Awesome, but Impractical? Deeper Engagement with the Middle Ages through Commercial Digital Games

Abstract

Medievalist computer games possess a vast reach and potent influence over their audience, but this influence often runs counter to the goals of heritage and teaching practitioners. This piece argues that while the commercial and mechanical requirements of computer games limit the utility of these games as heritage and educational tools on the macro scale, these same qualities enable computer games to engage their players with the Middle Ages in a different manner from other heritage platforms which can be of substantial value.

To this end, the piece will first highlight the similarities and differences between computer games and other means of engaging with history and heritage. It will proceed to consider the pressures these differences exert on the representation of history within games alongside the impact of the expectations of audiences and developers about this form of history and about the Middle Ages. Finally, the piece will discuss how these difficulties may be overcome, alleviated or embraced to support broader and deeper engagement with the medieval period and history more generally.

Introduction

Computer games with a medieval setting or medieval elements form a comparatively new addition to heritage and historical engagement with the Middle Ages. These medievalist games share many traits and representational tendencies with other heritage formats and media: their graphics draw on many of the same approaches and effects common to cinema and television (Šisler, 2014); their audio often leans on medievalist musical trends ranging from lutes and church organs to Viking Metal (Cook, 2020; Lind, 2020); their stories typically follow well established narrative trends from medievalist literature ranging from Scott, to Tolkien, to Martin (Laurel, 1986; Murray, 1998; Ensslin, 2014); their experiential and interactive nature draws close parallels with re-enactment and roleplay (Pugh and Weisl, 2013, pp. 122–136); their rules and mechanics are frequently drawn from those of medievalist board and tabletop games (White, 2014; De Groot, 2016; Goodfellow, 2016); a number of commercial games – most notably the *Assassin's Creed* Discovery Tours – demonstrate similarities with traditional museums in their approaches to reconstructing and presenting historical sites and information (Politopoulos *et al.*, 2019; Paananen *et al.*, 2023), and carry all the associated baggage of these approaches (Khattab, Sihvonen and Harrer, 2021).

This melange of influences has created several fundamental differences between the engagement with medieval heritage within medievalist games and within other formats. Although there are multiple similarities between the medievalism present in games and in other media, the interactivity and other features of games as a medium have created a number of unusual trends within medievalist digital games which are not usually seen within other forms of heritage. The intersection of experiential interactive medievalism with audio-visual elements drawn from cinema and other sources creates a distinct form of medievalism within games. Further, the interaction of the restrictions and expectations surrounding computer games with those surrounding medievalism often creates unusual and unexpected representations of the Middle Ages leading to the exaggeration, mitigation, or mutation of more typical popular medievalist views of the period (Houghton, 2023).

As a result of their novel qualities, medievalist computer games possess a vast potential as tools for the exploration of the Middle Ages in both formal and informal settings. A substantial range of

research has been undertaken addressing the potential of medievalist games as teaching tools at every level of study (Holdenried and Trépanier, 2013; Lewis, 2020; Körber, Meyer-Hamme and Houghton, 2021; and see the multiple essays in Houghton, 2022b). The informal educational impact of medievalist and other historical games has been demonstrated by a range of quantitative and qualitative studies which have highlighted the role these games can play in inspiring interest in historical periods, but also in developing an understanding of these periods (Houghton, 2016; Beavers, 2019; Stirling and Wood, 2021, 2022). More tentative steps have been taken to consider the utility of games as academic research tools to address the Middle Ages, but practical applications of these approaches have now begun to emerge (Clyde, Hopkins and Wilkinson, 2012; Spring, 2015; Marino Carvalho, 2017; Houghton, 2018, 2022a). As a result, the communicative and learning capacity of Medievalist digital games has been thoroughly demonstrated.

Given their established engagement power it is unsurprising that elements of historical digital games have been used within a number of heritage exhibitions, sites and online activities. Computer game technology has been used to support the reconstruction of historical sites such as the use of the Unreal Engine to power the visual recreations of the *SmartHistory* flyovers of Edinburgh and St Andrews (Rhodes, 2017), or the digital sonic techniques deployed within *The Soundscapes of the York Mystery Plays* project (López, Hardin and Wan, 2022). Relatively small custom-built games have been created in support of specific installations – often taking the form of a an augmented reality guided tour such as that deployed at the Sutton Hoo archaeological site (Angelopoulou *et al.*, 2012). As noted above, recent entries in the *Assassin's Creed* series have incorporated 'Discovery Tours' which guide the player through a series of tours akin to museum exhibitions complete with items to interactive with and explanatory text and audio, but the *878 AD* exhibition in Winchester has taken this approach further through the integration of graphical elements of *Assassin's Creed: Valhalla* and *Discovery Tour: Viking Age* with live performances and augmented reality around the city (Dunn, Humphrey and Veal, 2022). A handful of larger scale heritage computer games have been produced such as *Strange Sickness* addressing the plague through the materials of the Aberdeen council registers (Hepburn and Armstrong, 2021). Each of these approaches have augmented player engagement with heritage sites and medieval history.

However, while elements of historical digital games have begun to appear more frequently amongst heritage activities, the commercial digital games which form the foundation of these elements are typically sidelined and the core ludic elements of these games are often removed. The *SmartHistory* flyovers incorporate game graphics, but remove any aspect of play from their reconstructions. Augmented reality heritage games typically use very simple mechanics and while they may certainly broaden the appeal and impact of heritage activities, they do so by adapting traditional techniques rather than by incorporating playful elements. Likewise, although the *Assassin's Creed* Discovery Tours draw directly from the graphics and mechanics of their parent games, they remove almost all the gameplay aspects in favour of creating an experience closer to that received through a more traditional museum: players are led through a linear path with a substantial focus on viewing reconstructed items and sites and reading about various aspects of history relevant to the game. The 878 AD exhibition re-introduces gameplay elements through a number of augmented reality challenges, but these elements are relatively simple and are explicitly aimed at children. Even the larger heritage games such as *Strange Sickness* are restricted by their budgetary limitations and educational demands and cannot approach the scale and depth of commercial games. Commercial games and playful elements are thus typically removed from heritage activities.

The limited use of commercial games within medieval heritage is completely understandable for a number of practical reasons alongside some core assumptions around games. Games are expensive

to produce restricting most heritage approaches to relatively simple engagements through the use of stock graphical assets and mechanics. Longer games are impractical to install within crowded heritage sites where visitors may only have a few minutes to engage with each display. Most of these activities must be accessible to a broad audience including children and non-gamers, which precludes complex mechanics and longer sequences. Beyond all of this, there remains a perception of games as things for children which are unsuitable for addressing serious issues or history (Galloway, 2006; Chapman, 2013b; Marino Carvalho, 2017; Houghton, 2018). This leads many ludic approaches to medieval heritage to lean heavily on more traditional and authoritative modes of communication with a prominent reliance on recreating sites and artifacts, communicating information through text, and in many cases creating digital museum experiences.

Although these limited approaches are often necessary to facilitate the use of games within heritage – and they can certainly be effective – they lessen the potential of games as engagement and educational tools in several ways. The complex mechanics, gameplay and broader worlds present within commercial medievalist games can allow an engagement with the period which may be very different from that provided by museums and other forms of historical and heritage media and activities, but which can nevertheless form a valid and worthwhile interaction with the Middle Ages, and which in some ways can provide a deeper and more enduring experience for their players. In much the same way that attempting to make games more like traditional pedagogic or scholarly devices can remove their most innovative and useful teaching or research qualities, attempting to make games more like museums can undermine the factors which make them so engaging to an informal audience.

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The core thesis of this chapter is that there is substantial potential to use commercial digital games as an informal means of engagement with the Middle Ages. A range of scholars have argued that while digital games cannot conduct history in the same manner as traditional outputs, they are still valuable tools for teaching and research as they allow an engagement with history in a different manner which may still be valid if undertaken through a pedagogically or academically vigorous approach (Chapman, 2013b; McCall, 2018; Houghton, 2022a). These arguments hold true for the use of digital games as more informal engagements with history and heritage: the unique nature of the medium allows these games to be valuable tools if appropriate scaffolding is provided within or around the game to facilitate engagement and to alleviate the impact of representational issues common within these games.

