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Gaming Art History: A Study of Game-Based Pedagogy and Its Applications in Art History

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Submitted in Partial Completion of the Requirements for Departmental Honors in Art History

Bridgewater State University

May 12, 2020

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May 11, 2020
Abstract

Today, high school and college students are likely to be exposed to famous architecture through video games that feature historical settings before learning about it in an academic setting. Architecture plays a fundamental role in these games, and they often include sites that are relevant to art history. This paper investigates how video games can be used as pedagogical tools in art history. Accurately-replicated historical sites in video games are accessible to audiences who may not be interested otherwise, and scholars suggest that their use in the classroom can enhance students’ understanding and push more advanced material. Drawing from the existing scholarship on game-based pedagogy, I offer lesson plans centered around the use of Ubisoft’s *Assassin’s Creed Odyssey*, a game that offers a faithful reconstruction of the Parthenon. This is substantiated through comparisons of in-game images to photos and textbook descriptions that suggest what the site would have looked like at the time in which the game is set.
Introduction

Video games have become one of the favored forms of media among the current generation of high school and undergraduate students. The gaming industry is continuously expanding, with the Entertainment Software Association (ESA) reporting a recording-breaking $43.4 billion in sales in 2018.\(^1\) Younger generations are some of the most prominent players in the United States; as of 2018, 84% of teenagers own or have access to a gaming console,\(^2\) and 70% of families have a child in the household who plays video games.\(^3\) A major subset of games are those that deal with historical materials. Architecture is an important aspect of video games because it provides the environment with which the player interacts. In the case of historical fiction or historical simulation games (HSGs), this often includes replications of important monuments; many students receive their first exposure to the world of the past through these games.\(^4\) I argue that the accuracy of these depictions provides the opportunity to present information about them in a way that is more interactive and engaging than the traditional lecture. This paper investigates how educators can use video games as a pedagogical tool in the field of art and architectural history.

Educators and researchers alike have explored the applications of all types of history-based games in humanities pedagogy; major figures include Dr. Jeremiah McCall — a high school history teacher who wrote extensively on the subject based on his own classroom methods

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\(^3\) Entertainment Software Association, “2019 Essential Facts.”
— and Dr. Martin Wainwright — professor of history at the University of Akron who teaches a fully game-based course. While methods used with other games in other disciplines, such as history, are a useful point of reference, this paper will focus primarily on the *Assassin’s Creed* series and how it can be used within the context of art history. The series is developed by Ubisoft Entertainment. As a company, one of their main goals with the *Assassin’s Creed* games is to provide a faithful experience of the past by faithfully replicating the landscape and built environment.5 These games are particularly useful because they provide more colorful, engaging, and contextualized models of important buildings than those used in traditional textbooks. They also showcase how art history is relevant to students’ everyday life in the media they consume. A review of the existing literature on the usefulness of *Assassin’s Creed* will span much of the franchise, which consists of eleven main entries produced since 2007.6 The methods developed by this project focus on the most recent entry, *Assassin’s Creed Odyssey*, because of its advanced graphics, useful in-game features, and its degree of historical accuracy. With the information gleaned from existing scholars and teachers, as well as outside research on the actual merits of this form of experimental pedagogy, we can determine some of the best practices for teaching in the context of an art history classroom, as well as propose drafts for lesson plans based on existing schemes.

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Support for Game-Based Pedagogy

Before discussing the benefits and best practices of gaming as pedagogy, it is important to understand the impetus for the use of video games in the classroom more generally. Primarily, this comes from the fact that video games are so widely circulated among younger generations. As a result of this, scholars such as Christian Casey — a PhD candidate in Egyptology at Brown University — argue that it is important for teachers to at least be aware of the information that is contained within video games, given that so many of their students are sure to be exposed to them.

Perhaps the leading researcher on gaming as pedagogy, at least in the context of history, is Dr. Jeremiah McCall. He has composed a guide, *Gaming the Past: Using Video Games to Teach Secondary History*, as a comprehensive manual on how to use video games in the classroom effectively. McCall focuses on several genres of HSGs, which model systems of human culture and civilization. He makes a point to differentiate between HSGs and the broader world of historical fiction in gaming, and insists that HSGs are the only games that should be used in the classroom. The book focuses on games such as *SimCity*, the *Civilization* series, and *Port Royale*. These are HSGs that give the player control of city building and management, merchant trade, and even entire nations. As McCall argues, games like these showcase change over time as a result of decisions the player makes, allowing students to interact with simple models of complex historical systems. In *Gaming the Past*, McCall presents his advice for using

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7 Entertainment Software Association, “2019 Essential Facts.”
games in the classroom, and he draws on years of experience doing so. These methods do not always align with teaching art history, but they can be reasonably adapted to suit the needs of the discipline. It is important to study these guidelines because of existing gaps in the scholarship on pedagogical gaming; nobody apart from McCall has developed such clear, robust methodology.

