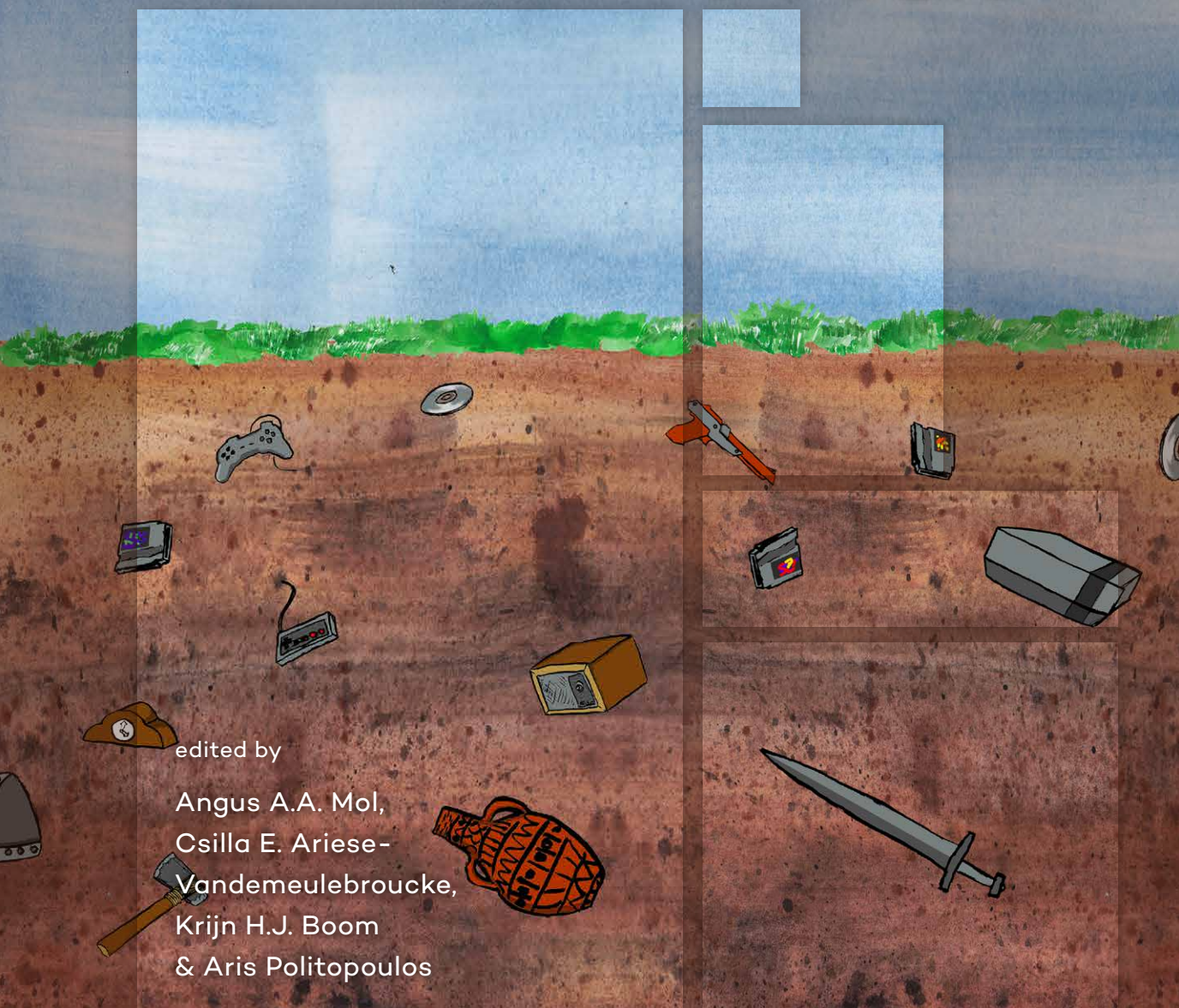


THE INTERACTIVE PAST

ARCHAEOLOGY,
HERITAGE & VIDEO GAMES



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Video Games as Archaeological Sites