To this end, the chapter will make three key arguments:

1. The distinct nature of commercial digital games allows them to engage with their audience in a different and in some ways deeper manner than other forms of medievalism and heritage activity.
2. The nature of these games in combination with their embrace of several medievalist and gaming tendencies and tropes creates a number of substantial issues which limit their heritage utility as standalone products.
3. These difficulties may be mitigated to some extent through appropriate engagement with players and developers which can allow digital games to act as more meaningful and useful engagements with the Middle Ages.

Ultimately this chapter will suggest that the fields of history and heritage may need to recalibrate their understanding of engagement to make effective use of commercial games as heritage tools.

Awesome potential

Commercial medievalist games can reach a massive audience but, more significantly, historical computer games can exert a vast degree of influence over their players. The impact of these games on their audience has been apparent to teachers at almost every level of historical study for over a decade: it is increasingly rare to find a history classroom without multiple students who have been drawn to study at least in part through such games (Elliott and Kapell, 2013; McCall, 2019). More recently, a growing range of quantitative and qualitative studies have demonstrated that games can not only act as an introduction to a period or inspiration for further (formal or informal) study, but that these games can also play a pivotal role in their player's understanding of historical events, peoples, and – most significantly – systems (Houghton, 2016; Beavers, 2019; Houghton, 2021b; Stirling and Wood, 2021, 2022).

The interactive nature of computer games is certainly a core element behind their impact on their players (Zimmerman, 2004; Juul, 2005; Houghton, 2018). Medievalist computer games exist among a cluster of 'experiential medievalisms' identified by Pugh and Weisl including re-enactment and roleplay (Pugh and Weisl, 2013). As Pugh and Weisl highlight, these interactive forms of engagement with history and heritage can have a deeper impact on their participant's understanding of the theme and periods they present as they allow their audience to 'become' medieval in a manner distinct from less interactive medievalisms such as literature and film. In essence, by allowing interactivity, games – and other experiential medievalisms – allow a deeper engagement with the information and ideas they convey.

While the interactive nature of medievalist games is a feature shared with other experiential medievalisms, the ways in which it manifests is somewhat distinct. In some ways, digital games are more limited than roleplaying and re-enactment. Every action available to the player is restricted by the design decisions and limitations imposed by the developer whether in terms of mechanics, geography or narrative. Games are largely restricted to audio-visual feedback, they cannot present smells, tastes, or tactile experiences in the same manner as re-enactment. However, digital games also offer greater interactivity in some respects. They allow the player to complete activities and take actions which would be impossible in real life. They can allow access to abstract versions of material culture and architecture which would be too expensive to recreate for even the wealthiest reenactment society or museum. Games allow the staging of massive battles, townscapes and other events which would require an implausibly broad recruitment and correspondingly complex logistics in the physical world. Games allow players to participate in activities ranging from mortal violence to minor trespassing which would be illegal if conducted in real life.

The sheer scale and detail of the worlds presented within medievalist games often sets them apart from other representations of medieval heritage and can play a role in the impact they have on their players. The vast open worlds of a plethora of games including *Witcher*, *Breath of the Wild*, and *Kingdom Come: Deliverance* provide a substantial number and variety of environments for the player to explore. Although more detailed and historically vigorous graphic models are available at several museums, these are of much more limited scope. Strategy games such as *Crusader Kings*, *Medieval: Total War*, and *Rise of Venice* present even larger, if more abstract, worlds and accompany these with a vast range of statistics relating to politics, diplomacy, warfare, economics, and – increasingly – personal relationships, presenting figures well in excess of even the most detailed academic project. Roleplaying games such as *Skyrim* and *Dragon Age* contain a huge amount of text, easily dwarfing that of all but the most voluminous of medievalist literature. These worlds are both wide and deep and can demand huge amounts of a player's time – even without the repetition of content. There is substantial scope for them to influence their player's understanding of the past as a result.

Furthermore, these digital worlds allow a different form of accessibility from that of many medievalist sites. Attendance at historical sites can provide a more detailed and authentic experience for the participant than anything possible within a game, but this is limited by a number of factors. Visiting historical sites requires travel to the location which immediately reduces accessibility due to financial and time constraints. Mobility issues may preclude access to areas of historical sites. Buildings may be closed for repair or for other reasons. Post-medieval development or degradation of historical sites can fundamentally change their appearance or lead to their environmental context and significance being changed or obscured by more modern architecture. At the most extreme, these sites may no longer exist. Although digital games present their own access constraints – including costs of software and hardware, digital literacy, issues of accuracy, and gameplay restricting access to areas – they nevertheless allow players to visit abstract versions of these sites without the restrictions of their real-world equivalents.

More significantly though, the mechanics of digital games allow and oblige their players to engage with history in a different manner from more traditional forms of medievalism. Bogost's (Bogost, 2008) identification of game mechanics as producing stories through a process of procedural rhetoric highlights a fundamental distinction between the ways in which narrative emerges within games and the ways in which narratives are constructed within other media. In essence, a game's rules and narrative can play just as much of a role in the story produced through play as any linear narrative or audio-visual devices. Chapman (Chapman, 2016) has adapted Bogost's analysis to the representation of history within games, categorising games which produce historical arguments primarily through their mechanics (rather than a linear narrative) as contextual simulations. The mechanics of these games represent abstract and limited but internally consistent models of some element of history. Although the limitations of Chapman's work are widely acknowledged (not least by Chapman himself), the broad concept that historical digital games may present arguments through their mechanics is almost universally accepted amongst historical games scholars and forms the basis for most theoretical and practical uses of games as pedagogical or scholarly tools (Taylor, 2003; McCall, 2012; Elliott, 2017; Houghton, 2021b). The mechanics of medievalist digital games present historical arguments as a core element of their function and demand that the player engage with these elements in order to make progress within the game (Douglas, 2002; Fogu, 2009; Chapman, 2013a; McCall, 2014, 2018).

The representation of historical arguments through game mechanics is not unique to digital games, but these arguments are typically processed and presented in a distinct and typically more detailed manner within digital games. The mechanics of more traditional historical games – card games, board games, tabletop games – produce similar representations of historical models to those found in their digital counterparts. Indeed, many mechanical approaches used within digital games are adapted from older tabletop games. Likewise, other experiential forms of medievalism rely to some extent on a system of rules to function and construct narratives. Roleplay and re-enactment adhere to accepted and often explicit sets of rules governing behaviour in and out of character. Combat re-enactment typically requires extensive and carefully enforced rules not only to keep in character, but also for balance and – above all – safety reasons. However, while there are certainly similarities between the mechanics of digital games and other forms of experiential medievalism, the sheer scale and complexity of the rules of digital games sets them apart. Digital games can keep track of a vast range of changing character attributes, calculate random outcomes swiftly, and present data to players clearly and succinctly. Digital games lack the personal interpretation and easy modification of rules within other experiential media, but their scale provides a new opportunity for a different sort of engagement with history and heritage.

By encouraging or demanding the playful participation of their players, digital games foster audience driven engagement in a manner and scale distinct from more traditional approaches. The role of players as co-authors of the narratives produced within games facilitates the development of stories and histories well beyond those envisaged by game developers (Poremba, 2003; Ensslin, 2012). Players may play games in drastically different manners from that intended by their creators as demonstrated through the plethora of speed-runs, pacifist runs, and other self-imposed challenges used by players across multiple genres of game. Player interactions within a game – such as forming guilds in *World of Warcraft* or creating vast structures together in *Minecraft* – or outside the game – such as modding and forum participation, may be foreseen and even encouraged by developers, but ultimately they rely on the involvement of the players.

While it should be acknowledged that these qualities are common to games addressing all periods of history, they are particularly potent with regards to the pre-modern period in general and to the Middle Ages especially. Several studies have highlighted the greater impact of pre-modern games on their players perceptions of the ancient and medieval periods than of more modern eras (Beavers, 2019; Houghton, 2021a). This trend can be explained in part by the fact that these earlier periods of history almost invariably receive less attention within school curricula then the modern age. Likewise pre-modern heritage is often obscured by a focus on more recent history. While medievalist film and literature are more commonplace, they lack the interactivity of games. Meanwhile, while re-enactment and board games can supply more thorough engagement with the period, these are often less accessible or less complex than digital games. Medievalist digital games can easily form the main means of interaction with the Middle Ages for many of their players.