_Assassin’s Creed_ in particular has been supported in the context of art history by Douglass N. Dow, who authored a chapter in Matthew Wilhelm Kapell and Andrew B. R. Elliott’s _Playing with the Past_. Dow explores how historical inaccuracies in video games can actually enhance students’ analytical skills in regard to historic architecture. His chapter, “Historical Veneers: Anachronism, Simulation, and Art History in _Assassin’s Creed II_,” analyzes Renaissance Italy, as it is showcased in _Assassin’s Creed II_, through the lens of Jean Baudrillard. Baudrillard wrote about “simulation and hyper-realism,” his central claim being that “immersive simulation[s] . . . erase the boundary between the viewer and the viewed.” Through this lens comparison, Dow asserts that the Italy presented in _Assassin’s Creed II_ is a simulacrum: “a version of the city that purports to be a true representation of Florence, but that presents a false likeness instead.” This idea is important, as it speaks to the immersive nature of the player’s experience. Dow emphasizes anachronisms that are present in the Florence of _Assassin’s Creed II_: depictions of buildings that are not as they would have been at the time in which the game is set — for example, the dome on the church of San Lorenzo, which would

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10 While there is much debate regarding Baudrillard’s theories on simulation, with varying degrees of positive and negative reception, Dow himself is in the former camp. This paper means to emphasize Dow’s ideas and his focus on gaming without making a direct assessment about Baudrillard.


have been added later (Fig. 1). In relating this idea to how we perceive history, Dow quotes Michael Camille in saying that “a simulacrum ‘calls into question the ability to distinguish between what is real and what is represented,’” centrally claiming that the anachronistic nature of the game can strengthen analytical skills.

Another researcher who has delved into the world of gaming as pedagogy is Hannah Elizabeth Rice, who wrote her Master’s Thesis for the University of York, and designed a video game for use in museum education. Although the focus of her thesis is on serious games (which are video games that are designed purely for educational purposes) in a museum context, one chapter discusses the merits of commercial games. Like other scholars, Rice points to commercial gaming’s “contribution to the historical consciousness of a wide audience” as its

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main point of relevance.\textsuperscript{15} In this chapter, Rice discusses several games, and dedicates a section to the \textit{Assassin's Creed} saga. She praises the series’ broad range of historical periods and locations, and its inclusion of in-game databases in each entry.\textsuperscript{16} These offer context for the notable buildings and locations that the player encounters during exploration. In order to attest to the historical accuracy of \textit{Assassin’s Creed}, Rice focuses on \textit{Assassin’s Creed Brotherhood} (set in 16th-century Rome) and \textit{Assassin’s Creed Revelations} (set in 16th-century Constantinople) which were the latest entries in the series at the time of her research.

In discussing to these two games, Rice praises the attention to small details that add to realism, and the source material that Ubisoft references and represents. She cites interviews with Ubisoft’s creative team that reveal the extent of their research, the types of sources they consult, and the features that they incorporate into the game. For example, in \textit{Revelations}, the team used

\textbf{Fig. 2:} FA side-by-side comparison of the interior of the Hagia Sophia today (left) and the same perspective \textit{Assassin’s Creed Revelations} (right), showcasing the precision of the rendering’s details. From Rice, “Exploring,” 40.


\textsuperscript{16} Ibid, 39.
“dimensions from old books for overhanging structures on roofs and frontages.”17 (Fig. 2). As Rice points out, idiosyncrasies like this are crucial because the player spends so much time climbing buildings and running across rooftops. Such close attention to detail — especially in regard to the specific features that the gameplay focuses on — is important in making the player’s experience as realistic as possible.18 Rice also discusses the layout of Rome in *Assassin’s Creed Brotherhood*, which was modeled after “Leonardo Bufalini’s 16th-century map”19 (Fig. 3, Fig. 4). The team “imported [the map] into the game engine to accurately model the city to the Rome that the game’s protagonist would have experienced.”20 These are just a few examples of

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17 Ibid, 41.
18 Ibid.
19 Ibid.
20 Ibid.
the sorts of research Ubisoft engages in to provide an authentic experience for *Assassin’s Creed* fans.

In the time since Rice wrote her thesis, Ubisoft’s ability to produce even more advanced and accurate representations of the past has increased dramatically. The two most recent games in the series, *Assassin’s Creed Origins*, and *Assassin’s Creed Odyssey* (set in Middle Kingdom Egypt and ancient Greece respectively) are particularly suitable to be used as pedagogical tools, given their accuracy and in-game features. 2017’s *Assassin’s Creed Origins* caught the attention of Christian Casey, an Egyptologist and PhD candidate at Brown University. Casey presented a paper on the subject, titled “*Assassin’s Creed Origins* as a Digital and Pedagogical Tool,” at the American Research Center in Egypt’s Annual Meeting in 2018. He draws upon scrupulous
research to substantiate his claims about the faithfulness of *Origins*, and he even interviewed two members of Ubisoft’s creative team. In this paper, Casey seeks to persuade his audience of the game’s overall relevance to Egyptology, and to evaluate its relative accuracy in several areas: history, landscape and geography, flora and fauna, people, language, and (of particular interest to this project) architecture.

Casey holds *Origins* in high regard as a faithful reconstruction of Ancient Egypt (with certain qualms about language) and praises the game’s architecture. In particular, the author was impressed with the digital reconstruction of the Step Pyramid in Djoser’s funerary complex, which he touts as the team’s “most impressive work” (Fig. 5, Fig 6). Casey shares an anecdote about how his “prior knowledge” of the complex was “rewarded” as he was easily able to find an entrance to the pyramid based on where he thought it should be, which led to a faithful and

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Fig. 5 (above): Djoser’s Pyramid as seen in *Assassin’s Creed Origins*. From Casey, “*Assassin’s Creed Origins*,” 12.

