Designing the Past (Together)

On the Gaming Industry's Contribution to Archaeology and What We Can Contribute to the Gaming Industry

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Abstract: Video games have become one of the spearheading media forms of the 21st century and their impact on our society omnipresent. Many games do represent historical and archaeological pasts in an artistic manner that leads still to wide criticism among archaeologists, historians and heritage practitioners as these reconstructed pasts do not represent the scholarly complexity that academia provides. Nevertheless, attempts to bridge the digital gap between academia and the public are still conducted even though they remain often fruitless due to the lack of effective understanding of popular audience expectations. Since recent years the gaming industry started to address the demand of their consumers for more authentic reconstructions of ancient towns and past societies. Because of that academic specialists have been increasingly employed or outsourced to enhance the quality of their games. This paper aims to discuss this development and interrogate aspects of it from an archaeologist's perspective. For that, cases are presented in which illustrate the relation between archaeological knowledge and the processing of it through games. It shall be also further discussed why it is crucial to participate in this process to benefit from an interdisciplinary collaboration between archaeologists and the gaming industry. It shall be not of focal interest to address the flaws of games in representing complex pasts but rather how to formulate an approach that would satisfy the industry as also archaeologists.

Keywords: *Digital Archaeology Game Studies—Media Archaeology—Theoretical Archaeology—Archaeogaming*

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Introduction

Archaeology's association with media and video games has never been satisfying for most archaeologists. This may go back to the fact that figures like Indiana Jones or Lara Croft had developed "the idea that archaeologists slash through jungles and prowl through caves searching for golden idols, precious work of ancient art, and magical charms" (Orser, 2015, p. 113). The obscured expectations towards the work of an archaeologist which are presented to the public may be one issue. Another aspect that has been always discussed by archaeologists and historians as well, is the accuracy of the content that is presented in digital games; to which extent can the past be

generalised, what are the repercussions or does it even matter? (Chapman, 2018; Reinhard, 2018). The visualisation of past realities into which people can immerse themselves became “increasingly significant in tourism, entertainment and education” (Petersson and Holtorf, 2017, p. 3). Hence video games like the *Civilization* series or the *Assassin’s Creed* series have been trying to offer past experiences to a growing community of players. These games do not just let players immerse into historical events but they also visualise a material past based on archaeological evidence. The representations and reconstructions of material heritage have huge implications for our society and its collective memory as most children grow up playing video games already at an early age.

The direction in which the archaeological framework develops has been always influenced by sociocultural realities (Trigger, 2007) and therefore it has been only natural that many scholars like Angus A. Mol and Andrew Reinhard had been discovering the conjunctions between archaeological science and video games since recent years. While Reinhard tried to explore how to apply an archaeological methodology on digital games (Reinhard, 2018), the *VALUE Foundation* has investigated on how video games could be used for didactic purposes in the context of heritage and archaeology (Mol et al., 2017a).

However, an understudied aspect remains how archaeologists can effectively participate in the visualisation of past realities for the public. Cooperation between archaeologists and the gaming industry could have immense benefits for both sides. The paper aims to address the possibilities and chances of the cooperation between archaeologists and the gaming industry to forward a progression on the field of a digital Public Archaeology. To accomplish that a recapitulation on video games that visualised the past for the last two decades is necessary. For that various cases were chosen to illustrate the different aspects in which video games can represent the past. Further, the game industry’s contribution to archaeology will be pointed out. For this reason, three factors that mark the industry’s contribution are going to be discussed further, namely: a vital interest, the visualisation and an object of study. The vital interest consists of the awareness about the past that is transmitted by video games to the public, the visualisation consists of the 3D-reconstructions of ancient sites, monuments and material culture that is being utilised for the prior factor and the object of study is the game in itself which can be seen from the perspective of contemporary archaeology as part of nowadays digital culture (Reinhard, 2018, p. 59) For that Civilization 6 was selected to illustrate the aspect of the game industry’s contribution.