Digital games therefore present a means of engagement with the Middle Ages which bears several similarities with other forms of medievalism, but which nevertheless represents a distinct mode of heritage interaction. This interactive and player driven approach is visible within other experiential medievalisms, but manifests in a different manner and on a typically larger and more complex scale within digital games. These differences, in conjunction with the sizeable reach of commercial digital games implies a substantial opportunity to engage new audiences with medieval heritage in an innovative manner.

Ludic impracticalities

However, while games can have an awesome impact on their players and allow deeper engagement with medieval history and heritage there are a number of issues which limit the value of this engagement and *currently* make the use of most commercial games for outreach impractical. Several of these issues are common to games set in any period, but these are often exacerbated by popular perceptions of the period. Medievalist computer games tend to present a particular vision of the Middle Ages which is at odds with the reality of the period and exaggerates or mutates several common medievalist tropes and tendencies. These representations are often accepted to some extent by their players on the basis of claims to historical fidelity, the implementation of complex mechanics, and by a relatively lack of knowledge of the period. Beyond this, the ability of certain small groups of players to dominate interactions within games and the culture surrounding games can influence their engagement with history to a substantial extent.

Historical computer games tend to follow a series of established tendencies. Wainwright (Wainwright, 2019) has catalogued many of these trends, but common tendencies include: a focus on violence (de Zamaróczy, 2017; Boom *et al.*, 2020; Hammar, 2020); constant and irreversible scientific progress (Pobłocki, 2002; Fogu, 2009; Pereira García, and Gómez Gonzalvo, 2015; Metzger and Paxton, 2016); side-line religion (Šisler, 2014; Domínguez, 2017); and stories and worlds focus on

white (Williams *et al.*, 2009; Higgin, 2012; Hammar, 2020), male (Miller and Summers, 2007; Williams *et al.*, 2009; Kowert, Breuer and Quandt, 2017; Hammar, 2020), and straight (Beasley and Collins Standley, 2002; Griffiths, Davies and Chappell, 2004; Chang, 2015) characters and themes. The driving force behind many of these tendencies are the mechanical limitations and conventions of the medium which impact games in several ways including restricting their ability to address abstract concepts (Juul, 2005), emphasising progress and competition (Aarseth, 2004), and focusing on graphical fidelity over story (Bulut, 2018). Beyond this, the identity of most game developers as white, male and cis-hetero (Geyser, 2018; Hammar, 2020) and perceived audience of young, straight, white men (Nakamura, 2012; Srauy, 2019; Hammar, 2020) continues to exert a huge influence on the characters, regions, issues, and stories told through historical games. There are obviously exceptions to these generalisations, but it remains the case that computer games and historical games overwhelmingly follow these trends.

Although many of these trends are visible within medievalist games, they are moderated, exaggerated or adjusted through their convergence or conflict with representational trends in modern medievalism. Audiences expect to see a particular set of tropes attached to the Middle Ages: frequent and bloody physical violence (Matthews, 2015; Smith, 2016; Locke, 2018; Kaufman and Sturtevant, 2020); chivalric and valorous knights in shining armour (Henthorne, 2004; Lynch, 2016; Simmons, 2019); technological stagnation (West-Harling, 2010; Bildhauer, 2011; Webber, 2014); a powerful and oppressive Church (West-Harling, 2010; Kaufman and Sturtevant, 2020); subservient and marginalised women (Tolmie, 2006; Kaufman, 2008, 2016); and a homogenously white world (Bertarelli and Amaral, 2020; Waymack and Greenlee, 2020; Hsy, 2021).

The combination of these gaming and medievalist trends can often create a more exaggerated and stereotypical vision of the period within medievalist games, but their interaction often leads to new and unexpected representations. Medievalist games tend to present bloody violence more frequently and explicitly than games set in other periods or medievalism in other media (Chadwick, 2014; Noone and Kavetsky, 2014; Houghton, 2024). Knights and chivalry are commonplace and have a substantial impact on both combat systems and notions of morality (MacCallum-Stewart, 2008; Webber, 2014; Moberly and Moberly, 2015). Visions of a backwards Dark Ages are often undermined by mechanics of technological progress or combat balance (Pitruzzello, 2014; McKenzie, 2018). The material trappings of the Church are commonplace, but deeper engagements are rare and usually limited to the role of religion in medieval warfare (Love, 2011; Heinze, 2012, pp. 170–172, 238–243; Heidbrink, Knoll and Wysocki, 2014; Hemminger, 2014). Diversity in race, gender, and sexuality may be present, but typically only at a superficial level with a mechanical and narrative focus on a straight, white and male world (Nakamura, 2012; Hammar, 2020; Young, 2021). The Middle Ages in games aligns with popular medievalism to some extent, but this is moderated substantially by gaming tropes and requirements. In any event, the account of the period present within most games is divergent from academic and heritage narratives.

These divergences can have a substantial impact on player's understanding of the Middle Ages as historical games in general often give the impression of being authoritative and authentic accounts of their periods. The developers of these games often vocally announce the accuracy of their games and this often extends to the employment of historical consultants to provide a veneer of authority to the games (Mayer, 2008; Copplestone, 2017; Medel, 2018; Wright, 2018; Enseleit and Schade, 2021). A focus on accuracy is a common demand amongst potential players, and many criticisms of historical games are justified through an appeal to a lack of historical accuracy (Champion, 2015; Manning, 2022). Players are often cynical of these claims to authority, but the version of history

presented by these games is often accepted to some degree whether consciously or unconsciously (Houghton, 2018, p. 14; Boom *et al.*, 2020, p. 31).

These appeals to authority are not unique to games as similar and often spurious claims are made by the creators of historical literature, cinema and re-enactments (Bildhauer, 2011, p. 20; Houghton and Alvestad, 2021, p. 4), but are particularly insidious within computer games. As outlined above, games, unlike other engagements with history, present a complex system of mechanics to determine the ways in which their worlds function. Their claims to accuracy are based not only on graphical fidelity or adherence to popular narrative, but also on the construction of a fully functioning and reactive model of a historical world. As outlined above, players must learn these mechanics in order to progress through the game, and are hence obligated to learn the representations of history presented within. In the case of medievalist games, this apparent authority is augmented by the limited interaction most players have with the Middle Ages. While outlandish outfits, buildings, and storylines may be rejected by players with relative ease, the mechanics which govern these settings can form a deeper and less obvious impact on their players.

These apparently authoritative images of the Middle Ages can vary substantially depending on player action and interpretation creating a further barrier towards their use for heritage interactions. The role of players in determining the history represented through games can substantially change their experience of the game. Each player brings their own understanding of the Middle Ages (and the world more broadly) to a game and this can fundamentally alter their behaviour within it (Burn, 2006; Mancini and Sibilla, 2017; Chapman, 2020). As a result, the outcomes and messages of games can be almost impossible for developers to predict: players can and will stretch and bend game mechanics to achieve their goals or vision of the period. Developers can certainly influence the message of the game (Chapman, 2016; De Groot, 2016; Champion, 2017), but ultimately every player's experience will be different. While broad statements can be made about the vision of history received by most players of many medievalist games, this personal variation makes the widespread use of games for heritage unpredictable.

More importantly though, the role of players in determining the narrative and history of games can promote exclusionary behaviours amongst sections of the player base and outright racism, sexism and homophobia amongst vocal minorities. These trends are well documented within computer game communities more generally (Daniels and Lalone, 2012; Nakamura, 2012; Greer, 2013; Kowert, Breuer and Quandt, 2017; Skotnes-Brown, 2019; Stang and Trammell, 2020; Condis, 2021), and medievalist communities have faced similar issues (Young, 2015, 2018; Kaufman, 2016; Hsy, 2021). There is growing evidence of an overlap between the two groups. Player outcry against the inclusion of non-white characters in *Mordhau* and defences of the almost homogenously white world of *The Witcher* and *Kingdom Come: Deliverance* employ exclusionary rhetoric common to some sections of medievalism in concert with clear links to the approaches used by similar groups based around gaming within GamerGate (Vossen, 2020; Young, 2021). A sizeable proportion of modders of medievalist roleplaying games such as Skyrim concentrate on the creation of women more closely aligned to straight Western concepts of beauty and the introduction of more sexually explicit content (Cooper, 2021). The communication between players in Massively Multiplayer Online Roleplaying Games such as *World of Warcraft* is often the medium for racism, misogyny, or homophobia (Schwartz, 2006; Higgin, 2008, 2012; Mayer, 2008) The existence of these typically small but vocal groups can pose a major obstacle for the use of digital games as medievalist engagement.