Fig. 6 (below): Interior of Djoser’s Pyramid as seen in *Assassin’s Creed Origins*. From Casey, “*Assassin’s Creed Origins*,” 12.
vibrant reconstruction of the interior. He goes on to praise the temple of Karnak, which he says “is not exact, but it is quite good. Its location and prominence in the city of Thebes is correct, and it closely replicates the layout of the temple while remaining open and navigable for gameplay” (Fig. 8). In addition to these existing sites, Casey also found the replications of ancient tombs successful: the Tomb of King Tutankhamen in particular. In regard to Tut’s tomb, Casey claims that “the wall decorations are taken from life, and various Tut-themed easter eggs can be found throughout the game.”

In addressing the relative accuracy of Origins, Casey also emphasizes the game’s importance as an entry-point into Egyptology: one that is better than other commonly-cited pieces of popular entertainment such as movies or television series. Casey argues that a video game is just as valid of an entry-point as a film like The Mummy or a children’s show such as Sesame Street, given that “it can hardly be argued that [the game] is less historically accurate” than such programs which depict Egyptology. For Casey, it is important that educators be aware of the game, as “anything that inspires a genuine interest, regardless of its imperfections, is worth paying attention to.” He cites one example as the sheer amount of time that students are bound to spend playing the game, which can amount to over 100 hours if the player chooses to complete every aspect. As Casey puts it, “that means some of your students will have spent more time interacting with the Assassin’s Creed version of ancient Egypt than with all other sources of information combined.” He even goes on to substantiate the game’s popularity,

23 Ibid.
24 Ibid, 3.
25 Ibid.
26 Ibid, 4.
having sold “1.51 million copies in its first week alone,” and the idea that it inspires interest in Egypt. Casey combed through Internet posts, and found that “many people on social media have cited this game as the inspiration for their newfound interest in Egypt.”

This popularity is important because of the relative accuracy of Origins. Since the game is so widely admired, and it has the ability to influence peoples’ interests and conceptions about history, it is beneficial that Origins portrays Egypt faithfully. As Casey has argued, it even has the potential to dispel myths about Egypt that other cultural phenomena have perpetuated — for example, the idea life in Egypt takes place mostly in the desert:

while most of pop culture treats Egypt as a massive desert, Assassin’s Creed primarily depicts life in cultivated areas. . . . We should remember how rare this is in popular media. While playing the game, you spend most of your time in villages and cities, such

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27 Ibid.
as Alexandria, Memphis, and Thebes, which are clearly recognized by their Greek and Egyptian characteristics.\textsuperscript{28}

For Casey, the unprecedented popularity of \textit{Origins} means that educators should be aware of these valuable aspects of the game. As he puts it, “students will undoubtedly gain a better understanding of ancient Egypt simply by playing the game. All we have to do as educators is know what they are learning and be able to answer their questions.”\textsuperscript{29} Although Casey does suggest that the game could be used in the classroom, he does not propose much in the way of methodology. He recommends simply plugging a gaming console into a projector to show students relevant aspects of the game as they relate to topics and themes discussed in class.\textsuperscript{30} Demonstrating the game’s usefulness as an educator would legitimize it for students, and could serve as a solid introduction for classroom use, but stopping there would not take advantage of the most engaging aspects of the game that would actually enhance instruction.

While there is a limited body of research on gaming as pedagogy at the college level, one professor, Martin Wainwright of the University of Akron, has a breadth of experience with it. Wainwright runs a course that is centered around video games (including the \textit{Assassin’s Creed} series) as the main method of instruction. He titled the course \textit{History in Video Games}, and recounts his methods and successes in an article called “Teaching Historical Theory through Video Games.” In this article, Wainwright claims that the most productive aspect of this course is that his students are able to learn content that is normally covered in graduate school (or in some cases, at the undergraduate honors level). Wainwright attributes this to the fact that students are able to engage in the content more enthusiastically than they would through a traditional lecture.

\textsuperscript{28} Ibid, 19.
\textsuperscript{29} Ibid, 30.
\textsuperscript{30} Ibid.
Wainwright’s method of instruction does not involve gameplay in class: rather the classroom “serves as a venue for presentation, discussion, and analysis.”\(^{31}\) Each student is required to purchase and play several games at home, one of which, *Civilization IV*, is required of everybody in the class; students are able to choose more to supplement, and as topics for their papers. Wainwright’s rationale for using *Civilization IV* as an “anchor” for the class is specific and practical: the game has versions for Mac and Windows, it is old enough to run on older operating systems, but new enough to work on the latest as well, and it is accessible in that it does not require advanced hand-eye-coordination that other games might.\(^{32}\) Wainwright bases the course on seven units: game mechanics; economics and environment; cultural bias; world systems and world history; determinism and contingency; combat and brutality; and gender. In the article, he evaluates several games based on his students’ success with them in regard to these categories. Since Wainwright’s methodology is unique in that it is used in a course based entirely on video games and the discipline of history, it is not essential to unpack all of these categories here; however, being aware of his methods is important because of the extent of his experience with game-based pedagogy.

In order to reap the full benefits of gaming in the classroom, instructors should use games extensively, and in innovative ways in the classroom. This notion is supported by a study conducted by the University of Montreal, which surveyed over 300 high school students in Quebec who were exposed to video game-based instruction in their history classes. Students in four different classes were surveyed, and each of their instructors used video games to a varying

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\(^{32}\) Ibid, 582.
degree. In the study’s accompanying article, “Can students learn history by playing Assassin’s Creed,” the author conceals the teacher’s identities, labelling them simply as T1, T2, T3, and T4, and describes the different methods each instructor used in the classroom:

T1 used visuals from the game to draw parallels between how the textbooks and the game depicted history and geography, or basically a comparison of images. In contrast, T2, T3, and T4 made strong use of the game’s multimedia features such as video clips and gameplay sequences, and the re-used them in their assessments.