After that, a similar approach will be conducted to define the potential contributions of archaeology to the gaming industry. The factors that will be discussed in this section are content, inspiration and integrity. The first two factors are passive in being able to be exploited by the gaming industry without having an archaeologist involved while the third one is an active factor as an archaeologist needs to be involved to offer archaeological integrity to a video game. In the case of content, every bit of knowledge about archaeological heritage is meant. From which function the buildings in the Agora of Athens may have had to how a Roman Legion under Emperor Claudius might have looked like. Inspiration is a factor that defines trends in the gaming industry. Inspirations for games that visualise the past are ambivalent and can evolve from either a lack of archaeological evidence or an abundant amount of archaeological evidence (How did Life in the late Palaeolithic look like Vs. How did life in the early Roman Empire look like)? Important to add is that those two passive factors can become active by the involvement of an archaeologist in preparing content and inspiration for game

developers. The third factor which is purely active is the scientific integrity that video games can get by involving an archaeologist in their development. To illustrate this section the game *Egypt: Old Kingdom* was chosen. This game offers a perfect example of how the cooperation with specialists Egyptologists can look like and improve the quality of historical or archaeological pasts in a video game. The section will be dedicated to a conclusion with further prospects.

A History of Playable Pasts

Since Hesiod works have been passed down to us that have somehow imagined and simulated a past with their causal present (Renfrew and Bahn, 2016, p. 22). While Hesiod chose to enclose his idea of a past in one of the most effective media at that time, which was literature in the 8th century BC, containers of conceptions and information have much changed in the following millennia. The industrial revolution gave birth to numerous technological developments of which photographs, audio and film have pushed the boundaries of the reproducibility of mass media (Benjamin, 2011). With the advent of cybernetics and computer sciences, connections and compositions became paradigmatic (Wiener, 2000). Finally, giving birth to the Leitmedium of the 21st century, the digital game (Muriel and Crawford, 2018). An interactive composite medium, containing intermingled audio, images, video, and text; all imbedded in binary code (Reinhard, 2018, pp. 12–13).

Like Hesiod almost three thousand years ago, many people throughout history and still now simulate a past to stimulate the present. The amount of video games that are simulations of (or at least related to) factual past events is innumerable. But visualisation of the past by video game developers does not come by chance. What we see is a visualisation of the past based on factual archaeological evidence; certainly, disobedient to the archaeologist (Clack and Brittain, 2007, pp. 12–13). One just needs to think about what impact the emergence of antiquarianism in the 17th and 18th century had on the fine arts, how the exploits of the Napoleonic campaigns in Egypt inspired painters and artisans (Trigger, 2007, p. 60) and how Schliemann's, Evans' and Carter's expeditions enchanted generations of Filmmakers. Since the PC revolution in the 1990s and the smartphone revolution around 2012 (Twenge, 2018) digital games have advanced deep into private households and private lives of billions of individuals. Digital games are not only accessible at any time for the majority of all human beings but also already undoubtedly a major player in our culture and education. For western generations that were born in the late 1970s, there was hardly any childhood without having ever played an arcade or video game (Barton, 2008, p. 44). It can be therefore said that the earliest conceptions about our world and its causal relation to an apparent past are developed through the intensive activity of gaming. Much of the media we consume, especially at an early age, mould itself into a solid framework of how we perceive our world and its supposed past.

Age of Empires II. (1999)

Age of Empires II: The Age of Kings is a real-time strategy game that is thematically placed in the Middle Ages. The game was released in 1999 as a sequel to its predecessor and stands still as a milestone in PC gaming history. The game offered the player in an open narrative style the possibility to engage into historical campaigns involving the exploits of King Barbarossa or Genghis Khan or into varieties of single-player and multiplayer based skirmishes. The player has in all modes of the game to choose between various cultural entities which come with different traits. While the Vikings

have strong longboats, the Japanese can train the Samurai, which are one of the strongest elite troops of the game. Throughout the game, the player will have to manage resources, construct buildings and defences (see Fig. 1). One will also need to train and organise troops to survive onslaughts of the enemy that one may strike back and defeat the enemy at last. Throughout AoE2 the player will encounter diverse cultural visualisations of military units and architecture associated with their specific attributes and values. While the game is certainly anachronistic, it is not ahistorical (Chapman, 2018, p. 236). It is a rather counterfactual and conceptual medieval past.

