sup>5</sup>

This period saw the emergence of the first academic programmes, the establishment of associations,<sup>6</sup> as well as the launch of dedicated journals,<sup>7</sup> conferences, and

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<sup>1</sup> Frans Mäyrä, *An introduction to Games Studies: Games in Culture* (London: Sage, 2008).

<sup>2</sup> "How Many Gamers Are There in the World? (2024 Updated)," Gamespublisher, accessed September 2, 2024, <https://gamespublisher.com/gaming-statistics-how-many-gamers-are-there-in-the-world/>. Additionally see: "Video Games", Statista, accessed September 2, 2024, <https://www.statista.com/topics/868/video-games/>.

<sup>3</sup> "This Opportunity for Investors is Bigger than Movies and Music Combined", Nasdaq, accessed September 2, 2024, <https://www.nasdaq.com/articles/this-opportunity-for-investors-is-bigger-than-movies-and-music-combined-2021-10-03>.

<sup>4</sup> Mark J. Wolf and Bernard Perron, eds., "Introduction," in *The Video Game Theory Reader* (London: Routledge, 2003), 6–13.

<sup>5</sup> Wolf and Perron, *The Video Game Theory Reader*.

<sup>6</sup> The establishment of associations such as the *Digital Games Research Association (DiGRA)* in 2023 and later of the *Foundations of Digital Games (FDG)* with their respective annual conferences became key venues for the discussion of video game studies, attracting researchers from a wide range of disciplines.

<sup>7</sup> Journals like *Game Studies*, which was founded in 2001, became essential resources for scholars seeking to publish and access peer-reviewed research on video games.

research initiatives. These platforms have provided a forum for the development of new theories and methodologies for analysing and employing video games, helping to establish the medium as a legitimate research subject within the broader academic community.

What started as a niche study area has developed into a dynamic and inherently interdisciplinary field, encompassing a wide range of epistemological frameworks that draw theories from computer science, psychology, sociology, media, and cultural studies.<sup>8</sup>

This growing body of scholarship has also influenced the way video games are designed and developed. Game designers are increasingly aware of academic research in the field, and many have incorporated these insights into their creative processes. This has led to the creation of games that are more thoughtful, innovative, and socially conscious, pushing the boundaries of what the medium can achieve. Video games are now widely recognised for their potential in therapeutic settings and task-based learning environments. In therapy, games are employed to address a variety of cognitive and emotional challenges, such as memory training, problem-solving, attention enhancement, and emotional regulation. Games are also used for physical rehabilitation, providing interactive exercises that improve motor skills, balance, and coordination.

In task-based learning, video games offer an interactive and immersive environment that engages learners in hands-on experiences, enabling them to apply knowledge and skills within realistic simulated scenarios. Video games also can afford immediate feedback, adaptive difficulty levels, and personalised learning experiences, which enhance learner engagement and facilitate the retention of knowledge.

Beyond these functional applications, games have also demonstrated their capacity as tools for social critique. As exemplified in Mary Flanagan's concept of Critical Play, game mechanics can effectively model and reflect geopolitical realities, allowing the medium to serve as a vehicle for critical reflection and socio-political commentary.<sup>9</sup> Organisations such as *Games for Change* have played a crucial role in promoting the use of video games for social, political, and cultural activism. Founded in 2004, it has been at the forefront of efforts to exploit the power of serious games to address real-world issues, bringing together game developers, educators, activists, and scholars to create games that raise awareness and inspire positive social action.

## Gaming as HiStorytelling

Historians increasingly turned their attention to video games in the 2000s, recognising their potential as tools for representing, simulating, and communicating historical

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<sup>8</sup> Wolf and Perron, *The Video Game Theory Reader*.

<sup>9</sup> Mary Flanagan, *Critical Play: Radical Game Design* (Cambridge, MA: MIT Press, 2013).

narratives. William Uricchio's 2005 essay "Simulation, History, and Computer Games" is often quoted as one of the earliest contributions, marking a shift toward understanding video games beyond their entertainment value, as a means to exploring causality and model historical processes.<sup>10</sup> A special issue of the journal *Games and Culture* dedicated to "History and Heritage in Games and Virtual Worlds",<sup>11</sup> as well as the seminal anthology *Playing with the Past: Digital Games and the Simulation of History* (2013),<sup>12</sup> further helped the crystallisation and recognition of historical game studies (HGS) as a specific area of research.