The survey revealed that the students of T1 were significantly less enthusiastic about the use of the game in class. With this in mind, the author suggests that whether or not students embrace the game as a learning tool depends on how it is used. The results of this study suggest that the greater extent to which the game is used in the classroom, the more successful the instruction will be. Essentially, simply using screen captures from games is not, inherently, an effective way to engage students. Instead, if games are used in the classroom, they should be used extensively, and in ways that highlight their immersiveness.

Along with suggesting some guidelines for using Assassin’s Creed as a teaching tool, the researchers also surveyed students about the benefits of learning with the game. They identified five main benefits perceived by students, and compiled results as such:

- greater motivation to learn (43.21% of students);
- appealing visuals and multimedia effects (24.28% of students);
- variety of learning materials (modernity) (20.99% of students);
- being able to use a game to learn (5.65% of students);
- and being able to see and compare historical facts virtually (5.76% of students)."

34 Ibid, 19.
35 Ibid.
36 Ibid, 12.
In addition to this quantitative data, the study also compiled accounts from individual students to qualify it. The students offer more specific insight into what components of the game they found helpful, as well as how and why. In particular, the study finds that the immersive quality of the game was one of the most important factors, as students recounted that they felt as if they had been transported to the world of the past through gameplay. One student claimed that “[the game is] a better way to learn because you get the impression you’re in the middle of things when you play; you have to get involved in the quest.” This sentiment echoes the study’s suggestions about how to make effective use of Assassin’s Creed in the classroom: by emphasizing the immersive qualities implicit to the gaming experience. Part of this immersiveness is created by the graphics. The renders of buildings are in themselves more engaging than images in a traditional textbook; another student added, “I’m less able to imagine myself in a painting than in the game [...] It takes me into a whole universe.” Furthermore, as Casey suggested, using the game in the classroom inspired students’ interest in the subject matter. Some students even claimed that it changed the way they played the game at home, shifting away from a focus on combat or narrative to understanding how it could help them learn more about the past. This is significant because not only did the game help students learn the material — it fostered a genuine interest in enhancing their knowledge and provided them with the skill of analyzing a piece of digital media.

37 Ibid, 14.
38 Ibid.
The Acropolis of *Assassin’s Creed Odyssey*: Accuracies and Disparities

Before proposing a methodology for the use of our game of focus, *Assassin’s Creed Odyssey*, an analysis of the game’s accuracy relative to the accepted historical record is necessary. I will focus on a building contained within the world of *Odyssey*’s ancient Greece: the Parthenon, often considered fundamental to architectural history. The details of its construction are transferrable to other facets of Greek architecture more generally, which is why it is so important to cover at the introductory level. Because of its paradigmatic status within art history, the Parthenon will serve as a case study to test the game’s relative accuracy. For these reasons, it will also be the center of the proposed instruction-plans developed at the end of this manuscript.

It is worth noting that Ubisoft, as with previous games in the series, invested a great amount of time and effort into conducting research for the production of *Odyssey*. This included extensive in-situ research and the enlistment of Dr. Stéphanie-Anne Ruatta, an expert on the ancient world who specializes in Classical languages and literature, as their in-house historian. The blog website, *Archeogaming*, has conducted an interview with Dr. Ruatta, and the authors have done extensive research on *Odyssey* and other games that feature material that is relevant to archeology. *Archeogaming* was founded by Dr. Andrew Reinhard while he was a PhD student in the University of York’s department of archeology; he continues to manage and author for the site. More recently, Kaitlyn Kingsland — a PhD candidate in history at the University of South Florida, and a member of the university’s Institute for Digital Exploration — has also been writing for the blog.

Reinhard interviewed Dr. Ruatta via email shortly after the release of *Odyssey*. This interview offers some insight into the research process for the development of the game. Dr.
Ruatta says she met the team and got involved in the project in early 2016 “by doing the preparations and acting as a historical consultant for a tour of Greece they made,” and began working with the team full-time shortly after. As the interview goes on, Dr. Ruatta discusses the types of sources she had to consult to solve the problems that were posited by the development team:

I’m always doing historical validations and research drawing on all kinds of sources. For example, I’ve had to draw on and comb through a wealth of documentation in faithfully recreating Classical Greek cities, monuments, and activities, including ancient literary sources, inscriptions, scientific research, museum databases, and archaeological studies and plans to provide teams with the support they needed. Ancient authors such as Aristophanes, Herodotus, Thucydides, and Pausanias were all pressed into service and filtered through a critical and scholarly understanding. Reports and plans from the schools of archaeology (EFA, ASCSA, BSA, and so forth) help the team recreate monuments and situate them in their virtual world. Other publications were used to complement those findings, such as An Inventory of Archaic and Classical Poleis, an investigation conducted by the Copenhagen Polis Centre for the Danish National Research Foundation that has been a great help and provides descriptions of 1,035 city-states, written by leading authorities.

Dr. Ruatta herself reveals the extent of her research work, and the specific areas to which different types of sources apply. This results in digital renderings that, even if not perfectly accurate all of the time, are always founded in a solid historical and scholarly basis.