Fig. 1. Managing your camp and its resources in Age of Empires 2 (CC)

Titan Quest (2006)

Titan Quest is a role-playing hack-and-slay video game that is thematically placed in a mythological anachronistic classical antiquity, including locations as Greece, Egypt, Mesopotamia and the Far East. The game is still remembered for its outstanding graphics in 2006, innovative gameplay and thematic concept. Throughout the game, one visits different antiquities and ancient landscapes to bring order to a world in which mythological creatures have taken a toll on the human world. The player fights creatures from different mythologies. While the player faces hordes of satyrs, cyclops and centaurs in Greece, he encounters different mythological equivalents in other geographies. Even though the focus of the game is on the fictional storyline and the slaying of hordes of monsters, it is visually comprehensible to the player that he is moving through different cultural landscapes. The aesthetics, weapons, architecture and mythological creatures were designed with much detail to

create contrasts between the different cultural landscapes. Through this contrast, the player learns the similarities and differences in architecture, weapons and mythology of ancient cultures. The visualisation of this fictional past is for sure not without any flaws and offers only a longue dureé capture of the recreated cultures (Chapman, 2018, p. 239). Meaning that architecture and weapons from different periods are mixed and the representation of Egypt, for example, is only a fused accentuation of many periods in its cultural, militaristic, mythological, and architectural history (see Fig. 2). Nevertheless, the player will develop a conceptual intuition of important cultural and mythological aspects of the ancient world and differences between various cultural units namely, Greece, Egypt, Mesopotamia and the Far East. This conceptual knowledge is solidified through the role-play aspect in which the player spends much time in equipping his character with different kinds of weapons and arms that bear specific cultural aesthetics.

Fig. 2. Encountering significant features of ancient Egyptian's visual culture in Titan Quest (CC)

Assassin's Creed: Unity (2014)

Assassin's Creed: Unity is an action-adventure game with stealth elements. The game is part of the *Assassin's Creed* franchise, one of the most successful game series in the history of video games (Komel, 2014, p. 74). Games of the series have been since years used as cases for many scholarly analyses in the fields of history and archaeology (Kapell and Elliott, 2013; Mol et al., 2017a;

Chapman, 2018; Reinhard, 2018). This comes not by chance; Games of the series have always provided exceptional digital reconstructions of towns and cities of various periods. By now stretching from the 5th century BC until the 19th century AD. These reconstructions have always been a playground for discursive approaches of historians and archaeologists, and in the same manner does *Assassin's Creed: Unity* serve here as a case. The game takes the player into the times of the French Revolution. The focal point of the game is an unbelievably detailed 18th century Paris. The game contains an iconic digital replica of the Notre Dame de Paris. After the partial destruction of the actual monument in 2019 the developer of *Assassin's Creed: Unity*, Ubisoft, offered its game for free to the public as a compensation for not being able to visit the actual monument (see Fig. 3). Anyhow, different from the previous two games Unity engages its player more immersively into the historic context through its game design. Mainly because of the player's perspective. While *Age of Empires 2* and *Titan Quest* had a bird's eye view on the actions taking place, Unity transports its player into a third-person view; looking the character over his shoulder and experiencing a Vitruvian proportion to the surroundings. Architectures and landscapes have hence a more impressive impact on the player. The game has an open story structure in which certain freedom is given to the player in being free to move through the in-game world as one pleases and to choose the structure in which one engages into the main storyline.

Fig. 3. While the real monument remains inaccessible (upper image), why not visit the Notre-Dame in Assassin's Creed: Unity? (lower image) (© B. Hanussek)

Creative pasts of ancient worlds offer a great deal of modern world escapism, entertainment and education. This paper was able to briefly wrap up three impactful games that have served millions of people with such: escapism, entertainment, and education. Still, the amount of games on past realities is growing almost daily with an apparently never-ending demand for more untold stories or innovative perspectives towards the past. The quality of these games is also progressing as the gaming industry is a highly competitive and unforgiving market. Yet, while increasingly better graphics and gameplay can be ensured by game developers themselves better historical content or thematic and conceptual depth are developments in the gaming industry that are starting to become outsourced. On the other hand, one shall not neglect the gateway drug these games have provided for people who advanced further into digging deeper into actual archaeological and historical records, sometimes even ending up studying archaeology or history (Hunt, 2004, pp. 94–95). The following sections will take a closer look at these developments.

On the Gaming Industry's contribution to Archaeology

It may be evident that the gaming industry will not help archaeologists to excavate more effectively or create more accurate results on ancient demographics. The benefits for archaeology in this relation do not primarily lay in the lab or field, even though excavation simulators would be for sure a reasonable thing to develop for students (Reinhard, 2018, p. 17). The primary benefits are to be found on a public archaeological and theoretical basis. Even though academic discourse has highlighted games and their benefits for heritage, archaeological and historical practice, these benefits stay mostly vague and undefined. Hence this section will conceptualise three benefits as measurable entities.