Despite its substantial and steady growth, the field has been characterised by the absence of a unified, all-encompassing methodology, rather shifting focus across multiple aspects and borrowing from a multitude of interpretative frameworks and approaches. Historians view video games through several lenses, each offering a different perspective on their significance and function. Media archaeologists and digital historians have been looking at video games as cultural artefacts, reflecting on the political, social, and technological contexts of their creation, and tracing their development as digital media. Video games, from this perspective, are seen as part of the evolving landscape of digital culture, contributing to both cultural history and heritage preservation. The widespread establishment of computer game museums and archival initiatives aimed at mapping global and local histories of video games is both a resultant and driving force behind this rising interest.<sup>13</sup>

Historians are equally focused on the paratextual materials surrounding video games, which can serve as supplementary historical sources. These may include game manuals, developer interviews, promotional content, or fan fiction. Such resources allow a deeper understanding of the broader cultural impact of historical video games, offering an insight into the intentions of game creators, the marketing strategies, and how player communities interpret and engage with these narratives.

Another significant perspective focuses on video games as historical representations, examining how they construct, interpret, and communicate historical narratives.

Through narrative design and gameplay mechanics, games offer interactive ways to engage with the past, presenting educational, speculative, or revisionist versions of

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<sup>10</sup> William Uricchio, "Simulation, History, and Computer Games," in *Handbook of Computer Game Studies*, eds. Jeffrey H. Goldstein and Joost Raessens (Cambridge, MA: MIT Press, 2005), 327–338.

<sup>11</sup> See Special Issue of *Games and Culture* 6, no. 6 (November 2011), curated by guest editors Erik Champion and Jefferey Jacobson.

<sup>12</sup> Andrew B.R. Elliott and Matthew Kapell, eds., *Playing with the Past: Digital Games and the Simulation of History* (New York: Bloomsbury, 2013). See also Esther Wrights' insightful review essay: "Still Playing with the Past: History, Historians, and Digital Games," *History and Theory* 61, no. 4 (December 2022): 166–177.

<sup>13</sup> See for instance projects such as *Confederation Ludens* in Switzerland or the Ludov database in Canada.

history. This approach examines the cultural, ideological, and contextual influences that shape historical representations and how they impact the players' understanding of history.

Player communities also form an essential part of historical game studies. Oral history and ethnographic methods<sup>14</sup> have been used to study how these groups engage with historical content through forums, "Let's Plays,"<sup>15</sup> and modding, where they often reimagine and reinterpret history creatively. This connects to broader debates about public history, where games are seen as a medium through which history is actively consumed and constructed by general audiences, muddling the lines between expert and amateur historiography.

A final approach in the field sees historians and public historians experimenting with game design as a form of public history. By creating games that tackle complex and often difficult historical themes, they have opened new ways to engage audiences with the past. This method moves beyond traditional modes of historical communication, allowing players to take on an active role in historical inquiry. Through interactive storytelling and mechanics, players are invited to explore historical events, navigate contrasting narratives, and come to terms with ambiguity, making game design a compelling tool for public historians seeking to broaden the impact and reach of their work beyond the textual.

## History Beyond Textuality

The definition of what constitutes a "historical game" has always been slippery and hard to pin down.<sup>16</sup> Unlike traditional media such as film or literature, which categorise works based on theme or setting, video game genres are typically defined by gameplay mechanics, player objectives, and narrative structures. This creates a challenge when attempting to label historical games, as history frequently functions as a narrative backdrop rather than as the primary focus of the gameplay. When examining digital game distribution platforms like *Steam*, we encounter a vast array of entries classified under the broad umbrella term of "historical game", encompassing thousands of titles across different genres – from shooters to strategy to narrative-driven games – and a wide variety of periods and themes. As argued by Esther MacCallum-Stewart and Justin Parsler, while history frequently inspires and informs the world-building of games, it is often subordinated to other aspects of gameplay, leading to a variety of historical representations that may differ widely in accuracy or educational value. Consequently,

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<sup>14</sup> Dany Guay-Bélanger at the University of Montreal has been conducting some promising research applying oral history methodologies to the study of gamers.

<sup>15</sup> T. L. Taylor, *Watch Me Play: Twitch and the Rise of Game Live Streaming* (Princeton, NJ: Princeton University Press, 2018).

<sup>16</sup> Esther MacCallum-Stewart and Justin Parsler, "Controversies: Historicising the Computer Game, Situated Play," *Proceedings of DiGRA 2007 Conference*, 203–210.



many games incorporate historical themes without necessarily aiming for authenticity or accuracy, with some providing subtle and complex representations of the past, while others simplify and fictionalise historical events purely for entertainment purposes.<sup>17</sup>

Broadening the discussion beyond debates over authenticity and accuracy, Adam Chapman argues that historical games should be viewed not merely as representations of the past but as systems that allow players to engage with historical processes. He contends that games offer unique forms of interaction that simulate historical events and practices, thus functioning as historical representations within their own specific epistemological frameworks.<sup>18</sup>

Chapman further categorises historical games by their simulation styles, distinguishing between “realist” and “conceptual” simulations, with the former focusing on visual fidelity and the latter on systemic historical processes.<sup>19</sup>