Treating digital entertainment as built environments

Andrew Reinhard

Introduction

A video game is a built environment, something made by people for other people to use – and in some cases ‘inhabit’ if the game is really, really good. A video game is also an archaeological site. This chapter seeks to explore this idea in detail, treating it as less of an analogy and more as a way of applying archaeological methods and interpretation to digital interactive media/entertainment. In 2007, when I first began to think about games archaeologically as a *World of Warcraft* (Blizzard Entertainment 2004) player who happened to be an archaeologist, I was distracted by the art and architecture that the developers had put in the game. There were sites in the game: runes and ruins, ready-made material culture, and ancient artefacts to find. It was not until after I stopped playing *WoW* in 2012 that I began to perceive the game, all of its content, and its community of players as being ripe for ‘real’ archaeological study. I began to think about video games as being actual archaeological sites.

When I started the *Archaeogaming.com* blog and *@archaeogaming* Twitter account in 2013, I had little idea of the depth of what archaeogaming quickly would become. For some video game archaeologists, their interests lie in how archaeology and archaeologists are portrayed in games by developers. For others, video game ethics for interacting with other players, as well as with in-game cultures, is of primary importance. For me, I became largely curious about the duality of video games: they are both artefacts and sites. It’s perhaps clear to see how a video game can be an artefact; one needs only to recall the 2014 excavation of the so-called Atari Burial Ground in Alamogordo, New Mexico, where 1,300 Atari cartridges from the early 1980s were removed from a landfill containing an assemblage of over 800,000 games (Reinhard 2015). Understanding video games as sites is a bit more complicated. My preliminary thoughts on the subject are presented here for the first time.

The Archaeological Record and Sites

In order to better understand how video games can be interpreted as archaeological sites, we need to first learn what defines a site in the real world. In the real world (aka ‘meatspace’) an archaeological site is a place in which evidence of past activity is preserved, which may be investigated using the methods of archaeology, and which represents part of the archaeological record (the body of physical evidence about the past).

When dealing with sites, one first has to understand the more general concept of the archaeological record, which can generally be defined as “the entirety of past cultural materials that have survived into the present day, but which are no longer actively engaged in a living behavioural system” (LaMotta 2012: 70). The archaeological record is formed over time and can change based on human (or another agents’) interaction with the material in the record.¹

Vince LaMotta outlines four basic ways in which the archaeological record can become inscribed by traces of a particular activity: 1) conjoined elements of an activity are abandoned; 2) conjoined elements could be removed from one place and entered into the archaeological record someplace else; 3) waste, by-products, and breakage; 4) modifications (Ibid.: 75-79). Several conjoined elements compose an archaeological assemblage, which can either comprise all or part of a site. The archaeological record is written when the site is abandoned, moved from one place to the next, destroyed, or changed in some way, caused by any number of internal and external factors. The causal factors are mechanical/natural changes wrought upon materials that ultimately provide us with recoverable residues (i.e. artefacts), leaving archaeologists with these artefacts to explain why people once acted to create different material realities (Barrett 2012: 146). The things we make are made for a reason, and are also changed for a reason (although those reasons can be difficult to identify; we cannot know for sure what was in the minds of makers and users).

LaMotta’s definition of the archaeological record is a limited one, however, because it does not account for the fluidity of time or of potential identification and uses of archaeological sites by contemporary archaeologists. Cornelius Holtorf’s more liberal interpretation acknowledges that the meanings of archaeological sites and artefacts always change and cannot be fixed to a particular locus in time or space. Archaeological sites mean very different things to different people, and these meanings are equally important (Holtorf 2005). These meanings also include those emerging from the sociocultural and political baggage of the archaeologist conducting research, or of the many voices (multivocality) of the site’s occupants past and present, something Ian Hodder defines as “reflexive methodology” (2005).