Interest

The Cambridge Dictionary gives us a simple but overarching definition on the concept of interest: "the feeling of wanting to give your attention to something or of wanting to be involved with and to discover more about something". It is undeniable that media of all kinds has done exactly that with archaeology. One just needs to compare figures and statistics. It is difficult to believe that the exponential growth of archaeology students between the 1990s and 2000s have nothing to do with the emergence of Indiana Jones movies in the 1980 and the generation(s) that grew up with the movies. Not to speak of the general growth of archaeological TV series in the second half of the 20th century. A similar trend may be observable in the visitor statistics of the Viking Ship Museum in Oslo. While visitors were significantly decreasing until 2013 the subsequently launch in that year and international success of the series Vikings has brought a sudden and continuing increase in visitors since 2014. A digital game has a similar impact on its players; maybe even more impactful. While people may read a book about ancient Rome or see a movie on ancient Egypt, players live and dwell in a virtual environment (Reinhard, 2018, p. 103) which can make them fond of an ancient Greece for example. So, the interest in archaeological or historical knowledge and practice is not just at hand but also more intensified through the immersive act of gaming (Muriel and Crawford, 2018, p. 91). Therefore, it can be said that the gaming industry generates interest which is a benefit for archaeology.

Visualisation

It is hard not to be impressed by the yearly improving quality of game design and graphics that the industry is being capable of developing for its consumers. The latest *Assassin's Creed* games, Origin and Odyssey were and are an ongoing revolution in the development of a digitally reconstructed antiquity. These and similar games are determining how new generations of players imagine antiquity and ancient civilisations. Meanwhile, the ongoing autonomous attempt of archaeologists in trying to master the art of digitally reconstructing ancient sites by themselves to engage locals, tourists and themselves (Averett et al., 2016, p. 14) is happening but by far not satisfying in terms of design and graphics (see: virtual artefacts and digital reconstructions in archaeological museums and excavation websites). Therefore, it makes sense to look elsewhere for appropriate digital reconstructions for public outreach. The game industry does not only provide experts with years of experience but also the fiscal means to design vivid ancient towns that encourage the player to spend more time with her or his virtual surroundings, which most likely will increase an intuitive understanding of a past society and generate more interest (Copplestone, 2017, p. 89). Therefore, it can be said that the gaming industry produces visualisations that are a benefit for archaeology.

Object of Study

This essay is already speaking for itself. Since the Atari Video Game Excavation (Reinhard, 2018, p. 23; Ruffino, 2018, p. 88) digital games have received quite reasonable attention from archaeologists and are increasingly discussed with various approaches. Digital games seem to challenge archaeologists to reflect on themselves, on how they as scientists, and how the cultures they explore are represented. Approaches like Reinhard's archaeogaming even use digital games as a playground for theoretical archaeology; working with game patches as stratigraphical layers. Digital games are of course also seen as a chance to revive the decreasing public interest in archaeology. But to understand the mechanisms of games and how they can be used for the benefits of a modern archaeology, games need to be studied, analysed and critically interrogated further by archaeologists. Therefore, it can be said that the gaming industry produces an object of study which is a benefit for archaeology. This benefit will not be highlighted further throughout the paper as the following games will be already treated as objects of study which will be self-explanatory for this aspect.

Civilization 6

Civ6 is a turn-based strategy game in which the player develops a civilisation "from the stone age to the information age" (Mol et al., 2017b) and competes with other civilisations for victory. Victory can be achieved through different kinds of gameplay. Military domination, cultural or religious hegemony and scientific supremacy are the common ways. Throughout the game, the player encounters "long-term planning and (…) evolution-like, phased gameplay. (…) [also] [t]he player will manage resources and make political decisions" (Mol et al., 2017b, p. 214) The whole Civilization game series has since the early 1990s already managed to steer much interest for past cultures and their technology-based development. To solidify the interest, every Civilization game offers a "Civilopedia" with entries on various aspects of the game. "These not only provide descriptions of in-game effects, but also provide information about the actual history underlying every building, wonder, unit, leader, technology, and more" (Mol et al., 2017b, p. 214). The many discursive works of historians and

