

Introduction

This book is not quite a sequel to its namesake, *Archaeogaming: An Introduction to Archaeology in and of Video Games*.¹ While *Archaeogaming* helped set the table in 2018 for what was becoming a rapidly growing international subdiscipline of archaeology, I wanted this new book to focus exclusively on applying methods and theory to archaeological problems in digital space. Much of archaeogaming's published output and conference presentations fall under the umbrella of reception studies,² and one can easily find papers of quality covering the many intersections of video games with past cultures and history.³

I chose a different route for my research, treating video games as archaeological artifacts, sites, and landscapes each affected by human agency and occupation. What evidence do people leave behind in persistent, interactive digital built environments, and how can the archaeologist document those spaces and that evidence contained within them? Can archaeologists use the same tools and methods in digital spaces that they use in physical/natural ones, and how can these tools be adopted and adapted for use in rapidly changing, fragile environments? Why should we care about what happens in playful spaces, and what do those past events tell us about ourselves, that is the people who play? My goal then was to attempt to find answers to these questions by converting the method and theory from the first book into practice for this one: *Practical Archaeogaming*.

Before presenting six projects, I want to begin this book with a bit of historiography, which I present in Chapter 1.⁴ Video game archaeology became “archaeogaming” on 8 June 2013, with the creation of its eponymous blog (archaeogaming.com), Twitter handle (@archaeogaming), and hashtag (#archaeogaming). By the time this book is published, the formalized subdiscipline of archaeology will be approaching its eleventh birthday. Much has happened over those eleven years, and I have updated what I presented in *Archaeogaming* with new people, groups, practice, and publications, as well as a look ahead. Six chapters follow this history lesson, each focusing on a specific set of problems often encountered in video games (yet are not exclusive to them). My hope is that readers might make the leap from games to other kinds of human-occupied digital environments (i.e., software, social media

Practical Archaeogaming

Andrew Reinhard

<https://www.berghahnbooks.com/title/ReinhardPractical>

Not for resale

platforms, auction/retail sites, etc.), as we hurtle toward the twenty-second century.

For many in 2023, screen-time dominates human (inter)activity. Software, an architectural outcome of human labor, houses the collective creative output of billions of people. Video games are a subset of software. They enable users to create their own built environments within a digital framework, which can be shared with others for enjoyment in the present and later subjected to abandonment and destruction. These digital constructions in synthetic, ephemeral spaces provide a unique challenge to archaeologists: how to document, preserve, and analyze archaeological evidence of human occupation of digital spaces especially when that period of occupation can last mere minutes and can vanish from the digital landscape without a trace. I address these issues in Chapter 2, “Rapid Archaeology of Human Constructions within Interactive Digital Built Environments: A Preliminary Assessment.”

Chapter 3 relates my first painful attempt at practical archaeogaming: “Adapting the Harris Matrix for Software Stratigraphy.” In 1979, Edward C. Harris invented and published his eponymous matrix for visualizing stratigraphy, creating an indispensable tool for generations of archaeologists. When presenting his matrix, Harris also detailed his four laws of archaeological stratigraphy: superposition, original horizontal, original continuity, and stratigraphic succession. In 2017, I created the first stratigraphic matrix for software, using as a test the 2016 video game *No Man’s Sky* (Hello Games). Software (games or otherwise) obeys all four of Harris’s laws because software applications/programs are digital archaeological sites. This chapter describes this theory of software stratigraphy and explains how (and why) the Harris matrix is appropriate for documenting software development in a visual way. The chapter includes screen captures, photos of my hand-drawn software matrix prototype, and links to my complete data, followed by a how-to guide for documenting the history of any computer program. I also include Harris’s personal comments that he shared with me after reviewing my preliminary results.

