

Archaeogaming: How *Heaven's Vault* Changes the “Game”

SEBASTIAN HAGENEUER*

Introduction

“*Archaeogaming*, broadly defined, is the archaeology both in and of digital games” (Reinhard 2018, 2). This relatively new term – and topic in general – is not something we would immediately connect with Susan Pollock and the work she has done over the last years. Nonetheless, she is known for being open to, but also rather curious about new technologies, methods, and developments in the field. In addition, she also knows of the importance of well-executed scientific communication and the exciting possibilities these new approaches have to offer. *Archaeogaming* is much more than just playing computer games under the umbrella of archaeological science. Communication of science and – an additional focus here – gender studies play a role as well. In digital games, archaeology and archaeologists are depicted in a certain way that is not only exaggerated, but in the end contributes to pseudo-archaeology, something that we as archaeologists have to be aware of, and concerned about. In that sense, I want to present an article about *archaeogaming* and why we – as archaeologists – should care about something so completely different to our profession as the video game industry.

The term *archaeogaming* was recently defined and published in depth by Andrew Reinhard in his book “Archaeogaming. An introduction to archaeology in and of video games” (2018). In it, he defines 5 main themes: 1. The study of physical video games, their documentation,

typology, and distribution as material culture of human history, 2. The study of archaeology within digital games, how archaeologists are depicted in their profession and what impact this has on us, 3. The application of archaeological methods within digital games to study (virtual) human behaviour, 4. Researching how game design manipulates players to interact within the game, and 5. The archaeology of game mechanics and the entanglement of code with players (Reinhard 2018, 3). As this definition of *archaeogaming* covers a wide field of applications, I focus only on the second theme here: the study of archaeology within digital games and especially on the depiction of *the archaeologist* as a character within them. After an introduction to games with historical settings in general, I will compare two games that feature female archaeologists in vastly different ways and discuss their importance.

Historical digital games

Digital games in historical settings are a popular theme within the industry (Meyers 2011), with an ever-expanding number of titles concerned with the depiction of our human past (for example the *Assassins Creed* series 2007–2019, *Civilization* 1991–2016, *Age of Empires* 1997–2019, and many more). These games are all best-selling products (so-called AAA-games) and therefore a big part of the current cultural media landscape (Rubio-Campillo 2020, 46–47). Digital games have become one of the fastest growing industries of our time,

* Archaeoinformatics, Institute of Archaeology, University of Cologne, Cologne (Germany)

creating more revenue than the film industry.¹ It is, however, no surprise that games concerned with our past have a huge influence on our culture and are a major factor in bringing children and young adults in contact with our heritage (Shanthini 2013). In other words, after TV (Holtorf 2007, 52–54; Reinhard 2018, 73), they most probably learn about the past, and the profession of archaeology through a video game (Felder et al. 2003, 170–71).

Games that depict the profession of archaeology are fewer, but still very powerful. Games are designed to entertain us and – when archaeology is involved – do so using certain stereotypical ways of depicting archaeology in an exotic, adventurous, and rather unrealistic manner; as we all well know from the famous Indiana Jones movies. Erik Champion calls this the “Indiana Jones” quandary: “*Adventure games are tainted by the ‘Indiana Jones’ quandary: archaeology is glorified via popular culture, not for preservation but for the exploration of novelty and the demonisation and destruction of other cultural perspectives. Indiana Jones films routinely involve an eclectic mix of historical and priceless artefacts that are destroyed by Indiana Jones’ race against time, or for just getting in the way of him and his extremely violent archaeological rivals*” (Champion 2004, 55). This echoes the *adventuring archaeologist trope* based on the first explorers of the 18th and 19th centuries CE, whose actions were colonialist, imperialistic, and often racist (Boyes 2018; Meyers 2011). The Indiana Jones movies therefore also fit into the so-called *white saviour trope*, where the white protagonist regularly saves non-white characters, therefore establishing a superior relationship (Filmmakers Of Colour And Lustre [Focal] 2019).

The depiction of the archaeologist as the adventurer holds true for nearly all digital games concerned with archaeology. This is most obvious for over a dozen titles about the famous archaeologist himself (the *Indiana Jones* series, 1982–2016; *Lego Indiana Jones* series, 2008–2009). Another well-known game series with a similar stereotypical character, not unlike Indy, is *Uncharted* (2007–2017) by publisher Naughty Dog, which features Nathan Drake, a treasure hunter par excellence. Although not explicitly promoted as an archaeologist, he is often compared to Indiana Jones or Lara Croft, who in reality are not archaeologists either. The narrative of the *Uncharted* series portrays the stealing of artefacts and depicts the lead character as a grave robber, looter, and murderer. In addition, supernatural forces or pseudo-archaeology² contribute to the narrative. This has most likely had an impact with regards to the fact that over 50% of all Americans believe in fictional ancient advanced civilisations, such as Atlantis (Boyes 2018).