To shift focus to the Parthenon in particular, we can start with the western façade of the building, and its representation of the Doric order: one of the three primary styles of Greek architectural construction (alongside the Ionic and Corinthian orders). The Doric order was the first of the three to be developed, and it is significant partially because it reflects the moment in history when “monumental construction made the transition from impermanent materials (i.e.

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40 Ibid.
wood) to permanent materials, namely stone,” which we associate with existing temples.\footnote{Jeffery A. Becker, “Greek architectural orders,” Smart History, August 8, 2015, https://smarthistory.org/greek-architectural-orders/.
} This development took place throughout the seventh century BCE, and the Doric order remained the primary style of construction throughout the fifth century BCE.\footnote{Ibid.} Each order was associated with certain qualities, with the Doric order being associated with strength.\footnote{James Stevens Curl, Classical Architecture: An Introduction to Its Vocabulary and Essentials, with a Select Glossary of Terms (New York: Norton, 2003), 17.} Because of such attributes, it was important to maintain the elements of the orders precisely, with a focus on ideal proportions.\footnote{Ibid, 8:50.} It was through these means that the ancient Greeks sought to represent harmony between human agency and mathematical perfection.\footnote{Curl, Classical Architecture, 18.}

The Doric order includes fluted columns made up of drums, which rest directly on the stylobate, and are topped by simple capitals.\footnote{Ibid, 22.} The capitals also include the typical composition of an abacus and echinus, separated from the rest of the column by a small section of necking.\footnote{Ibid, 24.} Atop the capitals rest the entablature, consisting of the architrave and frieze, with the frieze consisting of metopes which are separated by triglyphs.\footnote{Ibid, 18.} This entablature supports the pedimented roof, which is separated from the entablature by the cornice.\footnote{Ibid, 18.} All of these elements are included in the Parthenon of Assassin’s Creed Odyssey (Fig. 9), as seen alongside a traditional diagram of the Doric order (Fig. 10).\footnote{Marilyn Stokstad and Michael W. Cothren, Art History (New York: Pearson, 2018), 110.} As in reality, eight of these Doric columns

\begin{itemize}
\item \textbf{8.50.} As in reality, eight of these Doric columns
\end{itemize}
Fig. 9: Diagram of the Doric order constructed using the recreation of the Parthenon in *Assassin’s Creed: Odyssey.*
Fig. 10: Diagram showing the elements of the Doric order, from Marilyn Stokstad and Michael W. Cothren’s *Art History*, 110.
Fig. 11: West façade of the Parthenon in *Assassin’s Creed Odyssey*.

Fig. 12: North colonnade of the Parthenon in *Assassin’s Creed Odyssey*.
dominate the west façade of the game’s representation.\textsuperscript{51} (Fig. 11). The same goes for the eastern façade, which mirrors the architectural features of the western side. Connecting each façade are two colonnades to the north and south which each consist of seventeen Doric columns, which is also an accurate representation based on historical evidence (Fig. 12).\textsuperscript{52}

While the game’s representation of the Parthenon’s exterior \textit{is} accurate as far as the structure of the Doric order, the disparities occur in the sculptural elements. The most prominent examples are the pediment sculptures; the eastern pediment is meant to show the Birth of Athena (Fig. 13),\textsuperscript{53} and the western pediment the contest between Athena and Poseidon (Fig. 14).\textsuperscript{54} The pediments in the game both depict the same scene of an arbitrary battle (Fig. 15). The metope sculptures are similarly inaccurate, repeating six panels, even though they should display a cohesive narrative (Fig. 16). Many art historians agree that there were several mythical or historical scenes illustrated in sequence around the perimeter, including Gigantomachy on the east metopes, the Amazonomachy or the Persian Wars in the west metopes, and the sack of Troy on the south metopes.\textsuperscript{55} It would seem that \textit{Odyssey} did not take these interpretations into account, and instead favored a more streamlined approach with repetitive images. In addition to being thematically dissimilar, the sculptures also appear to be sculpted out of bronze, rather than marble.\textsuperscript{56} While these inaccuracies are glaring, it is important to note that the game is beneficial in creating a sense of scale. As the player climbs up the column to the pediment, they are given a

\textsuperscript{51} The British Museum, “The Parthenon, Athens” 4:47.
\textsuperscript{52} Ibid.
\textsuperscript{54} Ibid, 90.
\textsuperscript{55} Mark D. Fullerton, “Greeks and Others,” in \textit{Greek Art} (Cambridge: Cambridge University Press, 1999), 53-54.
Fig. 13: Reconstruction of the west pediment of the Parthenon according to drawing by K. Schwerzek. https://creativecommons.org/licenses/by-sa/4.0/

Fig. 14: Reconstruction of the east pediment of the Parthenon according to drawing by K. Schwerzek. https://creativecommons.org/licenses/by-sa/4.0/

Fig. 15: Pediment sculpture of the Parthenon in *Assassin's Creed Odyssey*, seen on both the eastern and western façades.
better sense of how tall the building would have been. Upon reaching the top, it is also evident that there was depth to the pediment which created a platform upon which the massive sculptures could rest.