This anti-prescriptivist approach allows us to treat the recent past and even the present as archaeological: that the past and present constantly commingle, voiced by thousands of people from the past and present. The library I use now was built 20 years ago, and while its primary function has remained unchanged

1 There are several ways of thinking about what makes a site a site, and archaeological theory continues to evolve. For the purposes of this chapter and this modern material, I have chosen to follow LaMotta’s definitions, which appear in the 2012 edition of *Archaeological Theory Today*, edited by Ian Hodder. This book, as well as Matthew Johnson’s *Archaeological Theory: An Introduction* (2010), are excellent overviews of archaeological theory.

(to provide free access to people to use its resources), the resources have changed – internet access, borrowing digital media, an entire section dedicated to manga. The space is older, but is also revitalized. The same can be said of video games as they are patched and modified (modded) over time to meet the needs of both old and new audiences. Archaeologists should be able to recognize and describe the modes of existence of various objects and account for the numerous connections that flow out of these streams of experience, investigating the making of objects in contemporary societies (Yaneva 2013: 131).

Video Games as Archaeological Sites

When we deal with the digital, the conceptual approaches and concerns involved are the same as when dealing with real-world sites. Everything tends towards a state of entropy, which is why the archaeological record is both incomplete and difficult to define. While natural/mechanical processes constantly work to erase/change the archaeological past, similar processes occur within digital media, which are by their nature degenerative, forgetful, and erasable (Chun 2011: 192). Digital media are stored (or have storage), not unlike the Earth (planet-sized storage). Archaeological data are locked in structures and in assemblages both underground and above ground, just as digital data are stored. In both cases, data are gradually lost, the methods of storage imperfect. But there is also memory (an intangible archaeology), something to be interpreted when the real or virtual site is explored. Storage is finite; memory is boundless (Ibid.: 195). There is no difference between the archaeology of the digital and the non-digital. The concepts of formation processes of the archaeological record and the methodological approaches to them are the same. Sites, like artefacts, have a history of use that continues from their origin into the present day. Sites are never not used, although they may exist in stasis until (re-)discovery.

The above definitions of what makes up an archaeological site – which is part of the archaeological record and is affected by formation processes – apply to video games. I propose the following points in an attempt to further define and defend the concept of video games as archaeological sites:

1. A video game is a discrete entity where its place can be defined as the space in which the game is installed (not necessarily its installation media). The past activity is the coding that created the game. Its elements can be directly observed and manipulated, part of the record of the game.
2. Video game installation media (e.g. a tape, cartridge, or disk) are not only artefacts, but also archaeological sites. Just as with real-world sites, installation media are bounded within the confines of the physical space containing smaller entities that comprise the media, adding a level of cohesiveness to all of the digital parts that make up the overarching game. These directories, files, structures/hierarchies are all themselves discrete entities, but combine to create a unified whole, just as a site is defined by its boundaries and the sum of its parts. The game media were created by one or more people for others to inhabit, creating a culture around those players who choose to inhabit the space of the game (e.g. the community of players in the original *MUD* in 1978). The



Figure 6.1: A portable archaeological site (photo by: Andrew Reinhard).

game media become part of the archaeological record upon production and leave behind evidence in the form of material remains, as well as a documented history of occupation by both developers and players.

3. The game-as-played, which is accessed via installed digital media, is also an archaeological site. The game-as-played is its own world in which one or more players interact, and which contains its own digital artefacts, either created via errors in code, or created as artificial constructs to be perceived by players as actual representations of real-world things that can be manipulated in game-space. Past activity includes, at the extra-game level, updates, patches, bug-fixes, mods, and expansions. At the in-game level, past activity includes the actions of one or more avatars and their effects on the game-space, whether it be moving in-game items from one place to another, or the destruction or construction of something semi-permanent in the virtual world.

Archaeologists can explore these game-sites on the surface (analysing the game media), from within (via file systems and structures), and through play (by interacting with the game-space as created by the developers). The games preserve evidence of past activity, from production to use to disposal, from installation to use to deletion, from beginning to gameplay to the final boss. The amount and nature of preserved evidence varies from game to game, as it does with real-world sites. Sometimes what remains is data-rich, and other times one is left with only a trace of fleeting occupation.