Most of these video game characters are white males and only a few games feature female archaeologists (Burgess et al. 2007; Reinhard 2018, 64). The most famous of them all is Lara Croft of the *Tomb Raider* series (1996–2018). She is also a treasure hunter and on a quest to uncover the past (Reinhard 2018, 69) in a race against various villains who seek to destroy ancient artefacts or misuse them for evil purposes. She, therefore, perfectly personifies the *adventurous archaeologist* or *white saviour tropes*. Her character was clearly modelled after Indiana Jones, but as a female, which according to Claudia Breger, contributed to these games being so successful

1 From 2010 to 2017, the amount of money spent annually on video games in the US increased from 17.5 billion to 29.1 billion dollars. In 2018, it reached its peak with 43.8 billion dollars. 64% of American households own a device they use to play games on and 60% of Americans play video games daily (Boom et al. 2020, 28–29; Entertainment Software Association [ESA] 2018; Mol et al. 2017, 8–9; Shieber 2019).

2 Pseudo-archaeology refers mostly to interpretations done outside of the archaeological community, promoting aliens or supernatural beings as the creator(s) of our own past. Pseudo-archaeology is never based on analytical methods or collected data, rather on individual artefacts (the Antikythera mechanism, Phaistos Disc) or sites (Stonehenge, Göbekli Tepe) that are explained utilising unscientific methods.

(Breger 2008, 42, 46). Nevertheless, before the first *Tomb Raider* game (1996), female characters were rarely represented in digital games and, if so, mostly as women in distress. Rather than being an object in need of rescue, Lara Croft, for the first time, was a female main character in a major digital game (Kennedy 2002; Mikula 2003, 80). Therefore, the *Tomb Raider* series is of special interest here, as it represents the stereotypical archaeologist of games and movies, but this time being a strong female character that became an idol for many female players (MacCallum-Stewart 2014; Mikula 2003, 79–80). In a second example, a game called *Heaven's Vault* will be used to showcase a different approach to the same topics that game developers can take.

Lara Croft and *Tomb Raider*

As a post-modern impersonation of the imperialistic endeavours of (mostly) past

archaeological practices, she is – like her male counterparts – penetrating space and appropriating treasures of ancient civilisations (Breger 2008, 46–48). In these games, the player must conquer various levels in different locations (*Tomb Raider* 1996–2018).³ In the very first game of that series, the player starts in Peru, searching for an artefact in the tomb of Q'ahlopec (a ruler of Atlantis) within the catacombs of the ancient city of Vilcabamba. Hired by a private organisation seeking an artefact called *Scion*, Lara explores and fights her way through the catacombs to find only one piece of the artefact. After the first episode, Lara travels to Greece (Fig. 1) to break into the monastery of St. Francis' Folly, where she finds the tomb of Tihocan, another ruler of Atlantis and the second part of the artefact, which reveals to her, in a vision, the location of the last part. The third part of the artefact is found in Egypt at the lost city of Khamoon, where she discovers the tomb of another



Fig. 1. Screenshot of *Tomb Raider Anniversary*, a remake of the very first part of the series (© Eidos Interactive).

3 So far, the *Tomb Raider* series consists of 12 main games, excluding spin-offs and handheld games. The publisher, and therefore the game, have changed several times. While the first games consistently fulfil the tropes discussed here, a reboot of the series in 2013 changed the game (discussed below). The examples shown here focus on certain titles, but also discuss the reboot.

Atlantian ruler. After assembling the pieces, her employer takes the artefact and brings it to an island where an Atlantian pyramid, filled with mutants, is the final location of the game. As the employer reveals her plans to gain control over the mutants with the help of the artefact, Lara decides to destroy the object that she recuperated so clumsily. In the process, she not only destroys the object, but also the pyramid and the entire island (*Tomb Raider I* 1996).