The interior shows a level of accuracy equal to the exterior in regard to its construction and architectural features. Each façade has a portico that acts as a mediator between the outside and the inner *cella*. These porticos consist of six more columns with walls running behind them which house the large doorways to the *cella*. The colonnades of the north and south also have walls behind them that close off the interior. This runs counter to a popular misconception about the Parthenon: that it was an open temple consisting only of colonnades and a roof, as its ruins stand today. On top of the interior colonnade rested the frieze: a feature that was typically used only in the Ionic order. This incorporation of Ionic elements into what was fundamentally a Doric temple was a unique feature of the Parthenon at the time it was built. The frieze also contained a set of relief sculptures around the perimeter; however, unlike the metope sculptures, this scene was not separated by triglyphs, so it illustrated a single scene taking place over time. While art historians are uncertain of what that scene is, it is generally accepted that it depicted

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58 Ibid, 3:34.
the Panathenaea: “the Athenian festival in honor of Athena.”59 As with the other sculptural elements, Odyssey does not incorporate this level of accuracy, and the frieze artwork is presented instead as a repeating scene (Fig. 17). The artwork also seems to be painted on a flat surface, rather than sculpted in relief and pigmented.

The porticos on the east and west sides of the Parthenon house two entrances into distinct sections of the interior, which Odyssey replicates. True to the historical record, if the player enters the building from the western side they will find the treasury, indicated by a large chest and piles of gold coins and valuable objects covering the floor (Fig. 18). This treasury is supported by four Ionic columns that form a square with their volutes facing towards the left and right sides of the room (Fig. 19).60 As for the naos, there are three colonnades forming an open rectangle with five columns along the innermost wall, and then along either wall to the left and right, forming a two story enclosure for the epic statue of Athena.61 As with the art of the

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61 Pollita, “The World Under Control,” 78
pediments, metopes, and the frieze, Ubisoft seemed to give less priority to the art of the interior as well. The statue of Athena is relatively faithful — apart from her dark clothing and pet snake, which are not seen on accepted reconstructions (Fig. 21, Fig. 22).

The version of the Parthenon in the game is much more vibrant than the traditional diagram shown above the in-game recreation. It also shows students that these buildings were polychrome — not entirely white as they are in the present day (Fig. 23). Representing Greek temples in full color was important to the developers in creating *Odyssey* because they wanted to give the player an authentic experience, and to dispel the popular misconception that Greek temples have always been purely white and monochrome as they are seen in contemporary ruins.

In a short, promotional article titled “*Assassin’s Creed Odyssey*: The Game That Greece Built,” Ubisoft’s Thierry Dansereau (Art Director) and Benjamin Hall (World Director) discuss their motivations behind this decision:

"After going through all the media we had gathered and watching lots of cool movies, quite often Greece was overcast and brown," says Hall. "It was de-saturated, monochromatic, arid, and flat. That is not what we experienced when we went to Greece." Instead, what Hall and Dansereau found was a colorful and vibrant country with a wide variety of natural landscapes. In fact, their research revealed that Ancient Greece was even more colorful than the contemporary country. "Most people, until recently, thought that everything was white when it comes to architecture, statues, and pottery," says Dansereau. "But according to archaeologists, color pigment was found on almost everything. Using this knowledge to our advantage, we had to add colors to almost all man-made structures. This gave us the unique opportunity to more accurately recreate Ancient Greece as it was two thousand years ago."  

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Fig. 18: The Parthenon’s treasury as recreated in *Assassin’s Creed Odyssey*.

Fig. 19: Ionic columns inside the treasury in *Assassin’s Creed Odyssey*.

Fig. 20: Reconstruction drawing of the interior of the treasury, from Barletta, “The Architecture and Architects,” 87.
Fig. 21: The *naos* of the Parthenon as seen in *Assassin’s Creed Odyssey*.

Fig. 22: Reconstruction of the *naos* of the Parthenon from Smart History. https://smarthistory.org/the-parthenon-athens/, 6:47.
It is important to note that lead developers, such as Dansereau and Hall, on *Odyssey*'s team wanted to remain as faithful as possible to history while considering other depictions of Greece in popular media. This inspired them to create something more faithful that could shift the historical consciousness of players towards a more accurate image. In this way, while Ubisoft is a commercial game, the creators clearly take their position seriously, and understand that their products have the potential to have such an influence. This awareness has taken form in a recent expansion to *Odyssey* — the Discovery Tour.

Methods for Using *Assassin’s Creed Odyssey* in Art History Instruction

It is important to start any lesson that incorporates gaming by introducing students to the game in question, including an overview of its mechanics. A great way to do this with *Odyssey* would be to make use of its recently-added Discovery Tour mode. The *Assassin’s Creed* Discovery Tours began with *Odyssey*'s immediate predecessor: *Assassin’s Creed Origins*. This mode provides players with a purely educational experience, guiding them through areas of the game with notable features and offering information about them. Casey touted the *Origins* Discovery Tour as a useful method for the classroom; he suggested plugging a console into a projector, and walking students through “points of interest” on the tour that are relevant to course content. This would serve as a good introduction to the game, and show students that it is a valid source from which to learn. In the *Odyssey* Discovery Tour, the player can travel to different historical sites to prompt a guided tour with a number of stops at particular points of interest. At each point of interest, the player presses a button on their controller or keyboard to

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65 McCall, *Gaming the Past*, 75.
66 Casey, “*Assassin's Creed Origins*,” 30.
Fig. 23: Image of the Parthenon’s façade in *Assassin’s Creed Odyssey* showing its color scheme.

Fig. 24: Colored reconstruction drawings of the Parthenon that *Odyssey’s* team used as reference for their version.

prompt a short presentation, which consists of a voiceover accompanied by panoramic footage. After this presentation, the player can use another button to “learn more,” which displays a short write-up accompanied by a reference image that Ubisoft’s creative team used in their research.

