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Editors

Apl. Prof. Dr. Annemarie Ambühl (Johannes Gutenberg-Universität Mainz)
Prof. Dr. Filippo Carlà-Uhink (Universität Potsdam)
PD Dr. Christian Rollinger (Universität Trier)
Prof. Dr. Christine Walde (Johannes Gutenberg-Universität Mainz)

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Contact

Principal Contact

Prof. Dr. Filippo Carlà-Uhink
Email: thersitesjournal@uni-potsdam.de

Support Contact

PD Dr. Christian Rollinger
Email: thersitesjournal@uni-potsdam.de

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JEREMIAH MCCALL

(Cincinnati County Day School)

Agents, Goals, and Action-Choices

Analyzing the Game Histories of *Assassin's Creed Odyssey* and *Hegemony Gold: Wars of Ancient Greece* with the Historical Problem Space Framework

Abstract This essay builds on the Historical Problem Space framework for historical game analysis by comparing the ways that two historical video games set in the Archidamian War (431–422 BCE) present the past. There are three main goals. First to position the Historical Problem Space framework as a useful analytical method for practicing a historiography of historical games. Second, to offer more detailed examples and exploration of how two particular historical games present the past as historical problem spaces. Finally, to demonstrate that historical game genres shape the historical problem space of these, and by implication other, games and thus the history they present. Comparing two games set in the same period and place but with distinct genres should help illuminate these points.

Keywords History, Video Games, Agents, Historiography

THE HISTORICAL PROBLEM SPACE FRAMEWORK: A MEDIUM SENSITIVE METHOD FOR ANALYZING HISTORICAL GAMES

This essay builds on the Historical Problem Space framework for historical game analysis¹ by comparing the ways that two historical video games set in the Archidamian War (431–422 BCE) present the past. There are three main goals. First, to position the Historical Problem Space framework as a useful analytical method for practicing a historiography of historical games. Second, to offer more detailed examples and exploration of how two particular historical games present the past as historical problem spaces (the definition of which follows shortly). Finally, to demonstrate that historical game genres shape the historical problem space of these, and by implication other, games and thus the history they present.

History, in broad terms, is the curated representation of the past, and it can be crafted and communicated in essentially any medium. And so, historical games, games that represent or participate in discourses about history, are a form of history.² Since they present historical meaning, they can be approached historiographically. A productive historiography of games, however, requires a medium-sensitive, holistic approach to analysis. To analyze games as if they were historical text or film surely misses the point. Games are games: they do not function like text or film when portraying history. They offer closed (once the player is added) interworking systems of code and mechanics that distinctively offer their players agency in the form of choice-making.³ Subjecting a historical game to an atomistic critique, isolating this or that historical statement the game seems to make and binarily judging it accurate or inaccurate, treats a game as if it were merely the sum of its parts, a set of independent propositions. We can better understand historical videogames in ways that are sensitive to the medium, by considering any meaningful part of a historical game in relation to the rest of the game.

The Historical Problem Space framework helps in this goal by providing tools to holistically analyze historical phenomena in historical games. A central premise: all historical games selectively present their historical content in the form

1 McCall (2012), (2020), (2022).

2 Chapman (2016); Chapman/Foka/Westin (2016); McCall (2020).

3 Games Studies scholars have also made this distinction between text and game, for example, Aarseth (1997), Frasca (2003), and, more recently, Nguyen (2020).

of mathematically and procedurally functional and more-or-less cohesively designed **historical problem spaces (hps)**. In other words, historical games present their selected historical content – their histories – as world systems with the following components:

- A **player agent**, the character in the game controlled by the player, who acts in a virtual **gameworld** (the “space” in hps) and is tasked by the game developers with achieving one or more **designed goals**. How to achieve those goals in the gameworld is the primary “problem”.
- A variety of gameworld **elements**, including non-player agents, resources, tools, and obstacles. Gameworld elements tend to behave instrumentally, assisting or constraining the player agent’s pursuit of designed goals.
- And so, the player agent (if they choose, which they may freely not do) makes **action-choices** in this gameworld to work with and around elements, solve problems, and achieve the designed goals.

Critically, all of these components interact functionally – *i.e.* as mathematically precise interworking rules – in the computer code. At least to the extent that a particular game is free of programming bugs, each line of code contributes to a set of statements that revolve around storing data or manipulating it through the application of precise mathematical formulas. In addition, the components of a game must also cohere at a higher mechanics-design level of a well-designed game. Though mechanical and narrative cohesion are not as rigidly forced as mathematical functionality, they are generally prioritized as features of good gameplay.⁴ As a result, the functioning of the rest of the game significantly affects the functioning of any particular component of the hps.

A historical game’s genre significantly shapes its hps and, accordingly, the history the game presents. For the purposes of hps analysis, “genre” refers to the often quite recognizable features and attributes of gameplay, interface, and developer practices that certain games share. Developers are not compelled to design a game according to particular genre conventions. Still, it is decidedly the case that they do often shape the hps portrayed in their games according to genre conventions. Accordingly, a roleplaying game (RPG) will shape and present its

⁴ On the importance of a cohesive game design, see Costa (2022). Designer Soren Johnson (2009) notes that no less influential a designer than Sid Meier calls the “one great game is better than two good ones” principle the “Covert-Action Rule.” This principle is based on the value of mechanical (and narrative, and world) design cohesion.

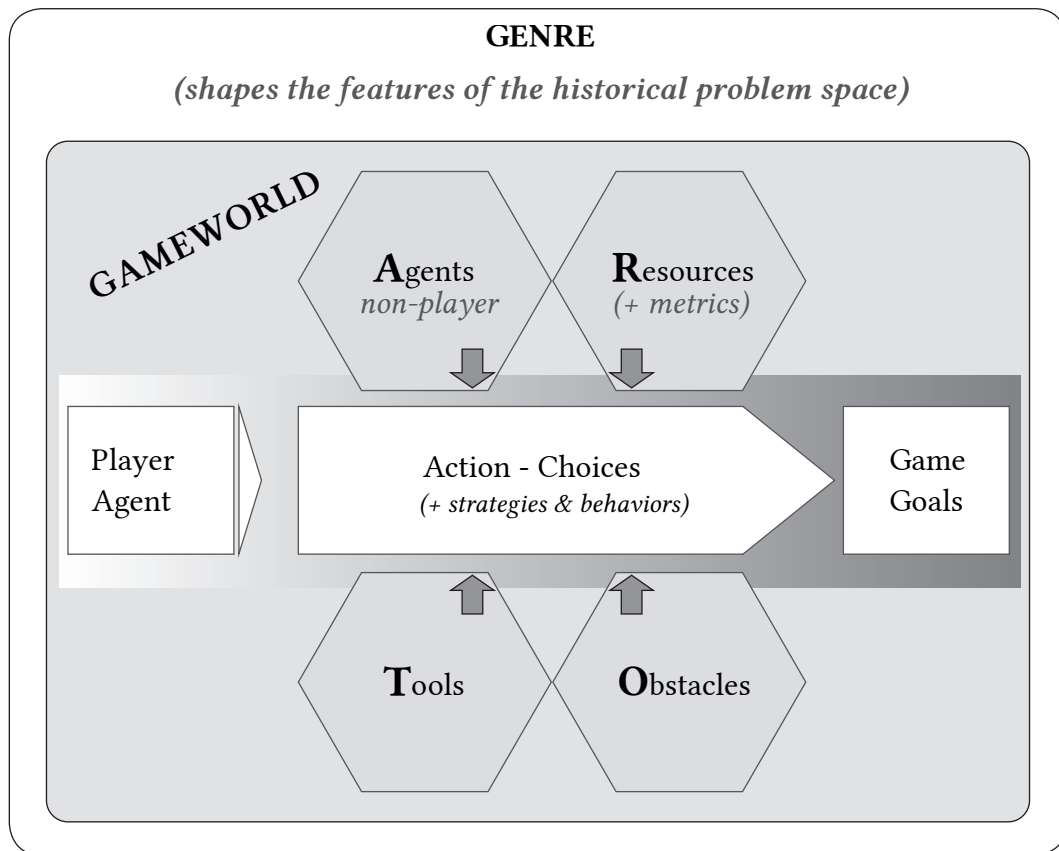


Figure 1 Historical Problem Space, conceptual diagram

historical content differently than a city-builder or a first-person shooter (FPS). As we will see in the comparison below, a real-time strategy (RTS) about the Greek World during the Peloponnesian War will shape and present its historical content differently than a third-person action adventure (3PA/A).

This often-powerful influence of genre-conventions on a game's hps is also apparent when developers are creating a new installment in what can be called a **brand genre**. Brand genres are those sets of shared attributes and features – often evolving but still identifiable – that tend to persist within a certain brand of games like *Assassin's Creed*, *Call of Duty*, *Civilization*, Rockstar Games' *Red Dead Redemption* and *Grand Theft Auto*, etc.⁵ Ultimately, understanding the genre

⁵ See Wright (2022) for a discussion of the features of Rockstar Games and the common developer practices that can, I think, be usefully termed a brand genre or genres.

of a particular historical game plays an important role in understanding how the game presents any part of its historical content.

To conduct an hps analysis, consider the mechanical functions of any phenomenon in game. If part of the plan is to explore the question: *is the in-game phenomenon consistent with the available historical evidence?*, it is best not to consider that phenomenon in isolation from the rest of the game mechanics and design. The question of whether a given in-game phenomenon is supported by historical evidence, while important, risks misunderstanding in-game phenomena as independent historical propositions when they are usually not independent at all – at least when the phenomenon is communicated through game mechanics. So, as we will see later, in *Assassins' Creed Odyssey* (Ubisoft 2018) and *Hegemony Gold: Wars of Ancient Greece* (Longbow 2012), the modellings of agriculture are tied to their functions and how they cohere with the other components of the hps in each game. So are their models of warfare, and so on.

Instead, more holistic, game-sensitive questions that can be part of a historical game historiography are:

- Why does a functional and cohesive⁶ historical game or any part of it present the historical record the way it does (fitting or straying from the historical record)?
- What are the effects of this functional and cohesive historical problem space structure on the game's representation and simulation of the past?

and

- What kinds of histories do distinct kinds (particularly different genres) of historical games present?

Pulling all this together, more questions and analytical routes are inspired by hps analysis:

⁶ In an effort for precision, I have reused some words frequently. By “functional” or “functionally,” I am referring to the fact that video games are made up of a series of rules and/or procedures that must mathematically precisely (notwithstanding inevitable bugs in code) interoperate. By “cohesive,” “cohesion,” and “cohere” I mean the widely acknowledged principle of good game design that the parts of the game work together to form a whole. See note 4.