Commercial digital games therefore present several notable barriers in their use as communication tools for medieval heritage. They present unpredictable accounts of the period, which often lean

into popular medievalist tropes modified by gaming conventions and requirements with compliance to academic consensus as an auxiliary consideration. Moreover, the very elements that make digital games powerful historical engagement tools undermine their heritage potential. Their detailed mechanics require players to learn the game's vision of history and grant the games a degree of historical authority, but where the history presented within these games is led by popular perspectives and gaming limitations they can very easily mislead players. The role of players in shaping the history presented by games through play, modding and engagement with developers can likewise lead to the promulgation of acritical popular history and exclusionary perspectives of the period.

Deeper engagement

These practical difficulties are widespread across commercial medievalist digital games but may be mitigated to some degree by changing players attitudes towards history in games through appropriate scaffolding to encourage them to play more critically. Many previous attempts to address these issues have revolved around having academics engage more closely with game design, but this is inherently limited by the commercial nature of these games. This can be effective to a certain extent, for example the work of Lavelle and other historical consultants on *Assassin's Creed: Valhalla* allowed the inclusion of unexpected representations of Viking Age England including counters to Victorian myths of Saxons as "a society of free peasant farmers" and an emphasis on cultural diversity (Burrows, 32/01/21). However, while many developers are genuinely concerned with ensuring a degree of conformity to scholarly history, they are nevertheless constrained by the entertainment, mechanical and commercial priorities outlined above. The commercial nature of these games restricts their ability to focus on critical history and thus the ability of consultant historians to influence the development of the game is often curtailed.

Instead of focusing on creating commercial games which adhere more strongly to academic visions of the Middle Ages, a more practical approach is to embrace the nature of these games and work to equip players to engage with ludic history more carefully and critically. This approach is fundamentally similar in its goal to that used by several scholars when introducing digital games to a classroom learning environment (Schut, 2007; Champion, 2015; Pereira García, and Gómez Gonzalvo, 2015; McCall, 2016; Boom *et al.*, 2020), but must be adapted for this more informal learning environment. To this end, it is vitally important to understand the representational tendencies present within medievalist digital games and to engage with their players as well as their developers.

Using commercial digital games for medievalist heritage requires an understanding of how these games represent the Middle Ages and how this differs from other forms of medievalism. To a certain extent this understanding can be acquired through academic articles and other scholarly works: there has been a vast volume of learned literature produced addressing many of the most popular medievalist games over the last decades including *Assassin's Creed*, *World of Warcraft*, and *Crusader Kings*. Engagement with popular articles, reviews, Let's Plays and game forums can likewise inform this consideration. However, as Boom et al. (Boom *et al.*, 2020, pp. 31–32) emphasise, the most detailed understanding of a game is always acquired through play. This does not have to be exhaustive – it is not necessary to master or even complete a game to gain an understanding of its core elements – or universal – it is likewise not necessary or even possible to play every medievalist game produced – but play of a broad range of games across genres can provide a wide ranging foundational understanding of their tendencies. Familiarity with a range of medievalist games can allow curators, re-enactors and other heritage professionals to identify likely conceptions held by players and adapt displays and performances accordingly.

On the basis of this understanding, heritage practitioners may engage with gamers through popular articles, podcasts, Let's Plays and other similar projects. Several websites including *The Public Medievalist* and *Mittelalter Digital* maintain a platform for articles relating to medievalist games. The Middle Ages in Modern Games Twitter conference and accompanying proceedings are open access and aimed primarily at a popular audience. Let's Plays such as those of *Ludohistory* and the *VALUE Foundation* can likewise have an impact in getting players to consider medievalist games more critically. A variety of written and audio-visual approaches are used within the multi-platform @Reshistorica. These activities focus on critical history and encourage their consumers to take a more measured approach to the use of the Middle Ages in games and can draw substantial audiences, often into the tens of thousands.

To take this engagement with gamers further, heritage practitioners may present challenges for players to encourage historical behaviour and outcomes, or to consider the history presented by these games more carefully. An offhand comment in a popular article about historical accuracy in *Crusader Kings II* argued "Harold crushing William at Hastings would be *inaccurate*. Harold, with his army of elephant riding mercenaries from Bengal, conquering the Russian steppes would be unrealistic" (Houghton, 2014). This prompted a comment among a small group of players around the "Robert Houghton challenge: invading Muscovy with Harold II with war elephants" (artificialinelegance, 2015). It is unlikely that this challenge was ever completed, but the incident highlights the influence that these popular articles may have on players' approaches to a game and their willingness to engage with that game in a more considered manner. A more constructive and influential guide around roleplaying in *Crusader Kings III* (PaniCaL, 2020) actively encourages players to take on the personalities of their characters and in doing so encourages a deeper form of interaction with the period (Nolden, 2020b, 2020a; Houghton, 2022a).

Although the influence of academics as research consultants on games is typically profoundly limited, interaction with game developers is nonetheless vitally important. Experience working with game studios can easily provide a better understanding of their priorities and the ways in which they approach history and the Middle Ages: elements which are foundational in planning heritage engagement with games. The cultivation of working relationships with developers can provide opportunities to engage with a greater share of a game's audience – for example, Slitherine Games Twitch stream hosts frequent discussion events including their consultant historians and other history and heritage workers. More significantly these events allow a discussion of a game's historical representations with combined development and academic perspectives, an approach which invites a more critical interaction with games on the part of their players. In a similar manner, these relationships can allow the integration of game developers into history and heritage events to the benefit of academics and practitioners. The annual Coding Medieval Worlds workshop and Middle Ages in Modern Games Twitter conference routinely include participants from industry. Events such as these can bolster understandings of the different requirements of scholarly and ludic history and in doing so can support heritage engagement efforts. The core scholarly benefit of this interaction is not to dictate the contents of the game, but to develop a better mutual understanding of the needs and goals of industry and the academy in producing games and – in many cases – to communicate these issues to a broader public audience.

There is therefore some potential to employ commercial games to support engagement with medieval heritage beyond simply inspiring interest in the period. These efforts require the construction of appropriate historical and intellectual scaffolding around games: at their heart, these efforts rely on encouraging players to think critically about the history portrayed through these games. In this manner, these approaches bear strong similarities to the increasingly widespread

teaching methods associated with medievalist digital games. The approaches outlined here will impact only a small proportion of players: even the most well subscribed historical publications and podcasts are dwarfed by the sheer scale of the audiences of the most successful historical games. But these efforts can have a pronounced impact on those who engage with them. In order to achieve this engagement it is vital to interact not only with the creators of these games, but also their players and the games themselves.

Conclusion

Commercial medievalist digital games could be a substantial resource for heritage engagement and informal (but useful) historical education. They possess several qualities which allow them to act as powerful engagement tools including their scale, interactivity and reach. This awesome potential is undermined to a substantial extent by representational trends within the medium which distort their picture of the Middle Ages and which – because of the same factors which make these games such powerful engagement tools – can easily mislead their players and consolidate outdated and exclusionary views of the period in their players' minds. Nevertheless, by using intellectual scaffolding similar to that employed when using games for classroom teaching but adapted for a more informal learning environment, these games can still act as viable interactions with medieval heritage. As is the case with ludic classroom approaches, the core issue is to encourage players to engage with medievalist games in a critical manner.

It should be emphasised that digital commercial games cannot engage with history and heritage in the same manner as museums, re-enactment, cinema, more traditional games, or even custom built digital games. Just as digital games conduct history in a different manner from traditional academic outputs, and must employ different approaches from more conventional methods when used for teaching, these games cannot match the tactile and narrative elements of many of these heritage approaches or the focus on scholarly history within many others. Attempts to do so often create useful heritage engagements – as with the Discovery Tours of the *Assassin's Creed* series – but in doing so they lose many of the defining characteristics of digital games and typically create limited facsimiles of the more traditional approaches they attempt to mirror. As is the case with educational or scholarly games, attempting to make games more like traditional approaches undermines their unique qualities.

However, digital commercial games may nevertheless engage with history and heritage in a valuable manner. The scale of their reach alone demands attention, but the depth of their influence requires that history and heritage professionals engage with them, if only to be aware of the messages they are imprinting on their audiences. Harnessing this media has great potential and this has been recognised through engagements such as the *878 AD* exhibition, but this can be taken further. Commercial digital games do history in a different way, but this innovative approach is still valuable.