Readers will note my attraction to *No Man’s Sky* (Hello Games 2016–). It has proven itself to be the perfect sandbox in which to test my ideas and has given back useful data to its community of players as a kind of digital public archaeology. Chapter 4, “Archaeology of Abandoned Human Settlements in *No Man’s Sky*: A New Approach to Recording and Preserving User-Generated Content in Digital Games,” presents the tools, methods, and findings of an archaeological survey, excavation, and ethnography of abandoned human settlements within

a digital built environment. In 2016, Hello Games (Guildford, UK) released *No Man's Sky*, a game set in a procedurally generated universe approximating the size of our own. Future game updates disrupted planetary climate and topography, forcing human players to abandon their homes and farms and relocate elsewhere. I was able to apply archaeological principles within a digital/human habitation while also investigating what became of the players and their constructions as well as their in-game community. This approach may well lend itself to efforts in the preservation of these digital environments, especially for player-created content.

Chapter 5 presents my most recent fieldwork, “Photogrammetry and GIS in Human-Occupied Digital Landscapes,” which I completed and then published with Sara Zaia, at the time a PhD candidate in archaeology at Harvard University. Zaia (now graduated) is an expert in the use of drones, the images from which she uses to create GIS maps in the Near East. In the last decade, archaeologists have been using human-occupied interactive digital built environments to investigate human agency, settlement, and behavior. To document this evidence, we provided one way to conduct drone-based photogrammetry and GIS mapping from within these digital spaces based on well-established methods conducted in physical landscapes. Mapping is an integral part of archaeology in the physical world but has largely eluded researchers in these new, populated digital landscapes. We argue that employing archaeological methods in digital environments provides a successful methodological framework to investigate human agency in digital spaces and has the potential for extrapolating data from human-digital landscape interactions and applying them to their physical analogues.

Many modern video games and virtual worlds feature artifacts designed to appear as three-dimensional on flat screens and in VR headsets. Players can manipulate these items inside the game; they have a programmed size, weight, and functionality, which affects how players and objects interact and how these digital objects operate within digital space. I was curious to see if I could capture a born-digital 3D simulacrum of an artifact through in-game photogrammetry and then export it to a 3D printer. “Photogrammetry and 3D Printing of 2D Digital Artifacts,” Chapter 6, shows that this is indeed possible and provides steps for others to follow to reproduce my results. We now have another tool and method for documenting and preserving digital material culture.

Chapter 7 returns to more familiar territory—a salvage excavation in the New Mexico desert. Instead of rehashing the story of Atari’s 1983 dumping of hundreds of thousands of cartridges in the Alamogordo city landfill, Chapter 7, “Report on the Recovered ‘Atari Burial Ground’

Material, Condition, and Post-Excavation Dispersal” publishes for the first time the afterlife of the excavated Atari assemblage. The report includes the official manifest of the games recovered by the excavation in April 2014 as well as the list of games sold by the city at auction on eBay, the prices realized, and the reasoning behind the auctions.

I hope to demonstrate through these different projects that digital games are not just “kid stuff,” that software provides an archaeology-rich research landscape. Archaeological investigations of digital things and places and the people who create and use them—games and otherwise—complements and can supplement archaeology conducted in physical environments. Physical and digital things and places blend easily and with increasing frequency. We see it with the evaluation and adoption of digital tools and technologies by archaeologists to conduct day-to-day work with physical artifacts, sites, and landscapes. This book attempts to describe digital archaeology from the opposite direction, leading with digital things and places and how current and future archaeologists can study this emerging avenue of research.