Building on Chapman’s framework, Jeremiah McCall asserts that historical games serve as a form of public history, offering players a powerful interactive medium to engage with the past, regardless of their adherence to strict historical realism and accuracy.<sup>20</sup> Realist simulations immerse players in hyper-detailed and visually accurate open worlds, offering opportunities to experience historical events as a form of time travel or historical reenactment, while conceptual simulations replicate underlying systems, structures and dynamics. At one end of the spectrum, we have titles like *Red Dead Redemption 2* or the *Assassin’s Creed Franchise*, which present intricately crafted virtual worlds that draw heavily from historical sources to create a strong sense of realism and authenticity. Players walk the streets of Paris on the eve of the French Revolution, visit the halls of the lost library of Alexandria, converse with Leonardo Da Vinci, or ride on horseback across the vast prairies of the 19th Century American Frontier. While their narratives are largely fictional and occasionally infused with supernatural elements, these games reconstruct the aesthetics and atmosphere of the past, giving players a tangible sense of time and place, stimulating historical imagination.<sup>21</sup> According to Bowman et al., the perceived realism of these environments enhances the players’ enjoyment and engagement with the game as they experience a plausible re-creation of the past. This immersion, combined with the freedom to explore

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<sup>17</sup> Ibidem.

<sup>18</sup> Adam Chapman, *Digital Games as History: How Video Games Represent the Past and Offer Access to Historical Practice* (New York, London: Routledge, 2016), 59–89.

<sup>19</sup> Chapman, *Digital Games as History*, 61 ff.

<sup>20</sup> Jeremiah McCall, “Playing with the Past: History and Video Games (and Why it might Matter): Historiography, Public History, and Historical Videogames,” *Journal of Geek Studies* 6, no. 1 (2019): 31.

<sup>21</sup> A recent book by Felix Zimmermann explores the concept of *Vergangenheitsatmosphären* (atmospheres of the past), arguing how the recreation of a particular mood or ambiance is to be understood as a manifestation of the aestheticisation of the past. See Felix Zimmermann, *Virtuelle Wirklichkeiten: Atmosphärisches Vergangenheitserleben im Digitalen Spiel* (Marburg: BÜchner-Verlag, 2023), 386.

the painstakingly detailed scenes allows players to interact directly with history, gaining a sense of presence and connection to the period portrayed.<sup>22</sup>

On the other side of the spectrum, we find games like Lucas Pope's *Papers, Please*, graphically stylised and set in a fictional, non-descript time and place, yet representing the oppressive mechanisms of totalitarian regimes with striking poignancy, successfully simulating bureaucratic violence, moral dilemmas, and institutionalised horrors.<sup>23</sup>

Procedural rhetoric, a concept introduced by Ian Bogost in his influential essay "Persuasive Games," highlights the idea that the rules, challenges, and opportunities presented within a game can effectively mirror and represent real-world processes.<sup>24</sup> In other words, the design and mechanics of a game can be employed as a form of persuasion, enabling players to engage with and understand complex real-life systems through interactive experiences.

In his article "Going Beyond the Textual in History," Jeremy Antley critiques the conventional integration of games into historical scholarship, particularly the attempt to emulate game-based historical inquiry with traditional textual methodologies.<sup>25</sup> He argues that such efforts limit the potential of games to offer unique forms of engagement with the past through their interactive mechanics. Drawing on the concept of procedural rhetoric, Antley emphasises that games, unlike monographs or other textual forms, enable players to actively participate in the construction of historical arguments through gameplay. This process, he contends, provides an alternative mode of historical inquiry that goes beyond the passive consumption of knowledge typical of textual sources. The critique targets scholars who seek to make games mirror the epistemological frameworks of traditional history, as this approach undermines the distinctive affordances of games in presenting historical narratives. Instead, it calls for a more flexible and dynamic understanding of the relationship between history and games, able to recognise the capacity of games to both convey and generate historical knowledge through interaction and play.

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<sup>22</sup> Nicholoas David Bowman, Alexander Vandewalle, Rowan Daneels, Yoon Lee, and Siyang Chen, "Animating a Plausible Past: Perceived Realism and Sense of Place Influence Entertainment of and Tourism Intentions From Historical Video Games," *Games and Culture* 19, no. 3 (2024): 286–308, <https://doi.org/10.1177/15554120231162428>

<sup>23</sup> Developed by award-winning game designer Lucas Pope in 2013, *Papers, Please* is a dystopian simulation game set in the fictional Eastern Bloc country of Arstotzka. Players assume the role of an immigration officer tasked with inspecting documents and deciding who is allowed to enter the country. The game presents moral and ethical dilemmas, as players must balance following government orders with their personal judgment, all while managing their own financial and familial pressures.

<sup>24</sup> Ian Bogost, *Persuasive Games: The Expressive Power of Video Games* (Cambridge, MA: MIT Press, 2007).