- Could the phenomenon have been designed in a way more consistent with the historical record and still functioned and cohered as it does with the rest of the game's problem space?
- Is consistency with the rest of the hps seemingly not as driving a factor for a phenomenon (often to the extent that the phenomenon is aesthetic or narrative independent of mechanics)?⁷
- How historically supportable – consistent with the critically researched historical record – or problematic is the overall problem space? Perhaps most important in this (since historical games are histories about agency and told through agency): are the player agent, designed goals and action-choices that the developers selected for the problem space historically sound or more problematic?

The hps framework should be used as a premise of historical video game analysis, an essential enriching tool underlying analysis, not a conclusion. It emphasizes that historical phenomena in games generally do not exist independently of their functional design coded into a whole game.⁸ They do not exist in games independently of a cohesive design either – at least when the design is cohesive. Praising or blaming the developers is not a goal for the framework either. A problematic phenomenon in a historical game does not become problem-free because of the pressures of its functional role in the game's problem space.⁹ It does, however, become more readily understandable in terms of the game me-

⁷ Aesthetics and narrative phenomena can be critical to historical games, but if they have no mechanical aspect, their expression is less likely (unlikely?) to be tied to the functional needs of the rest of the game. The functional needs of the adventure game *Pentiment* (Obsidian 2022), for example, do not require the art and text styles found in the game, but those aesthetics are critical for the overall experience of working in and with medieval European illuminated manuscripts.

⁸ This also means, by implication, that historical phenomena in games are at least somewhat shaped by game hardware, an investigation not yet conducted as far as I am aware.

⁹ For example, the depiction of indigenous peoples of North America as having limited agency compared to colonizers in *Sid Meier's Civilization* (Firaxis 2008) fits the hps design of the game and its functional needs but is still problematic (see Owens (2012)). *Civilization VI* (Firaxis 2016) developers' inclusion of Cree chief Poundmaker as the leader of a Cree civilization that is essentially imperialist and colonialist – like all the other in-game civilizations – fits the needs of the hps but is problematic, to name yet another example. On this last point, see McCall (2018).

dium itself and thus should be an important part of a medium-sensitive critique, a historiography of historical games. Nor should an hps analysis be thought to completely explain design choices. There is overlap: developers and critics regularly emphasize the importance of cohesive games (in mechanics as well as gameworld and narrative), at least when the design is not intentionally experimenting with incohesive elements. So, in a sense, hps can help identify more cohesive design choices over more fragmented ones. However, going substantially beyond this requires more research into developer practices both in general and for specific games. As a consequence, hps should enrich investigations of those external developer practices and ideas that shape gameplay illuminated by Grufstedt and Wright.¹⁰

ASSASSIN'S CREED ODYSSEY AND HEGEMONY GOLD: WARS OF ANCIENT GREECE: A COMPARISON OF THE HISTORICAL PROBLEM SPACES OF TWO GAME HISTORIES

Let's put this theory to work to compare our two games. *Assassin's Creed Odyssey*, on the one hand, belongs to a series of third-person action/adventure (3PA/A) *Assassin's Creed* games that we can usefully label a brand genre.¹¹ *Hegemony Gold: Wars of Ancient Greece*, on the other hand, has many of the features of the real-time strategy genre (RTS), which includes historical games series like *Age of Empires* and myriad science fiction and fantasy series like *Warcraft*, *Command and Conquer*, and so on. Both games, the whole of *Assassin's Creed Odyssey* and the first Classical Greek campaign in *Hegemony Gold: Wars of Ancient Greece*,¹² are set in the Archidamian War (431–421 BCE), the first phase of the longer Peloponnesian War (431–404 BCE): in very broad terms of historical content, they are game histories **about** the Aegean Greek world in this period, specifically during this Spartan and Athenian-led conflict.¹³ Yet the ways these games

¹⁰ Grufstedt (2022); Wright (2022).

¹¹ McCall (2022).

¹² Philip of Macedon's empire building and the Ionian War are the other campaigns.

¹³ More precisely, like all history, they are about a few highly selective features of that place and period.

from significantly distinct genres and significantly distinct problem spaces portray the war and related aspects of the Aegean world in that decade are often markedly different. This illustrates a central point of this essay: different historical games, different genre-centered historical problem spaces, will significantly shape the historical content they deliver, the historical referents they reference, in perceivable ways. Just as text histories can employ different approaches and framings, game histories can vary in their approaches. This can be seen by considering and comparing various in-game phenomena functionally, as parts of wholly designed historical problem spaces.

Brief sketches of each game's historical problem spaces

A brief survey of each game's primary problem space should be helpful for the subsequent analysis. Since this is intended to be an introductory worked example of applying the Historical Problem Space framework to a pair of games, hps-specific terms are bolded on their first use in each overview.¹⁴

In the third-person action/adventure (3PA/A), *Assassin's Creed Odyssey* (hereafter *Odyssey*, Ubisoft 2018), the **player agent**, *Kassandra*, ostensibly has the role of a 5th century Greek *misthios*, a "mercenary".¹⁵ The player controls their **embodied** avatar (*i.e.* one that occupies gameworld space), *Kassandra*, in a third-person view, looking over her shoulder. This camera and avatar perspective and control largely define the 3PA/A genre and, certainly, the *Assassin's Creed* brand genre (hereafter *AC* when not referring to a specific title or to *Odyssey*). The player agent moves through a **gameworld** of photo-realistically rendered 3D terrain and architecture depicting parts of mainland and island Greece, another feature of the brand genre.¹⁶ She can **traverse** rugged environments with ease, climbing, leaping, and swinging in graceful parkour through the mountains or streets and rooftops of Athens among many other locales in the ancient Aegean. Every so often, *Kassandra* can skillfully assassinate or openly duel to the death one

¹⁴ McCall (2020), (2022).

¹⁵ We will consider *Kassandra's* gender soon, but for now, *Kassandra* is recognized as the canonical player agent in the game (Harradence (2018)). As it happens, I also spent all my time in the game playing as *Kassandra*, so she will be our focus.

¹⁶ Chapman (2016) on realist style games.

or many foes (**non-player agents**): this too is a convention of the brand genre. Cassandra's main problem (**designed goal**) in the gameworld is to successfully complete the required missions to destroy the Cult of Kosmos conspiracy. She achieves this through a combination of stealth, agility, and weapons-skills that allow her to overcome all opponents (**opposing agents**). As Cassandra completes missions, she earns experience points that allow her to gain new levels of ability. With each new level she can spend skill points to gain new and improved skills (**abilities**). She also gains the ability to wield more powerful arms and armor. The **secondary goals** of the game, those fundamental to achieving the primary designed goals, are to succeed at these missions and, accordingly, gain in levels, skills, and equipment. All of this takes place in a world affected by the Archidamian war – at least politically and militarily. One of the important ways that Cassandra can gain experience points is to aid the Athenians or the Spartans – or both in turn – in their war for hegemony.

Action-choices for Cassandra cluster around:

- who, when, and how to kill others while staying alive.
- Which optional missions to complete. This includes choosing to have conversations with non-player agents through dialogue trees.
- how to explore and traverse the world space, often by means of parkour methods.
- whom to talk to and, in some cases, pursue romantic relationships with through the dialogue options she has with various non-player agents.

Mission structures have developed over the series' run, the open world aspects of each game have expanded, and recent games have included more role-playing game mechanics, but killing, stealth, and parkour traversal remain core to the AC brand genre, so much so, that Ubisoft recently re-emphasized these as pillars of gameplay.¹⁷

Figure 2 summarizes the core components of the *Odyssey* problem space.

In the real-time strategy game *Hegemony Gold: Wars of Ancient Greece* (hereafter *Hegemony*, Longbow 2012), however, the **player agent** is leader of the Athenians and their allies in the Archidamian War campaign. They are **unembodied** for practical purposes, a feature of most RTS games. There is no avatar in the gameworld with a following camera; the player agent instead is represented

¹⁷ Ubisoft (2022).

