The Convergence of Historical Game Design and Digital Heritage

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Keywords

digital heritage, virtual heritage, historical games, historiographical games, game design, serious games

EXTENDED ABSTRACT

This talk explores a rising convergence between two fields - historical video games and digitised heritage. The professionalisation of the field is taking place at the intersection of game design, historical and archaeological research, and curated heritage practices. Referring to the concepts of historiographical games, digital twins and memory twins, I explain how this methodological mix facilitates the creation of games that offer meaningful heritage experiences while maintaining a historiographical value. The purpose of this paper is the identification of history/heritage-themed digital games as an interdisciplinary contact zone between researchers, game developers, curators, digital heritage experts, and experience designers.

We begin with the principles of historical game design, in which game developers need to adopt the dual role of 'developer-historian' (as conceptualised by Champion, 2016) – or rely on the expertise of historical consultants (see Mochocki & Kot, 2024). Professional literature on historical game design displays a notable gap. On the one hand, there are numerous studies on someone else's historical game design (e.g. Copplestone 2016; Bazile 2021); as well as reflections of designers and scholars on their own practice (Copplestone 2017; Šisler et al. 2016). On the other hand, instructional works providing guidelines on the craft of historical game design are much fewer. I know only two book-length manuals: Suckling (2025) and McCall (forthcoming in 2026), and a small number of short papers (e.g. Suckling 2024) or chapters (e.g. Chapter 8 in Flanagan & Jakobssen, 2023). One of the most interesting trends – albeit a small niche – is historiographical game design, which aims to position game-making as a valid form of practising history as an academic discipline (McCall 2026; Bazile 2022; Kynn 2025). A historiographical game, in this understanding, could claim an equal status to peer-reviewed publications as a form of research output (Kynn 2025; Reid 2024). This, in turn, makes historiographical game projects eligible for research and R&D funding.

Proceedings of DiGRA 2026

The second part of the talk turns to the technological and legal dimensions of using 3D assets in heritage games – assets increasingly developed as digital twins of historical artefacts, buildings, and landscapes. In-game 2D and 3D models of real-world historical artefacts and terrains, created via photogrammetry, laser scanning, Geographic Information Systems etc., have been discussed in historical game studies (e.g. Mochocki 2021) as well as archaeogaming (e.g. Reinhard 2019; 2024). Simultaneously, game technologies such as VR/AR, 3D modelling and animation, etc. have been widely incporporated by the field of digital heritage. The expanding availability of high-quality digital reconstructions (Münster et al., 2024; Savorra & La Placa, 2025) has made it possible to merge authenticity with interactivity, building 3D, VR and AR digital immersive experiences for museum visitors (Banfi, 2025; Bozorgi & Lischer-Katz, 2020; Krzywinska et al., 2020) or online audiences (e.g. Camarda, 2024; Budzisz, 2025). This trend is exemplified by a variety of huge EU-funded consortia: ECHOES, HERITALISE, ARTEMIS and other Horizon projects that create elaborate research-based interactive virtual environments - not only for the public but also for documentation, research, preservation and curation. Interestingly, some of the digital twins are deliberately designed to be 3D game assets (Solanki & Mathew, 2024), and find their way to game asset stores (Van Mol & Vandewalle, 2025). An interesting case from Poland is a collection of 3D models of industrial mining infrastructure made available to the participants of a unique underground game jam held deep down a defunct coal mine. They have been published on Sketchfab by Piotr Budzisz for the Coal Mining Museum in Zabrze: https://sketchfab.com/digitalizacja_MGW.

Finally, we move from digital twins to memory twins – 3D heritage assets enriched with narrative layers that embed social and memorial contexts within digital reconstructions. Following recent work by Cassar, Baker, & Ioannides (2025), Ioannides et al. (2025), and Eide (2026), this emerging paradigm shifts attention from mere accuracy of representation to the experiential design of collective memory. Technology itself does not suffice – it should be enhanced with intangible culture, lived heritage, people's memories and oral storytelling. Moreover, memory twins are expected to be resources for "adaptive reuse" (Cassar et al., 2025) and memory-makign – and heritage-themed games are a perfect medium for this purpose (see e.g. Hammar, 2019). The inclusion of digital/memory twins in game design seems exceptionally promising in archaeogames, as it may be counted among "archaeological gameworld affordances" in game-based "interpretive archaeology" postulated by Smith Nicholls & Cook (2025, 1). Whereas digital twins have already found their way into games (from the huge model of the Notre-Dame Cathedral in *Assassin's Creed Unity* to the above-mentioned pieces of coal mining infrastructure used in tiny local game jams), memory twins are too recent a phenomenon to have been adopted by game-makers.

In conclusion, we return to game design – but this time through the lens of experience design, where heritage games act as mediators of cultural meaning rather than (or in addition to) as simulations of the past. The concept of experience design cuts across the divide (which is hardly a divide at all) between game design and museum experience design (as in Dal Falco & Vassos, 2017). The interconnectedness of game design and museum experience design has been noticed on all sides: in museum science that reaches for game design and game technologies to enhance museum experiences (e.g. Wong, 2025; Yi & Kim 2024; Krzywinska et al., 2020; Pietroni 2019), as well as in virtual heritage studies (Champion, 2011, 2016, 2024) and historical game studies (Mochocki, 2021, 2022; Hawthorne, 2019) that explore museum-like qualities of historical gameworld spaces and their design. At present, there aren't many large

EU consortia that specifically focus on game-making in their digital heritage mission, but they have set a course to be followed in the future. Projects such as CREAMARE, LoGaCulture, i-GAME or MEMENTOES demonstrate how the convergence of historical game design and digital heritage technology can combine histori(ographi)cal quality with meaningful heritage experiences. Moreover, their success stories have paved the way for game development to be funded from EU funding schemes for research and R&D in the sectors of Digital Heritage and Cultural & Creative Industries. The availability of funding in these fields is likely to further incentivise intersectoral collaboration between academia, heritage, and the game industry.

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