<sup>25</sup> Jeremy Antley, "Going Beyond the Textual in History," *Journal of Digital Humanities* 1, no. 2 (Spring 2012).

Digital games can be used as effective means for doing and communicating history both in their representational and performative form. This potential makes them ideal tools for educators looking to bring historical inquiry into the classroom.

McCall, a leading expert on the uses of historical games in history education, has developed a robust methodology for integrating games as tools for active and critical learning into secondary school history classes.<sup>26</sup> Pupils are encouraged to critically assess the accuracy and narrative choices within games, inspiring deeper reflections on how history is portrayed. Additionally, they reflect on games that simulate historical processes and are involved in creating simple narrative games, acquiring hands-on experience with historical interpretation. His method not only promotes critical thinking but also nurtures historical empathy, making games a meaningful way to explore and understand the past interactively.

Games offer distinctive epistemological frameworks that allow players to experience and participate in the construction of historical narratives through both realist and conceptual simulations. Whether immersing players in meticulously reconstructed historical environments or challenging them to engage with complex systemic dynamics, they extend the possibilities of how history can be understood, interpreted, and communicated. This interactive mode of historical inquiry not only enhances engagement but also encourages critical thinking, empathy, and a more nuanced understanding of the past, making digital games valuable assets in both academic and educational contexts.

In the context of historical video games, affordances refer to the ways games enable players to engage with history actively, beyond passive consumption. Games are fundamentally procedural, governed by a set of executable rules that shape the player's experience. This procedural nature makes games inherently interactive and, as Espen Aarseth describes, ergodic, requiring player effort and decision-making to progress.<sup>27</sup> Rather than passively absorbing information, players are invited to participate in historical inquiry, offering unique opportunities for the exploration and reinterpretation of the past. Interactivity grants player agency, which in turn results in heightened participation, increased immersion, and greater emotional investment.

Additionally, as forms of digital interactive storytelling, games offer the opportunity to present multiple perspectives on historical events, allowing for critical thinking and a more nuanced understanding of complex situations. That said, the multi-perspectivity of games is often shaped by the cultural paradigms of their creators. As argued by Dima

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<sup>26</sup> Jeremiah McCall, *Gaming the Past. Using Video Games to Teach Secondary History*, 2nd ed. (London: Routledge, 2023).

<sup>27</sup> Espen Aarseth, *Cybertext: Perspectives on Ergodic Literature*. (Baltimore and London: The Johns Hopkins University Press, 1997).

Saber and Nick Webber,<sup>28</sup> many games operate within frameworks of cultural hegemony, reflecting dominant Western narratives while marginalising others. For instance, war games like *Call of Duty* often perpetuate neo-Orientalist depictions of Middle Eastern conflicts, presenting simplified binaries of civilisation versus barbarism. These representations are rooted in broader hegemonic discourses, reinforcing cultural and political biases rather than challenging them. To create truly multi-perspective narratives, game designers must move beyond surface-level inclusion of diverse viewpoints.

*Attentat 1942*, developed by researchers at Charles University in Prague, exemplifies this by exploring the Nazi occupation of Czech lands through different viewpoints. The game uses cinematic interviews, interactive comics, and historical footage to allow players to uncover the mystery of a grandfather's arrest by the Gestapo after the assassination of Reinhard Heydrich. Through eyewitness testimonies, players experience diverse and often contradictory perspectives on the same event, deepening their understanding of the historical and individual complexities involved.

## From Frivolous to Formidable: The Changing Paradigms of Historical Game Design

For an extended period, digital games have been viewed as inadequate for addressing sensitive historical topics. The medium's reputation as inherently trivial has reinforced doubts about its ability to engage with serious issues. Political scientist and game scholar Eugen Pfister observed the notable absence of the Holocaust and similar atrocities in mainstream game culture, noting that attempts to directly confront these subjects were often seen as sacrilegious by popular media.<sup>29</sup> This scepticism reflected broader concerns about the ability of games to tackle difficult topics without trivialising them. As a result, developers frequently avoided engaging with dark heritage and conflicting histories, mindful of the ethical and cultural challenges posed by representing profound historical trauma in a ludic format.

It is likely this very process of reframing and translating historical events into a ludic form that might offer an interpretative framework for understanding why such portrayals elicit strong reactions. Adam Chapman and Jonas Linderöth draw on Goffman's theory of framing and keying<sup>30</sup> to examine how historical events are represented and

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<sup>28</sup> Dima Saber and Nick Webber, "This is our Call of Duty': Hegemony, History and Resistant Videogames in the Middle East," *Media, Culture & Society* 39, no. 1 (2017): 77–93.