The Discovery Tour is a great introduction to the use of *Odyssey* as a study tool because it focuses mostly on the history and overall design of architectural sites without going into much detail. Information about the Parthenon is presented in three stops along the longer nine-stop tour of the Acropolis. The first stop is at the eastern façade of the Parthenon. Here, the narrator offers some information about the myth of the battle between Athena and Poseidon for patronage of the city, and the Parthenon’s exterior — including an overview of the metope and pediment statues. From there, the tour takes the player into the *naos* to discuss the statue of Athena inside. The narrator presents some key information about the statue (it was designed by Phidias, and that it was made out of ivory and gold). However, the tour does not touch upon the architectural details of the room itself. The last stop takes the player to the western façade and into the treasury for a brief overview of its function and history related to the Delian League. After this, the player has the option of taking a three-question quiz to test their knowledge. The conclusion of the tour is a good place for an instructor to take over and offer more specific information. At no point does the Discovery Tour acknowledge any of the game’s shortcomings or inaccuracies; it simply uses the world of the game as a platform to offer basic information about the building. The tour also offers very little in the way of art historical terms — it makes no mention of the Doric order or its components — so it is up to the instructor to fill in these gaps for students.

Comparing textbook images to screen captures from games could serve as an effective first lesson after the Discovery Tour. The in-game representations provide a more vibrant
platform for showcasing architecture than traditional textbook images or photos of contemporary ruins. Moreover, these digital representations can be used in the exact same way as traditional illustrations to show what a site would have looked like at a certain time, but in a more engaging way. For example, see the comparison between Fig. 9 and Fig. 10 in the previous section showing the layout of the Doric order. The accuracy of the game’s layout also allows for a useful diagram of the entire Acropolis (Fig. 25). This method uses existing models provided by video games, engaging with students by demonstrating how art history is relevant to the media they consume. The traditional reconstruction drawings aim to depict how the Acropolis would have looked in the fourth century BCE, around the same time as the world depicted by *Assassin’s Creedy Odyssey*. Such drawings and diagrams are used in textbooks, and therefore represent how students typically learn (see Fig. 10 and Fig. 26). The game’s reconstruction offers a model that appears to be alive, and actually set within its proper context. After walking students through the Discovery Tour, the instructor could show students the diagrams designed here. It would be useful to have a dual projector in this scenario, as in-game diagrams could be displayed on one screen while the instructor demonstrates the game on the other. This could serve either as a review of the components of the Doric order, or a first lesson on those components depending on the instructor’s wishes. While this is not enough to fully engage students in the world of the game, it is an important step in introducing students to game-based pedagogy.

One of McCall’s methods used in his secondary history classroom is to have students explore video games themselves in a computer lab, either individually or in small groups. In *Gaming the Past*, McCall outlines specific steps for introducing students to gameplay. He

68 McCall, *Gaming the Past*, 75.
Fig. 25: Diagram of the Athens Acropolis constructed using a screen capture from Assassin’s Creed Odyssey.

Fig. 26: Reconstruction drawing of the Athens Acropolis as it appeared c. 447-432 BCE, from Stokstad and Cothren’s Art History, 110.
suggests the teacher demonstrate the mechanics to the students ahead of time, during a class period taking place before the students are to play it themselves. In the larger context of the suggested lessons, this could be done just after the image comparisons. From there, the instructor is to give students a series of discussion questions that they are meant to investigate through virtual exploration. This could easily be applied to Assassin’s Creed Odyssey; teachers could ask students to identify accuracies and inaccuracies in the game by exploring it. Below are examples of questions that educators could propose to facilitate discussion around the game:

- In answering these questions, be sure to consult your textbooks and lecture notes to make comparisons.
- How does the size of the Parthenon presented in the game compare to your expectations from viewing photographs and diagrams?
- Investigate the exterior of the Parthenon.
  - How many columns are used on the east and west façades, and on the colonnades to the north and south?
  - Are these numbers accurate to the historical record? Use the floor plan in your textbook as a guide.
- Examine the pediment sculptures on both the eastern and western façades.
  - Do the pediments contain the sculptures you expected?
  - What material do the sculptures seem to be made of? Is this accurate in comparison to the images in your text or the lecture?
- Examine the metope sculptures along the frieze.
  - Do the metopes contain the sculptures you expected?
  - What material do the sculptures seem to be made of? Is this accurate in comparison to the images in your text or the lecture?
- Investigate the room on the eastern side of the Parthenon.
  - What may it have been used for?
  - How many and what type of columns are used to support this room? Is this accurate?
- Investigate the room on the western side of the Parthenon.
  - How does the scale of the statue of Athena Parthenos compare to your expectations?
  - Are the details of the statue of Athena Parthenos accurate to history? Consider her clothing, pose, and materials used.
- Is the interior colonnade of this room accurate to history?
- What types of columns are used?

Ibid.

Ibid, 79.
• Are there any other points of accuracy or disparity to history that you would like to discuss? If so, describe them.