archaeologists also often state how this game has reinforced their interest towards an interactive past and shows that further interest is being generated and reinforced. Nevertheless, while interest is being factually solidified for its millions of players, it is also being enhanced by artistic visualisations. Each civilisation has an own historical leader (in *Civ6* also mythical with Gilgamesh from Sumeria), specific architecture and characteristic units. The visualisation of Civ6 has been largely criticised by the gaming community for its cartoonish design and overall lesser historic aesthetic (See: Steam User Reviews 2019) which may indicate that the demography of people playing games like civilisation relies on games like *Civ6* to appease their interest for an accurate playable past. It is interesting to see how a loyal community as the one that the Civilization series has felt deeply offended in being offered a game that did not focus on designing a realistic/serious past but rather an aesthetically inclusive and colourful one (see Fig. 4). Nevertheless, especially younger players found the game very accessible and for sure will be influenced by the game's visualisation of past cultures.

Fig. 4. Cartoonish aesthetics in Civilization 6 (© B. Hanussek)

The benefits that the gaming industry can and does create for archaeology are intriguing but still understudied. This section, therefore, may have offered an approach in conceptualising these benefits to make them observable and through the elaboration of these concepts technically measurable. Measuring the impact of digital games and their influence in shaping the understanding of archaeology, the past and heritage of the public exceeds this theoretical outline but can be done with the extension of the definitions using specific parameters and the borrowing of instruments of social sciences.

On Archaeology's contribution to The Gaming Industry

Looking at character's like Dr Jones and Mrs Croft one might have the impression that the mass-media sector has already got all they wanted from archaeology; and that without even having to deal with actual archaeologists. Yet even though the commercial successes of these imaginary archaeologists are undeniable, times have changed and new generations have emerged. Marketing has become much more labour intensive for the industry and compelling content of media must be complex, deep and authentic. Games like *Assassin's Creed: Odyssey* or *Hellblade: Senua's Sacrifice* were in gaming history pioneering developments. The employment of academics into the staff of game developers has been an emerging trend for game developers that seems to be more than fruitful. While game designers can rather focus on their proficiencies in programming, specialists of all kinds of fields, mostly though from history and psychology, are employed to create deeper virtual environments. These environments are more authentic and offer through their conceptual depth a stronger immersive character. The result of such endeavours is excellent ratings for the games, a satisfied community and more time spent in the game by the players. It is hard to imagine any other science than archaeology that is more capable of adding more detail to the development of a game that represents a past. The benefits archaeologists could add to the development process are many but the most basic, yet most important for the gaming industry are for sure: inspiration, content and scientific integrity.

Inspiration

"The past slips from our grasp. It leaves us only scattered things. The bond that united them eludes us. Our imagination usually fills in the void by making use of preconceived theories. (…) Archaeology, then, does not supply us with certitudes, but rather with vague hypotheses. And in the shade of these hypotheses, some artists are content to dream, considering them less as scientific facts than as sources of inspiration" (Lippman, 1986, p. 155). Looking at digital games it is obvious that the uncertainty about ancient cultures can offer as much inspiration as the certainty we have about others. Unfortunately, it often takes many years until novel archaeological perspectives escape the academic audience to the non-specialist domain. Having archaeologists with one foot in the industry and the other foot in academia novel perspectives on the past can be transmitted much faster. But also, these new narratives can be partly controlled by the scholar. It is not the developer who finds by accident a pseudo-archaeological book on ancient aliens but the archaeologist who supplies the developer with specific and bite-sized archaeological research which is transformed into inspiration. Novel information and unheard perspectives are valuable information in an industry that tries to sell stories. Therefore, it can be said that archaeologists can produce (controlled) inspiration which is a benefit for the gaming industry.

Content

In-game content can be a storyline as also virtual landscapes, architectures and objects. It is a fact that a game that provides more detailed and complex content makes players more eager to keep playing it and explore its content further. Archaeological data which is theoretically mostly about preserving and interpreting landscapes, architectures and objects may find a visual and conceptual outlet in digital games. Yet, archaeological results, conclusions and reconstructions of the past are

an undeniable heavyweight that has always posed difficulties in public dissemination. Nevertheless, archaeological data which can be transformed into immersive game narratives and virtual environments is at hand. If archaeologists are unhappy with the “inaccuracy or blatant misrepresentation” (Clack and Brittain, 2007, p. 23) they will need to offer themselves as an informant to the industry for content. But being capable of gathering data is only half the job. Hence, it must be the task of the archaeologist to understand the industry and the public and not the other way around (Holtorf, 2007, p. 12) to assemble what a game developer might be looking for. Also, the archaeologist needs to modify archaeological matters on a subject into a comprehensible story. The content must be transformed and not dumbed down. Therefore, it can be said that archaeologists can offer content which is a benefit for the gaming industry.