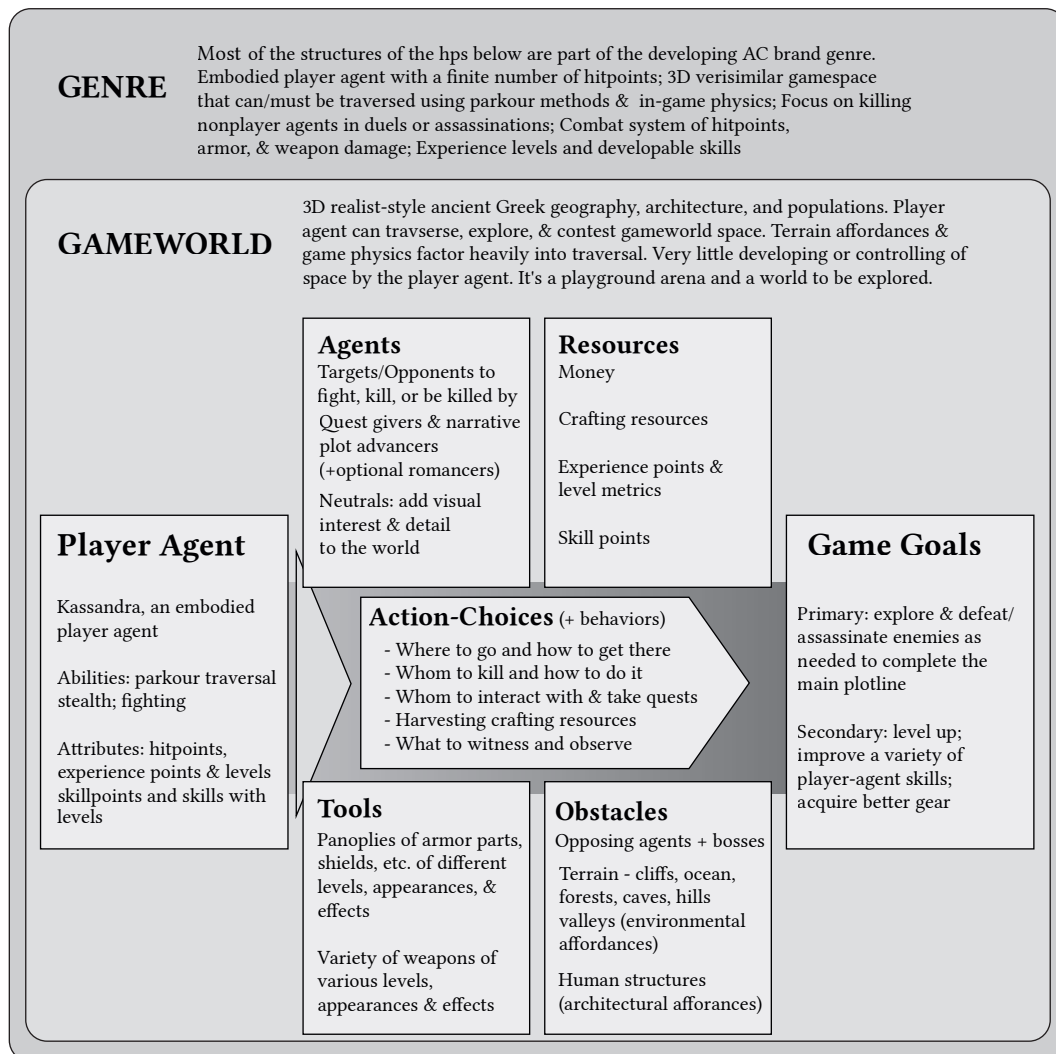


Figure 2 *Assassin's Creed Odyssey* historical problem space

by some form of cursor and extensive camera freedom. The **designed goal** in game is to defeat the forces and towns of the Peloponnesians (**opposing agents**) in an Aegean-wide war. The **gameworld** is a stylized three-dimensional Aegean region with passable and impassable terrain (**obstacles**), land and sea, and a variety of cities, mines, and farms. Play consists of ordering various miniature soldiers (non-player **subordinate agents**) – hoplites, peltasts, and cavalry – to move and to fight, besieging cities and securing farms and mines, raiding supply lines, or combating enemy units in the field.¹⁸ These war efforts require three main **resources** in the gameworld: food, money, and recruits. In hps terms, resources are quantifiable in-game “substances”, to use a general term, that can be spent or consumed. These resources come from gameworld **tools** that we can usefully term **producers**: cities for recruits and income; farms for food; mines for income.¹⁹ The resources of farms and mines require worker units to generate them; those workers can either be enslaved war-captives or units of workers produced in the cities (both non-player **subordinate agents**). Once generated, those resources transfer to the cities through supply lines the player agent activates, connecting resources and cities.

In *Hegemony*, the player agent’s available **action-choices** center on

- choosing where to focus the camera in a gameworld where many things can occur simultaneously.
- ordering units when, where, and often tactically how, to fight enemy soldiers.
- managing resources and logistics including choosing how to connect mines and farms to cities with supply lines.
- determining what units to recruit and in which cities, a decision that requires situational awareness of the resources of the city, the whole Athenian supply system, and the deployments of the Peloponnesians.

These action-choices tend to be features of most RTS games, whether fantastical like *Warcraft* or historical like *Age of Empires* and *Company of Heroes*.

Figure 3 lays out core components in *Hegemony*’s historical problem space.

¹⁸ Calleja (2011) develops the idea of miniatures, agents that appear to be miniature compared to the apparent vastness of the player agent, a common phenomenon in RTS and strategy games.

¹⁹ These can also be thought of as non-player agents.

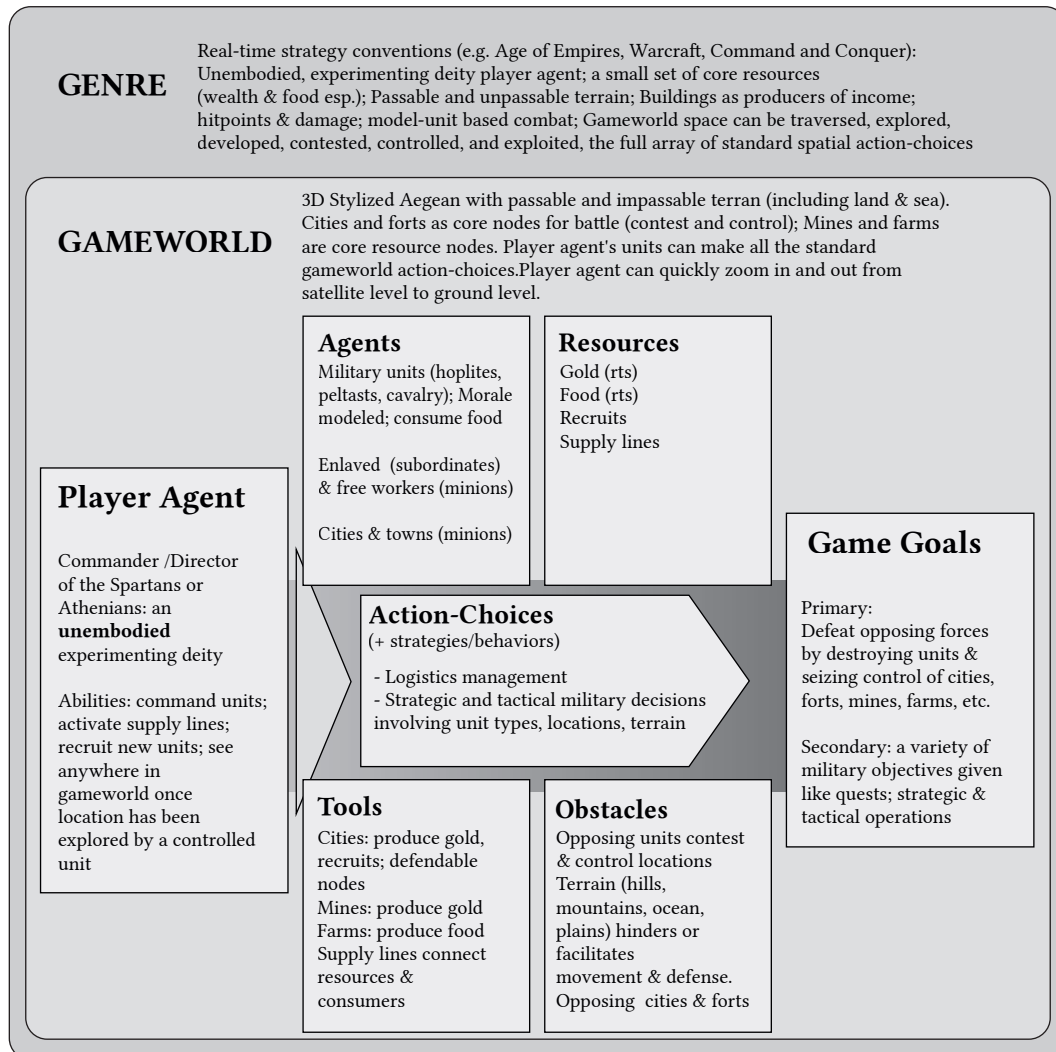


Figure 3 *Hegemony* historical problem space

Now, let's investigate some historical phenomena each game presents and explore how those cohere with the rest of the game's genre-centered hps. The following analysis is organized according to a series of questions I formulated that one might raise about the historical accuracy of either game. Though these questions are ostensibly about accuracy, they are more meaningfully explored by first considering the formal hps of each game and how that shapes its historical content.

Q1: Why is Cassandra a Greek mercenary who is effectively a super-human parkour and killing machine?

Every game in the *AC* brand genre has an **embodied** player agent, a space-occupying avatar.²⁰ That avatar is governed by gameworld physics: supported by gameworld physical features (cliffs, ground, rooftops, hand and footholds on vertical surfaces, etc.); falling when unsupported; and able to collide with material objects in the gameworld (walls, weapons, bystanders, the ground, etc.). As noted, the primary camera is a following camera, a defining convention of the larger 3PA/A genre *AC* is part of.²¹ The choice of an embodied agent in the problem space coheres well with the core goals and player agent action-choices in these games. Killing other beings through stealthy assassination or open duels arguably makes more gameplay sense if killer and opponent/target are embodied. It's difficult to imagine a mouse pointer, the representation of the player agent in a game like *Hegemony*, being stealthy or brazen.

Embodied player agents in *AC* and other historical 3PA/A games like Rockstar Games' *Red Dead Redemption* (2010, 2018), and *LA Noire* (2011), Asobo Studio's *A Plague Tale: Innocence* (2019), and so on, tend to have the following features.

- The primary storyline (the diegetic level) focuses on the embodied player agent (a contrast with *Hegemony* is coming in this essay).²²
- The game camera, as noted above, focuses completely on the player agent avatar, most often as a following camera.²³

²⁰ This is an avatar as Calleja (2011) essentially defines it: the digital representative of the player in the game space. Waggoner (2009) is more restrictive, considering avatars those player stand-ins whom the player has substantial input in creating.

²¹ Nitsche (2008) defines types of video game cameras including the following shot.

²² As Galloway (2006) terms it.

²³ Nitsche (2008).

- The player agent is bound by the gameworld's physical forces (whether cartoonish or, as in *Odyssey*, based in realistic physics).
- The primary locus of action-choices in the games is the avatar, and the scope of the avatar's abilities is mostly limited to their immediate environment and nearby targets (farther away, of course, when using something like a ranged weapon). Accordingly, action-choices for 3PA/A games often emphasize personal actions like fighting, traversing, and talking.²⁴

Unsurprisingly, perhaps, because of all this focus on an individual avatar, the history in *Assassin's Creed* – encoded into mechanics and revealed in dynamics – focuses on the individual adventurer. *Odyssey* is very much Cassandra's journey, a lone adventurer traveling through and witnessing the various sights and sounds of the material and intellectual culture of an ancient Greece. When Cassandra encounters obstacles, whether grand conspiracies or, contract jobs, she deals with them personally.

These core features of embodied player agents are all true of Cassandra and the other player agents of the *AC* brand genre: the embodied player agent needs to be an assassin. Ostensibly, she is a “misthios,” as the game calls her, a mercenary, a *misthios* with no feminine form ending.²⁵ In any event, the term and the identity are a bit shaky. It is worth noting that the term itself, “misthios,” for mercenary, is very infrequent in Classical Greek and grows in use later.²⁶ Greek mercenaries certainly were a historical phenomenon in the period from the Archaic through the Classical age and beyond, so the term certainly has historical referents outside the game.²⁷ But mercenaries in the ancient Greek context were soldiers, often units of soldiers, that joined the larger formations of this or that army, not individuals tasked with a variety of odd-jobs. In contrast, *Odyssey's*

²⁴ And flirting, perhaps in an Odysseus-like manner: Vandewalle (2022).

²⁵ Presumably a decision made for efficiency in recording the dialogue of other in-game characters.

²⁶ My thanks to Dr. Kate Cook for making this observation based on a search in the *The-saurus Linguae Graecae*. For the LSJ on the term, see <http://www.perseus.tufts.edu/hopper/morph?l=misqios&la=greek#lexicon>. Accessed 12 September 2022). Note that the LSJ points out that “misthophoros” to refer to “mercenaries” in Thuc. 1.35 and Xen. Hell. 5.4.45. See LSJ entry <http://www.perseus.tufts.edu/hopper/morph?l=misqoforos&la=greek#lexicon>. (Accessed 12 September 2022.9/12/22)

²⁷ Luraghi (2006); Miller (1984).

particular mercenary, as noted earlier, has primary action-choices that cluster around hyper-athletic traversals of space, brazenly or stealthily killing **a lot** of people in a variety of ways, and witnessing the audiovisual aspects of the game-world.²⁸

Some of these main action-choices (parkouring, killing, amassing and carrying armories worth of equipment, stealthily assassinating, etc) do not easily map onto the action-choices of documentable historical figures. Or rather, **some** of those action-choices were available to **some** extent to **some** historical figures, but the collective set of action-choices really does not map onto any particular documentable historical figure or archetype.²⁹ *Kassandra* is not your average Greek mercenary; she is as much an archetypal mercenary as *Spider-Man* is an archetypal teenage science student.