<sup>29</sup> Eugen Pfister, "Man spielt nicht mit Hakenkreuzen!'. Imaginations of the Holocaust and Crimes Against Humanity During World War II in Digital Games," in *Historia Ludens. The Playing Historian*, eds. Alexander von Lünen, Katherine J. Lewis, Benjamin Litherland, and Pat H. Cullum (New York: Routledge: 2020), 267–284.

<sup>30</sup> Adam Chapman and Jonas Linderöth, "Exploring the Limits of Play," in *The Dark Side of Game Play: Controversial Issues in Playful Environments*, eds. Torill Elvira Mortensen, Jonas Linderöth, and Ashley M. L. Brown (Abingdon: Routledge, 2018), 140–145.

recontextualised in video games. Games establish distinct interpretative frameworks, enabling players to engage with historical scenarios through the mechanics and goals of gameplay. In this context, keying refers to the transformation of real-world events into a game-like structure, where the serious, factual nature of history is reframed into something playful or competitive. The authors argue that games do not merely depict history but instead offer players a recontextualised experience, shifting the meaning of historical events into a ludic form.

While this shift might provide new insights into historical practice, allowing players to simulate decisions and actions, it also introduces significant ethical concerns.

Chapman and Linderoth emphasise that when real-world tragedies are portrayed in games, this recontextualisation risks trivialising the gravity of the events. The emotional weight and historical significance of these events can be diminished or distorted when they are transformed into entertainment. This would explain the ethical ramifications of turning sensitive historical themes into game content, questioning whether such portrayals are in poor taste, especially when the suffering involved is rendered as part of a competitive or interactive experience.

In 2015, *Slave Tetris*, a mini-game within *Playing History 2: Slave Trade* (2013), developed by Serious Games Interactive,<sup>31</sup> sparked widespread controversy for its depiction of the transatlantic slave trade. The game required players to arrange slaves like puzzle pieces in a ship's hold, a mechanic borrowed from the classic *Tetris*. This design choice, inspired by historical depictions of slave ship crowding during the Middle Passage and intended to demonstrate the inhumanity of slavery, was widely criticised for trivialising a traumatic historical event.<sup>32</sup> Although the developers claimed their intent was to educate and raise awareness, the disconnect between the subject matter and the game mechanics led to a severe backlash. Educational games that fail to consider the emotional and pedagogical impact of their mechanics can undermine their own goals. In this case, the poor design detracted from the educational potential by reducing human suffering to a playful challenge.

In *Slave Tetris*, the designers' decision to implement a *Tetris*-like mechanic reduced the profound inhumanity of the event into a simplistic puzzle, which trivialised the suffering and horror. The mechanic did not encourage reflection on the moral and ethical dimensions of slavery, but rather distanced the player from its emotional and historical significance. The fact that the game was designed for children exacerbated its failure, as young players were unlikely to grasp the intended metaphor or critically engage with the historical violence it sought to represent. This led to the educational message being lost amidst the gameplay, as the target audience lacked the maturity to

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<sup>31</sup> "Serious Games", accessed August, 5, 2024, <https://www.seriousgames.net/en/>.

<sup>32</sup> "Slave Tetris: When Educational Video Games Go Too Far," The Reboot Gamers, accessed August 25, 2024, <https://therebootgamers.wordpress.com/2015/09/11/slave-tetris-when-educational-video-games-go-too-far/>.

reflect on the moral complexities of the event. As argued by Dawn Spring<sup>33</sup> while video games can immerse players in historically rich settings, their success in conveying deep and nuanced historical arguments often depends on how well players connect in-game experiences to historical realities outside the game. This interplay between experience, imagination, and historical knowledge must be carefully designed to ensure that games not only engage but also educate players in meaningful ways.

In contrast, Gonzalo Frasca's "newsgame" *September 12: A Toy World* (2003), released on the anniversary of the September 11 attacks, represents a good case of how video game mechanics can be employed to convey complex political messages and deliver a poignant social critique. In the game, players attempt to eliminate terrorists in a Middle Eastern town but inevitably cause civilian casualties, which lead to more radical actions. The frustrating absence of a win condition and the cyclical pattern of violence and death in the game force the players to confront the consequences of military action reflecting on the futility of violent intervention. The game, thus, effectively conveys the message that the use of force perpetuates a cycle of violence, resulting in further conflict rather than resolution.

Brenda Romero's board game series *The Mechanic is the Message* offers a sophisticated example of how historical atrocities and complex societal issues can be explored through gameplay. Between conceptual art and social experiment, each game uses simple mechanics to convey profound messages about historical events, human behaviour, or ethical dilemmas. Players are confronted with their own complicity in the narrative and face uncomfortable truths about the moral implications of their actions.