As this summary of the events of the first game demonstrates, the narrative is a combination of well-established topics of pseudo-archaeology, violent adventures, and straightforward fiction.⁴ The game mechanics of the *Tomb Raider* series focuses mainly on climbing, jumping, and activating triggers to open doors, traps, or secret passageways. Occasionally, you also must fight against animals, dinosaurs, indigenous people, villains, mutants, or supernatural powers. Therefore, to complete a level, the player must find a way through these spaces often motivated by exploring and fighting through every inch of it to find every single secret hidden within them. The visualisation of these spaces is more often modelled on cliché expectations of adventurous or exotic locations and only sometimes resembles existing sites, by using well-known elements. As Breger states: “*The overgrown ruins of ancient civilizations recall the Orientalist tropes of a lost culture to be uncovered by Western science.*” (Breger 2008, 54). We, as a player, therefore act within this imperialistic *Orientalist trope*. The mechanics of looting within these games are specifically designed to progress you in the game by either allowing you to enter the next level, increasing your abilities, or granting you a higher score. This way, you are encouraged to loot and fight

and most of the time makes it a necessity to complete the game. Sometimes, looting is under the premise of preserving an artefact, but rather than calling the authorities, Lara takes the artefact for herself, regularly destroying it in the process, adding to the imperialistic behaviour within these games. This raises the question of ethical behaviour in digital games. Outside of the digital space, the ramifications of looting are well established. In-game, looting is often required to progress the narrative. Meghan Dennis asks, “[...] *does the archaeologist [that researches a game] engage in looting artifacts or objects of cultural patrimony [...] or does the archaeologist abstain?*” (Dennis 2016, 30). Looting can also be seen as an acceptable behaviour when promoted through a game like *Tomb Raider*.

The same holds true for the interaction with representations of native populations (Dennis 2016, 31), as these are often portrayed as underdeveloped bystanders to Lara’s adventures (*white saviour trope*). In *Shadow of the Tomb Raider* (2018), the natives of the Peruvian village of Paititi (Fig. 2) are unable to solve their own problems and are repeatedly rescued by her. Within minutes, she becomes the right-hand of queen Unartu, who Lara replaces later on in a sacred ritual, for which the queen had to train her whole life. The western adventurer is able to perform the native ritual at once, demonstrating the power of western civilisation. “*Lara doesn’t just steal artefacts in this game, she steals people’s destiny. Unuratu can’t save her people, she needs Lara for that*” (Webb 2019). A game that has such a huge cultural impact, especially on younger people, has a significant influence on how players perceive foreign cultures, and what they deem acceptable in terms of cultural contact and relations. In addition, as Dennis

4 Later games use roughly the same narrative, only exchanging locations, artefacts, and villains. She visits locations like the Great Wall of China (*Tomb Raider II* 1997), the Great Pyramid of Giza (*Tomb Raider: The Last Revelations* 1999), or the Dead Cities of Syria (*Rise of the Tomb Raider* 2015), finding artefacts like Excalibur (*Tomb Raider: Legend* 2006), Thor’s Hammer (*Tomb Raider: Underworld* 2008), or the dagger of the Mayan goddess Ixchel (*Shadow of the Tomb Raider* 2018).



Fig. 2. Lara in front of the village Paititi (© Square Enix).

correctly points out, the indigenous groups of the depicted natives do not normally have any voice for protesting their misrepresentation in a digital game (Dennis 2016, 31), and can only do so after its release. Also, as Philip Boyes states: “It might seem harmless to claim that aliens or Atlanteans built this monument or that lost city, but in doing so, you’re taking those achievements away from the people who actually accomplished them. Often those people are the ancestors of modern indigenous communities which have suffered colonialist oppression and marginalisation. And this brings us to pseudo-archaeology’s troubling relationship with race.” (Boyes 2018). These racist tropes are present in current popular games, and archaeology is often connected to them, fulfilling long established expectations about the profession of archaeology in the media.

The last point of critique in the *Tomb Raider* series is the objectification of her as a female character. Sexism in digital games is not restricted to archaeology-related titles, but we as archaeologists face the constant sexualisation of our profession in the media since the first Indiana Jones movies. Toby Gard, who was the creator of Lara Croft working at Core

Design at the time of the first game, on the question as to whether she is a feminist icon or a sexual fantasy describes her as follows: “Neither and a bit of both. Lara was designed to be a tough, self-reliant, intelligent woman. She confounds all the sexist clichés apart from the fact that she’s got an unbelievable figure. Strong, independent women are the perfect fantasy girls – the untouchable is always the most desirable” (Interview in *The Face* magazine, June 1997, cited after Mikula 2003, 79). As Maja Mikula describes: “Lara is everything that is bad about representations of women in culture, and everything good” (Mikula 2003, 79–80). Although the marketing department at Core Design had their reservations about having a female lead character, the binary design of Lara as strong, independent, and violent person on the one hand, but also attractive and desirable on the other, was most probably a stroke of genius. The character of Lara Croft appeals to female as well as male players at the same time, but for different reasons (Kennedy 2002). While male players usually do not tend to identify with a female video game character, they seem to either objectify her outer appearance, appreciate the violence done by or to her, or even develop a feeling of control and care for

the well-being of the character. Diane Carr summarises this with the statement that “Lara is watched, whilst she is being driven” (Carr 2002, 5). Helen Kennedy argues that by playing Lara as a male, her body transforms into a transgendered space (2002). In contrast, female players of Lara Croft enjoy “being”, instead of “controlling” her, thereby identifying with her positive feminist attributes. Lara Croft has become a role model for a large group of female players, who see beyond her objectification (Mikula 2003, 80–81).