Scientific Integrity

We live in an age of labels. Specialists of all kind produce labels for all kinds of products. It may be an association of dentists which approves of a certain kind of mouth wash or a human rights NGO that promises us that this coffee has been the result of fair trade. This kinds of securities and promises are crucial for consumers to make satisfying and mindful decisions towards the products they consume. These kind pedigrees have benefits for both parties. On one side the producer benefits from this kind of marketing and scientists receive acknowledgement and monetary resources for research. The ongoing trend of the gaming industry to employ specialists has proven much success not just in the game design but also in the promotion and marketing strategy of games. While historical video games would already successfully promote themselves as authentic and accurate (Chapman, 2018, p. 66) before specialists were employed to ensure these promises, games like *Assassin’s Creed: Odyssey* or *Hellblade: Senua’s Sacrifice* seem now to profitably ensure players about the authenticities of their games through the experts they have in staff. Archaeologists as experts on material remains seem therefore as an asset to any game that tries to represent a past. Therefore, it can be said that archaeologists can offer scientific integrity which is a benefit for the gaming industry.

Egypt: Old Kingdom

In 2018 the Russian indie game developer Clarus Victoria released *Egypt: Old Kingdom*, a round-based strategy game that offers the player an experience of unifying Egypt and ruling its state through the historical epoch of the Old Kingdom. The game has a slight arcade-like character as it has predefined goals with key tasks (Unifying Egypt in a specific time, building a tomb for a specific king, etc.) that are evaluated according to one’s efficiency of achieving the objectives. The game was designed under close cooperation with the Centre for Egyptological Studies of the Russian Academy of Sciences (CESRAS) to ground the game design and narrative on archaeological and Egyptological evidence. The game is available for various platforms, has been purchased over 50,000 times and enjoys high ratings and a solid and active community (see: Steam Database, Google Play). Anyhow, what makes this game so extraordinary is that it works with archaeological uncertainties (Orser, 2015, pp. 52–54) The game does not offer a linear sequence of factual events that the player is just skipping through. It is the player that can choose a set up to play according to different accepted theories (see Fig. 5a). So, while one game mode accounts climate change for

certain events, it is the invasion of a foreign people for it in another mode. But also, active decisions by the player can alter the course of the game narrative. For example, you can subdue, assimilate or annihilate another tribe to achieve the unification (see Fig. 5b). Each option needs different resources and alters again the course of the game. Another aspect that alters the game is how one researches technologies. Technologies are consecutive as some technologies cannot logically precede others, but again there is certain flexibility which works through the archaeological uncertainty of details (see Fig. 5c).

In addition to that, the visual representation of Egyptian culture is a creative extension of the original Egyptian canon. It does create vivid and new images, yet without exaggerating actual evidence (see Fig. 6a). It is visible that the Egyptologists and archaeologists who worked with the developers have provided important contributions in terms of inspiration, content and scientific integrity. Inspiration was certainly found in the creative use of archaeological uncertainties to create a non-linear and flexible game design that enables the player to experience different narratives of the Old Kingdom. Content can be found in the rich illustrated and commented segments of the game, which feeds the player with primary information to game relevant aspects but also with secondary facts to the ancient Egyptians in general (see Fig. 6b). Scientific Integrity is not just provided by the CESRAS but also accounted and utilised by the developer to promote the game. All in all, *Egypt: Old Kingdom* can be seen as a perfect case in which the cooperation between an individual game developer and an archaeological/Egyptological institution worked out. According to online reviews, the game seems to be fun and educative for players who do have little prior knowledge of ancient Egypt, as also enjoyable for professionals who enjoy revisiting accurate facts.