These questions can be easily modified depending on how much information the instructor has presented before introducing students to the game. Depending on the class resources, this exercise could be conducted in a few ways. Ideally, each student will have access to a computer with a copy of *Assassin’s Creed Odyssey* installed, whether it be their own laptops or in a computer lab. Alternatively, as Martin Wainwright does in his course, students could be required to purchase the game and play at home to prepare for in-class discussion. This would make sense in a fully game-based course, but if such methods are only part of instruction, using class time may be preferable. Regardless of the context in which students explore the game, individual use would be ideal because every student could immerse themselves in the game to achieve focus and better retain the material. If only a few students are able to access the game on their computers, they could be broken into small groups. If only the instructor has access to the game, they can use the projector and pass a gaming controller around to students who volunteer to investigate the questions in a large group discussion format (making sure to sanitize the controller between students). Depending on the needs of the class and the instructor, a combination of these methods could also be employed for a sense of variety. Most importantly, these are simply guidelines based on the research involved in this project. Instructors are encouraged to adapt them to their own needs and teaching styles, or to develop methods all their own.

While the use of gaming in the classroom is important, there are also ways to make such content more accessible to the general public. Part of this project was to produce a video on the
Parthenon of *Assassin’s Creed Odyssey*, inspired by the prominent art history website, Smart History. Art historians Dr. Beth Harris and Dr. Steven Zucker operate the site, where they post videos of animated slideshows over which they play a recorded, edited conversation between the two of them. Harris and Zucker discuss key elements that are fundamental to art history as they view notable artworks or examples of art objects in-situ at different museums across the globe.\(^1\) Since they are animated, and presented in a conversational style, these videos are engaging, and they are great study tools. SmartHistory’s content is completely free to the public, and their site even contains tutorials that show educators how to make videos in their style, including their methods of recording conversations, and editing the resulting audio and video.

To imitate this style of video, a conversation was recorded about the Parthenon in *Assassin’s Creed Odyssey* in collaboration with project mentor Dr. Montenegro Rosero. The video discusses the accuracies and disparates of the game’s rendering, while teaching viewers about the important features of the Parthenon, and it consists of a set of animated slides which feature screenshots from the game. Our conversation begins with some contextualization regarding the Parthenon’s history, then moves to an overview of the Doric order, the pediment sculptures, and the two *cella*. Essentially, the video employs the simple method of using visuals from the game to present information about the art historical content. While there are more immersive methods for education that would take fuller advantage of what makes the game an effective pedagogical tool, as discussed previously, the production of educational videos is a way to make such content accessible to the public. This includes not only those who are interested in

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art history, but do not study it in an academic context, but also those who are interested in
gaming but do not have access to their own console.

Conclusions

Video games offer multiple avenues for enhancing students’ success in the art history
classroom by showing them that they experience art history simply by engaging in this growing
form of mass communication. History educators have developed methods of using video games
in the classroom that are transferrable to art history. While video games do not always depict
monuments with full accuracy, they are still advantageous to pedagogy because there is the
potential to foster analytical skills. Students may not only retain material more strongly, due to
the immersion and focus that games facilitate, but also become more interested in the content
after seeing its relevance in their entertainment. Furthermore, the use of this digital format in
class exposes students to another form of media, in addition to textbooks or images, and expands
their repertoire of analytical skills.

While there is a multitude of historical fiction and simulation games that this project
could potentially investigate, the Assasin’s Creed series was a natural place to start because of
its popularity, combined with Ubisoft’s goal of providing a believable experience of the past.
Assassin’s Creed Odyssey, in particular, offers an outstanding model of the Parthenon: a building
that is fundamental to our understanding of western architecture. As a whole, its design was
informed by three separate in-situ study tours, and intensive research by Dr. Stépanie-Anne
Ruatta. The result is a rather accurate depiction of the Parthenon with architectural details that
are almost perfectly represented. Although the sculptural details are not as painstakingly
recreated, they still provide a sense of union between the art and architecture of the building, which is lost in contemporary ruins. Furthermore, students can push their analytical skills by evaluating what is and is not entirely accurate about the in-game rendering, whether that be at their leisure or in a classroom context.

Taking advantage of the methods used to evaluate the Parthenon, the rest of the Greek world shown in *Odyssey* may prove to be useful in a similar fashion as the game includes models of nearly every notable ancient temple, including the Erechtheion (Fig. 26) and the Grand Temple of Apollo (Fig 27). These temples would be perfect for showcasing the Ionic and Corinthian orders respectively. Furthermore, other games in the *Assassin’s Creed* series could serve as a way forward to discuss art and architecture from a variety of time periods and cultures. Different installments of the franchise have taken fans to a wide variety of locations throughout history, including: medieval Jerusalem, 16th-century Florence, Venice, Rome, and Constantinople, North America during the colonial period, the age of pirates in the Caribbean,

**Fig. 26: The Erechtheion as seen in *Assassin’s Creed Odyssey*.**
Revolution-era Paris, London during the Industrial Revolution, and ancient Egypt. Yet another entry, slated for release in December 2020, will be set in Norway and England during the 9th century, where the player will take control of a Viking avatar, and even construct settlements from the ground up. In essence, there is practically endless potential to develop more pedagogical content within this series alone.

The impact that video games can have on student learning at the college level should not be underestimated. They provide an avenue to increase student engagement with important disciplinary material while at the same time sharpening students’ analytical skills. As seen throughout this paper, for art history, digital reconstructions of important examples of art and

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architecture provide a more immersive environment for students that fosters their retention and increases comprehension of the material discussed. Importantly, video games bring the content learned in class to students’ everyday lives. They make art and architectural history a discipline that is alive and relevant to their experience of contemporary life. It not only allows students to learn about art history or other disciplines, but it invites them to look at the world critically from that perspective.
Bibliography