The outer appearance of Lara Croft is without a doubt modelled on an adolescent male fantasy, and proceeding the first game (1996), her physique became more and more unrealistic, as did her sexual attitude (Review at WomenGamers.Com cited after Mikula 2003, 81). This is not unique to the *Tomb Raider* series (Burgess et al. 2007), and while male characters, on the other hand, are more likely to be portrayed as violent (Dietz 1998; Dill and Thill 2007), characters like Indiana Jones or Nathan Drake are also appealing in their own way. In any case, the *Tomb Raider* series changed in 2013 with the reboot of *Tomb Raider*, where, for the first time, the game had a female writer, Rhianna Pratchett.⁵ Lara’s physique was adapted to a realistic value, the narrative was made more complex, and her character designed as emotionally deeper and more vulnerable. Nevertheless, she remained an object of sexual attraction (MacCallum-Stewart 2014), and as described in the last example (*Shadow of the Tomb Raider* 2018) still fulfils the white saviour trope.

These points are only a few that can be discussed here. Although, going through 22 years of development and redesign, the *Tomb Raider* series still presents problems. These problems are of course not unique to games concerned with archaeology, but in

my opinion find a powerful voice through the topic of archaeology, science, and exploration. The problems examined and discussed in this article are:

1. Imperialism: The justification of looting and the connected communication of the *Orientalist trope* depicting ancient sites as resource to be exploited for treasures and hidden secrets.
2. Racism: The portrayal of native populations as being helpless or under-developed in contrast to the western traveller that fulfils the *white saviour trope* of rescuing the non-white protagonists.
3. Sexism: The sexualisation of Lara as a female character in contrast to comparable male characters, and the communication that strong women need to have a certain physique.

Listed like this, the points made here strongly resemble the characterisation of early archaeology itself. It seems interesting that game designers have picked up on these aspects of archaeology rather than what archaeology is about today. The next example takes a different approach by breaking with imperialistic archaeology.

Aliya Elasra and *Heaven’s Vault*

In 2019, a new game was released called *Heaven’s Vault*, made by inkle studios, an independent game company which released its first game in 2015. The studio itself describes their game as follows: “*Uncover a forgotten past and decipher a lost language in this open-world narrative adventure game. Join archaeologist Aliya Elasra and her robot sidekick Six as they investigate The Nebula, an ancient network of scattered moons. [...] Decipher an entire hieroglyphic language in a puzzle mechanic with a*

⁵ The 2013 reboot was more a survival than an archaeology game, but the following parts *Rise of the Tomb Raider* (2016), and *Shadow of the Tomb Raider* (2018) again revived the imperialistic and racist themes of pre-2013 games (Webb 2019).

*unique narrative twist: every inscription you find has a meaning, and the translations you choose feed back into the story, changing Aliya's ideas about what she's found.*⁶

The game starts at the fictional University of Iox, where we play as Aliya meeting her supervisor who requests that she investigates the whereabouts of a missing friend and the origins of a mysterious brooch with unknown inscriptions on it. Aliya travels through space to different moons, discovers artefacts or landmarks with more inscriptions, and tries to decipher the old lost language, called "Ancient". The hieroglyphic language consists of about 1,000 individual signs and does actually form a real working language that the player learns over the course of the game. The player learns more about the past of the world Aliya is living in and how everything ties together in a wider story, which makes a replay of the game worthwhile. The game mechanics are based on a simple point-and-click adventure, where you navigate Aliya through the world and interact with points of interests or other characters. Within the dialogues, Aliya

has to choose between several options, which influences the narrative of the game as well as her relationship with other characters. The inscription system consists of a visual depiction of the inscriptions found as well as several proposals for translation (Fig. 3). After finding more inscriptions, the translations become more confident and the same signs across different inscriptions can confirm a proposed translation. Although *Heaven's Vault*, being developed by an independent studio in contrast to a big publisher, cannot compete with the newest additions to the *Tomb Raider* series graphically, it favourably compares to *Tomb Raider* in many other regards. The game uses no weapons or violence and solely relies on the story-telling of the main character Aliya Elasra, a female archaeologist from the University of Iox; thereby being an archaeologist with an academic background.