For example, in *Train*, players unwittingly take on the role of complicit actors in the Holocaust, tasked with efficiently loading people onto trains, only to later realise the convoys are bound for Nazi concentration camps. The game effectively uses this mechanic to evoke a sense of connivance and horror, beginning as a seemingly innocuous challenge before revealing the true, disturbing nature of the scenario at the end. The mechanic of loading passengers onto the train mirrors historical processes, but without initially revealing its historical context. By the time players realise their role in the Holocaust, they are forced to confront the unsettling truth that they have unwittingly participated in a crime. The simplicity of the mechanics in *Train* – loading people and moving the train forward – becomes a powerful tool for conveying moral responsibility and complicity, as the player is drawn into a process that symbolises historical atrocity without immediate awareness of its consequences. This design also reflects the dynamics of situational opportunism,<sup>34</sup> where players follow the rules and achieve objectives without questioning the broader moral implications. The game leads players

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<sup>33</sup> Dawn Spring, "Gaming History: Computer and Video Games as Historical Scholarship," *Rethinking History* 19, no. 2 (2014): 207–221, <https://doi.org/10.1080/13642529.2014.973714>.

<sup>34</sup> See Andreas Fickers and Christoph Brüll, *Ein Experiment kollektiver Gewissensprüfung. Situativer Opportunismus und kumulative Heroisierung* (Eupen: Grenz-Echo Verlag, 2019).

to reflect on how easily they accept and follow orders, and how complicit they are willing to be when faced with authority or efficiency. By the time the truth is revealed, *Train* forces players to critically examine their own actions, highlighting how ordinary participation in a system can contribute to profound harm.

Where *Slave Tetris* failed to respect the gravity of its subject by turning the event into a puzzle game, *Train*'s mechanics successfully engage players in a way that provokes deep reflection on their role within the historical narrative.

This differentiation stresses the importance of developing game mechanics that effectively convey the emotional and ethical weight of the historical events they aim to represent. Design choices can dramatically impact the effectiveness of a game in delivering its message. Thoughtful, well-considered mechanics can engage players on a deeper emotional and intellectual level, allowing them to critically reflect on complex subjects. In contrast, poorly chosen design elements can trivialise serious topics, leading to a disconnect between the gameplay and the message, and reducing the potential for meaningful engagement. Ultimately, the success of a game in conveying its intended message depends not only on the subject matter but on how its mechanics translate and support the gravity and complexity of the content, reinforcing the intended narrative and transforming gameplay into a meaningful, impactful experience.

Historian and game designer Vít Šisler and his group argue that, unlike traditional media such as films or books, which primarily convey history through linear narrative and representation, video games offer a unique way to engage with historical environments and events through interactive gameplay. This interactivity allows players to go beyond passively receiving historical information, becoming instead active participants in historical scenarios. Games enable players to explore, make decisions, and experience the consequences of those decisions within a simulated historical context, thus creating a deeper, more personal connection to the past.<sup>35</sup>

In this context, they introduce two key concepts: "inter-medial authenticity," which refers to how games use established media conventions to create a sense of historical truth, and "procedural heritage,"<sup>36</sup> which examines how game mechanics shape players' interaction with historical narratives. Inter-medial authenticity is achieved by referencing familiar tropes from documentaries, museums, and films, thus enhancing players' sense of immersion and credibility. Procedural heritage, on the other hand, focuses on how the rules and systems of the game create a framework for players to engage with history not just as observers but as actors within it.

In video games, historical events are not just presented as inert facts or stories. Through their rules and mechanics, games create dynamic "historical problem spaces"<sup>37</sup>

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<sup>35</sup> Vít Šisler et al., "History, Heritage, and Memory in Video Games. Approaching the Past in Svoboda 1945: Liberation and Train to Sachsenhausen," *Games and Culture* 17, no. 6 (2022): 901–914.

<sup>36</sup> Šisler et al., "History, Heritage, and Memory," 903.

<sup>37</sup> *Ibidem*.

where players can experiment with different choices and outcomes. These systems allow for vicarious experiences of history, where players can reenact or reinterpret past events. This interactivity can trigger historical empathy by placing players in the roles of historical agents, forcing them to deal with the complexity, moral dilemmas, and contingency of historical decision-making.

This active engagement contrasts with the passive reception of history in traditional media. In games, history is not just something to be learned or observed; it is something to be “played,” experienced, and critically reflected upon. Functioning both as narrative device and interpretative framework, game mechanics enable players to interact with and even alter the course of historical events. This opens up new ways of understanding the past by emphasising the contingent nature of historical processes and how individual actions within a broader systemic framework shape historical outcomes.