Ultimately, the approaches outlined here favour a focus on depth of impact over breadth. The commercial and practical priorities of medievalist digital games typically demand the relegation of scholarly elements to an auxiliary status. By engaging with smaller groups of players outside the game, a more meaningful difference can be made to their playing experience. Under these more narrow constraints and with the acceptance that digital games are commercial products with their own peculiar demands, games can indeed be a deep and practical means to engage with the Middle Ages. Moreover, this engagement can be even more awesome.

Bibliography

Aarseth, E.J. (2004) 'Quest games as post-narrative discourse', in M.-L. Ryan (ed.) *Narrative across media: the languages of storytelling*. Lincoln: University of Nebraska Press (Frontiers of narrative), pp. 361–376.

Angelopoulou, A. *et al.* (2012) 'Mobile Augmented Reality for Cultural Heritage', in N. Venkatasubramanian, V. Getov, and S. Steglich (eds) *Mobile Wireless Middleware, Operating Systems, and Applications*. Berlin, Heidelberg: Springer (Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering), pp. 15–22. Available at: https://doi.org/10.1007/978-3-642-30607-5_2.

artificalinelegance (2015) 'Factual accuracy and mechanical accuracy in Crusader Kings II (Academic article)', *r/CrusaderKings*. Available at: https://www.reddit.com/r/CrusaderKings/comments/2nisen/factual_accuracy_and_mechanical_accuracy_in/ (Accessed: 21 April 2023).

Beasley, B. and Collins Standley, T. (2002) 'Shirts vs. Skins: Clothing as an Indicator of Gender Role Stereotyping in Video Games', *Mass Communication and Society*, 5(3), pp. 279–293. Available at: https://doi.org/10.1207/S15327825MCS0503_3.

Beavers, S. (2019) *The Informal Learning of History with Digital Games*. Open University.

Bertarelli, M.E. and Amaral, C.O. (2020) 'Long Middle Ages or appropriations of the medieval?: A reflection on how to decolonize the Middle Ages through the theory of Medievalism', *História da Historiografia: International Journal of Theory and History of Historiography*, 13(33), pp. 97–130. Available at: https://doi.org/10.15848/hh.v13i33.1555.

Bildhauer, B. (2011) *Filming the Middle Ages*. London: Reaktion Books.

Bogost, I. (2008) 'The Rhetoric of Video Games', in K.S. Tekinbaş (ed.) *The ecology of games: connecting youth, games, and learning*. Cambridge, Mass: MIT Press (The John D. and Catherine T. Macarthur Foundation Series on Digital Media and Learning), pp. 117–140.

Boom, K.H.J. *et al.* (2020) 'Teaching through Play: Using Video Games as a Platform to Teach about the Past', in S. Hageneuer (ed.) *Communicating the Past in the Digital Age: Proceedings of the International Conference on Digital Methods in Teaching and Learning in Archaeology (12th-13th October 2018)*. Ubiquity Press, pp. 27–44. Available at: https://doi.org/10.5334/bch.

Bulut, E. (2018) 'One-Dimensional Creativity: A Marcusean Critique of Work and Play in the Video Game Industry', *tripleC: Communication, Capitalism & Critique. Open Access Journal for a Global Sustainable Information Society*, 16(2), pp. 757–771. Available at: https://doi.org/10.31269/triplec.v16i2.930.

Burn, A. (2006) 'Playing Roles', in D. Carr (ed.) *Computer games: text, narrative, and play*. Cambridge: Polity, pp. 72–87.

Burrows, A. (32/01/21) 'Interview: Historian Ryan Lavelle on the historical research that helped build Assassin's Creed Valhalla', *The Sixth Axis*. Available at: https://www.thesixthaxis.com/2021/01/23/assassins-creed-valhalla-history-interview-ps4-ps5-xbox-series-x/ (Accessed: 20 April 2023).

Chadwick, O. (2014) 'Courtly Violence, Digital Play: Adapting Medieval Courtly Masculinities in Dante's Inferno', in D.T. Kline (ed.) *Digital gaming re-imagines the Middle Ages*. New York: Routledge (Routledge studies in new media and cyberculture, 15), pp. 148–161.

Champion, E. (2015) *Critical Gaming: Interactive History and Virtual Heritage*. Farnham, Surrey: Ashgate (Digital research in the arts and humanities).

Champion, E. (2017) 'Single White Looter: Have whip, will travel', in A.A.A. Mol et al. (eds) *The interactive past: archaeology, heritage & video games*. Leiden: Sidestone Press, pp. 107–122.

Chang, E.Y. (2015) 'Love Is in the Air: Queer (Im)Possibility and Straightwashing in FrontierVille and World of Warcraft', *QED: A Journal in GLBTQ Worldmaking*, 2(2), p. 6. Available at: https://doi.org/10.14321/qed.2.2.0006.

Chapman, A. (2013a) 'Affording History: Civilization and the Ecological Approach', in M. Kapell and A.B.R. Elliott (eds) *Playing with the past: digital games and the simulation of history*. New York: Bloomsbury Academic, pp. 61–73.

Chapman, A. (2013b) 'Is Sid Meier's Civilization history?', *Rethinking History*, 17(3), pp. 312–332. Available at: https://doi.org/10.1080/13642529.2013.774719.

Chapman, A. (2016) *Digital games as history: how videogames represent the past and offer access to historical practice*. New York, NY: Routledge, Taylor & Francis Group (Routledge advances in game studies, 7).

Chapman, A. (2020) 'Playing Against the Past? Representing the Play Element of Historical Cultures in Video Games', in A. von Lünen et al. (eds) *Historia ludens: the playing historian*. New York, NY: Routledge (Routledge approaches to history, vol. 30), pp. 133–154.

Clyde, J., Hopkins, H. and Wilkinson, G. (2012) 'Beyond the "Historical" Simulation: Using Theories of History to Inform Scholarly Game Design', *Loading... The Journal of the Canadian Game Studies Association*, 6(9). Available at: http://journals.sfu.ca/loading/index.php/loading/article/viewArticle/105 (Accessed: 18 November 2016).

Condis, M. (2021) 'Playing at racism: White supremacist recruitment in online video game culture', in S.D. Nilsen and S.E. Turner (eds) *White Supremacy and the American Media*. 1st edn. London: Routledge, pp. 246–274. Available at: https://www.taylorfrancis.com/books/9781003215172 (Accessed: 16 May 2022).

Cook, J. (2020) 'Sonic Medievalism, World Building, and Cultural Identity in Fantasy Video Games', in K. Fugelso (ed.) *Studies in Medievalism XXIX: Politics and Medievalism (Studies)*. Boydell & Brewer, pp. 217–238. Available at: https://doi.org/10.2307/j.ctvxhrjqn.

Cooper, V. (2021) 'Modding and authentic, gritty medievalism in *Skyrim*', in K. Alvestad and R. Houghton (eds) *The Middle Ages in Modern Culture: History and Authenticity in Contemporary Medievalism*. IBTauris, pp. 161–173.

Copplestone, T.J. (2017) 'Designing and Developing a Playful Past in Video Games', in A.A.A. Mol et al. (eds) *The interactive past: archaeology, heritage & video games*. Leiden: Sidestone Press, pp. 85–97.

Daniels, J. and Lalone, N. (2012) 'Racism in Video Gaming: Connecting Extremist and Mainstream Expressions of White Supremacy', in D.G. Embrick, J.T. Wright, and A. Lukács (eds) *Social exclusion, power, and video game play: new research in digital media and technology*. Lanham: Lexington Books, pp. 85–100.

De Groot, J. (2016) *Consuming history: historians and heritage in contemporary popular culture*. Second edition. London ; New York: Routledge, Taylor & Francis Group.

Domínguez, F.P. (2017) 'Steel-clad Conquistadores on horseback. A case study of selective authenticity and the Spanish Empire in computer games', *Presura*, 23, pp. 22–41.

Douglas, C. (2002) '"You Have Unleashed a Horde of Barbarians!": Fighting Indians, Playing Games, Forming Disciplines', *Postmodern Culture*, 13(1). Available at: http://pmc.iath.virginia.edu/issue.902/13.1douglas.html.

Dunn, F., Humphrey, W. and Veal, J. (2022) 'A Geolocation Journey into the Past with *Assassin's Creed*', *The Middle Ages in Modern Games: Conference Proceedings*, 3, pp. 56–57.