In game-play the character is constantly challenged on how to interact with discovered artefacts. Aliya can engage (take) or avoid (leave them) to answer these ethical questions in the game, but should she consider to do



Fig. 3. Translation mechanic during the game to decipher the language "Ancient" (© inkle studios).

6 See: <https://www.inklestudios.com/press/heavensvault/>. [Accessed 3.11.2019].

something ethically questionable, people in the game will change their opinion about her, directly influenced by her decisions, and therefore change the narrative (Reinhard 2019a). Additionally, she does not only treat the worlds she visits as levels, but rather as sites, where she needs to decide whether to open an old chest and risk destruction, or to leave it be to move on. These repeated decisions regarding ethical behaviour are a constant reminder of the value of these sites and artefacts.

The character is a woman of colour (Fig. 4), as are many of the side characters. Jon Ingold, the game's narrative director and writer (and son of archaeologist Prof. Timothy Ingold, University of Aberdeen), based the main character of the game on the real life Egyptologist, Dr. Monica Hanna (Reinhard 2019a), who is well-known for her activities in protecting Egyptian heritage (Hanna 2015). He deliberately decided against a male and white character of the 'Golden Age of Archaeology' (like Indiana Jones), which appeared to him as a "racist sport for rich people" (Reinhard 2019a). The sites that the

player visits are reminiscent of Near Eastern locations with hints of Iranian architecture for the most part, but also more modern references. Jon Ingold writes: "*The result is a world that's mixed-up as Ancient Byzantium, or Middle Ages London, or modern-day Brooklyn. A world that, we think, feels coherent and exciting and surprising, full of people of all colors, sizes, shapes. A world that refuses to fit inside its box*" (Ingold 2019). The game directly addresses colonialism, as Aliya faces a strong resentment by indigenous people on the moon of Maersi. In this case, she has to decide as to how to behave as a visitor from the planet that oppressed that moon in the past (Reinhard 2019b). Again, her decisions influence the progress of the game and interaction with other characters in the world.

In *Heaven's Vault*, the female character is not sexualised in any way. Aliya is wearing comfortable trousers, a blouse, and a headscarf. Clothing which is appropriate for the occasion, and comparable to other characters in the game. She is treated in a respectful way without any references to sexual attitudes whatsoever.



Fig. 4. Aliya Elasra with her sidekick robot Six (© inkle studios).

She acts independently and the relationships with other female or male characters are at eye level. Aliya is intelligent, funny, and relatable and a perfect example how this can be achieved without sexualisation.

In sum, *Heaven's Vault* solves very elegantly the problems of the *Tomb Raider* series and does not fulfil any imperialistic, racist, or sexual tropes, while still referencing them. Archaeology is displayed as the discipline it is, without ignoring the associated problems. There is the possibility to act imperialistic or racist, but it is not necessary to proceed the game and has direct consequences observable by the player. By having a replay value, the game even invites one to play it in different ways (such as a good or bad archaeologist) and the player is able to compare the different outcomes of their decisions. In that sense, *Heaven's Vault* can be characterized as a post-processual digital game, similar to post-processual archaeology, and in complete contrast to *Tomb Raider*, which represents the archaeology of the first explorers.

Discussion

Why should we even care about digital games? In this article, I highlighted three (of several) problems of digital games depicting archaeologists and pointed out how they can be handled with care, and how they are not. Several popular games, for example, the *Tomb Raider* series, promote imperialism, racism, and sexism, and encourage players to act out these tropes to win the game. In this way, our profession is depicted in an adventurous, exotic, unethical, and highly unrealistic manner. The mechanics of games like these idealise the stealing and destroying of artefacts, as well as the oppression and marginalisation of indigenous people and their heritage. In this way, they are appropriating the past from a western perspective. In contrast, by showing the immediate effects of imperialistic or racist behaviour, *Heaven's Vault* is able to raise awareness, or at least offer alternative ways

of dealing with these topics. It is not about making a game where imperialism and racism does not exist, but rather to show them as part of archaeology (as they were since its beginnings), and present immediate feedback as to the consequences of unethical actions, as well as discussing them. As a player, you may choose between behaving ethically or unethically and have to deal with the consequences of your in-game choices. Sexism however has some other ramifications. Although studies have demonstrated no correlation between sexist beliefs and playing video games (Breuer et al. 2015, 200–01), it does exclude female players in engaging in digital games as equally and as fully as male players. The reboot of the *Tomb Raider* games in 2013 did go in the right direction by reducing objectification to a minimum, but as *Heaven's Vault* has shown, sexualisation is not necessary to create an appealing game.