### **Playing with Feeling: Trauma and Transformation**

Building on prior discussions in game studies and media theory,<sup>38</sup> Toby Smethurst and Stef Craps argue that games extend beyond mere interactivity to become “interreactive”: a dynamic loop where players interact with the game, and the game, in turn, reacts to the players. This reciprocal relationship transforms games into more than just interactive systems; they become experiences in which both player and game respond to one another, leading to a unique form of communication that actively engages the participant. Through this “interreactivity,” players are granted a level of agency which enhances their emotional and cognitive engagement. This agency, by granting players control over certain aspects of the game, deepens their immersion and emotional investment in the experience.<sup>39</sup>

Professional historians have been displaying an enduring aversion to emotions and irrationalism.<sup>40</sup> Emotions, however, influence the way we perceive and interpret information, shape our biases, judgments, and decision-making processes. Integrating emotional processes into scientific knowledge can help explain the complexity of human behaviour, ultimately leading to more holistic and effective approaches to historical research and applications.<sup>41</sup> Video games possess the ability to elicit a wide range of

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<sup>38</sup> Thomas H. Rousse, “On Ruining Dear Esther,” *Oh No! Video Games* 19 (2012).

<sup>39</sup> Toby Smethurst and Stef Craps, “Playing with Trauma: Interreactivity, Empathy, and Complicity in The Walking Dead Video Game,” *Games and Culture* 10, no. 3 (2015): 269–290, <https://doi.org/10.1177/1555412014559306>.

<sup>40</sup> See the recent work of Ute Frevert and Daniela Petrosino, *The Power of Emotions: A History of Germany from 1900 to the Present* (Cambridge: Cambridge University Press, 2023).

<sup>41</sup> Marja Jalava, “Emotions in Historiography: The Case of the Early Twentieth-Century Finnish Community of Historians,” *História da Historiografia* 12, no. 31 (2019): 113–143.



fundamental and complex emotional responses in players and are a remarkably suitable medium for creating meaningful experiences.<sup>42</sup>

In *The Paradox of Transgression in Games*, Mortensen and Jørgensen argue that video games are uniquely positioned to explore transgressive content and ideas that challenge societal norms. Central to the book's thesis is the paradox that aestheticised transgressions in games, while provocative, remain manageable within the ludic context, whereas truly profound transgressions would render a game unplayable. The authors challenge the fallacy that play is inherently non-serious, asserting that games can engage with uncomfortable and subversive topics. This reinforces empirical studies on emotionally moving and harrowing experiences in games, which support the notion of eudaimonic appreciation<sup>43</sup> and highlight the transformative potential of interactive narratives as educational tools.<sup>44</sup> The emotional engagement and affective experiences that players encounter demonstrates how games not only challenge players cognitively but also provoke deep emotional responses, facilitating immersion and personal investment. Through the synthesis of ludic mechanics and aesthetic elements, video games possess unique affordances to convey difficult and complex themes, allowing them to push boundaries and provoke meaningful reflections.

The transformative potential of video games is shaped not only by their design but also by the demographics of their players. Age, educational background, and cultural context play critical roles in determining how players engage with historical narratives. While younger players might benefit from games as an entry point to history, older or more educated players may bring deeper critical frameworks to their gameplay, engaging more fully with the moral and historiographical questions posed. Designing games with demographic diversity in mind is thus essential. For example, games aimed at secondary school students should prioritise accessible narratives and mechanics that introduce foundational historical concepts, while games targeting older audiences can afford to engage with more complex and contested historical themes. This differentiation ensures that games remain impactful across a broad spectrum of users, maximising their potential as educational and heuristic tools.

## Agonistic Games

A promising approach to addressing difficult heritage and historical trauma comes from the integration of agonistic memory theory into game design. This method allows

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<sup>42</sup> Scott H. Hemenover and Nicholas D. Bowman, "Video Games, Emotion, and Emotion Regulation: Expanding the Scope," *Annals of the International Communication Association* 42, no. 2 (2018): 125–43, doi:10.1080/23808985.2018.1442239.

<sup>43</sup> See Julia Ayumi Bopp, Klaus Opwis, and Elisa D. Mekler, "'An Odd Kind of Pleasure': Differentiating Emotional Challenge in Digital Games," *CHI 2018*, <https://doi.org/10.1145/3173574.3173615>.

<sup>44</sup> Christian Roth, Elisa Mekler, and Nick Bowman (Workshop: Transformative Experience Through Interactive Narrative: 2020), 10.13140/RG.2.2.25199.87203.

players to engage with multiple perspectives, including those of perpetrators, victims, and bystanders, promoting a more nuanced reflection on complex socio-historical issues. Games that adopt agonistic frameworks create spaces where unsettling decisions must be made, encouraging players to confront moral ambiguities and the socio-political contexts that inform historical events.