Not all in-game phenomena have the same levels of functional pressure shaping their form, especially in-game phenomena that are wholly aesthetic or narrative with little or no mechanical aspect. Take, for example, *Kassandra's* gender. Prior *Assassin's Creed* games have enabled one to play as a female character: for example, Evie Frye in *Assassin's Creed Syndicate* (Ubisoft 2015) and Aya in *Assassin's Creed Origins* (Ubisoft 2017). *Kassandra* is the first full lead female character in a standalone *AC* game.³⁰ The player has the option to play as either the male character Alexios or the female character *Kassandra*, and the choice does not affect the functional mechanics of the hps at all.³¹ This essentially super-human (for, really, an *AC* player agent has capacities beyond most, if not all, real-world humans) player agent has no mechanical pressure to be any particular gender, or even human (the cat player agent in *Stray* (BlueTwelve Studio 2022), for example, can climb and leap and avoid harmful agents). The mechanics are the same for *Kassandra* and Alexios.³² So, the functional design of the hps does not seem to contribute significantly to understanding why female standalone-entry full-lead

²⁸ Some players attempt a “Pacifist’s Creed” run where *Kassandra* kills no one in the game. The difficulty attempting to do this and indeed the impossibility of sparing everyone and completing the game emphasize that the game developers expect *Kassandra* to kill a number of people.

²⁹ See Lee (2004).

³⁰ Aveline in *Assassin's Creed III: Liberation* (Ubisoft 2012) came first, an extension of *AC III*.

³¹ Though the selection of *Kassandra* or Alexios is a critical choice for the player. See Cole (2022b).

³² Barnes (2022).

player agents were only introduced to the series starting with *Odyssey*. Accordingly, issues external to game design functionality and cohesion need to be considered even more. As it happens, Schreier reported in 2020 that an executive at Ubisoft consistently blocked the release of games with a female lead, maintaining – against significant evidence to the contrary – that female leads would not sell in games.³³ In a world and an industry that operates too often according to male norms, it is well worth noting that the design team for *Assassin's Creed Odyssey* designed the game initially with Cassandra as the only lead.³⁴ The case might be made that a female mercenary in 5th century Greece was likely an extreme rarity. But explaining Cassandra as an in-game phenomenon, a presentation of the past, is more effectively done by exploring ideas among developers, game players, and society about the importance of inclusivity. These social and cultural factors are important parts of understanding why there is a Cassandra option when a female adventurer would probably be historically uncommon.³⁵

Regardless of gender, the identity of Cassandra as a historical mercenary seems tenuous. But considering the hps for the game, what historical agent **could** actually have had the abilities of the *AC* player agent? The mercenary association, albeit stretched, does provide a bit of historical patina in that Cassandra takes on all manner of violent jobs and can take part in segments of the Archidamian War, frequently if she chooses. Even then, however, many of Cassandra's abilities and equipment go far beyond what was likely within the capabilities of any human then or now. Her functionally superhuman skills, however, are all a regular part of the developed functional player agent of essentially every *AC* game. So, part of the explanation behind the phenomenon of Cassandra the *misthios*, the presentation of history in the game, is this: the genre-influenced hps design and conventions of an *Assassin's Creed* game have shaped the historical refer-

33 Schreier (2020); Santos (2022).

34 Schreier (2020); Tassi (2020).

35 See Santos (2022) and Cole (2022b) on the choice and experience of playing as Cassandra. Someone might assert that, as far as our poor evidence allows, Greek female mercenaries appear to have been a rarity in that patriarchal society, if they appear in the evidence at all. This does not mean, of course, no female Greek mercenaries existed. The case has been made by Lee (2004) that, for example, women who accompanied Xenophon's 10,000 were treated as full companions and the males at least appeared open to the possibility that the women could be warriors. Regardless, the mechanics of *Odyssey* do not require any particular gender.

ence to mercenaries from Ancient Greece to integrate the game mercenary fully into the hps of the game.³⁶

While many of Cassandra's action-choices do not map onto any particular historical agent in the 5th Century, she has one critically important set of action-choices available to all *Assassin's Creed* player agents and with an important historical analogy: **witnessing**. The ability to witness historical scenes and interactions and engage in dialogue in *Assassin's Creed* games is often the single most important method of interacting with those phenomena representing the documentable past.³⁷ Cassandra not only gets to see but also to travel across, over, and through an impressive fictive yet evidence-based representation of ancient Greece: peasants in the fields, shoppers in the marketplaces, actors on stage, singers on the street, priests at the temples, and more. These people and settings, as noted before, are often modeled with a considerable eye to historical evidence. She also gets to speak with and listen to historically documentable figures such as Aspasia, Herodotus, Socrates, and Pericles, not to mention scores of Greeks from everyday walks of life. The historical content of the game is delivered primarily not through her actions as a nominal *misthios* but through her virtual touch, gaze, and hearing. Importantly, this witnessing is integrated and incentivized in the game's hps. A critical secondary goal of *AC* games is to increase in levels. The only way that Cassandra can level up is through acquiring experience points which the game rewards her for visiting unexplored places on the map, an incentive in the world-system.³⁸ Witnessing also advances the plotline of the game through conversations with historical figures. The goal of witnessing can compel the player agent to choose new parkour routes, synchronize birds-eye views, and find new enemies. Last but not least, Cassandra's virtual armory of weapons and armor (including independent choices for helmet, bracers, cuirass, and greaves), all available almost all the time, reveal an antiquarian

³⁶ Of course other external factors arguably play a part in the description of Cassandra. For example, though she is termed a *misthios*, the developers almost assuredly were influenced by the cultural tropes of bounty hunters. My point here is simply that, whatever the external forces shaping the design, Cassandra's mechanical needs in the overall hps also exert pressure on the form she takes and the powers she has.

³⁷ Essentially witnessing is a historical version of what King/Krzywinska (2006) note are the spectacles that many games offer to players to observe. For more discussion of the dialogue options Cassandra has, see Vandewalle (2022).

³⁸ Tapsell (2021).

paradise of witnessing: historical and legendary references are made while the gear fulfills the highly functional role of dealing and protecting from damage. In short, witnessing goes from what might be considered a fundamentally passive action to an active player-agent choice integral to the hps. This witnessing has always been a critical part of the history in *Assassin's Creed* games and even other historical 3PA/A games like, for example, *A Plague Tale: Innocence*, those in the *Mafia* series (variously Hangar 13, 2K Czech, Aspyr, and D3T), and the *Red Dead Redemption* titles (Rockstar).

The hps framework helps us move beyond summarily binary questions – whether *Kassandra* fits the historical evidence – to an exploration of how *Kassandra* as player agent coheres with the *AC* brand genre and *Odyssey's* game-world and historical problem space.

Q2: Why does the player agent in *Hegemony Gold: Wars of Ancient Greece* have essentially godlike powers to monitor and compel humans to act?

In contrast to *Odyssey*, the Athenian-state player agent in *Hegemony* is an **unembodied** agent, as is the case with most real-time strategy games. Unlike *Kassandra*, that player agent cannot be killed and indeed cannot act directly on any opposing forces. Instead, the player agent can survey the map and, once focused on a location, give orders to any Athenian-allied units or settlements – orders to move, fight, or produce. Even limited to giving orders, however, the player agent controls a great deal more than any terrestrial being could, so much that these kinds of player agents can be called “experimenting deities,” to reflect their power to mess about in human affairs.³⁹ Though the term fits, however, it is more precise in this case to identify the player agent as the Athenian state.

Games with an unembodied player agent, in particular real-time strategy games like *Hegemony*, tend to:

- focus the game story (the diegetic level) on a group of inworld agents, units of various kinds and buildings, rather than a single individual.
- employ a functionally telescopic “free overhead camera.”⁴⁰ The player agent can change camera positions and locations to various parts of the game world

³⁹ And of course, some – like *Populous*, *Black and White*, *Spore*, and *Godus* – are even called “god games” though that tends to be just one kind of game and 4X and RTS games generally also have a similar kind of extremely powerful, unembodied player agents.

⁴⁰ Nitsche (2008) 99–101.

as they wish, godlike. There is, as Nitsche puts it, “a missing reference to a single character.”⁴¹ Deciding where and when to position the camera and the player agent’s attention at any given moment is a critical action-choice.

- have player agent abilities and action-choices whose source is not the gameworld at all. It is generally the ordered gameworld agents who take physical action in the gameworld.
- enable the player agent to order various agents on the map in different parts of the gameworld and plan for those orders to execute offscreen simultaneously. Again, deciding where to focus one’s attention at any particular moment is a critical decision for unembodied player agents in RTS games.

These features of the unembodied player agent are common phenomena in most if not all RTS games with unembodied player agents.

Certainly, no historical individual had the abilities of the Athenian player agent. However, if we shift our idea of player-agent from an individual to an ancient state ordering various state agents, the player agent abilities map somewhat more cleanly onto the historical record. Historical states, though of course lacking the powers of information an RTS player agent generally has, could compel cities to recruit units, farms, and mines to produce resources. In doing so, they encroached upon the agency of thousands of individuals. Commanders in the service of the state certainly could set strategic and tactical objectives and arrange troops for battle (though those soldiers had their own agency too). Indeed the limitations on controlling soldiers in *Hegemony*, once they have engaged, maps well onto the ancient reality that, except for the Spartans in some cases, efforts to control large units of soldiers once they had clashed with the enemy were largely futile.⁴² The historical referent of the Athenian state is shaped into a player agent that is a cohesive and functional part of an RTS-genre centered problem space. The forms of the hps shape the historical content.

Neither game’s player agent is categorically more consistent with the historical evidence, but each player agent, *Kassandra* and the Athenian State, functions and coheres with the rest of their genre-centered hps. Furthermore, each has a significantly different hps, amounting to a different kind of history. *Odyssey*, in

41 Nitsche (2008) 101.

42 Konijnendijk (2017) 139–177.

some senses, presents “Great Person” history.⁴³ This may seem a strange claim. Certainly, if we focus on the quotidian details that come to life under Cassandra’s gaze, the history is very much about everyday folk. Still, the framing narrative and ludo-narrative speak of grand plots (not to mention the overarching conspiracy tale that pins the *AC* series together) while the mechanics and the segments of the player-agent centered narrative focus on Cassandra as an exceptional individual.⁴⁴ All her powers, all her might and wit, are personal: she travels, she witnesses and talks and equips, she traverses spectacularly, and she kills. Cassandra is no driftwood bobbing in the sea: she challenges and overcomes historical forces. In this sense she is very much a “Great Person”. *Hegemony* on the other hand, is a logistical and strategic history, a history of state-directed military actions set in motion by the state player agent but ultimately enveloping scores (representing thousands) of humans in action. Systemic forces of supply, morale, terrain, and weather cannot be overcome, only managed.