We constantly discuss the depiction of archaeology and archaeologists in movies and TV, failing to see that another medium is already more influential, especially to a younger audience. We therefore need to comment on digital games in the same way that we do with Indiana Jones movies, or the latest addition to the realm of pseudo-archaeological TV series such as "Legends of the Lost with Megan Fox".

When researching digital games as archaeologists, we can start by utilising the same methods we use when analysing books, or movies of popular media. Recent examples show that research into the depiction of archaeology in popular media is of importance (Holtorf 2007). The same holds true for digital games (Reinhard 2018). *Archaeogaming* as the study of this phenomenon can help to find further methodologies for researching digital games. Of importance are questions of game mechanics and their ethics (Dennis 2016), how we can teach archaeology through digital games (Boom et al. 2020; Hiriart 2020), and what results we can achieve by doing so (Mol et al. 2017). In my opinion, the academic field

needs to become aware of the realm of digital games, and how these shape not only the perception of the past, but also of archaeology itself.

One way of discussing digital games is to focus on them in the university classroom. Recent courses at the University of Cologne, Bonn, Leiden, and Koblenz have shown how this can be achieved. By analysing different historical games, students critically deal with the depiction of the past, archaeology, or archaeologists. In these courses students are encouraged to use YouTube videos,⁷ as a well-known medium in the community of players, and in this way are able to reach their target audience, which will not happen if analyses are only published in scientific publications.

In recent years, the archaeogaming community produced their own games with an academic background, engaging with the public or school children at an early level, bringing a more realistic image of archaeology to the fore. In a game made by Juan Hiriart of the University of Salford, school children were able to play as the head of an Anglo-Saxon family and learn about cultural meanings and traditions, defining identities, roles, and social interactions in post-Roman Britain. By assessing the knowledge of schoolchildren before and after playing the game, Hiriart was able to evaluate that the game was most successful when it was able to engage with the children empathetically (Hiriart 2020). Xavier Rubio-Campillo directed the team that created a simulation game called “*Ancestors: Stories of Atapuerca*”. This game allows the player to take the role of the leader of a hunter-gatherer group at different stages of human evolution and try to survive in different eras, in turn teaching about prehistory (Rubio-Campillo 2020). The VALUE Foundation based at the University of Leiden demonstrates that digital games can be used

to teach about the past in a critical, yet fun way, allowing for a deep level of personal and historical learning. Either by presenting complicated archaeological topics in the classroom, using video streaming or the software *Twine* to discuss archaeology, by creating interactive non-linear stories, or by utilizing the popular game *Minecraft*, they show how digital games can help to engage with children and create first-stage contact with cultural heritage in a fun and creative way (Boom et al. 2020). Although these examples (including *Heaven’s Vault*) show how it can be done, they only contribute a small percentage of the overall market share in archaeological digital games, as these games are developed by researchers or independent studios.

Rarely, big publishers do include archaeologists as consultants in the development of a game and the depiction of the past. Ubisoft’s *Assassin’s Creed* series has employed an historian since *Assassin’s Creed III* (2012). In *Assassin’s Creed Origins* (2017) the player can embark on Discovery Tours, where one is able to explore (rather than fight through) the world of Ancient Egypt (2017), or Greece (2018) to learn about different aspects of the past (like pottery production, religion, or education). These efforts are a big step in the right direction.

Finally, we, as archaeologists, have an obligation to communicate the past to the public. As the above examples have shown, we can do this either by creating our own games, discussing and commenting other games to offer an archaeologists’ perspective to them, or actively participating in creating these games on a big scale, if other publishers do follow Ubisoft’s decision in including us. If we fail to do so, sexual, imperialistic, and racist tropes will continue to be promoted, and our profession accordingly to be misrepresented and misused.

7 For example here: https://www.youtube.com/channel/UCIH_c2rw5eiPcK1N5nEaCoQ/ or <https://www.youtube.com/channel/UCwHUIJYb5t2gY--DnVDcKeaA>. [Accessed 18.11.2019].