Locating the Virtual Site

With virtual spaces, there are a number of ways to document the locations of archaeological sites on both levels: the in-game and the extra-game. In-game, some games contain their own location systems (e.g. *Tomb Raider: Definitive Edition*, Crystal Dynamics 2014) where players can record X-Y coordinates on a Cartesian grid. With games featuring maps, depending on the hardware used to play the game, one can take a screenshot and then apply a regular grid over the top of it as a layer using image software (e.g. Photoshop). Other map-less games, still allow for the assignment of in-game locations via textual descriptors (e.g. level name and a description of the player's surroundings), which lacks pinpoint exactness, reading more like an explorer's journal entry. The usefulness of these qualitative notes becomes less clear when dealing with games comprised of vast regions to explore. But if Heinrich Schliemann could find the ancient city of Troy by way of reading the *Iliad*, then perhaps there is hope that an intrepid player could do the same based on observation, reading literature provided in-game and online, and a little luck.

Considering the loci of the physical sites of the games themselves (the extra-game), this could be an IP address of a game server, server farm, or local client hardware. These boxes or arrays occupy physical space, and could be considered as 'meta sites:' the plastic-and-metal wrappers containing the game-site. Games might also be located by knowing the whereabouts of the development computer(s), or possibly the master media onto which the game's design was saved. With these game-sites comes a stratigraphy of build numbers and versions, sometimes stacking on top of each other, other times replacing the code that came before, not unlike the levels of the ancient city of Troy, or the use of *spolia* to create new monuments and cities from the old.²

Games as Artefacts

The physical game-artefact as it existed in the past – and still does, but to a lesser extent with direct downloads taking over the market (Chalk 2014) – was created by at least one person, with the help of machines. This resulted in a distributed thing, that contains within its production a history of creation, possible inscription, and has a find spot (or more than one find spot as its biography grows). The artefact of the game provides the heart of the game-space, as well as metadata, its developer-created information, a mobile inscription, and a container of text-and-image. The cartridge or disk is a vessel with the wine, the stone upon which the writing was carved containing the deeper meaning born of words and syntax. It is the physical manifestation of code wrapped in layers of instructions that created the portable package, a world in itself containing a world within. Of those games that exist independent of physical media, accessible only through hardware connected to a network or to the internet, these are digital artefacts lacking in materiality, yet behaving in the same way as their physical counterparts: the copy of *Uncharted 4* (Naughty Dog 2016) I downloaded plays exactly the same as the copy purchased at a brick-and-mortar retailer.

2 Ancient monuments and other buildings made use of *spolia*, taking stone from older buildings and incorporating them into new ones. For example, Rome's Arch of Constantine (AD 315) contained reliefs from second century buildings.

Defining the Virtual Site

The final question to consider is “when can we call what we are looking at a site?” In the real world, the archaeologist can determine the boundaries of a site through investigation of the material remains, whether a fixed border of a wall, for example, or the petering out of a distribution of flakes left behind from tool-production. The archaeological record gradually transitions from site-to-other, like the layers of the atmosphere transitioning from the Earth to space. As archaeological sites are composed of the remains of human occupation, the archaeologist must consider those things left behind to create a provisional history of the site, or at the very least a definition of the site itself.

When dealing with digital media, archaeologists such as Gabe Moshenska (2014) and Sara Perry & Colleen Morgan (2015) have explored USB sticks and hard drives as archaeological sites. These containers hold a file structure composed of directories, subdirectories, and files, that when taken separately are themselves artefacts. Taken together, they compose an archaeological site.

Games are no different. For older PC games, one could browse to the installation directory and gradually tease out the files and contents of those files that when used together generated the game-space on-screen. As installation media have grown in sophistication, those files and their contents have become obfuscated, but all of the elements used to create the game for the player remain. These games are sites composed of artefacts working together, an electrified society of automatons.