A good way to appreciate how well each player agent functionally coheres and how that creates different histories is to imagine the player agents were reversed while everything else in each designed historical problem space remained as designed. An unembodied RTS and *Hegemony*-style player agent for *Odyssey* could certainly be designed and coded. However, it would functionally clash with the overall problem space and the overall history it presents. With an unembodied Cassandra, no longer would *Odyssey* be the journey and struggles of a wandering individual relying on her own wit, skill, and strong sword arm. No body, no armor, no weapons, no stealth, no parkour, no Cassandra. The story loses its locus, the *AC* history its focus.

For that matter, the developers at Longbow certainly could have designed and coded an embodied *AC*-style Athenian commander as their player agent in *Hegemony*. The fit with the rest of the RTS gameworld would be odd at best. To carry out the action-choices in that RTS problem space, that embodied commander might have to run across the Peloponnese and swim the Aegean to give commands to each city and to each unit, or even to see what was happening on any particular point in the map, since the camera would track the player agent. There would be no tactical view for ordering units. The player agent could not go

43 Thomas Carlyle famously asserted “The History of the World is but the Biography of Great Men.” (1906) 28. For an analysis of Carlyle on this point and the approach of writing biography, see Dhúill (2017).

44 As the grand-daughter of Leonidas, she is not even of humble origins.

into cities, let alone buildings, because they are designed as production buildings and defense nodes with only implied inner space; there would be no city space to enter and traverse and, consequently, less to witness. There would be no parkour; the terrain is designed and coded to be tread across by miniature units of soldiers, not climbed by an embodied player agent. The history that Longbow tells, the history that this RTS proposes, focuses on an Athenian state agent and its efforts to master the labor and natural resources of the state against rival state agent Sparta: cities, soldiers, workers free and enslaved, gold and food. An hps designed to focus on the tactical challenge of commanding of armies and the powers of a state runs counter to the effect having a truly embodied individual player agent like Cassandra would have. The action-choices of managing cities and armies over large distances runs counter to the clustering of action-choices and world events around an embodied individual. As it happens, the first *Hegemony* campaign illustrates the cohesion of the unembodied agent functionally in this game. The player agent in this first campaign is explicitly Philip of Macedon, and there is a miniature in the game world explicitly labeled as Philip. That miniature at first glance serves as an avatar, an embodied player agent. Actually, it leaves out critical features common to 3PA/A style embodied avatars: the camera is not fixed on the avatar, and the avatar does not act directly but must be ordered to act just like every other miniature in the game. So, functionally, even this nod to an avatar is not really developed in *Hegemony's* RTS problem space. Instead the RTS history stays on course with RTS mechanics for a functional and cohesive problem space.

Q3: Why are geography and architecture in the *Odyssey* gameworld often so verisimilar to the historical evidence? Why is geography and architecture in *Hegemony* generally more abstract, less verisimilar, and less visually detailed?

Historical games have historical gameworlds. These gameworlds contain and contextualize all the components of a game's historical problem space. When considering verisimilitude and gameworld space, Adam Chapman's work on the two main styles of simulation employed by historical games, conceptual and realist, offers a critical building block for any historical video game analysis.⁴⁵ Essentially, historical games, though often using a combination of styles, tend more toward a "realist" or "conceptual simulation style". Realist historical games

45 Chapman (2016) 59–89. "Show" p. 61; "Tell" p. 70.

tend to focus heavily on verisimilar appearing and sounding game worlds where exploring and witnessing the world is often a primary means of accessing historical content (think *Kassandra's* action-choice to witness). The focus of such games tends to be on “showing” how a historical world looked. *Odyssey* is firmly in the realist style and tends to do the majority of its historical delivery in the form of visual and aural representation that *Kassandra* can witness and interact with. We might expect then that, consistent with this approach, *Odyssey* would focus heavily on geography and architecture verisimilar to ancient Greece for its player agent to traverse. *Hegemony*, however, adopts a conceptual simulation style. In this approach, the audio-visual elements tend not to be verisimilar, at least not to the degree of realist games. History is presented by these games heavily through “procedural rhetoric,” a concept developed by Bogost.⁴⁶ The game procedurally simulates these systems and their operations in game rules. Those rules, as Chapman notes, “tell” more about the past than “show” what it was like. Interestingly, most games that focus heavily on the realist style, such as *Odyssey*, tend to have embodied player agents. Most games that focus heavily on the conceptual style, however, such as *Hegemony*, tend to have unembodied agents.⁴⁷ Because of the incomplete overlap, and because embodied and unembodied player agents incorporate a number of accompanying critical features for a game’s historical problem space, the two concepts, Chapman’s simulation style and the hps concept of player agent embodiment, powerfully complement each other for analysis. Accordingly, I will draw upon Chapman’s typology in this essay, especially in the analysis of gameworld spaces.

Assassin’s Creed in general, and *Odyssey* following suit, have been praised for their photo-realism, their authentic-feeling digital 3D visual and aural recreations of geography, period architecture, people, clothing, and daily life patterns.⁴⁸ These features all tend to be designed with reference to a great deal of archaeological and historical evidence, and Ubisoft quite proudly notes its on-

46 Bogost (2007) 1–64.

47 Some game edge-cases have embodied player agents but are not, or at least not as obviously, in the realist style of 3D verisimilitudinous presentation of history “as it looked.” And so these games complicate matters: *Cat and the Coup*, *Return of the Obra Dinn*, *Valiant Hearts*, *Papers Please*.

48 For *Odyssey*, see Politopoulos et al. (2019) and Vandewalle (2022). For a complementary analysis of Rome as a polychronia in the earlier *Assassin’s Creed Brotherhood*, see Westin/Hedlund (2016).

going collaborations with historians.⁴⁹ The evidence-based reconstructions of Greek geography and architecture, the game's realist approach, is an important part of the brand genre. Yet the gameworld's consistency with the available historical evidence goes far beyond the functional requirements of the problem space Ubisoft developers have crafted. The gameworld for *Kassandra*, as for each *AC* player agent to date, needs to function as a giant 3D arena for parkour, stealth, and combat.⁵⁰ The computer code mathematically and functionally simulates a spatially detailed, traversable world: verticality, handholds to which *Kassandra* can stick, blind spots, traversable and untraversable terrain, places to fight, etc. Yet none of this mechanically needs, for function or cohesion, to look like ancient Greek space. Consider that player agents with the core *Assassin's Creed* abilities to gymnastically navigate 3D realms, leap and crawl, kill openly, and stealthily assassinate have existed in the series for well over a decade in **not**-Classical Greek settings: Medieval Jerusalem (*Assassin's Creed*), Renaissance Rome (*Assassin's Creed Brotherhood*), Revolutionary Paris (*Assassin's Creed Unity*), Industrial London (*Assassin's Creed Syndicate*), even Colonial Boston and New York (*Assassin's Creed III*). So, embodied *Kassandra* could have a highly functional playground that had no degree of verisimilitude to the historical record for ancient Greece, and she still could make action-choices that are functionally central to *AC* player agents: leap and climb, stride and sneak, fight and destroy, and so on. She could witness, but the content of that witnessing would no longer need to have historical significance. The game procedures would functionally work. The development practice of gray boxing also illustrates this separation between the functionality and the content of an *Assassin's Creed* worldspace. It is a common practice in 3D game design to use gray boxes to represent objects in a 3D gameworld for testing and design when the art assets are not yet complete for use. This allows the positioning of 3D assets and the overall spatial layout to be tested. Functionally, those gray boxes do what is needed for the 3D testing. Theoretically then, an *Assassin's Creed* game could be stripped of everything historically specific, reduced to grayboxes, yet have the core mechanics of traversal intact.

Yet it matters that an *Assassin's Creed* game set in ancient Greece **looks** to be set in ancient Greece; the problem space that *Odyssey* presents is explicitly set

49 Politopoulos et al. (2019); Poiron (2021); Vandewalle (2022).

50 Nitsche's definition of arena (2008).

in an ancient Greece full of ancient Greek denizens and historically identifiable figures that Cassandra can watch and engage with.⁵¹ Lacking these features, the game would not appear to refer to ancient Greece at all, which certainly would not aid developer claims like this one:

Become A Spartan Hero. Embark on an epic journey that takes you from your humble beginnings as an outcast Spartan mercenary to a legendary Greek hero and uncover the truth about your mysterious past as Alexios or Cassandra. Sail to the farthest reaches of the Aegean Sea, forming alliances and making enemies. Along the way, you'll encounter historical figures, mythical characters, and a whole cast of others who will impact your journey.⁵²

There is, if not an explicit claim to historical verisimilitude here, certainly an implicit one.⁵³ For this claim to appear justified, Ubisoft needs *Odyssey* to have some degree of visual verisimilitude. Sailing in an Aegean with no perceivably authentic visual references in terms of land and, especially, architecture and people would not deliver on these claims.⁵⁴ *Odyssey* would be untethered from its connections to the past – connections that, not least of all, serve to promote and market the game, among other things.⁵⁵ Perhaps one might continue this line of analysis and investigate the available paratexts for *Odyssey*, the official game website, for example, and consider the extent to which the marketers and developers are making explicit and implicit claims to historical authentic-

51 Some of the many discussions of the historical setting, what it may evoke in players, and its relationship to historical evidence in various *AC* entries: Dow (2013), Westin/Hedlund (2016), Cole (2022a) & (2022b), Vandewalle (2022).

52 Ubisoft (2022).

53 McCall (2018).

54 Of course, Ubisoft has developed a reputation for painstaking research and use of academic consultants for designing visually authentic historical settings, especially architecture, of their games. See Poiron (2021), Politopoulos et al. (2019), and Vandewalle (2022).