References

- Boom, Krijn H. J., Csilla E. Ariese, Bram van den Hout, Angus A. A. Mol, and Aris Politopoulos. 2020. "Teaching through Play: Using Video Games as a Platform to Teach about the Past." In *Communicating the Past in the Digital Age. Proceedings of the International Conference on Digital Methods in Teaching and Learning in Archaeology (12–13 October 2018)*, edited by Sebastian Hageneuer. 27–44. London: Ubiquity. DOI: [10.5334/bch.c](https://doi.org/10.5334/bch.c).
- Boyes, Philip. 2018. "Does Bad Archaeology Make for the Best Games?" *Eurogamer.net*, July 18, 2018. <https://www.eurogamer.net/articles/2018-07-18-does-bad-archaeology-make-for-the-best-games>. Accessed 31.10.2019.
- Breger, Claudia. 2008. "Digital Digs, or Lara Croft Replaying Indiana Jones: Archaeological Tropes and "Colonial Loops" in New Media Narrative." *Aether* 11: 41–60.
- Breuer, Johannes, Rachel Kowert, Ruth Festl, and Thorsten Quandt. 2015. "Sexist Games=Sexist Gamers? A Longitudinal Study on the Relationship between Video Game Use and Sexist Attitudes." *Cyberpsychology, Behaviour, and Social Networking* 18 (4): 197–202. DOI: [10.1089/cyber.2014.0492](https://doi.org/10.1089/cyber.2014.0492).
- Burgess, Melinda C. R., Steven Paul Stermer, and Stephan R. Burgess. 2007. "Sex, Lies, and Video Games: The Portrayal of Male and Female Characters on Video Game Covers." *Sex Roles* 57 (5–6): 419–33. DOI: [10.1007/s11199-007-9250-0](https://doi.org/10.1007/s11199-007-9250-0).
- Carr, Diane. 2002. "Playing with Lara." In *ScreenPlay: Cinema/Videogames/Interfaces*, edited by Geoff King and Tanya Krzywinska, 171–80. London: Wallflower Press.
- Champion, Erik. 2004. "Indiana Jones & the Joystick of Doom: Understanding the Past via Computer Games." *Traffic* 5: 47–65.
- Dennis, L. Meghan. 2016. "Archaeogaming, Ethics, and Participatory Standards." *The SAA Archaeological Record* 6 (5): 29–33.
- Dietz, Tracy L. 1998. "An Examination of Violence and Gender Role Portrayals in Video Games: Implications for Gender Socialization and Aggressive Behavior." *Sex Roles* 38 (5–6): 425–42. DOI: [10.1023/A:1018709905920](https://doi.org/10.1023/A:1018709905920).
- Dill, Karen E., and Kathryn P. Thill. 2007. "Video Game Characters and the Socialization of Gender Roles: Young People's Perceptions Mirror Sexist Media Depictions." *Sex Roles* 57 (11–12): 851–64. DOI: [10.1007/s11199-007-9278-1](https://doi.org/10.1007/s11199-007-9278-1).
- Entertainment Software Association [ESA]. 2018. "2018 Sales, Demographic, and Usage Data: Essential Facts about the Computer and Video Game Industry." https://www.theesa.com/wp-content/uploads/2019/03/ESA_EssentialFacts_2018.pdf. Accessed 31.10.2019.
- Felder, Kathrin, Isabella Hammer, Juliane Lippok, and Mareile Wulf. 2003. "Erkenntnisgewinn und Unterhaltungswert – eine Analyse von Archäologiebildern in den Unterhaltungsmedien." *Ethnographisch-Archäologische Zeitschrift* 44: 161–82.
- Filmmakers of Colour and Lustre [Focal]. 2019. "Indiana Jones – A Primer on Racist Film Tropes." Uploaded on YouTube 26.07.2019. <https://youtu.be/CVHkM49bx4I>. Accessed 31.10.2019.
- Hanna, Monica. 2015. "Documenting Looting Activities in Post-2011 Egypt." In *Countering Illicit Traffic in Cultural Goods: The Global Challenge of Protecting the World's Heritage*, edited by France Desmarais, 47–63. Paris: ICOM.
- Hiriart, Juan. 2020. "How to Be a 'Good' Anglo-Saxon: Designing and Using Historical Video Games in Primary Schools." In *Communicating the Past in the Digital Age. Proceedings of the International Conference on Digital Methods in Teaching and Learning in Archaeology (12–13 October 2018)*, edited by Sebastian Hageneuer, 141–51. London: Ubiquity. DOI: [10.5334/bch.k](https://doi.org/10.5334/bch.k).
- Holtorf, Cornelius. 2007. *Archaeology Is a Brand! The Meaning of Archaeology in Contemporary Popular Culture*. Oxford: Archaeopress.
- Ingold, Jon. 2019. "How Ancient Rome Inspired the Diverse World of Heaven's Vault, Out Today." *PlayStation Blog*, April 16, 2019. <https://blog.playstation.com/2019/04/16/how-ancient-rome-inspired-the-diverse-world-of-heavens-vault-out-today/>.