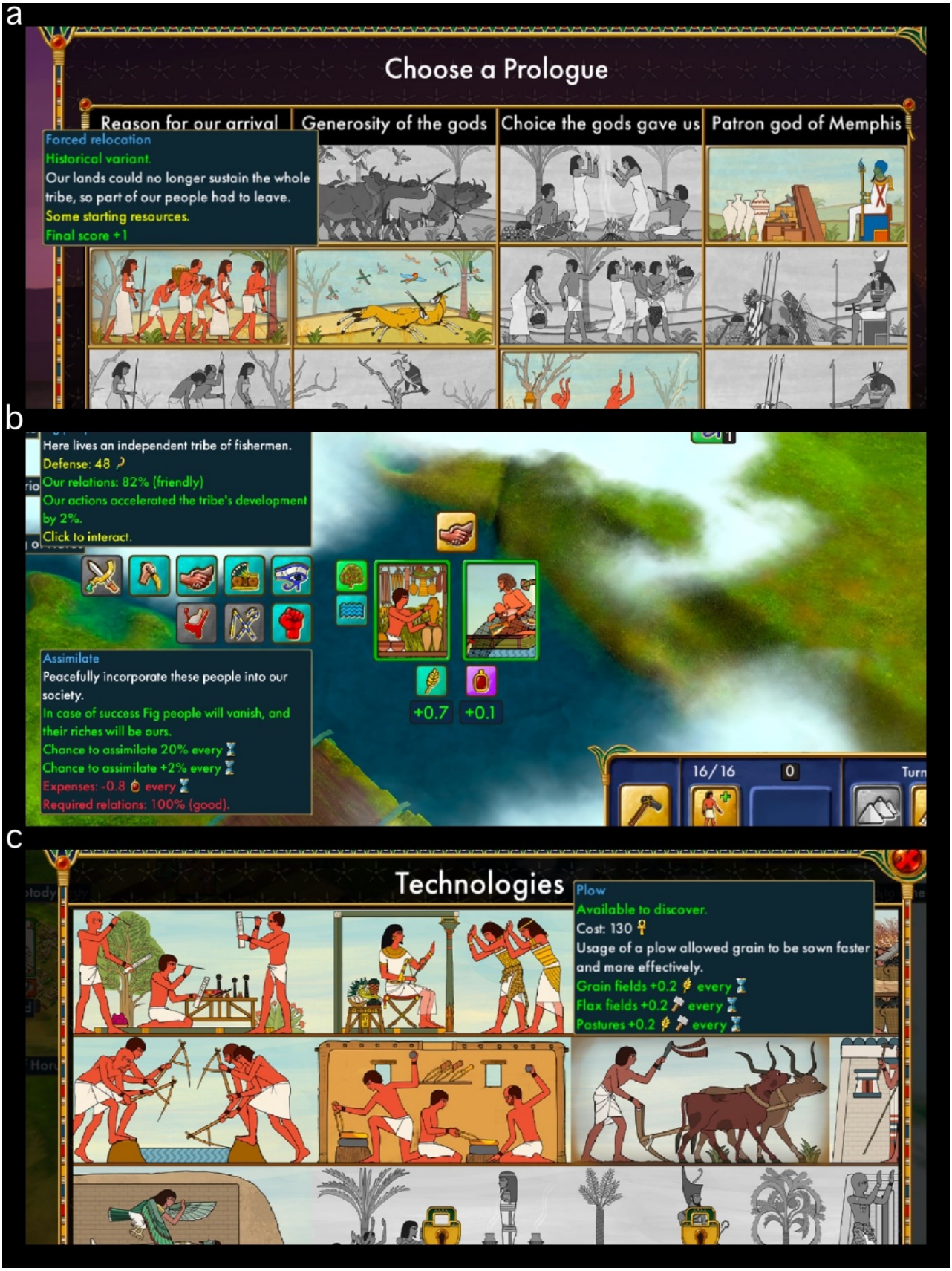

Fig. 5. a) Defining theoretical frameworks for one's gameplay; b) Different ways to interact with in-game peoples; c) Advancing technologies according to one's gameplay (© B. Hanussek)