55 This does not mean that Ubisoft aims at or achieves a brick-by-brick replica of ancient settings. Scholarly analyses of *Odyssey* and earlier *Assassin's Creed* games indicate far more complex and intriguing fusions of times, places, details, and references – a polychronia in Westin/Hedlund (2016), a Baudrillardian simulation in Dow (2013) and a mashup in Cole (2022) – is achieved. These works provide helpful analytical tools for the representation and simulation of the Aegean in *Odyssey*.

ity.⁵⁶ For the purposes of a more focused hps analysis, however, we should particularly note that **witnessing**, including listening to and/or engaging in dialogue and engaging with material culture (not least of all in the form of equipment), is a core historical action-choice in AC gameworlds that the hps of *Odyssey* enables and incentivizes. Designers proud of the history they put into a game, where the most historical action-choice their agent can make is to witness, arguably will place a premium on historical verisimilitude, or, at least, claim to do so. Accordingly, we see a game with an authentically reconstructed architecture ranging from the Parthenon, the Athenian Treasury and Temple of Apollo at Delphi, Knossos, and so on.⁵⁷

Of course, as detailed as it is, *Odyssey*'s gameworld is not fully verisimilar to the historical and topographical evidence in its geography and architecture. Sometimes discrepancies are just a predictable result of details missing from the historical evidence. Existing archaeological remains commonly lack at least some of their ancient surface features (e.g., friezes or paint colors), and the game's developers must speculate to provide the kind of finished encompassing environment expected of *Assassin's Creed* games.⁵⁸ Skins and textures on buildings may have little to do with the functional requirements of the designed gameworld. But the functional needs of the problem space must have had at least some influence on the size, height, and placement of buildings in the gameworld. Indeed, the developers must have speculated a great deal since most of the actual structures from late 5th century Greece no longer exist or are under ground.⁵⁹ Other features of the geography are clearly functional too, like, for example, the distances between points on the world map. Distance is measured in meters in *Odyssey*, fitting for a character who travels many places on foot. The span across mainland Greece, in this case from the easternmost tip of Attica to the western-

⁵⁶ <https://www.ubisoft.com/en-us/game/assassins-creed/odyssey> (accessed 4 March 2024). Recently Esther Wright (2022) conducted such a study on the historical approach and marketing of Rockstar Games' *Red Dead Redemption* and *LA Noire* through paratexts.

⁵⁷ Politopoulos et al. (2019).

⁵⁸ Two visual examples can be found in Politopoulos et al. (2019). See also Kira Jones' analysis in Small (2018), Cole (2022b), and Vandewalle (2022). For a complementary analysis of the city of Rome and its multifaceted connections to the historical record in *Assassin's Creed Brotherhood*, see Westin/Hedlund (2016).

⁵⁹ Hall/Dansereau (2019) offer a detailed overview of the *Odyssey* development team's process in accessing and reconstructing the physical history of 5th century Greece for the game.

most point in the Peloponnesus, is a bit over 9,000 meters when the real world span is more than 25 times longer at more than 250 km. This compression reduces the player agent's travel time to a more manageable scale, though even so, the opportunity for fast-travel is an important quality of life feature available for players.⁶⁰ Similarly, the game time required to climb a mountain is orders of magnitude less than the time needed to summit in the real world.

In contrast to *Odyssey*'s gameworld, *Hegemony*'s gameworld, like those of many RTS games, shows the hallmarks of the conceptual style of historical game design. The terrain is visually simplified but not without functional detail. Indeed the data for the map comes from satellite imagery with terrain that impacts units' movement options: hills, forests, mountains, cliffs, shores, and the sea.⁶¹ Compared to *Odyssey* – which, as seen above, has its own contrived features – *Hegemony*'s geography and architecture are far more stylized features than realistic imagery, consistent with the conceptual style.⁶² *Hegemony* designer McNally calls these “caricatures” of real-world geography.⁶³ Functionally, of course, this is what the world needs to be: a miniature representation – or at least so it can appear – of the Aegean for miniature units to traverse and fight upon. Though cities and forts can be occupied and defended by units that disappear while “inside,” the architecture has no explicit interior space. While these cities have a limited appearance of verticality with a 3D representation of walls, generic temples, etc., there is no agent with the ability to climb structures or travel in and through them as in *Odyssey*. It certainly would have been possible for programmers to have designed a system of variables and computer procedures in code to track which parts of a city wall in *Hegemony* have hand and footholds and whether a non-player agent could be supported by those. But what would tracking that mean functionally when no agent in the game climbs? Instead, the *Hegemony* hps creates a space to simulate unit skirmishes and battles during the Archidamian War with topography that shapes strategy and tactics.⁶⁴

⁶⁰ Politopoulos et al. (2019).

⁶¹ Goodfellow (2006).

⁶² Of course, the world of *Odyssey* is stylized too, rendering of the entire Peloponnesus as a world only 9,000 meters across.

⁶³ McNally (2012).

⁶⁴ McNally (2012).

Q4: Why do the peasants in *Odyssey* look like they are harvesting crops but produce no gameworld food resources? Why can they be murdered but produce no food?

Kassandra encounters many people appearing to go about daily life. They visibly labor at all manner of tasks, yet no labor is simulated procedurally in the game beyond the audio-visual aesthetics. Frasca's definition of simulation helps here. "To simulate is to model a (source) system through a different system which maintains (for somebody) some of the behaviors of the original system," he notes. "The key term here is behavior. Simulation does not retain the – generally audiovisual – characteristics of the object but it also includes a model of its behaviors."⁶⁵ Simulating in this sense requires executing a series of encoded rules that provide a model in some way analogous to the real-world system.⁶⁶ It requires procedural logic of the kind Bogost and Chapman envision.⁶⁷ In this sense, the Greek peasant-farmers in *Odyssey* are not part of a procedural simulation of agriculture. The critical behaviors they lack are all those that model the actual tasks of agriculture – beyond the visual appearance – and the effects of those tasks in the gameworld. Their audio-visual labors and the goods they produce are not simulated procedurally in the underlying code: so far as can be reasonably assessed, no data structures or accompanying operations in the game exist for fields and growing, wheat and barley, food processing, consumption etc. So, the Greek peasants Kassandra encounters do nothing procedurally agricultural to any model of fields they appear to work, nor can they produce gameworld wheat or barley resources, the staples of ancient Mediterranean dry farming.⁶⁸ They appear to farm but are actually not part of a game model analogous to farming and its products. Accordingly, there is no grain eaten by anyone. Indeed, there is no model of edible food at all. Why? At least part of the answer is that the AC problem space, the fully functioning gameworld, does not require a procedural agricultural model from the world to be cohesive in design. *Assassin's Creed Valhalla* has a couple of instances where food can be ingested

⁶⁵ Frasca (2003) 223.

⁶⁶ Bogost (2007); Chapman (2016).

⁶⁷ Note, this is a description, not a criticism. Cameron Kunzelman (2022) makes insightful comments on a tendency for privileging simulation over representation in *Game Studies Study Buddies* (episode 50 starting at minute 40). I do not intend to criticise on this point.

⁶⁸ Garnsey (1988).

(berries and mushrooms), but otherwise the brand genre including *Odyssey* has not featured ingesting food. An embodied-player-agent game focused on traversing, killing, talking, and witnessing does not particularly need a procedurally simulated agricultural model: a visually represented one fully suffices to interact with the encouraged action-choice of witnessing. This is true of essentially all the depictions of everyday life and labor in the game: visual representation is sufficient.

Two features of the peasant (or laborer, etc.) that are procedurally simulated, however, are central to the core problem space of *Odyssey* as designed – a physics-centered realist third-person action/adventure game focusing on traversal and violence. First, the peasant is a procedurally simulated movable (impactable) object in the gameworld. The player agent must go around the peasant or collide with and shove them aside, the standard model for interpersonal collisions in the *AC* world. Second, the more chilling second procedurally simulated feature of the peasants is that they are killable, a feature for *Odyssey* that was subsequently removed in *Valhalla*. The player agent can opt to murder the peasant, and when they do so, the game procedurally simulates that murder (the locations of *Kassandra* and the victim absolutely and relative to each other, weapon contact, weapon damage, victim's hitpoints, victim attempting to flee) in addition to an audio-visual representation of the victim's suffering. The peasants function as the necessary gameworld element for the overall *AC* game design: visual historical enrichment and living beings to create the appearance of a world, physics objects with audio barks that may be assaulted or killed at the player agent's discretion.

Hegemony's RTS presentation of agriculture, however is significantly different from *Odyssey's*. There is a procedurally simulated system – certainly simplified – of farms, food, and supply. Farms are essentially tools, producers in the gameworld that can be contested, controlled, burned, and reclaimed. Food is a resource.⁶⁹ Cities require a steady food supply: too little food and the city defenses lose their garrison and become easy targets for siege and conquest. That food is supplied when the player activates a supply line between a particular farm and a particular city. When connected by a supply line, a city receives food from the farm. Seasons are modeled in *Hegemony* and farms produce different amounts of food in different seasons. Military units within a radius of a farm, a

⁶⁹ A reminder: in hps terms, a resource is a quantifiable in-game “substance” that can be spent or consumed.



Figure 4 Kassandra and Peasants in the Wheat Field, Ubisoft, Assassin's Creed Odyssey, 2018



Figure 5 A Farm (green circle) outside Athens in *Hegemony*, Longbow, Hegemony Gold: Wars of Ancient Greece, 2012

flock, or a supplied city or fort under their control will gather food supplies, a resource each unit has visibly displayed in its information box onscreen.

Farms and agriculture in *Hegemony* – puzzlingly, not peasants – are visually represented, not just procedurally simulated, though in much more abstract terms than those in *Odyssey*. *Hegemony* follows the conceptual simulation approach here rather than the realist. Consequently, the farms look stylized, a simple field enclosed by a rail fence, filled with barrels and crates of produce, rather than a full historical farm. Unlike the farms in *Odyssey*, those in *Hegemony* procedurally simulate agriculture. Food, an important in-game resource, is grown and transported, then consumed by cities and soldiers.

Combat between units of infantry and cavalry is a core feature of the hps, and each unit's fighting effectiveness hinges significantly upon its food supply. Besieging a city is more effective if it is cut off from food supplies. If a unit runs out of food, its morale drops precipitously, and it will likely flee from combat quickly. For all this importance of food and supply lines to *Hegemony*'s hps, it is not surprising that the Athenian state player can target enemy supply lines by attacking the ships or oxcarts transporting food along them. They gain food for the unit and disrupt enemy supply lines in the process. Units can also burn farms, a feature reflecting that common practice in ancient Greek wars.⁷⁰ So, functionally, food is a critical resource in a simple procedurally simulated agriculture-and-consumption system that connects directly to the strategic wargame.

In a game about Greek military strategy, tactics, and logistics, where the state commands large numbers of soldiers, food plays a central simulated role as a resource in a way few other resources could. In a game about parkour, exploration, assault, and witnessing it does not. In each game's case the historical portrayal functionally and cohesively interconnects with the overall design.

Q5: Why does Cassandra fight the Archidamian War essentially single-handedly?

Odyssey is set in the Archidamian War between Athens and Sparta, and Cassandra can materially participate in that war potentially on both the Spartan and Athenian sides. She is incentivized to do so with in-game rewards of experience and equipment. The game divides Greece into regions, and each region is either under the control of the Athenians or the Spartans. Selecting a region in map mode causes the game to display the faction that controls the region (Athens or

⁷⁰ Thorne (2001).