As outlined by Daniela De Angeli and her collaborators, agonistic games draw on the principles of agonistic memory, which emphasises the multi-perspective understanding of historical narratives. Unlike cosmopolitan or antagonistic memory frameworks, which either polarise narratives or focus predominantly on victims, agonistic memory seeks to engage all social agents involved in historical events, including perpetrators. This approach humanises individuals who might otherwise be seen in one-dimensional moral terms, enabling a more reflective and nuanced understanding of the past.<sup>45</sup>

Two site-specific games, *Endless Blitz* and *Umschlagplatz '43*, exemplify how agonistic memory can be applied to game design to promote critical engagement with dark heritage. The games were specifically created for the exhibition “*Krieg. Macht. Sinn.*” (“War. Power. Meaning.”) hosted at the Ruhr Museum in Essen, Germany, from November 2018 to June 2019. The goal of the exhibition was to provoke critical reflection on the meaning of war and its consequences, particularly within the context of dark heritage and focused on presenting multiple perspectives on war, violence, and memory in European history.

In *Endless Blitz*, one player takes the role of a bomber, while another acts as an evacuation officer, each making decisions that reflect real-world moral dilemmas faced during wartime. The game requires players to experience both sides of the scenario - both destroying targets and saving civilians. This forced shift in perspective, as well as the time-sensitive and unsettling choices involved, challenges players to reflect on the moral complexity of wartime actions.<sup>46</sup>

Similarly, *Umschlagplatz '43* places players in the shoes of individuals awaiting deportation during the Holocaust, with each character representing different socio-political backgrounds. Through role-play, players must negotiate with a non-player character who can only save one person. The game pushes players to confront uncomfortable truths about their characters' actions during the war, as they must decide whether to lie, tell the truth, or defame others to increase their chances of survival.

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<sup>45</sup> See Daniela De Angeli, Daniel J. Finnegan, Lee Scott, Anna Bull, and Eamonn O'Neill, “Agonistic Games: Multiperspective and Unsettling Games for a Social Change,” in Proceedings of the 2018 Annual Symposium on Computer-Human Interaction in Play (CHI PLAY '18 Extended Abstracts), ACM, New York, NY, USA, 7 pages, <https://doi.org/10.1145/3270316.3270594>; Daniela De Angeli, Daniel J. Finnegan, Lee Scott, and Eamonn O'Neill, “Unsettling Play: Perceptions of Agonistic Games,” *ACM Journal on Computing and Cultural Heritage (JOCCH)* 14, no. 2 (2021): 15, <https://doi.org/10.1145/3431925>.

<sup>46</sup> Ibidem.

The power of these games lies in their ability to contextualise unsettling decisions within the broader socio-historical frameworks that shaped them. By immersing players in scenarios that require them to embody conflicting roles and perspectives, agonistic games enable a deeper understanding of how historical actors navigated difficult moral landscapes. This approach also resonates with contemporary discussions about the limitations of nationalistic or victim-centred narratives, which often fail to capture the complexities of historical trauma and violence. Moreover, agonistic games contribute to the ongoing discourse on the role of interactive media in public history and cultural heritage. As seen in the design of *Endless Blitz* and *Umschlagplatz '43*, these games serve not only as tools for historical reflection but also as potential interventions in contemporary social debates.

## Conclusions

Video games represent a unique convergence of narrative, technology, and culture, offering historians novel ways to engage with the past. Whether approached as cultural artifacts, technological innovations, or historical representations, video games open up new methodological and theoretical avenues for research. They challenge traditional boundaries between historian and audience, and between passive consumption and active participation in history.

By moving beyond passive observation, games offer a more nuanced engagement with historical trauma and provide a framework for understanding the complex motivations and actions of historical actors. Through their interactive nature, games have the potential of transforming players' perceptions of the past, making them powerful tools for public history and cultural heritage education. They invite players to navigate conflicting viewpoints, encouraging critical thinking and reflection on moral dilemmas. These activities are essential when dealing with difficult or contentious past.

Changing the role of the audience from spectator/reader to actor/agent, video games can support the transformative learning process by providing immersive and interactive experiences that help players to critically engage with historical events and perspectives. Through the simulation offered by historical games, players can gain a deeper understanding of the past and its impact on the present. Furthermore, the representation of trauma in video games can allow players to explore and process their emotions, encouraging empathy and understanding, and providing a sense of agency and control over the experience.

Games offer unique rhetorical possibilities providing a means of communication, persuasion, and education through their interactive and immersive nature.<sup>47</sup> Ludonarratives, operating at the intersection between game mechanics and story

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<sup>47</sup> Gonzalo Frasca, "Simulation versus Narrative: Introduction to Ludology," in *The Video Game Theory reader. op.cit.* (New York; London: Routledge, 2003).

elements, can create a more engaging experience where the player's actions and decisions in the game world have a direct impact on the story and its outcome. Well-developed narratives, compelling characters and immersive gameplay can, thus, create resonance with players, fostering a deep emotional connection that can inspire positive action in the real world.<sup>48</sup>

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<sup>48</sup> Jane McGonigal, *Reality is Broken: Why Games Make Us Better and How They Can Change the World* (New York: Vintage Books, 2012).

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