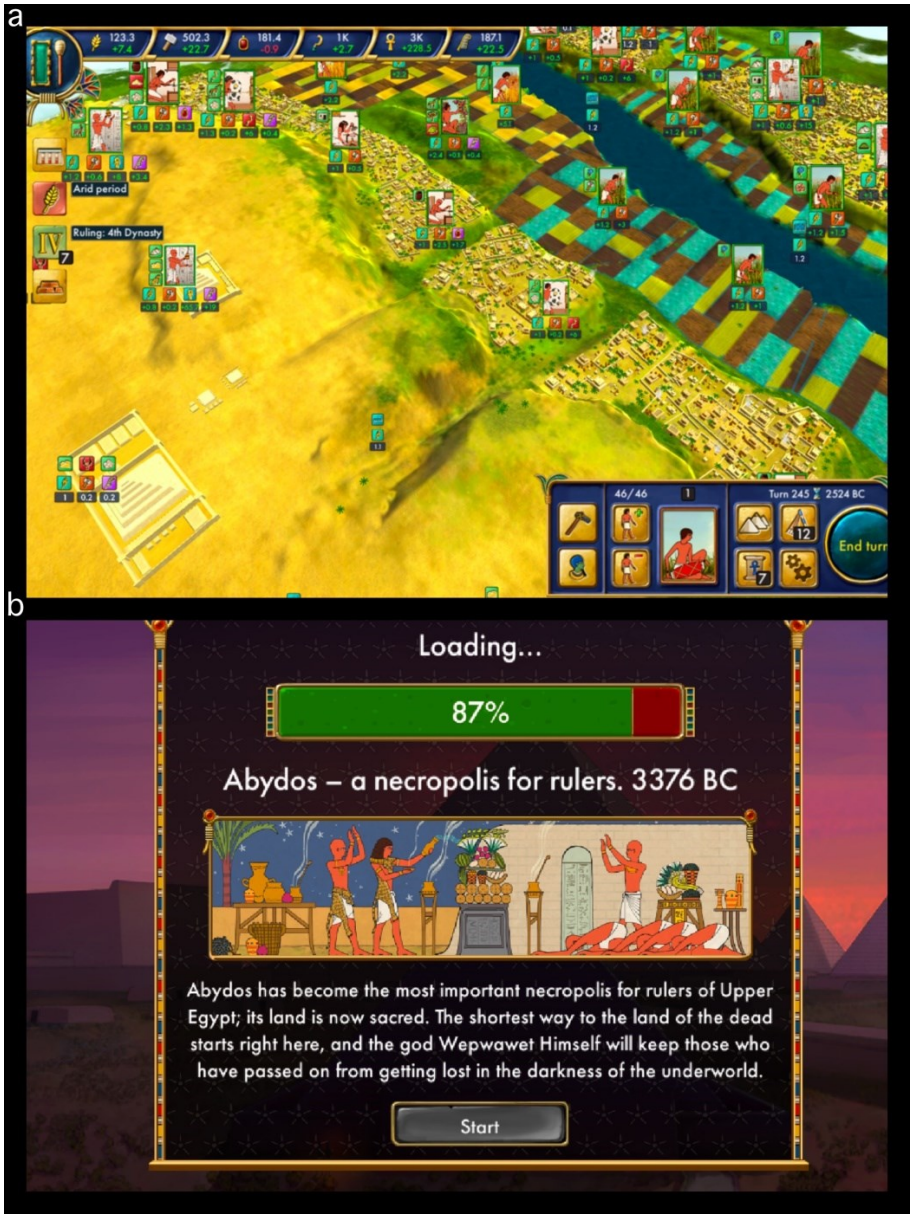

Fig. 6. a) Basic gameplay overview; b) Egyptian quick facts on the loading screen (© B. Hanussek)

Conclusion

It is obvious that with the further development of immersive technologies, digital games will increase their presence and influence on our society and understanding of our world. Another part of this development which arises from the core of our neo-liberal society is the democratisation of knowledge. Looking towards the age of alternative media, fake news and decentralised authorities it seems questionable to still rely on traditional educational outlets to transmit fundamental scientific knowledge to a public that seems less, and less concerned with the rather smooth but complex developments inside the archaeological academia. Now, video games have come a long way since their technical infancy in the late 1960s. This kind of medium can visualise, conserve, transmit and consolidate effectively knowledge of all kinds. While the gaming industry may have exploited this fact for own benefits and painted a (for archaeology) debatable past for its players, the isolated attempts by archaeologists, heritage and museum practitioners in doing the same have turned out

rather fruitless over the last two decades. Designing a compelling game has become a science by own means looking at the amount of game design and game studies programmes offered at numerous universities around the globe. Accepting that as a fact may make it easier for archaeologists, historians and similar scholars to see collaboration with game developers as a meaningful interdisciplinary endeavour rather than a subduing process of dumbing down factual knowledge about the past. The game *Egypt: Old Kingdom* offers a brilliant example of how first steps towards a beneficial relationship between scholars and game developers can look like in crafting an interesting, visually appealing and fun experience in an authentic past.

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