Figure 6 An Example of a Contested Region in *Odyssey*, Ubisoft, Assassin’s Creed Odyssey, 2018

Sparta), the name of that faction’s regional leader, and how securely they control the region, according to a nation power **metric**.⁷¹ So, in figure 6, for example, Megaris is under Athenian control; the Athenian garrison is commanded by Kleobis the Miscreant; and they are in a strong position – Athenian nation power in Megaris is currently “fortified”.

Conquest missions for each region of Greece allow the player agent to help Athenians or Spartans take control or defend a region. So, if player agent Kassandra wishes to seize a territory for Sparta, she must optimally do two things in game to lower Athenian nation power in the region. First, Kassandra can travel to Athenian forts in the region, ranging from palisaded camps to elaborate stone fortresses. Each fort has a set of soldiers and officers that can be assassinated or (if Kassandra is sufficiently skilled and/or powerful) openly slain in duels. Either way, she is on her own against as many as 10 to 20 enemy soldiers and officers including a powerful polemarch. Killing soldiers and especially officers decreases Athenian nation power in the region. Accordingly, Kassandra **single-**

⁷¹ In hps terms, it can be useful to distinguish sometimes between a resource, which can be spent and/or consumed, and a metric, which is not. There are overlaps, of course.

handedly duels and/or stealthily assassinates enemy soldiers. Second, finding and destroying a limited set of special chests of war supplies and weapons racks in each fort also reduces Athenian nation power in the region. Cassandra can **personally** find and destroy the supplies – stealthily or brazenly; it is up to the player agent. Finally, Cassandra can **single-handedly** locate and assassinate the Athenian faction leader in the region. In short, Cassandra personally whittles down the Athenian occupying force and its resources in the region significantly, to the point where it is vulnerable to losing a conquest battle.

In her assault on a region, Cassandra cannot command troops, consistent with many conventional 3PA/A embodied agents. In fact, she cannot command anyone, but she can certainly act and fight directly. So far, Spartan and Athenian struggles for control of a region in the war look like the operations of a lone superspy rather than struggles between armies of armed soldiers. This staging for the conquest battle to decide control of the region (and gain Cassandra a considerable amount of experience) has little to map onto in the historical Archidamian War. Sieges and attacks on urban centers were a critical part of that war: Potidaea (432–29), Methone (431), Plataea (429–27), Mytilene (428–27), Scione (423–21), and Mende (423).⁷² But a siege or even a battle between combined-arms forces are very different things from a super-athletic player agent individually eliminating belligerents, one at a time. Further, there is nothing in the evidence to suggest that Athenians and Peloponnesians each could station fortified standing garrisons in so many regions. The evidence certainly suggests that they did not.⁷³ Still, those soldiers play an important part in filling the world with inhabitants, non-player agents for the hps.

When the faction's control over a region has been sufficiently weakened, Cassandra can initiate a conquest battle for the contested region by talking to the commander of the faction she chooses to support. The conquest battles themselves are a spectacle. One of Ubisoft's selling points on the *Odyssey* webpage is that the player can "charge into epic clashes between Sparta and Athens in big battles pitting 150 vs. 150 soldiers against each other."⁷⁴ So it seems. Clearly, however, it is not the type of battle described by Thucydides or Xenophon, between bands of heavy and light infantry and cavalry. In *Odyssey* battles, small packs

⁷² Lendon (2010) provides a useful timeline of the Archidamian War.

⁷³ Lendon (2010) gives an excellently detailed account of this war. De Souza (2002) is also a useful resource.

⁷⁴ Ubisoft (2022).

of soldiers duel one another in anything but organized formations: it's a grand brawl. Bare-chested Spartans fight against Athenians in full hoplite panoplies, or sometimes the equipment is reversed. Many fight with sword or spear without shield; some have hoplon shields and even what appear to be reinforced-linen cuirasses. As figure 7 suggests, not only is there no single battleline; the soldiers of each army are not even facing all the same direction. There is no direction of attack, no front and rear, just spread out clusters of two or three combatants fighting. These duels scattered across the battleground are punctuated by the roaming poleaxe-wielding larger soldiers on both sides and the harder-to-kill captains. In the midst of this chaos, Cassandra ranges Homerically, like a digital Diomedes in an *aristeia*,⁷⁵ picking her targets among the soldiery, taking care to slay the necessary heroes and captains, wielding weapons that can range from a war spear to pairs of daggers to axes and clubs, whatever the player agent chooses from her personal arsenal. "Somewhat" Homerically, one could say, except that, again, even fluid Homeric warfare had opposing sides of the battlefield. In this procedural simulation, all of Cassandra's central behaviors and action-choices focus on timing strikes and dodges gracefully and using special abilities to gain the upper hand. The course of the battle is largely, if not wholly, determined by how many powerful warriors Cassandra **personally** takes down.

These conquest battles seemingly have little to do with what we know of late 5th century Greek warfare on multiple levels. Focusing only on the Archidamian War, sieges were important in addition to irregular engagements, raids, and skirmishes.⁷⁶ Still, there were some documented pitched battles, which would be the closest thing to compare to *Odyssey's* conquest battles: Olpae (426), Solygeia (425) Delion (424) and Amphipolis (422).⁷⁷ The Peloponnesians certainly seemed to want more: a Peloponnesian army invaded Attica no less than five times in the first six years of the war, devastating crops and hoping to goad the Athenians into a pitched battle.⁷⁸ Armies of hoplites in phalanx formation with light infantry and cavalry in support was a regular expectation, regardless of how frequently it happened. Konijnendijk's recent work provides a valuable investiga-

75 *Hom. Il.* 5.130–164, for an example.

76 Examples include the Peloponnesian attack on Demosthenes' Pylos fortifications and the subsequent defeat of Peloponnesian and Spartiate forces on Sphacteria through light troops and missile troops; 425 BCE.

77 Lendon (2010).

78 Lendon (2010).



Figure 7 Kassandra Fighting a Conquest Battle against Spartans in *Odyssey* (red left meter is Sparta and blue right, Athens), Ubisoft, *Assassin's Creed Odyssey*, 2018

tion of these battles.⁷⁹ Despite the affection lavished upon them in the sources, the reality is that the ponderous hoplite formations that went into battle without the support of lighter infantry and cavalry would fall prey to light troops. Though the sources often focus on the hoplite phalanx, sometimes even to the exclusion of all else, light infantry and cavalry were essential. Indeed Konijnendijk notes that in the Archaic Period, “The Greeks soon discovered that unsupported heavy infantry was at the mercy of lighter troops,” and later comments, “Horsemen, too, could make heavy infantry dance to their tune.” Pitched battles focused solely on a decisive clash of hoplite phalanges were relatively rare. Rather, “Greek armies much more often fought less ‘formal’ engagements on a less impressive scale.”⁸⁰ These engagements involved both light and heavy infantry. Still, hoplites depended upon fighting in a phalanx, depended on facing the enemy in a continuous line.⁸¹ Meanwhile, the ponderous inertia of the hop-

⁷⁹ Konijnendijk (2017).

⁸⁰ Konijnendijk (2017) 96, 102, 105.

⁸¹ See Kagan/Viggiano (2013) for a state of the field concerning hoplite battles.

lite phalanx and the sounds and chaos of battle made it nearly impossible for generals and armies to execute tactical movements in the fray.

Odyssey does not include units and formations of any kind, certainly nothing approximating a mass of hoplites with light troops and cavalry protecting their flanks and harrying the enemy. Instead, the battle is an arena for Cassandra alone with fixed spatial limits, plenty of enemies, and a score to achieve.⁸² A single Cassandra doing what she does in the game is not consistent with how pitched battle in the Peloponnesian War took place according to historical evidence. That observation, however, is insufficient for understanding how this game shapes the historical record. Cassandra and the conquest battles **absolutely** are an *Assassin's Creed* hps way of representing this historical content. The battles function precisely as we should expect in an *AC* brand genre game history. An embodied agent who takes the center stage of the gameworld and has peerless personal abilities to maneuver, fight, and kill takes a war of hundreds and thousands of combatants and turns it into a brawl where she plays the decisive role. Once again, *Odyssey's* hps has presented a "Great Person" style of history a history focused on the immediate world of exceptional Cassandra's senses and personal abilities.

Q6: Why does *Hegemony* portray combat in the Archidamian War as battles between units of soldiers in varying formations?

As noted before, in *Hegemony* the abilities and available action-choices of the player agent, the Athenian state, all involve the direct management and control of other agents, proxies for player-agent action. That fundamental shift from a 3PA/A history to an RTS history does a great deal to explain these different presentations of battle in the same Archidamian War.

Battle for control of a region in *Hegemony* is markedly different than in *Odyssey*, of course. The historical record, such as it is, about the conduct of the war has not changed. What has changed is the mode of history, the genre-centered hps that shapes the historical content. In *Hegemony* the unembodied Athenian state player agent commands units of soldiers, a hallmark of RTS games. In accordance with orders, units march, adopt formations (when more than one unit is selected), and so on. These units qualify as subordinate agents rather than minions for two reasons: They often fail to follow orders when engaged in battle,

⁸² See Nitsche (2008) for the gamespace of an arena.

and, equally crucially, they will surrender in battle if their morale attribute is too low. They have some agency modeled and, therefore, are not minions.⁸³

As noted earlier, cities and forts are the primary control nodes in *Hegemony*. Though units can and do fight in pitched battles and skirmishes, sieges will ultimately determine the war. Consider how the Athenian state might seize a region in *Hegemony* compared to *Odyssey*. The player agent could order units to disrupt local supply lines in a region and burn farms supplying a targeted enemy city, Megaris or Corinth, or perhaps Thebes. Units of miniature soldiers comply and head off. Next, the player agent might dispatch an army. Perhaps a single unit; sometimes, depending on the threat and available troops, a combined arms force of hoplites, peltasts, and cavalry. The computer opponent might respond by summoning Peloponnesian forces either stationed in the target city or sent from nearby cities. A battle could ensue between miniature armies. If so, the player agent will have some ability, if they are not distracted by some other activity on the world map, to organize their soldiers' formations. If given time and space, the player agent can order units to adopt a formation – from a variety of choices like columns, lines, wedges, circles, etc. Or they can pick separate targets for each unit. Each unit has strengths and weaknesses, though more nuanced than found in many RTS games. Cavalry is fast and gets an attack bonus when charging light infantry. Light infantry is swift, much swifter than hoplites, and can cast javelins at the ponderous heavy infantry and then retire safely. They can also continue to pepper the hoplites who have clashed with an opposing hoplite battle line. For their part, hoplite phalanxes that catch light infantry or cavalry will maul it.