- Kennedy, Helen W. 2002. "Lara Croft: Feminist Icon or Cyberbimbo? On the Limits of Textual Analysis." *The International Journal of Computer Game Research* 2 (2). <http://www.gamestudies.org/0202/kennedy/>.
- MacCallum-Stewart, Esther. 2014. "'Take That, Bitches!' Refiguring Lara Croft in Feminist Game Narratives." *The International Journal of Computer Game Research* 14 (2). <http://gamestudies.org/1402/articles/maccallumstewart>.
- Meyers, Katy. 2011. "The Adventuring Archaeologist Trope." *Play The Past*, June 28, 2011. <http://www.playthepast.org/?p=1635>.
- Mikula, Maja. 2003. "Gender and Videogames: The Political Valency of Lara Croft." *Continuum* 17 (1): 79–87. DOI: [10.1080/1030431022000049038](https://doi.org/10.1080/1030431022000049038).
- Mol, Angus A. A., Csilla E. Ariese-Vandemeulebroucke, Krijn H. J. Boom, and Aris Politopoulos. 2017. "An Introduction to Archaeology, Heritage, and Video Games." In *The Interactive Past—Archaeology, Heritage & Video Games*, edited by Angus A. A. Mol, Csilla E. Ariese-Vandemeulebroucke, Krijn H. J. Boom, and Aris Politopoulos, 7–17. Leiden: Sidestone Press. <https://www.sidestone.com/books/the-interactive-past>.
- Reinhard, Andrew. 2018. *Archaeogaming: An Introduction to Archaeology in and of Video Games*. New York/Oxford: Berghahn Books.
- Reinhard, Andrew. 2019a. "Archaeology and *Heaven's Vault*: An Interview with Inkle's Jon Ingold—Archaeogaming." *Archaeogaming*, January 25, 2019. <https://archaeogaming.com/2019/01/25/an-interview-with-jon-ingold-of-heavens-vault/>.
- Reinhard, Andrew. 2019b. "The Archaeology of *Heaven's Vault*—Archaeogaming." *Archaeogaming*, April 16, 2019. <https://archaeogaming.com/2019/04/16/the-archaeology-of-heavens-vault/>.
- Rubio-Campillo, Xavier. 2020. "Gameplay as Learning: The Use of Game Design to Explain Human Evolution." In *Communicating the Past in the Digital Age. Proceedings of the International Conference on Digital Methods in Teaching and Learning in Archaeology (12–13 October 2018)*, edited by Sebastian Hageneuer, 45–58. London: Ubiquity. DOI: [10.5334/bch.d](https://doi.org/10.5334/bch.d).
- Shanthini. 2013. "Guest Blog: Why I Love Lara Croft, the Tomb Raider—Tomb Raider Horizons." *Tomb Raider Horizons*, August 31, 2013. <https://tombraiderhorizons.com/2013/08/31/guest-blog-why-i-love-lara-croft-the-tomb-raider/>.
- Shieber, Jonathan. 2019. "Video Game Revenue Tops \$43 Billion in 2018, an 18% Jump from 2017." *TechCrunch*, January 23, 2019. <https://techcrunch.com/2019/01/22/video-game-revenue-tops-43-billion-in-2018-an-18-jump-from-2017/>.
- Webb, Franki. 2019. "Lara Croft: The Problematic Archaeologist." *Medium*, June 25, 2019. <https://medium.com/@frankiwebb/lara-croft-the-problematic-archaeologist-91790a1ba549>.

Ludography

- Age of Empires* series (1997–2019). Ensemble Studios, Relic Entertainment. Microsoft Game Studios. [Multiple platforms].
- Ancestors: Stories of Atapuerca* (2018). Murphy's Toast Games. [iOS and Android].
- Assassin's Creed* series (2007–2019). Blue Byte, Gameloft, Ubisoft. [Multiple platforms].
- Civilization* series (1991–2016). MicroProse & Firaxis Games. MicroProse, Activision, Infogrames Entertainment & 2K Games. [Multiple platforms].
- Heaven's Vault* (2019). Inkle studios. [Multiple platforms].
- Indiana Jones* series (1982–2016). Multiple. [Multiple platforms].
- Lego Indiana Jones* series (2008–2009). LucasArts. [Multiple platforms].
- Tomb Raider* series (1996–2018). Core Design & Crystal Dynamics. Eidos Interactive & Square Enix. [Multiple platforms].
- Uncharted* series (2007–2017). Naughty Dog. Sony Interactive Entertainment. [PlayStation 3 and PlayStation 4].