Elliott, A.B.R. (2017) 'Simulations and Simulacra: History in Video Games', *Práticas da História*, 5, pp. 11–41.

Elliott, A.B.R. and Kapell, M. (2013) 'Introduction: To Build a Past That Will "Stand the Test of Time"-Discovering Historical Facts, Assembling Historical Narratives', in M. Kapell and A.B.R. Elliott (eds) *Playing with the past: digital games and the simulation of history*. New York: Bloomsbury Academic.

Enseleit, T. and Schade, T. (2021) 'Das Mittelalter im Videospiel: "Assassin's Creed: Valhalla"', *Mittelalter Digital*, 1(2), pp. 174–211. Available at: https://doi.org/10.17879/MITTELALTERDIGI-2020-3292.

Ensslin, A. (2012) *The language of gaming*. Houndmills, Basingstoke, Hampshire ; New York: Palgrave Macmillan.

Ensslin, A. (2014) *Literary gaming*. Cambridge, Massachusetts ; London, England: The MIT Press.

Fogu, C. (2009) 'Digitizing Historical Consciousness', *History and Theory*, 48(2), pp. 103–121. Available at: https://doi.org/10.1111/j.1468-2303.2009.00500.x.

Galloway, A.R. (2006) *Gaming: essays on algorithmic culture*. Minneapolis: University of Minnesota Press (Electronic mediations, 18).

Geyser, H. (2018) 'Decolonising the Games Curriculum: Interventions in an Introductory Game Design Course', *Open Library of Humanities*, 4(1), p. 33. Available at: https://doi.org/10.16995/olh.217.

Goodfellow, T. (2016) 'A New Kind of History: The Culture of Wargame Scenario Design Communities', in P. Harrigan and M.G. Kirschenbaum (eds) *Zones of control: perspectives on wargaming*. Cambridge, Massachusetts: The MIT Press (Game histories), pp. 149–156.

Greer, S. (2013) 'Playing queer: Affordances for sexuality in Fable and Dragon Age', *Journal of Gaming & Virtual Worlds*, 5(1), pp. 3–21. Available at: https://doi.org/10.1386/jgvw.5.1.3_1.

Griffiths, M.D., Davies, M.N.O. and Chappell, D. (2004) 'Online computer gaming: a comparison of adolescent and adult gamers', *Journal of Adolescence*, 27(1), pp. 87–96. Available at: https://doi.org/10.1016/j.adolescence.2003.10.007.

Hammar, E.L. (2020) *Producing & Playing Hegemonic Pasts: Historical Digital Games as Memory-Making Media*. PhD. Arctic University of Norway. Available at: https://munin.uit.no/handle/10037/17717 (Accessed: 26 March 2020).

Heidbrink, S., Knoll, T. and Wysocki, J. (2014) 'Theorizing Religion in Digital Games. Perspectives and Approaches', *Online - Heidelberg Journal of Religions on the Internet*, 5, pp. 5–50. Available at: https://doi.org/10.11588/REL.2014.0.12156.

Heinze, C. (2012) *Mittelalter Computer Spiele: Zur Darstellung und Modellierung von Geschichte im populären Computerspiel*. Bielefeld: Transcript-Verl (Historische Lebenswelten in populären Wissenskulturen, 8).

Hemminger, E. (2014) 'Game Cultures as Sub-Creations - Case Studies on Religion & Digital Play', *Online - Heidelberg Journal of Religions on the Internet*, 5, pp. 108–133. Available at: https://doi.org/10.11588/REL.2014.0.12156.

Henthorne, T. (2004) 'Boys to Men: Medievalism and Masculinity in Star Wars and ET: The Extra-Terrestrial', in M.W. Driver and S. Ray (eds) *The medieval hero on screen: representations from Beowulf to Buffy*. Jefferson, N.C: McFarland.

Hepburn, W. and Armstrong, J. (2021) '*Strange Sickness*: running a crowdfunding campaign for a historical research-based game', *The Middle Ages in Modern Games: Conference Proceedings*, 2, p. 47.

Higgin, T. (2008) 'Blackless Fantasy: The Disappearance of Race in Massively Multiplayer Online Role-Playing Games', *Games and Culture*, 4(1), pp. 3–26. Available at: https://doi.org/10.1177/1555412008325477.

Higgin, T. (2012) *Gamic Race: The Logics of Difference in Videogame Culture*. PhD. University of California.

Holdenried, J.D. and Trépanier, N. (2013) 'Dominance and the Aztec Empire: Representations in *Age of Empires II* and *Medieval II: Total War*', in M. Kapell and A.B.R. Elliott (eds) *Playing with the past: digital games and the simulation of history*. New York: Bloomsbury Academic, pp. 107–119.

Houghton, R. (2014) 'It's What You Do With It That Counts: Factual accuracy and mechanical accuracy in Crusader Kings II', *The Public Medievalist*, 30 September. Available at: https://www.publicmedievalist.com/ckii-houghton/ (Accessed: 10 May 2018).

Houghton, R. (2016) 'Where did you learn that? The self-perceived educational impact of historical computer games on undergraduates', *Gamevironments*, 5, pp. 8–45.

Houghton, R. (2018) 'World, Structure and Play: A Framework for Games as Historical Research Outputs, Tools, and Processes', *Práticas da História*, 7, pp. 11–43.

Houghton, R. (2021a) 'History Games for Boys? Gender, Genre and the Self-Perceived Impact of Historical Games on Undergraduate Historians'. Available at: https://doi.org/10.26092/ELIB/918.

Houghton, R. (2021b) 'Scholarly History through Digital Games: Pedagogical Practice as Research Method', in C.E. Ariese-Vandemeulebroucke et al. (eds) *Return to the Interactive Past: The Interplay of Video Games and Histories*. Leiden: Sidestone Press, pp. 137–155.

Houghton, R. (2022a) 'Beyond Education and Impact: Games as Research Tools and Outputs', in R. Houghton (ed.) *Teaching the Middle Ages through Modern Games: Using, Modding and Creating Games for Education and Impact*. Berlin: De Gruyter, pp. 279–297.

Houghton, R. (ed.) (2022b) *Teaching the Middle Ages through Modern Games: Using, Modding and Creating Games for Education and Impact*. Berlin: De Gruyter.

Houghton, R. (2023) 'The Middle Ages in Modern Games: An Adolescent Field', in R. Houghton (ed.) *Playing the Middle Ages: pitfalls and potential in modern games*. London: Bloomsbury Academic.

Houghton, R. (2024) 'A Violent Medium for a Violent Era: Brutal Medievalist Combat in *Dragon Age: Origins* and *Kingdom Come: Deliverance*', in K. Fugelso (ed.) *Studies in Medievalism XXXIII*. Cambridge: Cambridge University Press.

Houghton, R. and Alvestad, K. (2021) 'Accuracy and authenticity – interactions in contemporary medievalism', in K. Alvestad and R. Houghton (eds) *The Middle Ages in Modern Culture: History and Authenticity in Contemporary Medievalism*. London: Bloomsbury, pp. 1–12. Available at: https://doi.org/10.5040/9781350167452?locatt=label:secondary_bloomsburyCollections (Accessed: 23 April 2021).

Hsy, J. (2021) *Antiracist medievalisms: from 'Yellow Peril' to Black Lives Matter*. Leeds: Arc Humanities Press (Arc medievalist).

Juul, J. (2005) *Half-real: video games between real rules and fictional worlds*. Cambridge, Mass: MIT Press.

Kaufman, A.S. (2008) 'Romancing the Game: Magic, Writing, and the Feminine in Neverwinter Nights', in K. Fugelso and C.L. Robinson (eds) *Medievalism in technology old and new*. Cambridge ; Rocheter, NY: D.S. Brewer (Studies in medievalism, 16), pp. 143–158.

Kaufman, A.S. (2016) 'Muscular Medievalism', *The Year's Work in Medievalism*, 31, pp. 56–66.

Kaufman, A.S. and Sturtevant, P.B. (2020) *The devil's historians: how modern extremists abuse the medieval past*. Toronto ; Buffalo ; London: University of Toronto Press.