If the player agent keeps the camera focused on this burgeoning battle – after all, important events are likely happening simultaneously elsewhere in the gameworld – they might be able to adjust formations a bit. Once units clash, however, there is little chance of disengaging, and they will fight until one side's morale is spent. Then the demoralized will flee the battle and risk being captured and enslaved by the victorious enemy.

Considering what we know about the Archidamian War, *Hegemony* presents a model, a systems simulation that seems to authentically map onto the historical record in several ways. Conflicts range from small skirmishes to large battles. The core unit types and behaviors approximate historical functions. The ability to fight with combined tactics maps well onto tactics from historical battles – light infantry for skirmishing with javelins, cavalry to harry the flanks and

⁸³ The same cannot be said of units in all RTS games, like *Age of Empires*, for example.



Figure 8 Battle outside the City Walls in *Hegemony*, Longbow, Hegemony Gold: Wars of Ancient Greece, 2012

enforce a retreat, heavy infantry as a slow and steady fixed battle foundation. Command is limited in these battles too. There is little that the player agent can do with units that are already engaged, a reality of warfare in the period.⁸⁴ At the same time, sieges are commonplace. One might note that where *Odyssey* was designed – as any game in a brand genre likely would be – as an *Assassin's Creed* take on the war, *Hegemony* seems to have been developed in the reverse direction, the historical content driving choices of genre design.⁸⁵

While Longbow's uncommon practice of letting the historical content drive genre and design choices may be an effective way to render history in a game, the analogue between warfare in the game and in the record should not obscure a critical point. *Hegemony* is still a game history; its designed RTS-genre hps shapes historical content significantly. It renders a messy and horrible human affair, battle, into a quantifiable, functional, and cohesive world and systems. Its units have hit points and weapon damage, quantifications of a world that was

⁸⁴ Konijnendijk (2017).

⁸⁵ Originally, *Hegemony* was a turn-based wargame on a hex map before shifting to RTS to capture the designer's understanding of battle better. See Adams (2010) and Gillen (2010).

and is not humanly quantifiable. Its units also gain experience in battle and skill points: skill points that allow the player agent to upgrade units along four tracks: heroics, initiative, logistics, engineering. It has a pause function that allows the player agent to plan moves and give orders while the game is paused, then un-pause to watch those orders execute. Additionally of course, its camera can jump across the game world, zoom in, twist and turn in ways that would have made any ancient commander weep in envy. These are just some of the RTS-genre features (and sometimes turn-based wargame features) in *Hegemony* that shape the content of the Archidamian War.

CONCLUSIONS

Games philosopher C. Thi. Nguyen notes, “the medium of the game designer is agency” as part of his assertion that games are fundamentally about the aesthetics of agency.⁸⁶ This is just as true for historical games. Indeed a critical – if not the defining – characteristic of the game medium is the presence of player agency and choice.⁸⁷ The player, playing as a player agent in game has the ability to make choices that will ultimately affect the diegetic outcome of the history, in major or minor ways. That is games’ great strength: exploring the powers and limitations of agency within a systemic world of rules. Thus we should expect that such a historical medium will communicate histories about agents and their agency and action-choices in a world. Ultimately if we want to know what kind of history a particular videogame presents, we should start with that fundamental insight: historical games deliver historical problem spaces. Some agent blocked from achieving some goal (*i.e.* presented with a problem) makes action-choices to solve that problem. In these two histories, each part in each well-designed video game functionally coheres with the rest, expanding into a world. Agents, goals, and action-choices in a world of systemic elements.

Assassin’s Creed Odyssey is very much an *Assassin’s Creed* genre-centered hps focused on the trials and tribulations of an individual, Kassandra. An embodied individual player agent with powerful athletic and martial abilities traverses

⁸⁶ Nguyen (2020) 17. Though it was published too recently to integrate, see now Bodi (2023) on agency in video games.

⁸⁷ McCall (2012); see also, for games more generally, Aarseth (1997) and Nguyen (2020).

and explores a gameworld of natural and human construction with denizens from the prosaic to the epic, ostensibly the world of 5th century Greece. She encounters all manner of people visibly going about their lives. Some ignore her, some talk with her, some ask for favors and give her quests that often expect killing, through assassination or a duel, a great number of people. She must complete enough of these quests to gain necessary experience to increase her abilities and to find the powerful weapons and armor that she uses to survive the violence. For only when she has reached sufficient level can she successfully solve the highest level quests and her main problem: how to sort through and respond to the various episodes and encounters to reach her ultimate goal and destroy the Kosmos cultists. In many ways, this approach is an example of Great Person history. Though the machinations of more powerful individuals shape the narrative and Cassandra really cannot create a new historical narrative for the period, she can stop the whole conspiracy cold, personally. Cassandra changes the lives of many, often quite dramatically, by her actions great and small.

Left to this description one might conclude that *Odyssey* bears little from the historical record when it comes specifically to player-agent Cassandra and her action-choices. Primary action-choices of stealth, killing, and parkour, as we have noted, do not map well onto any particular historical agents. But Cassandra's actions, the narrative of *Odyssey*, the framing and ludo-narrative,⁸⁸ is far more complicated than a binary accuracy or inaccuracy. Recently, Richard Cole has illuminated that we need to see *Odyssey* as consistent with the phenomenon of the "cultural mashup."⁸⁹ In the game there are references and imagery from an ancient Greece of many sources, epic for the monsters, history for the figures, archaeology and geography not to mention popular media – not least of all the imagery of films like *300* and *Troy*. Far from being traditional references to historical sources with attention and labor paid to chronology and citation, mashups like that in *Odyssey* are not beholden to canonical or legal divisions or interpretations.

In fact, mashups thoroughly divest themselves from such restrictions. They have an inherent, transgressive function in their borrowing that transcends issues of accuracy and originality and welcomes participation.⁹⁰

88 Chapman (2016).

89 Cole (2022) 3

90 Cole (2022a) 916.

While many things *Kassandra* witnesses are historical mashups, there is also a purposefully authentic-to-many-players, often evidence-based 5th century Greek world virtually realized. *Kassandra* performs a critical role in that realized world. She interacts with the sights, sounds, and, virtually, the feel and physicality of the material world. Much of the history in *Odyssey* lies in the game's attention to material culture and individual personalities and stories brought to life when player agent *Kassandra* chooses to witness them. For many are the sights and sounds, the paths and tides, the hawkers selling wares, the peasant farming, the devout worshipping. The history comes in discussions with the everyday people of the Aegean as *Kassandra* takes quests. Throughout her epic narrative, she is constantly given the choice of witnessing and exploring – actions that include discussion with non player agents and quest-givers. True to its core as a realist game with an embodied player agent, *Odyssey* at every corner seems to present Ancient Greece as Chapman noted, “by aiming and/or claiming to *show* the past ‘how it was’, *i.e.* as it appeared to historical agents of the time.”⁹¹ As it looked and sounded. At least that is the argument the game seems to make. This helps explain another element of the gameworld that is striking in its strength. *Odyssey* is also an outstanding example of antiquarian-focused history. The detail in the buildings and artwork and geography. Even more, the truly overwhelming number of choices for gear and weapons, each given a historical, legendary, or mythological name to connect it in players' minds with the physical details of the past. And these experiences are no less part of the historical problem space than the fantasized killings. The parkour, whether for convenience or pleasure, takes *Kassandra*, and accordingly the player, in close to view the details of the architecture and geography. As noted, her vast panoply of historical and mythical weapons and armor options are functionally critical for the hps combat. Exploration itself, a key to *Odyssey* witnessing, provides experience points, points that are crucial if *Kassandra* is to survive her odyssey. Further, only through exploration can *Kassandra* unlock new perils and rewards, both of which grant even more experience. Witnessing is critical to the history presented. How can one even think of a substantial session in *Odyssey* without the material culture and the oceans of people? Witness and explore the journey, the sights, the sounds.

Hegemony Gold: Wars of Ancient Greece, in contrast is about the removed commander, the unembodied state agent. Indeed, the state agent looks at the

91 Chapman (2016).

gameworld as a state would, the complex realities of the world simplified, flattened and quantified into soldiers, cities, workers, and supplies.⁹² Through the player-agent's orders, the outcomes of countless mortal lives, the miniatures in the units and cities, are largely determined. The player agent has no hands to get dirty, and the game gives little reason to feel loss when a unit now has 49 soldiers where it once had 50; casualties are truly numbers. The history is about unit combat and supply lines, battles and logistics. Where *Odyssey* focuses on the particular and the antiquarian, *Hegemony* focuses on the abstract and the general: generic hoplites, peltasts, and cavalry, nameless – and, when zoomed out sufficiently, faceless – soldiers. Even the historical figures in-game, Pericles and all, are rendered as generals whose only function is to add combat bonuses to the unit to which they are attached. This is a logistician's history with no glimpses into the lives of the thousands forever altered by war, let alone glimpses into the more-documented state agents who put this all in motion. This is a game about grand scale structures and systems bigger than the individual: the state, war, and logistics. One might even step back – further back than even the state agent – and muse on the futility of war as armies win and lose, cities feed and starve, and land ownership changes hands. Not that *Hegemony* would agree with this view – steady feeds of missions and quests keep the state agent ever moving forward, ever trying to win. Indeed, in this war, arguably unlike the historical Archidamian war, there can be a winner, there can be victory.

Ultimately, the question of which game is accurate and which is not is too limiting a question to ask for a deep analysis of these games; more exploration is needed. Both games shape their historical phenomena according to their genre-centered hps. To simply say that *Odyssey* inaccurately portrays the war is a binary evaluation that does not focus on the game medium. To say that *Hegemony* accurately portrays the war is no less arbitrary (especially when seeing all the miniature soldiers in real time jam together chaotically as they often do in the game). A more complex analysis can explore how the ways each game portrays the war is fundamentally shaped by the hps – including the genre – of each.

The Historical Problem Space framework does not explain every design choice, yet it factors into most design decisions, judging from these historical games. In the end, historical games are **games**, and that means they take the form of historical problem spaces. Thus, the Historical Problem Space framework offers the means to do historiography on these game histories. It offers a methodical, me-

92 Scott (1998).

dium-sensitive way to do study the formal structures of historical video games as the holistic player operated systems they are. It also suggests that in these cases and others, genre is a powerful way to shape the histories these games present. At their core, each game, like all historical games, presents a historical problem space with a player agent. This means we need to analyze and understand these histories as functionally interconnected accounts of agents, personal or impersonal, engaging in goal-oriented behavior in a world focused, by developers at least, on a problem.

It is my sincere hope that this essay proves useful in thinking about how to engage in genre-centered historical problem space analyses and point toward some of the insights those analyses might gain us.

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Jeremiah McCall
Cincinnati County Day School

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