The discipline’s shorthand of “digital archaeology” disambiguates it from its cousin, “media archaeology.” Media archaeology—perhaps most succinctly defined by early practitioners Jussi Parikka and Erkki Huhtamo in their hugely influential, 2011 edited volume *Media Archaeology: Approaches, Applications, and Implications*—seeks to understand the relationships between media objects and people, exploring how these technologies developed in co-evolution with humans creating and using them. For the media archaeologist, an antiquated piece of crockery bears passing interest; however, if you present a digital facsimile of the same teapot, you will capture the media archaeologist’s undivided attention. Media archaeologists are by their very nature digital archaeologists: they use digital tools to study electrical and mechanical things. While their methods are not traditionally archaeological, their questions and goals are roughly the same, except for a distinct subset of artifacts, places, and people from the recent past and from contemporary cultures. But this need not be an either-or distinction between two archaeological clans, “us and them.” As with the physical and digital worlds, they continue to blend with increasing frequency and will benefit from cooperation, collaboration, and cross-pollination.

The kind of digital archaeology that captivates me falls into that blended, liminal space between digital and media archaeology, taking cues from both areas to inform the present work. I conduct my fieldwork within digital spaces, prosecuting campaigns of survey, excavation, and ethnography through the screen. I use digital tools to study human settlement, use, and abandonment within interactive digital

built environments (software generally, and more specifically digital games and virtual worlds). It is both digital *and* media archaeology, but it is also just plain old generic “archaeology” despite the medium.

I would also propose that in 2023 all archaeology is *both* digital and media archaeology. I do not now know of a single archaeologist not utilizing something digital in their work. And every artifact is made of some medium or another (or lots of media mashed together to make a complex or complicated thing). The physical properties of media make them candidates for use by a maker, and the makers and the things they create respond to those materials. Media (which includes, say, atoms of iron or palm wood) communicate to both maker and consumer how they can be used and to what purpose.

The text you are reading started in 2020 as a pandemic book growing from my early observation that most of my friends and colleagues in lockdown were spending an awful lot of time on Netflix, Amazon Prime, Hulu, Disney+, Apple TV+, Paramount+, Peacock Premium, Tubi, FuboTV, Roku, and dozens of other ridiculously named streaming services, not to mention social media and premium subscriptions to bottomless libraries of video games on PlayStation+ and Xbox Game Pass. In 2007 Edward Castronova, Professor of Economics and New Media at Indiana University, published the book *Exodus to the Virtual World: How Online Fun Is Changing Reality*. In it, he articulated the reasons behind this human migration from the physical world to the synthetic and sees this as a kind of global moral crisis: have things gotten so bad in the “real” world that hundreds of millions of people frequently seek refuge in the “virtual.” Fast-forward to the Covid years of 2019–22 and the answer is likely “yes.” I probably played more games in that three-year span than I have in a lifetime of gaming (which started formally in an arcade in 1977).

So, what does that mean archaeologically? What does this migration look like from the archaeologist’s perspective? What material evidence do people leave behind to indicate that they once “inhabited” a digital space? Do these massive online populations and platforms come at a cost to the physical world? How do we know? How can we measure? What do people build for themselves in digital space? How do their communities form and for how long do they last? At what speed does change occur online and how can archaeologists keep pace as they drink from the firehose of endless, relentless data torrents? We need more people working on the applied, practical side of archaeogaming, treating digital games and virtual worlds as archaeological artifacts, sites, and landscapes, figuring out what these examples of interactive software can tell us about recent and contemporary material culture

and the people who contribute to that material culture. We are doing this early work now—developing and testing archaeological tools and methods in these digital built environments—to save our future counterparts time and effort, and to enable them to build on our *published* investigations. But archaeologists need not wait for something to become old before studying it archaeologically. Let’s begin with a practical approach.

Notes

1. I would like to thank the anonymous peer reviewers of this manuscript for their suggestions in how to improve its content and organization. Thanks are also due to my editor at Berghahn Books, Caryn Berg, for supporting my approach to archaeology at the Digital Turn.
2. See Chapter 1, this volume.
3. Search, for example, Google Scholar with the terms “Egypt” and “video games.”
4. Some of these chapters have appeared as earlier versions in my PhD thesis at the University of York and in peer-reviewed articles in archaeology and gaming journals. Citations to the originals are given at the beginning of those chapters, and the content and sources have been edited and updated.