Khattab, M., Sihvonen, T. and Harrer, S. (2021) 'Playing at Knowing Ancient Egypt: The Tourist Gaze in *Assassin's Creed: Origins*', in N. Denk et al. (eds) *A Ludic Society*. Donau: Donau-Universität Krems, pp. 61–72. Available at: https://door.donau-uni.ac.at/o:1399 (Accessed: 17 April 2023).

Körber, A., Meyer-Hamme, J. and Houghton, R. (2021) 'Learning to think historically: some theoretical challenges when playing the crusades', in R. Houghton (ed.) *Playing the crusades*. Abingdon, Oxon ; New York, NY: Routledge (Engaging the crusades : the memory and legacy of the crusades, Volume Five), pp. 93–110.

Kowert, R., Breuer, J. and Quandt, T. (2017) 'Women are from FarmVille, Men are from ViceCity: The cycle of exclusion and sexism in video game content and culture', in R. Kowert and T. Quandt (eds) *New perspectives on the social aspects of digital gaming: multiplayer 2*. New York London: Routledge Taylor & Francis Group (Routledge advances in game studies, 8).

Laurel, B.K. (1986) *Toward the Design of a Computer-Based Interactive Fantasy System*. PhD. Ohio State University.

Lewis, K.J. (2020) 'Grand Theft Longboat: Using Video Games and Medievalism to Teach Medieval History', in A. von Lünen et al. (eds) *Historia ludens: the playing historian*. New York, NY: Routledge (Routledge approaches to history, vol. 30), pp. 54–70.

Lind, S. (2020) 'Music as temporal disruption in *Assassin's Creed*', *The Soundtrack*, 11(1), pp. 57–73. Available at: https://doi.org/10.1386/ts_00005_1.

Locke, H.J. (2018) 'Beyond "tits and dragons": Medievalism, Medieval History, and Perceptions in Game of Thrones', in M. Gerzić and A. Norrie (eds) *From medievalism to early-modernism: adapting the English past*. London: Routledge, pp. 171–187.

López, M., Hardin, M. and Wan, W. (2022) 'The Soundscapes of the York Mystery Plays: Playing with Medieval Sonic Histories', in R. Houghton (ed.) *Teaching the Middle Ages through Modern Games*. De Gruyter, pp. 249–278. Available at: https://doi.org/10.1515/9783110712032-012.

Love, M.C. (2011) 'Not-So-Sacred Quests: Religion, Intertextuality and Ethics in Videogames', *Religious Studies and Theology*, 29(2), pp. 191–213. Available at: https://doi.org/10.1558/rsth.v29i2.191.

Lynch, A. (2016) 'Medievalism and the ideology of war', in L. D'Arcens (ed.) *The Cambridge Companion to Medievalism*. 1st edn. Cambridge University Press, pp. 135–150. Available at: https://doi.org/10.1017/CCO9781316091708.010.

MacCallum-Stewart, E. (2008) '"Never Such Innocence Again": War and Histories in World of Warcraft', in H. Corneliussen and J.W. Rettberg (eds) *Digital culture, play, and identity: a World of Warcraft reader*. Cambridge, MA: MIT Press, pp. 39–62.

Mancini, T. and Sibilla, F. (2017) 'Offline personality and avatar customisation. Discrepancy profiles and avatar identification in a sample of MMORPG players', *Computers in Human Behavior*, 69, pp. 275–283. Available at: https://doi.org/10.1016/j.chb.2016.12.031.

Manning, C. (2022) 'Expectations vs. reality: Perceived accuracy when women are in historical games', in J. Draycott (ed.) *Women in historical and archaeological video games*. 1st edn. Boston: De Gruyter Oldenbourg (Video games and the humanities, 9), pp. 57–73.

Marino Carvalho, V. (2017) 'Videogames as Tools for Social Science History', *Historian*, 79(4), pp. 794–819. Available at: https://doi.org/10.1111/hisn.12674.

Matthews, D. (2015) *Medievalism: a critical history*. Cambridge: D.S. Brewer (Medievalism, volume VI).

Mayer, L.S. (2008) 'Promises of Monsters: The Rethinking of Gender in MMORPGs', in K. Fugelso and C.L. Robinson (eds) *Medievalism in technology old and new*. Cambridge ; Rocheter, NY: D.S. Brewer (Studies in medievalism, 16), pp. 184–204.

McCall, J. (2012) 'Navigating the Problem Space: The Medium of Simulation Games in the Teaching of History', *History Teacher*, 1, pp. 9–28.

McCall, J. (2014) 'Simulation Games and the Study of the Past: Classroom Guidelines', in K. Kee (ed.) *Pastplay: Teaching and Learning History with Technology*. University of Michigan Press, pp. 228–254. Available at: https://doi.org/10.2307/j.ctv65swr0.15.

McCall, J. (2016) 'Teaching History With Digital Historical Games: An Introduction to the Field and Best Practices', *Simulation & Gaming*, 47(4), pp. 517–542. Available at: https://doi.org/10.1177/1046878116646693.

McCall, J. (2018) 'Video Games as Participatory Public History', in D.M. Dean (ed.) *A companion to public history*. 1 edition. Hoboken, NJ: Wiley, pp. 405–416.

McCall, J. (2019) 'Playing with the past: history and video games (and why it might matter)', *Journal of Geek Studies*, 6(1), pp. 29–48.

McKenzie, A. (2018) 'A Patchwork World: Medieval History and World-Building in *Dragon Age: Inquisition*', *The Year's Work in Medievalism*, 33, pp. 49–61.

Medel, I. (2018) '*Kingdom Come: Deliverance* y la representación de la Baja Edad Media', *e-tramas*, 1, pp. 17–33.

Metzger, S.A. and Paxton, R.J. (2016) 'Gaming History: A Framework for What Video Games Teach About the Past', *Theory & Research in Social Education*, 44(4), pp. 532–564. Available at: https://doi.org/10.1080/00933104.2016.1208596.

Miller, M.K. and Summers, A. (2007) 'Gender Differences in Video Game Characters' Roles, Appearances, and Attire as Portrayed in Video Game Magazines', *Sex Roles*, 57(9–10), pp. 733–742. Available at: https://doi.org/10.1007/s11199-007-9307-0.

Moberly, K. and Moberly, B. (2015) 'Swords, Sorcery, and Steam: The Industrial Dark Ages in Contemporary Medievalism', in K. Fugelso, V. Ferré, and A.C. Montoya (eds) *Studies in Medievalism XXIV*. NED-New edition. Boydell and Brewer (Medievalism on the Margins), pp. 193–216. Available at: www.jstor.org/stable/10.7722/j.ctt12879b0.19.

Murray, J.H. (1998) *Hamlet on the holodeck: the future of narrative in cyberspace*. Cambridge, Mass: MIT Press.

Nakamura, L. (2012) 'Queer Female of Color: The Highest Difficulty Setting There Is? Gaming Rhetoric as Gender Capital', *ADA*, 1. Available at: https://doi.org/10.7264/N37P8W9V.

Nolden, N. (2020a) *Geschichte und Erinnerung in Computerspielen: Erinnerungskulturelle Wissenssysteme*. De Gruyter Oldenbourg. Available at: https://doi.org/10.1515/9783110586053.

Nolden, N. (2020b) 'Social Practices of History in Digital Possibility Spaces: Historicity, Mediality, Performativity, Authenticity', in M. Lorber and F. Zimmermann (eds) *History in Games: Contingencies of an Authentic Past*. Bielefeld: Transcript-Verl (Studies of Digital Media Culture, 12), pp. 73–89.

Noone, K. and Kavetsky, J. (2014) 'Sir Thomas Malory and the Death Knights of New Avalon: Imagining Medieval Identities in World of Warcraft', in D.T. Kline (ed.) *Digital gaming re-imagines the Middle Ages*. New York: Routledge (Routledge studies in new media and cyberculture, 15), pp. 93–106.

Paananen, S. *et al.* (2023) 'User Experience in Virtual Museums - Evaluating Assassin's Creed Odyssey: Discovery Tour', in A.L. Brooks (ed.) *ArtsIT, Interactivity and Game Creation*. Cham: Springer

Nature Switzerland (Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering), pp. 239–252. Available at: https://doi.org/10.1007/978-3-031-28993-4_18.

PaniCaL (2020) 'Made a guide sheet to help myself Role-Play better at CK3'. Available at: https://forum.paradoxplaza.com/forum/threads/made-a-guide-sheet-to-help-myself-role-play-better-at-ck3.1412521/.