In traditional archaeology, one cannot pick up a site and move it. For the game-archaeologist, all sites are portable, as are the artefacts they contain. Both have multiple moving parts that all contribute to the meaning of the site they comprise. The artefacts form a network created by culture. In the case of a video game’s history, its creation originates from pop culture, industry trends, and the design spec (Therrien 2012: 21). The game-site is constructed, then reconstructed, always in a state of modification. The networked pieces contribute to an emergence of a broader meaning, and the creation of an interactive environment. As with any archaeological site, real or virtual, the site is a system, a network, that the archaeologist can attempt to break down into its constituent interacting agents, from whose behaviours and interactions various systems-level properties may emerge (Kohler 2012: 108). This is the definition of agent based modelling. Pieces of the whole work together to create an interactive environment, be it the city of Athens or a digital simulation of it.

Conclusion

An archaeological site communicates many things and can be used in several different ways at once. Holtorf describes the uses and appeals of archaeological sites as having: monumentality (big/visible = important); factual detail (conformity with educational values); commerce (commercial exploitation of sites); social order (reception that mirrors the present); identities (personal relation to the past); aesthetics (romance and scenery of ruins); reflection; aura; nostalgia; ideology; adventures; magical places; and progress (Holtorf 2005: 92-111). Take a game such as *Assassin’s Creed Unity* (Ubisoft Montréal 2014) as a site, and you will find that all of the above uses apply equally to the virtual as they do to the real. In the

case of open worlds – games that allow for free movement/play – video games behave even more like their real-world counterparts. In *Eve Online* (CCP Games 2003) there are no developer-ordained goals or a traditional endgame. Instead, players band together to create their own goals, annex their own little corner of the universe, form alliances, foster animosities with other groups, and create their own in-game lore (Stanton 2015: 298-301). There is no difference between the archaeological understanding of a real-world place and a video game. These sites are formed in the same way, grow and change through mechanical, natural, and human intervention. They also contain the same data, which lends itself to the same questions archaeologists have asked for over a century.

Perhaps most simply put, as stated in this chapter's title, is that video games are built environments (which can also be classed as archaeological sites). Archaeologists understand built environments to be constructed by people for people, creating a manufactured space for everyday living, working, and recreation. For many people (including myself), that includes video games – digital built environments – especially in the case of MMOs and open worlds. I give these digital spaces hundreds, sometimes thousands, of hours of my time, spend my real-world money to inhabit these environments, and build my own social networks within them (e.g. my Carpe Praedam guild in *World of Warcraft*).³ Some people even make a real-world living through their in-game interactions and activities (professional community managers and professional e-sports players come immediately to mind). These games have become the sites for a new archaeology, one that embraces the real and the virtual.

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3 See Ducheneaut *et al.* (2007) for a thorough breakdown of guilds in *World of Warcraft*.

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THE INTERACTIVE PAST

Video games, even though they are one of the present's quintessential media and cultural forms, also have a surprising and many-sided relation with the past. From seminal series like *Sid Meier's Civilization* or *Assassin's Creed* to innovative indies like *Never Alone* and *Herald*, games have integrated heritages and histories as key components of their design, narrative, and play. This has allowed hundreds of millions of people to experience humanity's diverse heritage through the thrill of interactive and playful discovery, exploration, and (re-)creation. Just as video games have embraced the past, games themselves are also emerging as an exciting new field of inquiry in disciplines that study the past. Games and other interactive media are not only becoming more and more important as tools for knowledge dissemination and heritage communication, but they also provide a creative space for theoretical and methodological innovations.

The Interactive Past brings together a diverse group of thinkers — including archaeologists, heritage scholars, game creators, conservators and more — who explore the interface of video games and the past in a series of unique and engaging writings. They address such topics as how thinking about and creating games can inform on archaeological method and theory, how to leverage games for the communication of powerful and positive narratives, how games can be studied archaeologically and the challenges they present in terms of conservation, and why the deaths of virtual Romans and the treatment of video game chickens matters. The book also includes a crowd-sourced chapter in the form of a question-chain-game, written by the Kickstarter backers whose donations made this book possible. Together, these exciting and enlightening examples provide a convincing case for how interactive play can power the experience of the past and vice versa.

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