Pereira García, S. and Gómez Gonzalvo, F. (2015) 'La reconstrucción del paso del tiempo en el videojuego Sid Meier´s Civilization IV. Una perspectiva educativa', *LifePlay: Revista académica internacional sobre videojuegos,* 4, pp. 13–27.

Pitruzzello, J. (2014) 'Systematizing Culture in Medievalism: Geography, Dynasty, Culture, and Imperialism in *Crusader Kings: Deus vult*', in D.T. Kline (ed.) *Digital gaming re-imagines the Middle Ages*. New York: Routledge (Routledge studies in new media and cyberculture, 15), pp. 43–52.

Pobłocki, K. (2002) 'Becoming-state: The bio-cultural imperialism of Sid Meier's Civilization', *Focaal - European Journal of Anthropology*, 39, pp. 163–177.

Politopoulos, A. *et al.* (2019) '"History Is Our Playground": Action and Authenticity in *Assassin's Creed: Odyssey*', *Advances in Archaeological Practice*, 7(3), pp. 317–323. Available at: https://doi.org/10.1017/aap.2019.30.

Poremba, C. (2003) 'Patches of peace: Tiny signs of agency in digital games', *DiGRA International Conference: Level Up, Utrecht, the Netherlands* [Preprint]. Available at: http://openresearch.ocadu.ca/id/eprint/1401/1/Poremba_Patches_2003.pdf.

Pugh, T. and Weisl, A.J. (2013) *Medievalisms: making the past in the present*. London: Routledge.

Rhodes, B. (2017) 'Reconstructing Pre-Reformation St Andrews', *St Andrews 2017*, 10 April. Available at: http://2017.wp.st-andrews.ac.uk/2017/04/10/reconstructing-pre-reformation-st-andrews/ (Accessed: 8 June 2018).

Schut, K. (2007) 'Strategic Simulations and Our Past: The Bias of Computer Games in the Presentation of History', *Games and Culture*, 2(3), pp. 213–235. Available at: https://doi.org/10.1177/1555412007306202.

Schwartz, L. (2006) 'Fantasy, Realism, and the Other in Recent Video Games', *Space and Culture*, 9(3), pp. 313–325. Available at: https://doi.org/10.1177/1206331206289019.

Simmons, C.A. (2019) 'Chivalric Medievalism', in R.W. Jones and P. Coss (eds) *A Companion to Chivalry*. Boydell & Brewer, pp. 301–322. Available at: https://doi.org/10.2307/j.ctvb937g7.

Šisler, V. (2014) 'From Kuma\War to Quraish: Representation of Islam in Arab and American video games', in H. Campbell and G.P. Grieve (eds) *Playing with religion in digital games*. Bloomington, IN: Indiana University Press (Digital game studies), pp. 109–133.

Skotnes-Brown, J. (2019) 'Colonized Play: Racism, Sexism and Colonial Legacies in the DOTA 2 South Africa Gaming Community', in P. Penix-Tadsen (ed.) *Video games and the global south*. Pittsburgh: Carnegie Mellon University, pp. 143–153.

Smith, J.L. (2016) 'Medievalisms of Moral Panic':, in K. Fugelso, J. Davies, and S. Salih (eds) *Studies in Medievalism XXV: Medievalism and Modernity*. Boydell and Brewer, pp. 157–172. Available at: www.jstor.org/stable/10.7722/j.ctt19x3hn8.16.

Spring, D. (2015) 'Gaming history: computer and video games as historical scholarship', *Rethinking History*, 19(2), pp. 207–221. Available at: https://doi.org/10.1080/13642529.2014.973714.

Srauy, S. (2019) 'Professional Norms and Race in the North American Video Game Industry', *Games and Culture*, 14(5), pp. 478–497. Available at: https://doi.org/10.1177/1555412017708936.

Stang, S. and Trammell, A. (2020) 'The Ludic Bestiary: Misogynistic Tropes of Female Monstrosity in *Dungeons & Dragons*', *Games and Culture*, 15(6), pp. 730–747. Available at: https://doi.org/10.1177/1555412019850059.

Stirling, E. and Wood, J. (2021) '"Actual history doesn't take place": Digital Gaming, Accuracy and Authenticity', *Game Studies*, 21(1). Available at: http://gamestudies.org/2101/articles/stirling_wood (Accessed: 14 June 2021).

Stirling, E. and Wood, J. (2022) 'Learning About the Past Through Digital Play: History Students and Video Games', in R. Houghton (ed.) *Teaching the Middle Ages through Modern Games*. De Gruyter, pp. 29–44. Available at: https://doi.org/10.1515/9783110712032-002.

Taylor, T. (2003) 'Historical Simulations and the Future of the Historical Narrative', *History and Computing*, 6(2).

Tolmie, J. (2006) 'Medievalism and the Fantasy Heroine', *Journal of Gender Studies*, 15(2), pp. 145–158. Available at: https://doi.org/10.1080/09589230600720042.

Vossen, E. (2020) 'There and Back Again: Tolkien, Gamers, and the Remediation of Exclusion through Fantasy Media', *Feminist Media Histories*, 6(1), pp. 37–65. Available at: https://doi.org/10.1525/fmh.2020.6.1.37.

Wainwright, A.M. (2019) *Virtual history: how videogames portray the past*. Abingdon, Oxon ; New York, NY: Routledge.

Waymack, A.F. and Greenlee, J.W. (2020) 'In the Beginning Was the Word: How Medieval Text Became Fantasy Maps', in K. Fugelso (ed.) *Studies in Medievalism XXIX: Politics and Medievalism (Studies)*. Boydell & Brewer, pp. 183–200. Available at: https://doi.org/10.2307/j.ctvxhrjqn.

Webber, N. (2014) 'Technophilia and Technophobia in Online Medieval Fantasy Games', in D.T. Kline (ed.) *Digital gaming re-imagines the Middle Ages*. New York: Routledge (Routledge studies in new media and cyberculture, 15), pp. 214–226.

West-Harling, V.O. (2010) 'Medievalism as Fun and Games', in K. Fugelso (ed.) *Studies in Medievalism XVIII: Defining Medievalism(s) II*. Cambridge: Cambridge University Press, pp. 1–16. Available at: http://universitypublishingonline.org/boydell/ebook.jsf?bid=CBO9781846157646 (Accessed: 6 October 2021).

White, W.J. (2014) 'The Right to Dream of the Middle Ages Simulating the Medieval in Tabletop RPGs', in D.T. Kline (ed.) *Digital gaming re-imagines the Middle Ages*. New York: Routledge (Routledge studies in new media and cyberculture, 15), pp. 15–28.

Williams, D. *et al.* (2009) 'The virtual census: representations of gender, race and age in video games', *New Media & Society*, 11(5), pp. 815–834. Available at: https://doi.org/10.1177/1461444809105354.

Wright, E. (2018) 'On the promotional context of historical video games', *Rethinking History*, 22(4), pp. 598–608. Available at: https://doi.org/10.1080/13642529.2018.1507910.

Young, H. (2015) 'Whiteness and Time: The Once, Present and Future Race', in K. Fugelso, V. Ferré, and A.C. Montoya (eds) *Studies in Medievalism XXIV*. NED-New edition. Boydell and Brewer (Medievalism on the Margins), pp. 39–50. Available at: www.jstor.org/stable/10.7722/j.ctt12879b0.9.

Young, H. (2021) 'Race and historical authenticity *Kingdom Come: Deliverance*', in K. Alvestad and R. Houghton (eds) *The Middle Ages in Modern Culture: History and Authenticity in Contemporary Medievalism*. London: Bloomsbury, pp. 28–39. Available at: https://doi.org/10.5040/9781350167452?locatt=label:secondary_bloomsburyCollections (Accessed: 23 April 2021).

Young, H.V. (2018) *Race and popular fantasy literature: habits of whiteness*.

de Zamaróczy, N. (2017) 'Are We What We Play? Global Politics in Historical Strategy Computer Games', *International Studies Perspectives*, 18(2), pp. 155–174. Available at: https://doi.org/10.1093/isp/ekv010.

Zimmerman, E. (2004) 'Narrative, Interactivity, Play and Games: Four Naughty Concepts in Need of Discipline', in N. Wardrip-Fruin and P. Harrigan (eds) *First person: new media as story, performance, and game*. Cambridge, Mass: MIT Press, pp. 154–164.